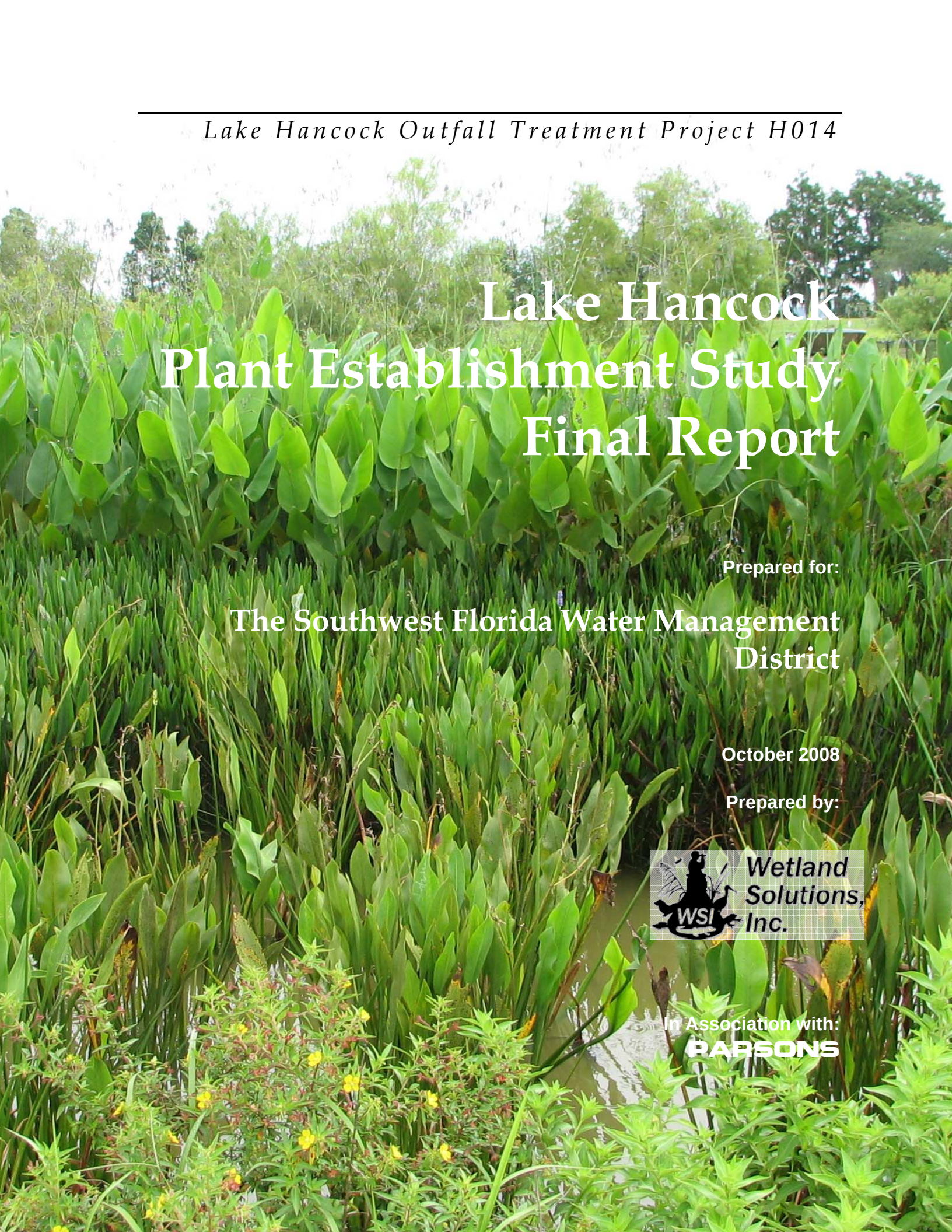

Lake Hancock Plant Establishment Study Final Report

Prepared for:

The Southwest Florida Water Management District

October 2008

Prepared by:

Wetland Solutions, Inc.

In Association with:

PARSONS

Lake Hancock Outfall Treatment Project
H014

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Plant Establishment Study
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Contents

Executive Summary

The Southwest Florida Water Management District (District) plans to construct a large-scale, flow-through, treatment wetland to improve the quality of water discharged from Lake Hancock to Saddle Creek and ultimately to the Peace River. A Plant Establishment Study (Study) was implemented on the south side of Lake Hancock to provide site-specific information to help address these design and construction-related concerns of implementing this treatment wetland project on reclaimed clay settling areas. The Study was initiated in June 2007 and lasted one full year. Final plant community and water quality sampling was conducted in May 2008. Hydrologic records were collected over the full 365 day period.

Results of the year-long Study are provided in this report. In summary, rates and densities of plant establishment under a range of site preparation and hydrologic conditions were quantified. The Study found that an emergent wetland plant community can be established on these soils within about one year using planting of nursery-grown stock at a fairly high planting density. Slower but eventual wetland plant coverage can also be attained by natural recruitment of volunteer plant species. Hydrologic control was found to be one of the most important requirements for optimizing plant growth in these soils. Early plant colonization tended to occur at median water depths not exceeding 0.7 – 0.8 ft, and colonization of most species occurred at median water depths not exceeding 0.2 – 0.3 ft. Invasive species such as cogongrass was controlled by flooding, eliminating the need to use recalcitrant herbicides.

A number of specific recommendations related to design and construction methods for the full-scale treatment wetland are presented in this report. Plant community establishment can be accomplished in a timely and cost effective fashion by a combination of using relatively narrow planting strips of nursery-grown plants and natural volunteer plant recruitment. The resulting plant community will likely have a high cover of cattails but will also have considerable overall diversity and many subdominant plant species. A dense cover of robust emergent flood-tolerant plants is considered essential to maximize nitrogen removal in the full-scale treatment wetland.

1.0 Introduction

The Southwest Florida Water Management District (District) plans to construct a large-scale, flow-through, treatment wetland to improve the quality of water discharged from Lake Hancock to Saddle Creek and ultimately to the Peace River. The primary goal of the full-scale treatment wetland is nitrogen removal to help achieve water quality goals in the lower Peace River and Charlotte Harbor. The full-scale treatment wetland will be constructed on the south side of Lake Hancock on reclaimed phosphate mine clay settling areas. The nature of the existing soils leads to design-related issues involving constructability of the proposed wetland grading plan and the suitability of these clayey substrates for initial wetland vegetation establishment through natural recruitment and minimal planting of nursery grown plant stock.

A Plant Establishment Study (Study) was implemented on the south side of Lake Hancock to provide site-specific information to help address these design and construction-related concerns of implementing a large-scale treatment wetland on reclaimed clay settling areas (**Exhibit 1-1**). The Study was initiated in June 2007 and lasted one year. Final sampling was conducted in May 2008. First, second and third quarterly results were presented in previous reports (WSI 2007, WSI 2008a, and WSI 2008b). Results of the year-long Study are provided in this report. Detailed construction and implementation methods, conclusions, and specific recommendations related to design and construction-related methods for the full-scale treatment wetland are also presented in this report. This report provides a final overall summary of the results of the Plant Establishment Study.

2.0 Study Site Description and Monitoring Methods

2.1 Description of the Study Site

2.1.1 System Location

The test cells were constructed on the south side of Lake Hancock as shown in **Exhibit 1-1**. This particular site was selected for the Study for the following reasons:

- The topography was favorable compared to other areas within the District's property boundary and would therefore require less excavation and earthwork.
- The site was relatively clear of thick vegetation and would consequently require minimal site clearing.
- The site was in close proximity to Lake Hancock so water could be piped a minimal distance from the lake and the site was accessible for subsequent monitoring events.
- The site had a relatively thick coverage of cogongrass making it more conducive to testing cogongrass-control techniques.
- The proposed system location had no impact on jurisdictional wetlands occurring within the District's property boundary.

2.2 System Construction

Construction of the Lake Hancock test cells began on June 11, 2007, and was substantially complete by June 22, 2007. **Exhibits 2-1** and **2-2** show the approximate dimensions of the test cells as well as the location of the inflow pipes, valves, water level recorders, and scaffold boardwalks. **Exhibit 2-3** shows the site following completion of construction (photo date June 27, 2007).

2.2.1 Wetland and Cogongrass Cells

Four cells, each approximately 0.25 acres in size, were constructed to assess wetland vegetation establishment techniques. These cells were designated as W-1, W-2, W-3, and W-4. The ground surface of Cells W-1 and W-2 was scraped to remove the thick layer of cogongrass (*Imperata cylindrica*). Cells W-3 and W-4 were constructed at a lower elevation by excavating and removing approximately 3 ft of soil and the associated cogongrass roots and rhizomes.

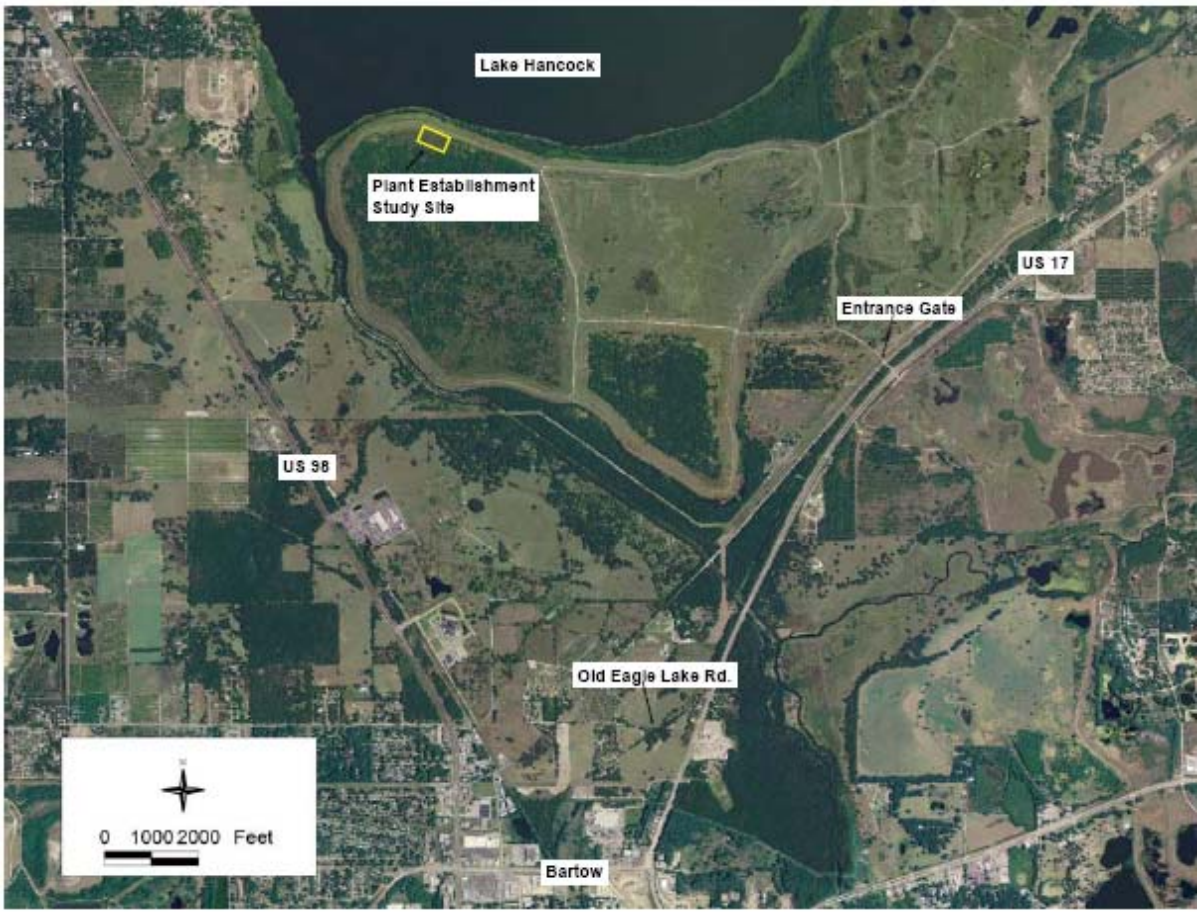


EXHIBIT 1-1
Site map showing the location of the Lake Hancock Plant Establishment Study Site

Two cells, designated as C-1 and C-2, were constructed to assess a variety of control strategies for cogongrass. The two cogongrass cells were smaller (0.11 ac each) than the wetland cells. The ground surface in the two cogongrass cells was left undisturbed so various cogongrass-removal techniques could be evaluated on actively growing cogongrass.

Perimeter berms (5-ft top width, 3-ft height) were constructed around the six cells to contain water. One scraped cell (W-1) and one excavated cell (W-3) were planted with nursery-grown wetland plants **(Exhibit 2-4)**. The other scraped (W-2) and excavated cell (W-4) were not planted so natural recruitment by volunteer plant species could be assessed on bare soil.

A deep water zone was excavated diagonally across each of the four wetland plots to promote even water distribution throughout each plot, provide easy access for water quality sample collection, and provide a sump in which particulates could settle out (**Exhibits 2-1** and **2-2**).

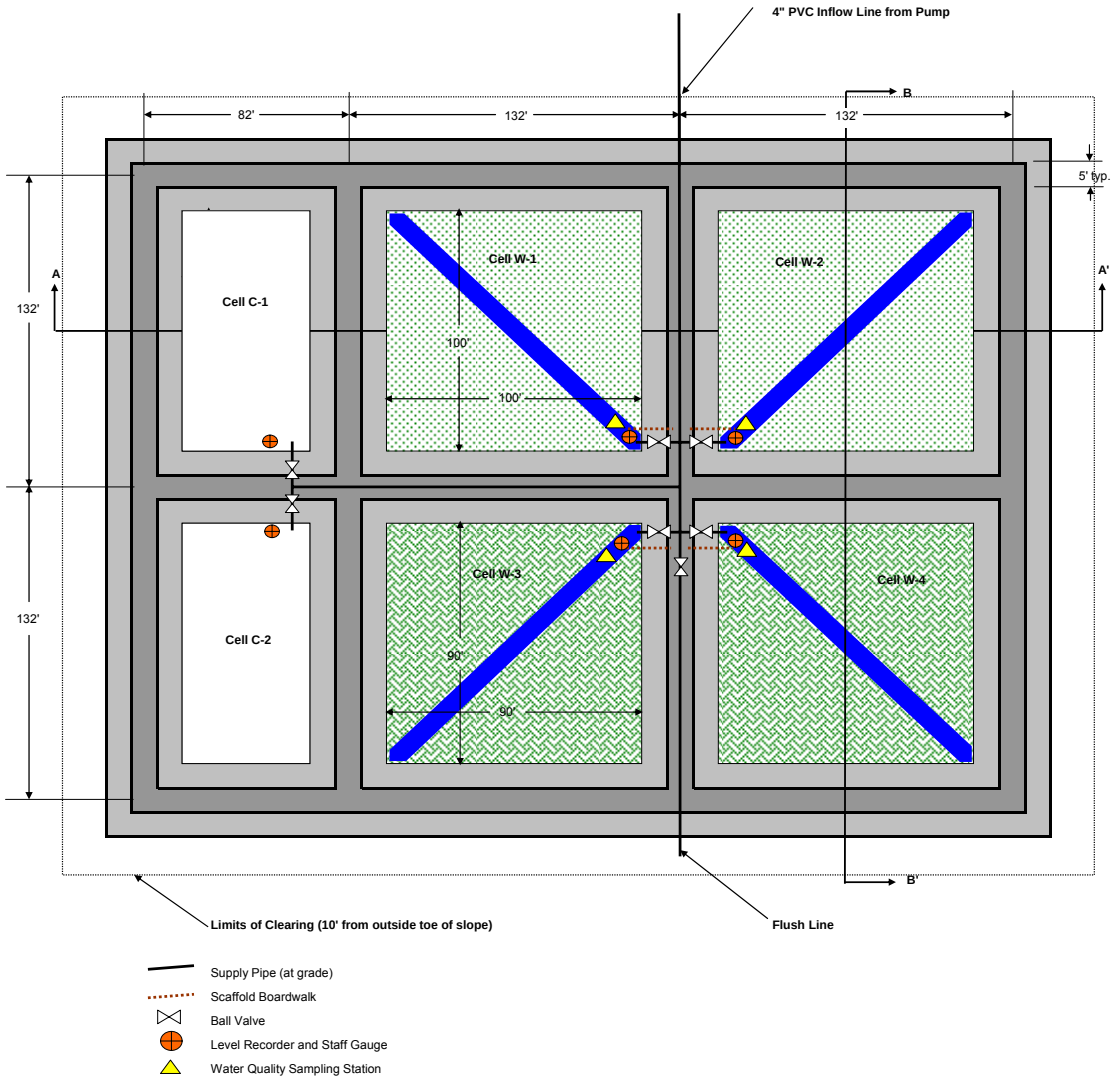
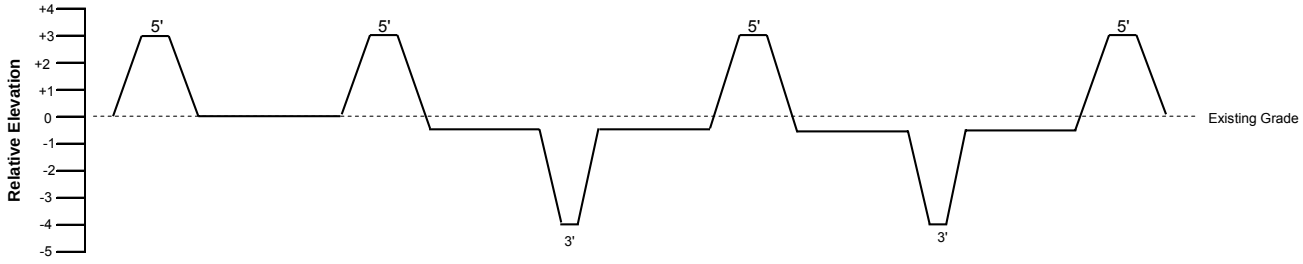
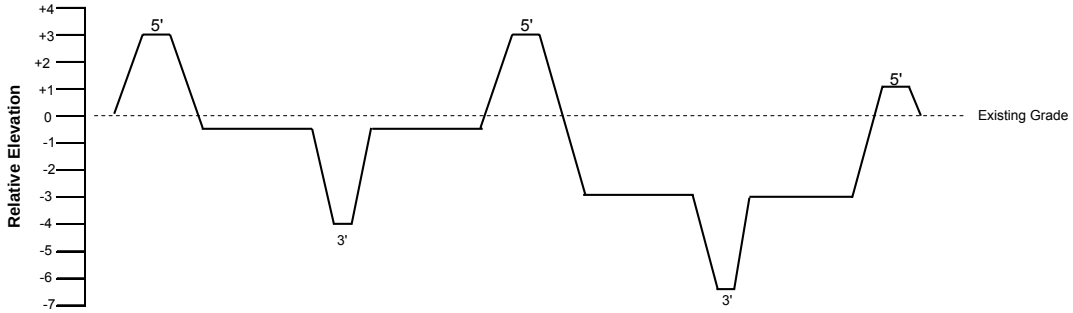


EXHIBIT 2-1
Detailed layout of the Lake Hancock Plant Establishment Study site



SECTION A-A'



SECTION B-B'

NOTES:

All levee top widths 5'.
All side slopes no steeper than 3:1 (H:V).
Deep zone bottom depth 3' below finished marsh elevation.
Deep zone bottom width 3'.
Cells C-1 and C-2 had no disturbance of existing vegetation between inside toes of levees.
Cells W-1 and W-2 had existing vegetation scraped to minimum depth necessary to expose bare soil.
Cells W-3 and W-4 were excavated 3' below existing grade (deep zones to ~6 to 7 feet below existing).
Levee top elevation of 3 feet above existing grade except for SW-SC, CC-SC, CE-SE, and SC-SE which was 1' above
Cleared 10' buffer (strip vegetation) from outside toe of slope.

EXHIBIT 2-2
Approximate cross-section view of the Lake Hancock Plant Establishment Study test cells

2.2.2 Pump and Piping

A portable, 4-inch (16 Hp), gas-operated pump (**Exhibit 2-5**) was used to transfer water from Lake Hancock to the test cells. A 4-inch diameter intake pipe was constructed from a 10-foot section of perforated drainage pipe attached to Schedule 40 PVC solid-wall pipe. The solid pipe was connected to a 20-foot length of PVC suction hose with quick-connect fittings and attached to the suction side of the pump. The discharge piping included a 30-foot section of 4-inch diameter collapsible hose which was connected to solid-wall 4-inch diameter PVC pipe. The discharge pipeline extended to the test cells above ground and buried under the road where inflows to each cell were regulated with 3-inch ball valves (**Exhibit 2-6)**. The inflow pump was stored in an on-site shed and connected to the transfer pipeline only during pumping events.

EXHIBIT 2-3
Aerial photograph of the Lake Hancock Plant Establishment Study site following completion of construction. (Photograph taken June 27, 2007.) Cells W-1 and W-3 were planted. Diagonal deep zones, inflow piping, and access boardwalks are shown. Each of the four wetland cells has a design wetted surface area of 930 m^2. The two cogongrass cells (C-1 and C-2) have a design surface area of 465 m^2 each.

EXHIBIT 2-4
Vegetation Planting Plan for Cells W-2 and W-4 at the Lake Hancock Plant Establishment Study site

Plant Species	% of Planting	# Plants per Cell	Total # of Plants
Pickerelweed (*Pontederia cordata)*	16	200	400
Duck potato (*Sagittaria lancifolia*)	14	175	350
Arrowhead (*Sagittaria latifolia*)	14	175	350
Fireflag (*Thalia geniculata*)	14	175	350
Giant bulrush (*Schoenoplectus californicus*)	14	175	350
Spikerush (*Eleocharis cellulosa)*	14	175	350
Sawgrass (*Cladium jamaicense)*	14	175	350
Total	**100**	**1,250**	**2,500**

2.2.3 Instrumentation, Sampling Platforms, and Fence

Scaffold boardwalks were installed in each of the four wetland cells to provide access to collect water quality samples and download water level recorders. The platforms extended from the central north/south berm outward to the deep water zones.

Continuous water level recorders (Infinities USA) and staff gauges (Stevens, Type C) were installed in each plot to track water levels during the study. **Exhibit 2-7** shows the typical installation of an Infinities USA water level recorder, staff gauge, and access boardwalk.

A field fence was installed around the outside toe of slope of the perimeter berms to prevent cows, hogs, and other unwanted wildlife from disturbing the experimental cells and potentially breaking pipes and uprooting vegetation during the Study.

EXHIBIT 2-5
4-inch 16-HP Pump Used to Pump Water from Lake Hancock to the Plant Establishment Study Cells

EXHIBIT 2-6
Water Distribution Pipes at the Lake Hancock Plant Establishment Study Cells

EXHIBIT 2-7
Water Level Recorder, Staff Gauge, Water Distribution Pipe, and Sampling Boardwalk at the Lake Hancock Plant Establishment Study Cells

2.2.4 Vegetation Planting

Approximately 2,500 bare root emergent plants were installed on 3-ft centers in Cells W-1 and W-3 on June 21, 2007. This design allowed assessment of plant establishment in a scraped cell (Cell W-1) and in an excavated cell (Cell W-3). The plant list and quantity of each species is provided on **Exhibit 2-4.** Plant material was purchased from and installed by Aquatic Plants of Florida, Inc. and was delivered as healthy bare-root seedlings. Individual plant species were installed in linear zones across both W-1 and W-3 (**Exhibits 2-8**). Zone borders were clearly staked so that the plants could be installed in the proper zones and so competition between species could be monitored. Plant zones and the overall experimental design are depicted on **Exhibit 2-9**. No plants were installed in W-2, W-4, or the two cogongrass treatment cells (C-1 and C-2).

EXHIBIT 2-8
Plant Zones at the Lake Hancock Plant Establishment Study Site

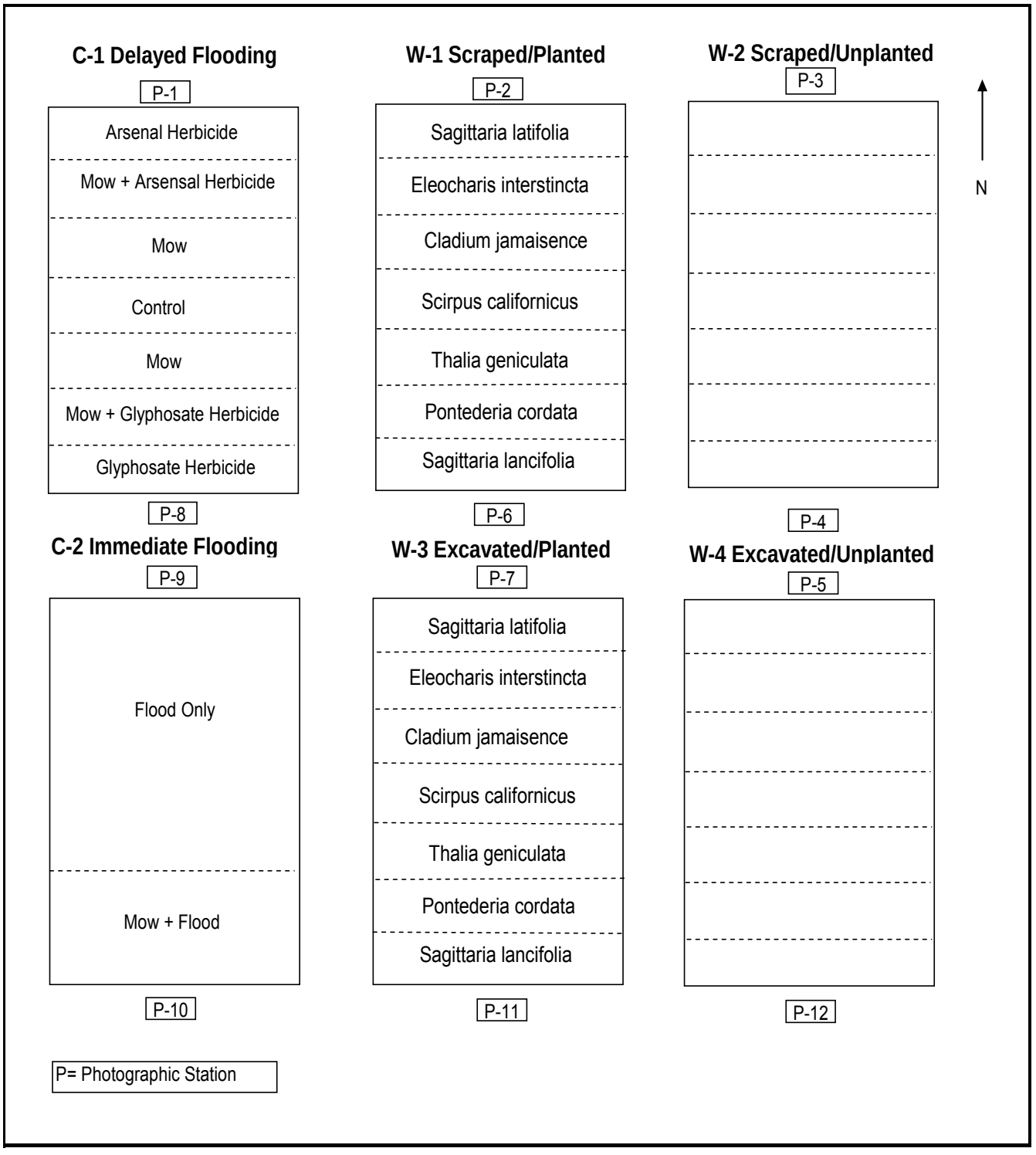


EXHIBIT 2-9
Experimental Design of the Test Cells for the Lake Hancock Vegetation Establishment Study

2.3 Hydrologic Monitoring

Water from Lake Hancock was pumped to Cells W-1, W-2, W-3, W-4, and C-2 on a five to seven-day interval through the 12-month duration of this study from June 2007 through May 2008. Hydration to Cell C-1 was delayed until November 26, 2007 and continued on an approximately seven-day pumping interval through May 2008. Pumping was more frequent during the first part of the study to compensate for water loss through infiltration, evaporation, and low rainfall. Increased rainfall during the second half of the study reduced the need for supplemental water additions.

Target water levels were established in each cell to provide a suitable hydroperiod for survival and growth of planted species in Cells W-1 and W-3, encourage natural recruitment of wetland plants in all four wetland cells, and to examine the effects of flooding on the health of cogongrass in the two cogongrass cells. The variable ground surface elevations in all six cells resulted in a range of water depths in each cell depending on water stage. Cells were initially saturated with minimal standing water to encourage rapid growth of planted and recruiting plants. Following about one month of saturated conditions, water surface elevations were raised to produce approximately 2 – 10 inches of standing water. These initial water stages were maintained until November 2007 when the target water levels were lowered to encourage greater volunteer recruitment, more rapid growth of the planted wetland species, and to account for lower evapotranspiration rates during winter months. The lowered target water levels equated to approximately 0 - 8 inches of standing water in each cell. In March 2008, the target water levels were increased slightly (to approximately 4 – 12 inches of standing water) to favor the obligate wetland species that were recruiting and to discourage the spread of cogongrass and other upland species in the raised portions of the wetland cells, particularly W-2.

Water levels were automatically recorded on an hourly basis using Infinities USA water level recorders. Water level data were downloaded from the six water level recorders approximately monthly. Staff gage readings were recorded from the adjacent gages when each recorder was downloaded. The time of day was also recorded at each download event.

2.4 Vegetation Monitoring

Monthly vegetation monitoring occurred during the 12-month study, with a baseline monitoring event in June 2007 and the final monitoring event in May 2008. Plant cover was estimated in 21 subplots (seven zones per cell and each zone divided into thirds) within each of the four wetland cells and cell C-1 by visually estimating the percent of each subplot that was covered by each species of vegetation. Percent cover was also estimated in the two cogongrass treatment plots in C-2. These monitoring plots are depicted in **Exhibit 2-9**.

Percent cover was estimated using the cover classification categories as follows:

0 = none	5 = 25 - 50% cover
1 = <1% cover	6 = 50 – 75% cover
2 = 1 -5 % cover	7 = 75 – 90% cover
3 = 5 – 10% cover	8 = 90 – 95% cover
4 = 10 – 25% cover	9 = >95% cover

Raw plant cover data were analyzed to calculate total percent cover within each wetland cell by averaging species cover by subplot (n=21). As plants began recruiting and occupying more area within the wetland cells, a data check was needed to ensure that the percent cover computations were reflecting the overall estimated cover within each cell. Beginning in October 2007, total percent cover for all plant species within each cell was visually estimated using the above cover categories. Those independent estimates were used to provide a quality check for all plant species combined and to compare the visually estimated total vegetation coverage in each plot with the computed total vegetation coverage (using n = 21). Based on this comparison, historic species cover field estimates were adjusted to better reflect overall lower visual estimates.

Additional vegetation monitoring was implemented in Cells C-1, C-2, and four additional cogongrass plots (see **Exhibit 2-3**) to further assess the effectiveness of the cogongrass control strategies. Degree of cogongrass die-back was evaluated by estimating the percent of the plot with green (i.e., unaffected) cogongrass, yellow/brown (i.e., stressed, dieing, or dead) cogongrass, and bare ground (i.e., dead and decomposed cogongrass). The percent of cogongrass in each of these three categories was estimated using the cover classifications as described above. There were no modifications made to the cogongrass die-back dataset because cover estimates were only made for cogongrass dieback, rather than for multiple species.

Photographs were taken during each monthly vegetation monitoring event from the 12 designated photo stations depicted by "P" at the end of each cell as shown in **Exhibit 2-9.** A photographic record comparing changes in the experimental cells at time 0 and after four, eight, and 12 months of growth is presented in **Appendix A.**

2.5 Water Quality Monitoring

Water quality parameters, consisting of both field and laboratory parameters, were measured monthly in the deep zone of each of the four wetland cells, in C-2, and at the edge of Lake Hancock during the 12-month study to determine water quality effects on plant growth, evaluate startup nutrient releases from soils, estimate wetland performance, and provide data to update performance estimates for the full-scale project. Water quality parameters were also measured monthly in cell C-1, the delayed hydration cell, beginning in December 2007 and extending through May 2008. The measured field parameters,

measurement equipment, and field methods are listed in **Exhibit 2-10** and laboratory parameters and associated methods are listed on **Exhibit 2-11.**

Unpreserved sample bottles were used to collect water samples just below the water surface. The water sample from the unpreserved bottle was then poured into the preserved sample containers. All samples were collected carefully to avoid entrainment of plants and floating sediments in the water column. A quality control duplicate sample was collected for analysis during each monthly sampling event. Water samples requiring filtration were filtered in the lab. Following collection, samples were preserved on ice and delivered to the analytical laboratory within the required holding times as noted on **Exhibit 2-11**. Advanced Environmental Laboratories, Inc. (AEL) in Gainesville, Florida performed the water analyses. Chain-of-custody documentation accompanied the water samples that were transported to the laboratory.

2.6 Soil Sampling

Shortly after initial flooding, high phosphorus (P) levels were detected in water samples from the experimental plots. Because the phosphorus concentrations measured in water at Lake Hancock was lower than the initial concentrations in the cells, it appeared that phosphorus was being released from the soil substrate during flooding. To verify this assumption soils were collected from the cells for chemical analysis.

Two soil sampling events were added to the field sampling regime mid-way through this Study to characterize P concentrations in the soils and to better estimate the effects of soil P levels on startup P concentrations in the full-scale wetland. Soil samples were collected in October 2007 and January 2008 and analyzed for total inorganic P (TIP), total phosphorus (TP), sulfate (SO_4), aluminum (Al), calcium (Ca), iron (Fe), bulk density, and dry weight solids. During comparison of the two data sets it appeared that TIP from the October data set was unrealistically low compared to expectations for this soil and compared to the January 2008 data. After scrutinizing the laboratory data, laboratory methods, and laboratory protocols, it was concluded that the problem was a laboratory error. Because the laboratory had not retained the October soil samples, they agreed to rerun another set of soil samples at no additional charge. Therefore a third set of soil samples were collected in April 2008 and analyzed for TIP and TP.

Soil samples were collected by first removing the soil surface layer and then collecting a sample from an approximate depth of 2 – 10 inches. Three soil samples were collected from the cell bottom in each of the six experimental cells and then composited to form one composite soil sample from each cell. The October 2007 sampling event occurred prior to flooding in C-1, providing a soil sample from a cell with no prior flooding. Because no construction disturbance occurred within the cell bottom of cells C-1 and C-2, these two cells provided samples from undisturbed soils. A soil sample outside of the fenced-in study area was collected in April to serve as an additional soil sample that was not flooded. Analytes of concern, analysis methods, and detection limits are listed in **Exhibit 2-11.** Samples were delivered to the analytical laboratory within the required holding times as noted on **Exhibit 2-11**. Soil analyses were performed by AEL. Chain-of-custody forms accompanied the soil samples that were transported to the laboratory.

2.7 Cogongrass Eradication Experimental Plots

Cogongrass experiments were implemented to assess whether cogongrass could be extirpated by flooding alone rather than by more expensive site preparation methods such as mowing, herbicide application, scraping, or excavating the ground surface. Multiple cogongrass control strategies and two flooding scenarios were implemented in the two cogongrass cells (C-1 and C-2) during the initial startup in June and July 2007. Four additional cogongrass plots were established outside of the fenced Study to assess herbicide efficacy on vigorously growing cogongrass. These four additional cogongrass plots were circular and approximately 10 ft in diameter. The experimental methods are described in **Exhibit 2-12**. The experimental design was described above in Section 2.1 and is visually depicted on **Exhibit 2-9.**

Flooding was initiated in Cell C-1, the delayed flooding cell, on November 20, 2007. Several cogongrass treatment methods were implemented in Cell C-1 in preparation for the delayed flooding event as noted on **Exhibits 2-9 and 2-12**. The herbicide, Gly-Star, was reapplied to the "Gly-Star Herbicide Only" and "Mow + Gly-Star Herbicide" plots in C-1 on November 14, 2007. The two "Mow Only" plots in C-1 were also mowed for a second time on November 14, 2007.

EXHIBIT 2-10
Summary of Field Parameter Methods and Standards for the Lake Hancock Plant Establishment Study

Field Parameter	Equipment[a]	Method
Water Temperature	YSI 556	FT 1400
Dissolved Oxygen	YSI 556	Air Calibrate, FT 1500
pH	YSI 556	4, 7, and 10 units, FT 1100
Conductivity / Specific Conductance	YSI 556	1000 µmhos/cm @25^{o}C, FT 1200

[a] or with comparable meter

[b] FT-series SOPs (Field Testing & Calibration) in "DEP Standard Operating Procedures for Field Activities", January 1, 2002. (DEP-SOP-001/01)

EXHIBIT 2-11
Water Quality and Soil Parameters, Analysis Methods, and Reporting Limits for the Lake Hancock Plant Establishment Study

Water Parameter	Method	Reporting Limit	Holding Time	Preservative
Organic Nitrogen	Calculated[a]	0.1 mg/L	28 Days	--
Total Nitrogen	Calculated[b]	0.1 mg/L	28 Days	--
Total ammonia-N	EPA 350.1	0.01 mg/L	28 Days	H_2SO_4, <4°C
Total Kjeldahl N	EPA 351.2	0.1 mg/L	28 Days	H_2SO_4, <4°C
Total Kjeldahl N - Dissolved[c]	EPA 351.2	0.1 mg/L	28 Days	H_2SO_4, <4°C
Nitrate+Nitrite-N	EPA 353.2	0.004 mg/L	28 Days	H_2SO_4, <4°C
Ortho-phosphorus	EPA 365.2	0.004 mg/L	48 Hours	<4°C
Total Phosphorus	EPA 365.1/365.3	0.004 mg/L	28 Days	H_2SO_4, <4°C
Total Suspended Solids	EPA 160.2	2 mg/L	7 Days	<4°C
Sulfate	EPA 375.4	1 mg/L	28 Days	<4°C
Calcium	EPA 200.7/6010 (ICP)	0.05 mg/L	180 Days	HNO_3, <4°C
Aluminum	EPA 200.7	50 ug/L	180 Days	HNO_3, <4°C
Iron	EPA 200.7/6010 (ICP)	50 ug/L	180 Days	HNO3, <4oC

Soil Parameter	Method	Reporting Limit	Holding Time	Preservative
Total Phosphorus	IFAS	1.0 mg/kg	28 Days	<4°C
Ortho-phosphorus	IFAS	1.0 mg/kg	48 Hours	<4°C
Sulfate	EPA 375.4	40 mg/kg	28 days	<4°C
Calcium	EPA 6010B (ICP)	0.002 mg/kg	6 Months	<4°C
Aluminum	EPA 6010B (ICP)	3.6 mg/kg	6 Months	<4°C
Iron	EPA 6010B (ICP)	0.1 mg/kg	6 Months	<4°C

[a] = Calculated as Total Kjeldahl N - Total Ammonia-N

[b] = Calculated as Total Kjeldahl N + (Nitrate + Nitrite N)

[c] = Sample was Preserved After Lab Filtration

EXHIBIT 2-12
Cogongrass Control Strategies at the Lake Hancock Plant Establishment Study

Cell	Control Strategy	Implementation Methodology
C-1	Arsenal herbicide; flooding delayed 4 months	A 4% solution of 28.7% of the active ingredient Imazapyr (5.1 oz per gallon of water) was formulated. The surfactant, Lastick, was added to the Arsenal/water mixture (2 tablespoons per gallon). The herbicide was applied to a 50 ft wide by 12.5 ft long plot using a backpack sprayer on 6/20/07. Weather conditions were hot, dry, and a very light breeze. Flooding began on 11/26/07.
C-1	Mow + Arsenal herbicide; flooding delayed 4 months	A 50-ft wide by 12.5-ft long plot was mowed to a height of 10 in or less on 6/20/07 and again on 10/11/07 using a hand-held weed-eater. Arsenal herbicide was applied to the mowed plot at the rate noted above one month after mowing on 7/17/07 when the cogongrass was vigorously growing. Flooding began on 11/26/07.
C-1	Gly Star Plus herbicide; flooding delayed 4 months	A 4% solution of 41% of the active ingredient Glyphosate (5.3 oz per gallon of water) was formulated. The herbicide was applied to a 50 ft wide by 12.5 ft long plot using a backpack sprayer on 6/20/07. Weather conditions were hot, dry, and a very light breeze. Gly Star Plus was re-applied at the above rate on 11/14/07. Flooding began on 11/26/07.
C-1	Mow + Gly Star Plus herbicide; flooding delayed 4 months	A 50-ft wide by 12.5-ft long plot was mowed to a height of 10 in or less on 6/20/07 and again on 10/11/07 using a hand-held weed-eater. Gly Star Plus herbicide was applied to the mowed plot at the rate noted above one month later on 7/17/07 and 11/14/07 when the cogongrass was vigorously growing. Flooding began on 11/26/07.
C-1	Mow; flooding delayed 4 months	Two 50-ft wide by 12.5-ft long plots were mowed to a height of 10 in or less on 6/20/07 using a hand-held weed-eater. The plot was mowed again on 11/14/07 in preparation for flooding C-1. Flooding began on 11/26/07.
C-1	Control; flooding delayed 4 months	The existing cogongrass was left undisturbed to compare the effects of delayed flooding in the absence of other cogongrass control strategies. Flooding began on 11/26/07.
C-2	Mow + immediate flooding	A 50-ft wide by 30-ft long plot was mowed to a height of 10 in or less on 6/26/07 using a hand-held weed-eater. Flooding commenced on 7/21/07, but has been intermittent due to water loss. The 50-ft wide by 30-ft long plot was again mowed on 7/17/07 and 9/13/07 using a hand-held weed-eater.
C-2	Immediate flooding	Flooding commenced on 6/21/07 in the 50-ft wide by 70-ft long cell but has been intermittent due to water loss.
Four Additional Vigorously Growing Cogongrass Plots	Arsenal herbicide; no flooding	5.1 oz of 28.7 % of the active ingredient, Imazapryl, was added to 1 gallon of water. The surfactant, Lastick, was added to the arsenal/water mixture at a rate of 2 tablespoons per gallon. The herbicide was applied to four circular plots with an approximate diameter of 10 ft using a backpack sprayer on 6/20/07. Weather conditions were hot, dry, and a very light breeze.

3.0 Results

3.1 Hydrology

Exhibits 3-1 through **3-3** depict the continuous hydrographs for the four wetland cells and the two cogongrass cells beginning with the initial hydration event right after construction in June 2007 and through the 12-month duration of this study. Average ground elevation within each cell and rainfall from the nearby P-11 rain gauge have been added to these hydrographs. Flooding in Cell C-1, the delayed hydration cell, began in November 2007.

Water levels in the two scraped cells (W-1 and W-2) and the two excavated cells (W-3 and W-4) fluctuated during the first month of operation when lake water pumping into the cells began (**Exhibits 3-1 and 3-2)**. By mid-July, the cells began retaining water and remained almost continuously inundated through May 2008 in response to rain events and supplemental hydration from pumping events.

Water levels declined in late November 2007 in response to a deliberate reduction in pumping to reduce the target water levels and the onset of the dry season. Target water levels were established in each wetland cell to provide a shallow inundation regime necessary to support the planted wetland species in Cells W-1 and W-3 and to encourage natural recruitment of wetland plant species in all four wetland cells. Because the ground level is uneven in the wetland cells, the initial target water levels translated into a water depth range of roughly 0.6 ft in each cell.

Field observations revealed that natural wetland plant recruitment was only occurring in the shallowest zones, primarily along the toe of slope and in the raised areas where shallow inundation occurred. In late November, 2007 the target water levels were adjusted downward to encourage additional volunteer plant recruitment in broader areas within the experimental cells, by reducing the deep areas and creating more shallow inundation areas. Target water levels were increased in March 2008 (to approximately 4 – 12 inches of standing water) to favor the obligate wetland species that were recruiting and to discourage the spread of cogongrass in the raised portions of the wetland cells, particularly W-2. The hydrographs of the four wetland cells illustrate the reduction in water levels in late November 2007 and increase in target water levels in March 2008 (**Exhibits 3-1 and 3-2)**.

Water level in C-1, the delayed flooding cogongrass cell, fluctuated widely since artificial hydration began in November 2007 (**Exhibit 3-3**). This fluctuation was likely caused by a high rate of infiltration, a lag-time required to reach a water table equilibrium, and weekly (rather than more frequent) pumping events. Like C-1, the water level in C-2, the flooded cogongrass cell, fluctuated widely (**Exhibit 3-3**)**.** Therefore, pumping was often concentrated in the two cogongrass cells since they were not as efficient at retaining water.

A water budget was developed to quantify the volume of water added to the four wetland cells with regards to rainfall and artificial hydration with lake water. The volume and percent of rain water and lake water added to each cell is summarized on **Exhibit 3-4**. Graphs illustrating the period-of-record time-series and cumulative inflow of water and the stage-frequency curves for the four wetland cells are provided in **Appendix B**.

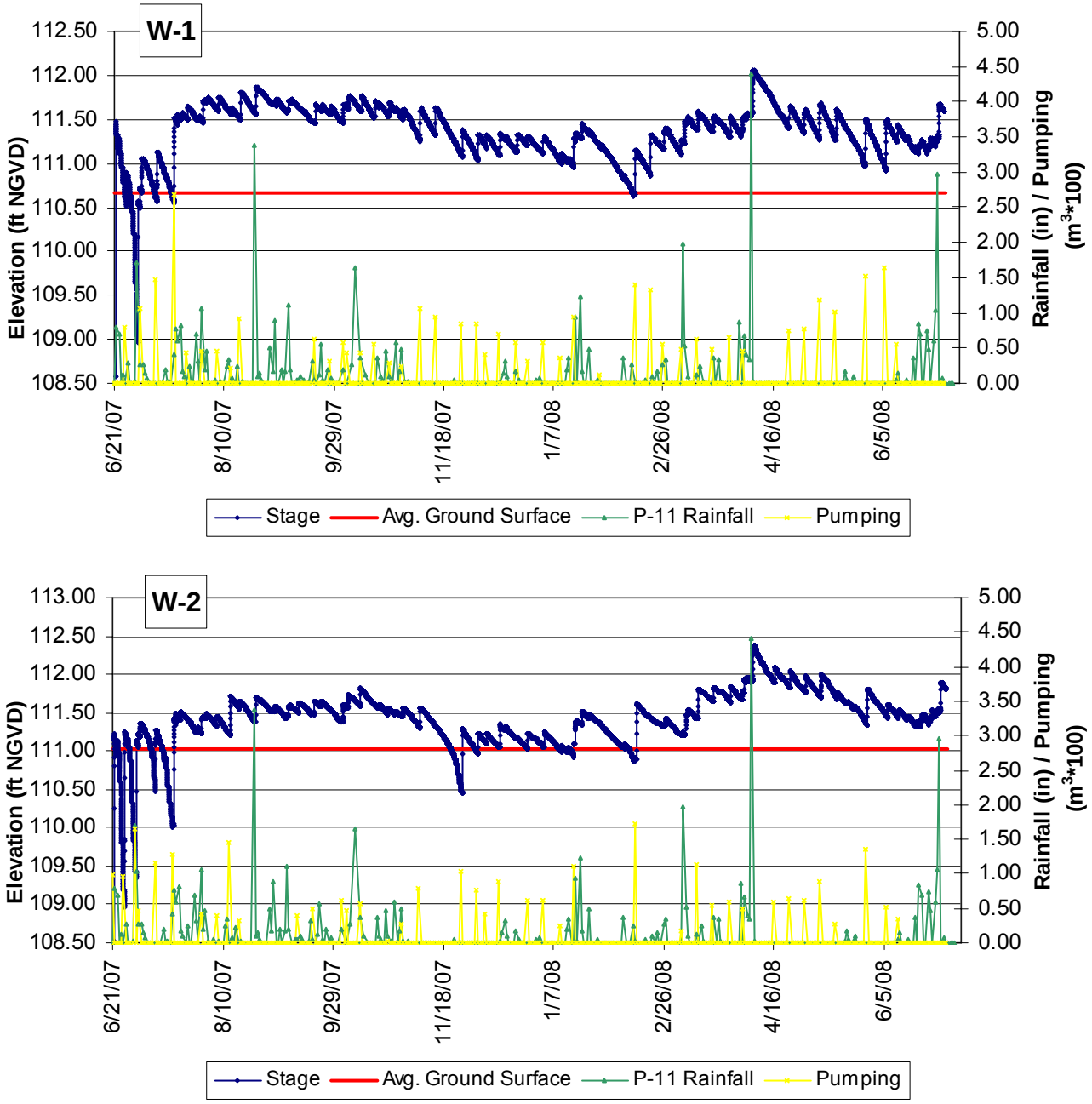


EXHIBIT 3-1
Time Series of Hourly Water Levels, Average Ground Elevation, Rainfall, and Pumpage in Wetland Cell W-1(Scraped and Planted Cell) and W-2 (Scraped and Unplanted Cell) of the Lake Hancock Plant Establishment Study from June, 2007 through June 2008. Rainfall Data are from the nearby P-11 Structure.

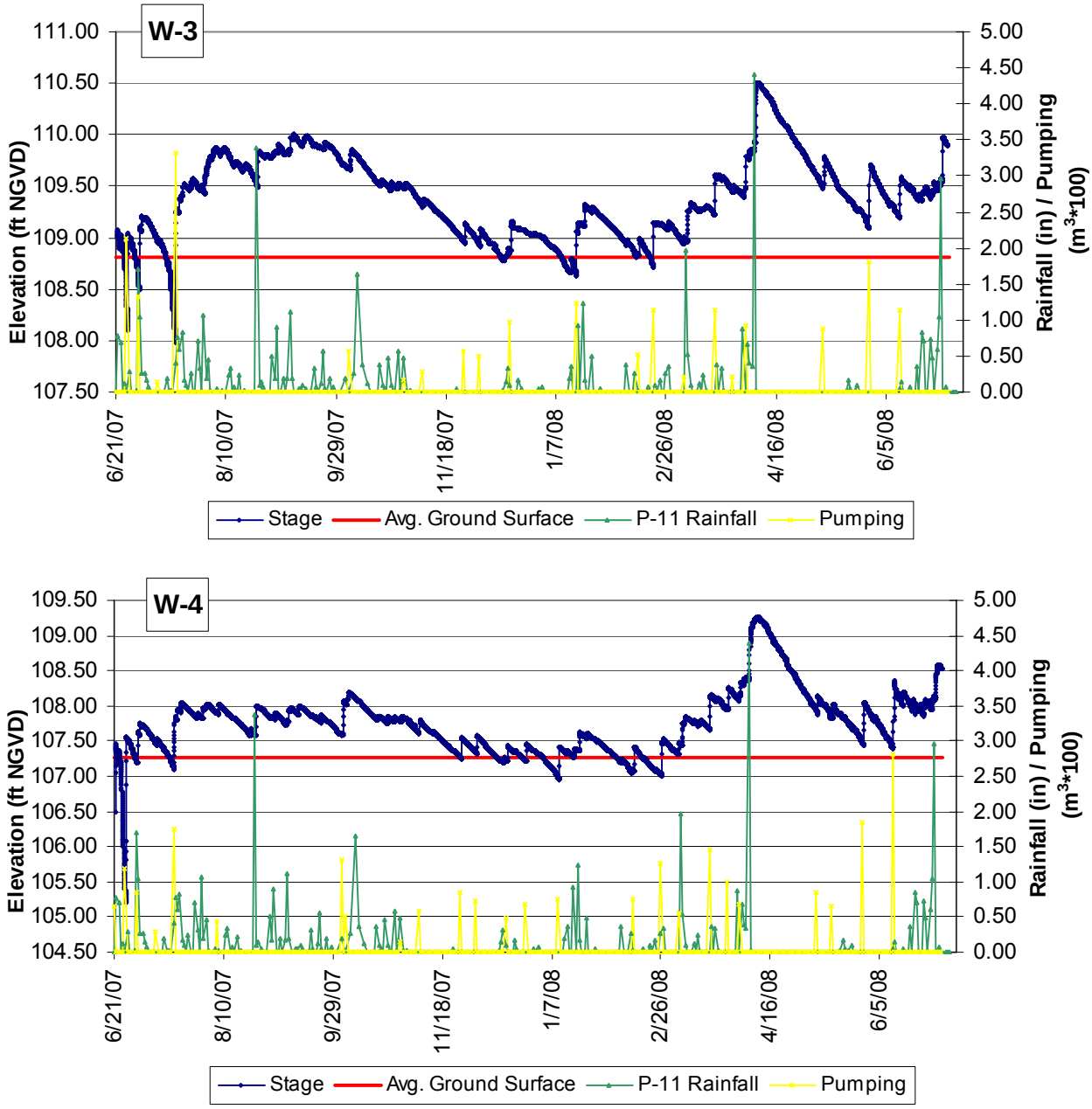


EXHIBIT 3-2
Time Series of Hourly Water Levels, Average Ground Elevation, Rainfall, and Pumpage in Wetland Cell W-3 (Excavated and Planted Cell) and W-4 (Excavated and Unplanted Cell) of the Lake Hancock Plant Establishment Study from June 2007 through June 2008. Rainfall Data are from the nearby P-11 Structure.

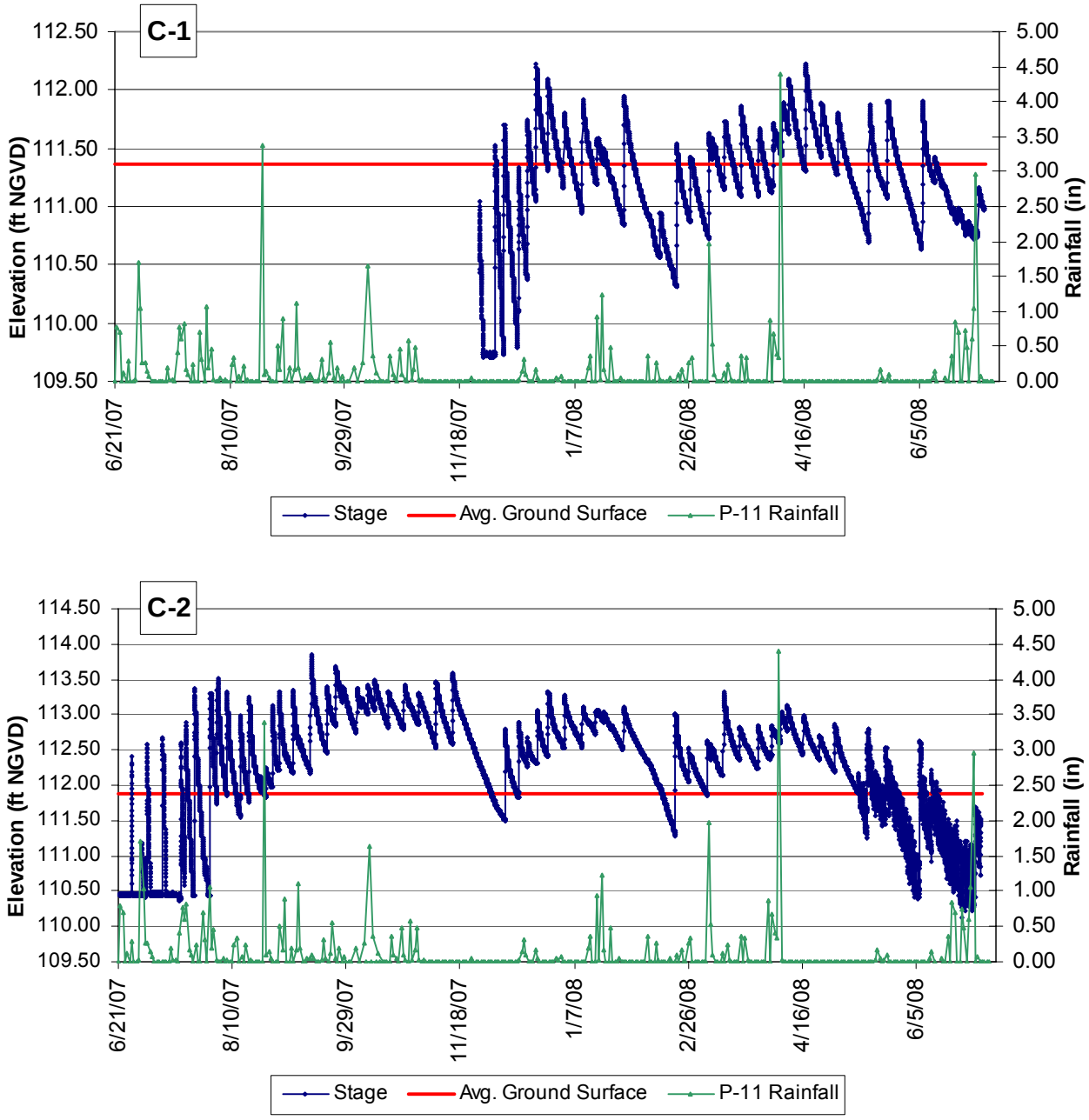


EXHIBIT 3-3
Time Series of Hourly Water Levels, Average Ground Elevation, Rainfall, and Pumpage in Wetland Cell C-1 (Delayed Flooding Cogongrass Cell) and C-2 (Immediately Flooded Cogongrass Cell) of the Lake Hancock Plant Establishment Study from June, 2007 through June 2008. Rainfall Data are from the nearby P-11 Structure

Since there were no surface overflows of water from the cells their total water losses were approximately equal to the total estimated inflows in Exhibit 3-4. The total water net losses ranged from 3,136 to 4,537 m^3/yr during this study. This equates to total water net loss rates averaging about 1.3 and 1.2 cm/d in cells W-1 and W-2 and 0.92 and 1.0 cm/d in cells W-3 and W-4. These net water loss rates are considerably higher than what would be expected due to evapotranspiration alone (approximately 0.33 cm/d reported for 2007 at the Dover station).

Over the 12-month study, a higher volume of lake water was pumped into the two scraped cells, W-1 and W-2, (2,829 to 3,315 m^3) as compared to the two excavated cells (1,914 to 2,306 m^3) (**Exhibit 3-4)**. Pumping accounted for about 70 to 73 percent of the inflow water to the two scraped cells as compared to about 61 to 65 percent to the two excavated cells. Estimated direct rainfall contributed the remaining fraction of the water inflows to the cells. None of the experimental cells had any discharges of surface water during the period of this study.

The targeted water levels were generally achieved during each weekly pumping event. On few occasions, a full day of pumping could not raise the water level in all cells to the target point when a substantial decline in the water level occurred due to lack of rainfall and high evapotranspiration rates. On other occasions, pumping was not implemented to those cells (generally the two excavated cells, W-3 and W-4) when the water level was at or above the target level. The two scraped cells required more supplemental water to retain the target water levels presumably due to greater leakage through the separating berm from the higher ground surface in the two scraped cells to the lower ground surface in the two excavated cells. Water loss from the two scraped cells could also have occurred from slightly greater vertical permeability and higher evapotranspiration since the surface area in the two scraped cells was slightly greater than the two excavated cells.

EXHIBIT 3-4
Summary of Estimated Rainfall and Lake Water Added to the Wetland Cells of the Lake Hancock Plant Establishment Study from June 2007 through June 2008. Rainfall Data are from the nearby P-11 Structure. (the approximate wetted area of each cell was 930 m^2)

Cell	Volume of Added Water (m^3)			Volume of Added Water (%)		
	Rainfall	Pumping	Total	Rainfall	Pumping	Total
W-1 (scraped and planted)	1222	3315	4537	27	73	100
W-2 (scraped and unplanted)	1222	2829	4050	30	70	100
W-3 (excavated and planted)	1222	1914	3136	39	61	100
W-4 (excavated and unplanted)	1222	2306	3528	35	65	100

3.2 Vegetation Monitoring

Vegetative cover was monitored monthly to assess how various hydroperiods (depth and duration of flooding) and site conditions (bottom elevation, planted, unplanted) affected the

establishment, recruitment, and succession of vegetation in the wetland cells. Graphs depicting total vegetative cover, temporal cover of planted species, final cover of planted species, cover of cogongrass, and cover of recruited species over the 12-month study period are provided in **Exhibits 3-5, 3-6, 3-7, 3-8, and 3-9** respectively**.**

Total vegetative cover, which consisted of both planted and naturally recruited species, was low (<1 percent) during the initial monitoring event in June, 2007 following construction. The only plants present during the baseline monitoring event were those seven species that were planted in cells W-1 and W-3. Rapid growth of most of the planted species and recruitment of wetland-adapted species occurred during the first five months after establishment and corresponded to an active growing season from June through November 2007. By May 2008 the two planted cells, W-1 and W-3, exhibited about 70 to 75 percent vegetative cover (**Exhibit 3-5)**. The plant cover consisted of both a high coverage of planted species and moderate recruitment of wetland species around the toe of the slope and in the shallow portions of the cells. The two unplanted cells, W-2 and W-4, exhibited a lower total vegetative cover of plants. Coverage was highest near the toe of slope and on shallower areas within the two cells. By May 2008, total plant cover was higher in the scraped cell W-2 (40 percent) than in the excavated cell W-4 (30 percent). Qualitative observations in early July 2008 of Cell W-2 indicated about 90 percent total plant cover (much greater than the final quantitative estimate of 40 percent collected during May). Similarly, by July 2008 percent cover in Cell W-4 had increased to approximately 50 percent from 30 percent as reported during the last monitoring event in May 2008.

Total vegetative cover of plant species increased substantially during the 2007 growing season and then declined in February and March 2008 in response to a frost in early January that caused noticeable damage to the more sensitive species such as the various *Ludwigia* and *Cyperus* species. Some of the planted species (duck potato, arrowhead, fireflag, spikerush, and pickerelweed) also sustained frost damage, especially those individuals that were not inundated and not buffered by the standing water. (A list of planted species is provided in **Exhibit 2-4**). The plants then began vigorous growth in April and May 2008, which is depicted in a notable increase in total vegetative cover (**Exhibit 3-5)** and shown in the photographs in **Appendix A**.

Coverage of planted species peaked at over 60 percent cover in the two planted cells (W-1 and W-3) in November 2007, which marked the end of the 2007 growing season. After a temporary winter decline, the planted species increased again in April and May 2008 (**Exhibit 3-6**) to an estimated cover of about 60 percent in the scraped cell W-1 and 70 percent in the excavated cell W-3 by the end of the Study in May 2008.

Five of the seven planted species (duck potato, spikerush, fireflag, pickerelweed, and arrowhead) quickly established after planting and began vigorously growing in the wetland cells. With the exception of duck potato, those species flowered, fruited, and expanded laterally during the 12-month study period. Surprisingly, the other two planted species - bulrush and sawgrass - exhibited high initial mortality following planting and poor growth rates; however, their survival was slightly better in the excavated cell (W-3) than in the scraped cell (W-1). By the end of the 12-month study, four planted species stood out as the most successful with respect to survival, growth, and overall plant vigor. Of the four, three species – spikerush, pickerelweed, and fireflag exhibited over 80 percent cover within their planted zones at the end of the 12-month study period. Arrowhead had almost 70 percent

cover (**Exhibit 3-7)**. The high rate of growth can be seen in the photographs in **Appendix A** for W-1 and W-3, the two planted cells. During the first half of the study, duck potato successfully established in its planted zone. However, spikerush, the most vigorously growing plant, expanded beyond its planting zone and encroached heavily into the duck potato zone. Consequently, duck potato declined substantially during the second half of this 12-month study.

Above-ground cover of cogongrass was almost completely removed during construction of the four wetland cells as indicated by zero percent cover of cogongrass during the baseline monitoring event (**Exhibit 3-8)**. In Cell W-2, the scraped and unplanted cell, cogongrass began sprouting from residual rootstock and increased in cover after the first month of operation. Flooding has likely limited the re-establishment of cogongrass in the other cells. A raised portion on the western side of Cell W-2 was often without standing water, which allowed the cogongrass to survive and expand in that cell. Cogongrass has also re-established along the toe of slope in each cell. Cogongrass declined in W-2 in March 2008 after the target water level was increased in part to control cogongrass in this wetland cell. At the end of this 12-month study, coverage of cogongrass was satisfactorily controlled and remained at less than 3 percent cover in all four wetland cells.

Recruitment of wetland plant species (which does not include cogongrass) increased noticeably during the second half of the 12-month study as plant seeds dispersed, germinated, and grew. Cover of recruited species was highest in April and May 2008 in W-2 and W-4, the two unplanted cells (**Exhibit 3-9)**. Competition by the planted species in Cells W-1 and W-3 likely limited natural recruitment in the two planted cells. Dominance of volunteer plant species continued in the two unplanted cells as more wetland plants matured and reproduced.

Natural recruitment by volunteer wetland plant species was most noticeable in Cells W-2 and W-4 where raised mounds and the toe of the side slopes provided more favorable (saturated but not deeply flooded) conditions for recruitment. Minimal recruitment of plants occurred initially where continual deeper inundation (i.e., > ~ 5-8 inches) occurred. Target water levels were dropped in November 2007 to approximately 0 – 8 inches to encourage additional natural recruitment. In March 2008 target water levels were raised to approximately 4 – 12 inches of standing water to favor the obligate wetland species that were recruiting (i.e., cattails) and to discourage the spread of cogongrass in the raised portions of the wetland cells, particularly W-2. Qualitative observations in Cell W-2 indicated about 90 percent total cover of volunteer plants within the twelve months since system construction was complete and less than five percent cover of cogongrass. After one year, 56 plant species had recruited into the wetland cells. As expected, early recruitment is manifested by early colonizing, fast growing, and often weedy species.

Natural recruitment clearly accelerated as the 12-month study progressed, especially in the saturated and shallow inundation areas. However, it was not clear what the most favorable hydroperiod should be to select for a high recruitment of wetland plant species. Therefore, ground elevations were measured at locations where multiple individuals of each plant species had recruited first in September 2007 and then in May 2008. The hydroperiod was then calculated for each dominant plant species (or genera) by plotting the range of elevations of occurrence with respect to specific water regime elevations. The water regime elevations are P-10, P-25, P-50, P-75, and P-90. The P-10 water regime elevation is defined as

the elevation that exceeded the water level 10 percent of the time (or the elevation at which standing water occurred at least 90 percent of the time).

This comparison of elevations at which recruited (volunteer) plants were growing during May 2008 in relation to specific water regime elevations for a selected suite of wetland plants is presented by cell in **Appendix C**. The elevation range for the recruited plant species from all cells combined is illustrated in **Exhibit 3-10** The measured ground elevations of the plants depicted on **Exhibit 3-10** are shown in relation to P-50, which is the median water surface elevation (using an arbitrary zero equal to the estimated average ground elevation in each cell). Thus, plants measured above 0 were growing at an elevation higher than the median water elevation and plants shown below 0 were growing at an elevation below the median water elevation. The plant species are arranged on the graph from left to right with those species occurring at the highest elevation (drier) to those species occurring at the lowest elevations (wetter).

All of the recruited wetland species were growing slightly below the median water surface elevation, or the elevation at which standing water occurred at least 50 percent of the time (**Exhibit 3-10).** Several of the volunteer plant species were restricted to the areas with very shallow inundation and the shortest duration of inundation. These "more shallow inundation" species included Caesar weed (*Urena lobata*), amaranthus, (*Amaranthus* sp.), cyperus species (*Cyperus odoratus, C.* sp.), odorweed (*Pluchua odorata*), sicklepod (*Sesbania* sp.), Ludwigia species (*Ludwigia peruviana, L. octovalvis, L. decurrens*), eclipta (*Eclipta alba)*, water dock (*Rumex crispus*), an unknown grass, smartweed (*Polygonum punctatum*), and Bermuda grass (*Cynodon dactylon*). Consequently, these data suggest that these early colonizing plant species will likely colonize the most shallow reaches of the large-scale constructed wetland, especially during the early operational period. These data also suggest that cogongrass could become established in the higher reaches of the large-scale wetland where inundation depth and duration is not sufficient to control this undesirable species.

Two desirable treatment wetland species – cattail (*Typha* sp) and water hyacinth (*Eichhornia crassipes*) – tended to recruit at elevations lower than the "more shallow inundation" species and consequently can tolerate somewhat deeper water and a longer duration of inundation. By the end of the one-year study these two species had the highest average cover of all volunteer plant species in the unplanted wetland cells. By May 2008 cattails had estimated cover values of approximately 12 percent in both unplanted cells while water hyacinth had estimated cover values of about 12 percent in W-2 and 9 percent in W-4 (**Appendix C**). It is expected that these two species will be common early recruits into the slightly deeper areas of the large-scale treatment wetland. Just as important, the data on **Exhibit 3-10** suggest that early colonization tends to occur at median water depths not exceeding 0.7 – 0.8 ft, and that colonization of most species occurs at median water depths not exceeding 0.2 – 0.3 ft. The exception is water hyacinth, a floating species that can tolerate deeper water levels.

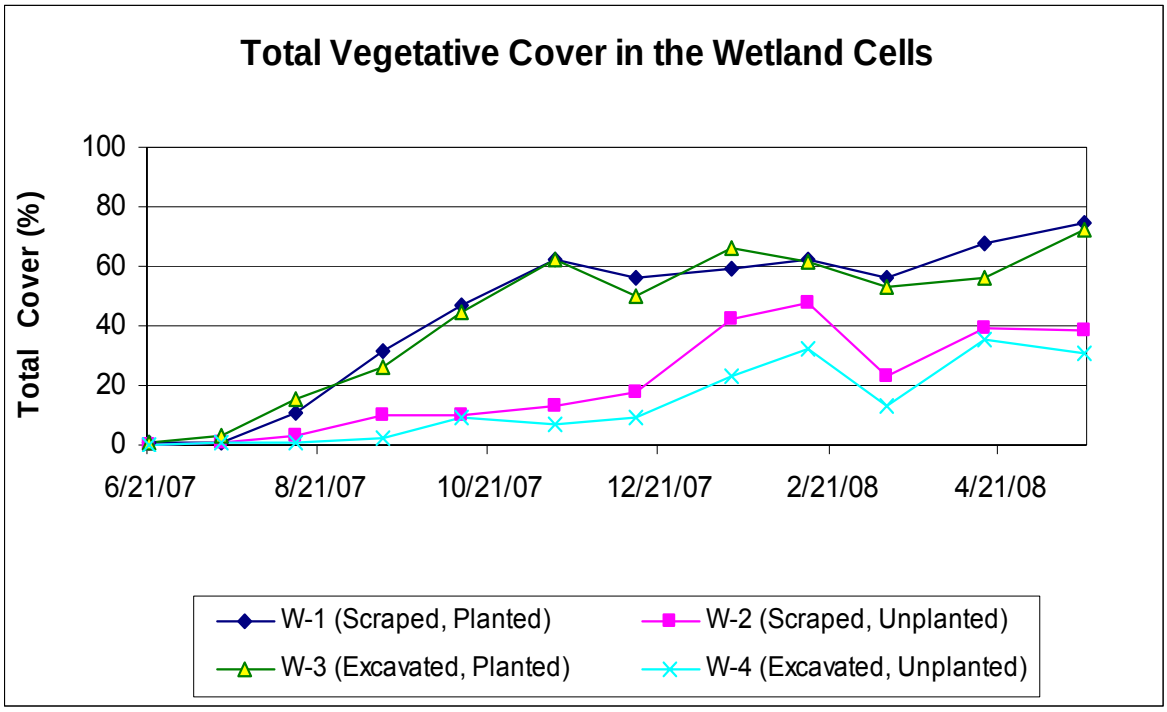


EXHIBIT 3-5
Total Vegetative Cover in the Wetland Cells of the Lake Hancock Plant Establishment Study from June 2007 through May 2008 (values include contributions of cogongrass)

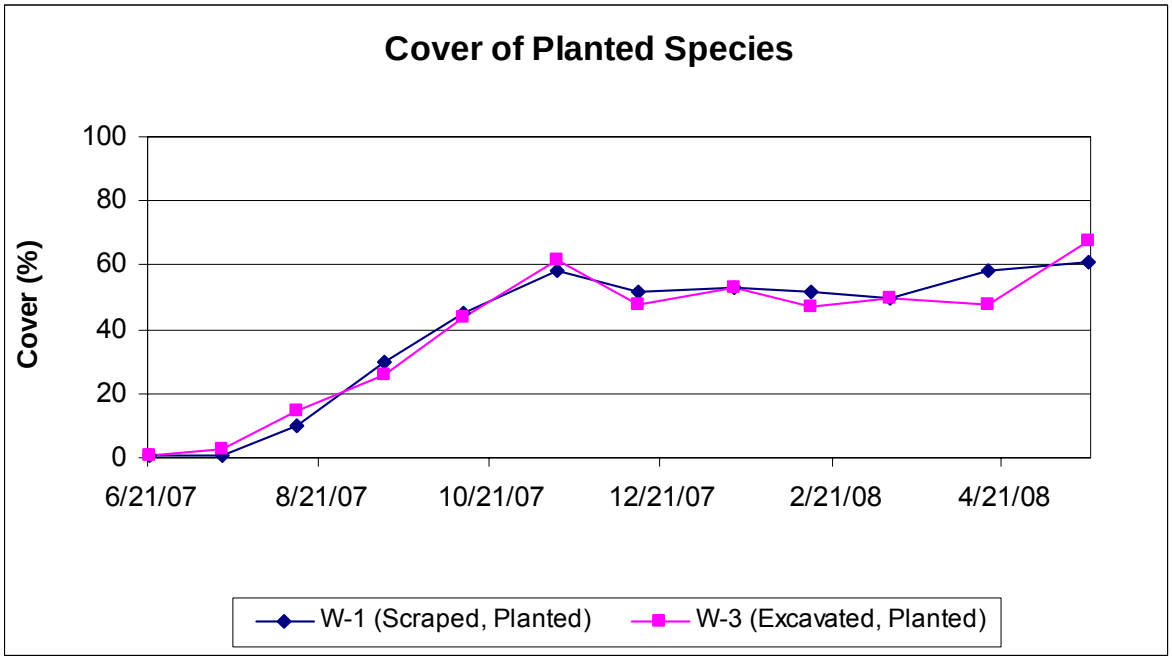


EXHIBIT 3-6
Cover of Planted Species in the Wetland Cells of the Lake Hancock Plant Establishment Study from June 2007 through May 2008

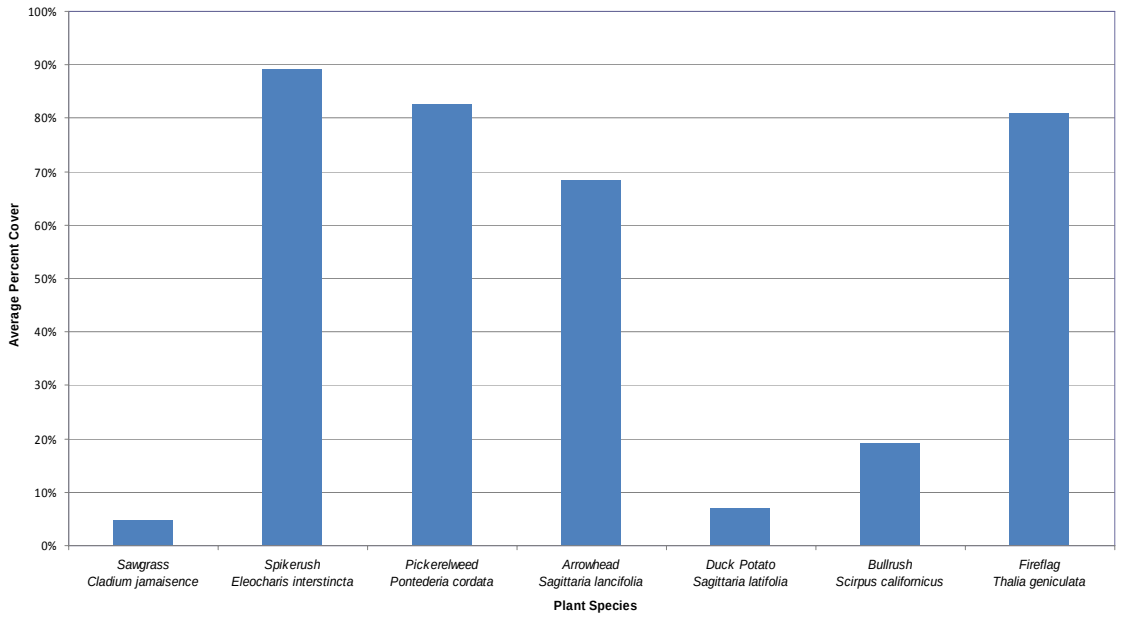


EXHIBIT 3-7
Total Cover of Each Planted Species in May 2007 at the end of the 12-month Study Period of the Lake Hancock Plant Establishment Study

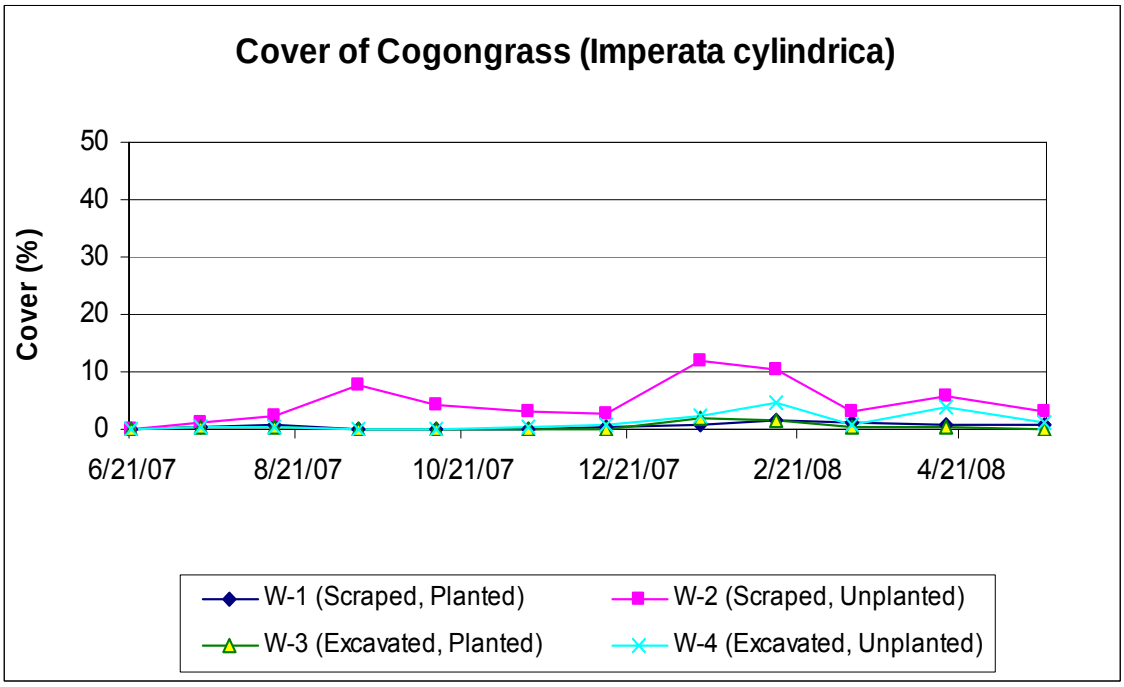


EXHIBIT 3-8
Cover of Cogongrass (*Imperata cylindrica)* in the Wetland Cells of the Lake Hancock Plant Establishment Study from June 2007 through May 2008

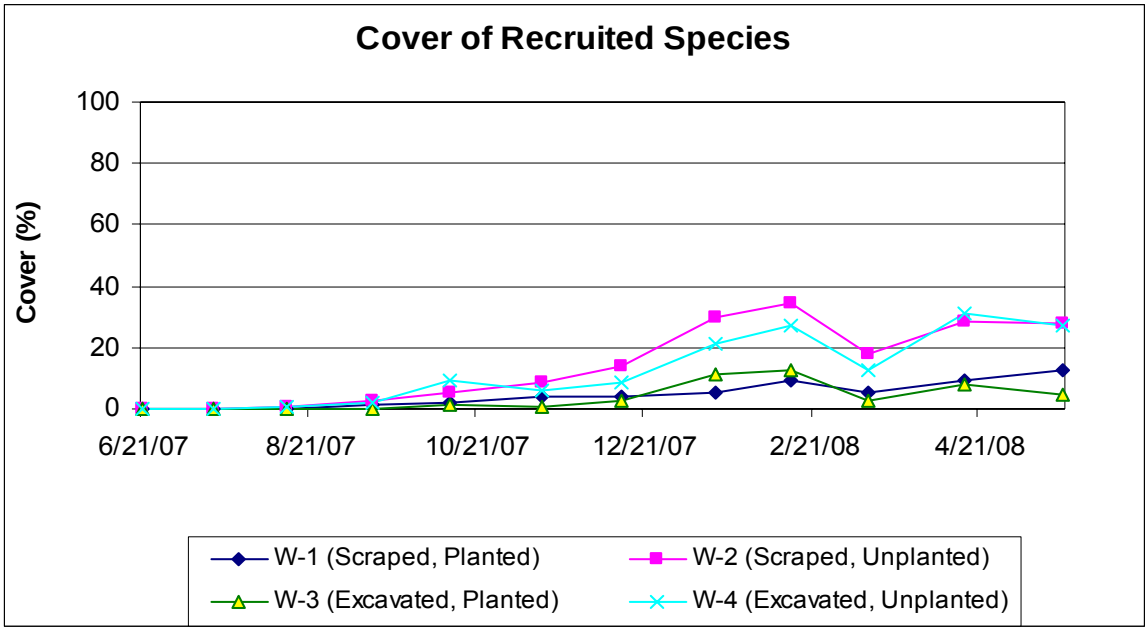


EXHIBIT 3-9
Cover of Recruited Species in the Wetland Cells of the Lake Hancock Plant Establishment Study from June 2007 through May 2008. Recruited species excludes cogongrass and planted species.

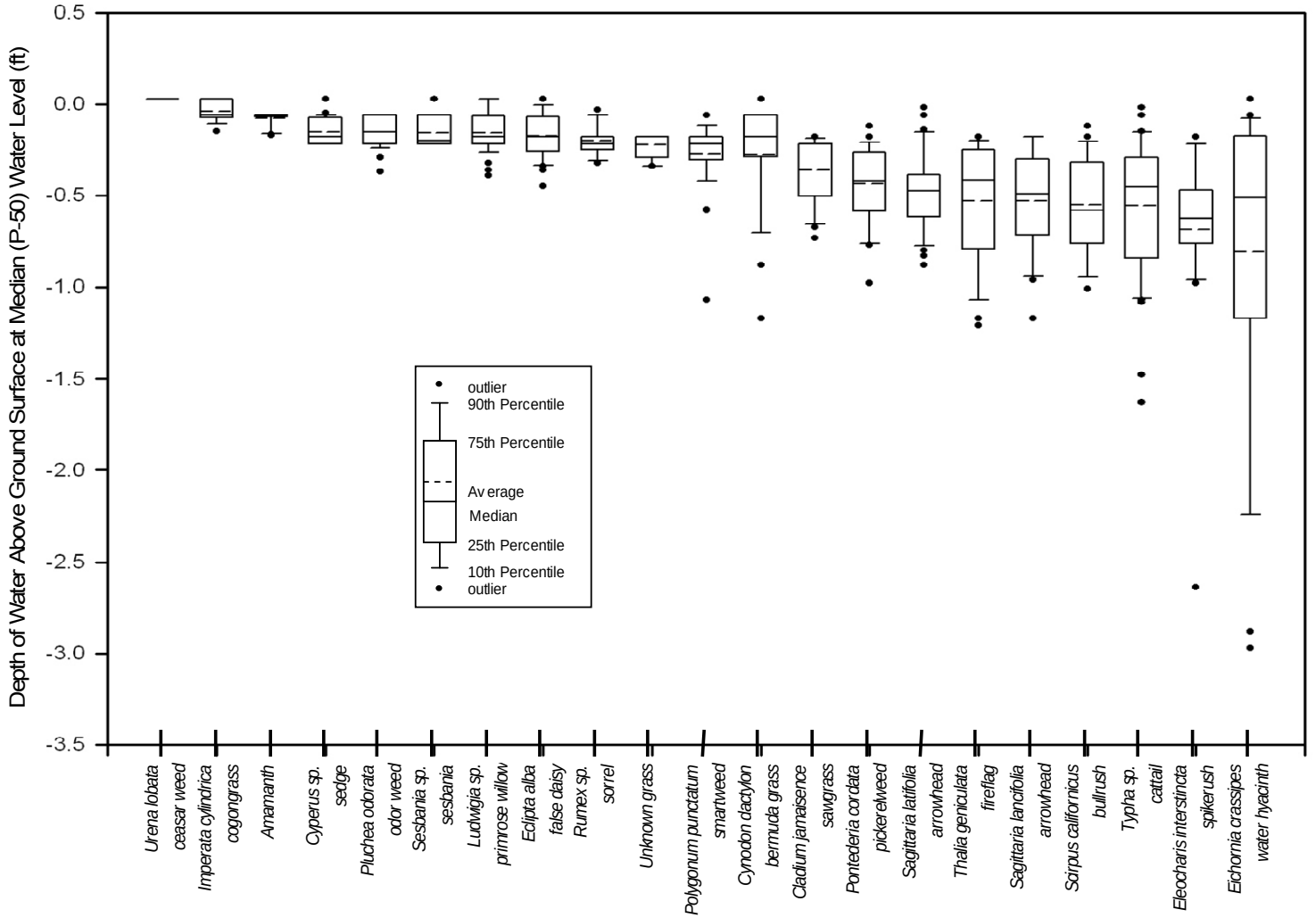


EXHIBIT 3-10

Summary of Water Depth Tolerance for Selected Recruited Plant Species in Wetland Cells W-1, W-2, W-3, and W-4 of the Lake Hancock Plant Establishment Study as measured in May 2008. Ground Elevation is Plotted Relative to the Median (P-50) Water Elevation, which is the Probability Not Exceeded Value (i.e., a 50 Percent Probability that the Water Level does not Exceed the P-50 Elevation). Ground Elevation of 0.0 is Equal to the Median Water Elevation, so 0.5 ft equates to 0.5 ft above the Median (P-50) Water Elevation

3.3 Cogongrass Study

Cogongrass cover in cells C-1 and C-2 was assessed monthly to determine the effectiveness of various cogongrass control techniques. Three cogongrass foliar conditions were evaluated and included green foliage (i.e., healthy), yellow/brown foliage (i.e., stressed or beginning to die), and bare ground (i.e., mortality and foliar decay). Graphical results of the observed response of the cogongrass foliar condition to the various management techniques are provided as **Exhibits 3-11, 3-12, and 3-13.**

3.3.1 Herbicide, Mowing, and Control; Cell C-1

Five cogongrass management strategies and a control were implemented in Cell C-1, the delayed flooding cell, during the initial no-flood period. Flooding was delayed six months to simulate a potential construction/delayed flooding scenario, and began on November 26, 2007. The five cogongrass management strategies included Arsenal herbicide, Gly Star Plus herbicide, mowing followed by Arsenal herbicide, mowing followed by Gly Star Plus herbicide, and mowing.

The initial mowing and herbicide applications occurred in June and July 2007 at the onset of this study (specific dates noted on **Exhibit 2-5).** A second application of Gly Star Plus herbicide was applied to the two Gly Star Plus herbicide plots (Gly Star Plus, and mow + Gly Star Plus) on November 14, 2007 in preparation for the initial flood event in C-1, the delayed flooding cell. A second application of Arsenal was not applied to the Arsenal plots since Arsenal was providing a sufficiently high control of cogongrass.

Greatest continuous control of cogongrass occurred with Arsenal herbicide as shown by a high coverage of dead cogongrass and small coverage of the green/healthy cogongrass starting in July one month after the first herbicide application (**Exhibit 3-11)**. Almost complete mortality of cogongrass was noted by September 2007, three months after the herbicide application. Mowing plus Arsenal also resulted in an almost complete elimination of cogongrass; however, final cogongrass mortality appeared to be triggered by the initiation of flooding in November 2007 rather than the mowing and/or herbicide treatment.

Gly Star Plus herbicide caused a moderate amount of the cogongrass to turn yellow and brown and then die; however, the control of cogongrass was short-lived and moderately effective for only four to five months after the June application. Almost complete mortality of cogongrass occurred after the second herbicide application (October 2007) concomitant with the delayed flooding event (November 2007). Likewise, mowing plus Gly Star Plus herbicide produced a moderate and short-lived control on the cogongrass until the second mow plus Gly Star Plus herbicide event and the delayed flooding in November. These observations suggest that subsequent stressors to the cogongrass (i.e., second mowing, second application of Gly Star Plus, and/or the onset of flooding) greatly increased the efficacy of the Gly Star Plus herbicide, which if applied singularly, would not have provided sufficient control of cogongrass. However, the single application of Arsenal provided a longer term control of cogongrass in the absence of flooding.

Cogongrass in the C-1 plot appeared thick and healthy when this study was implemented. However, the cogongrass growing outside the study cells was thicker, taller, and appeared

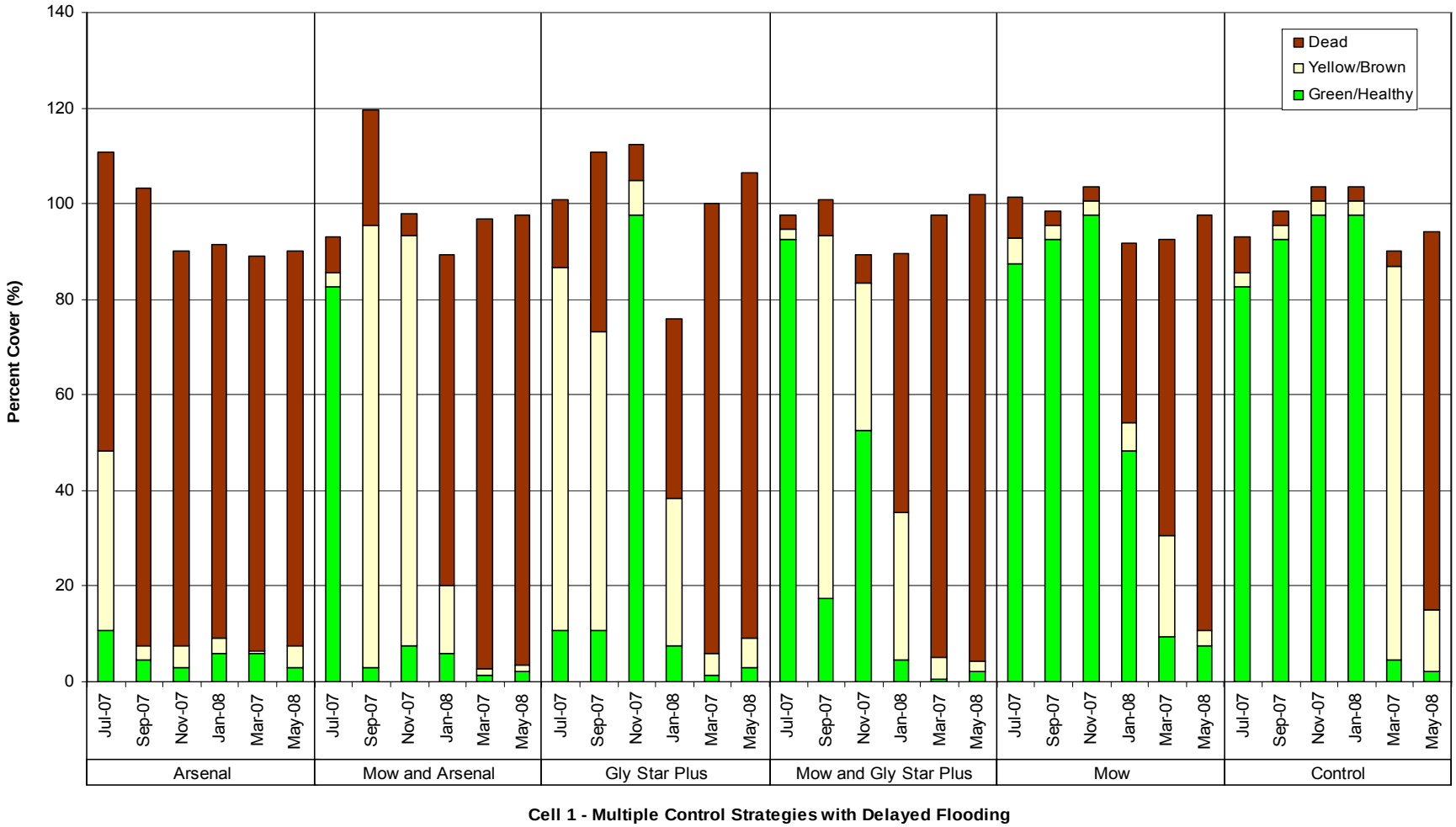


EXHIBIT 3-11

Lake Hancock Vegetation Establishment Study – Coverage of Three Cogongrass Foliar Conditions (Green/Healthy, Yellow/Brown, and Dead) Using Multiple Control Strategies and Delayed Flooding in Cell C1. Flooding Began in November 2007 Six Months after Management Strategies were implemented.

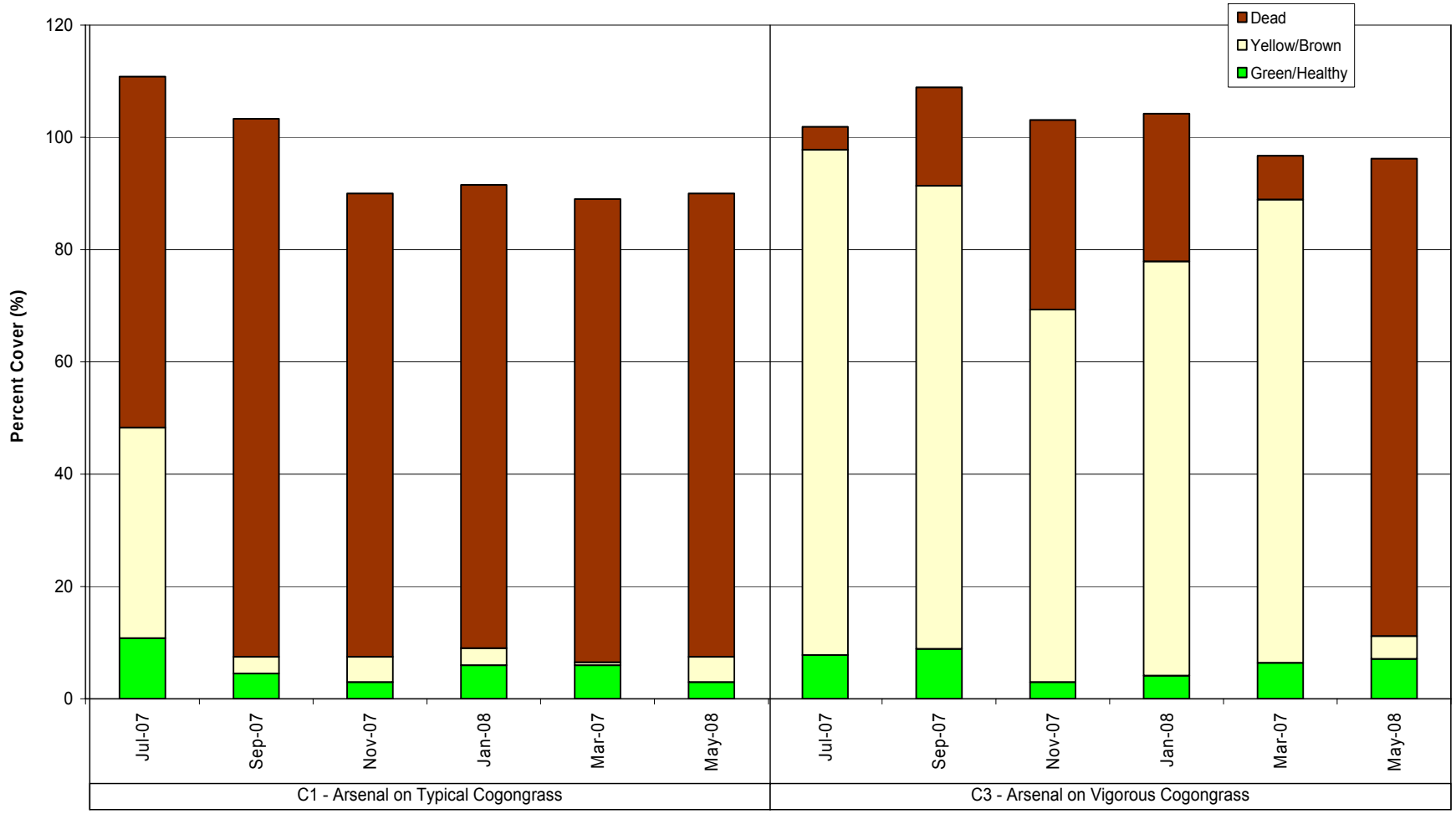


EXHIBIT 3-12
Lake Hancock Vegetation Establishment Study – Coverage of Three Cogongrass Foliar Conditions (Green/Healthy, Yellow/Brown, and Dead) from the Application of Arsenal Herbicide on Typical Cogongrass (Cell C-1) and Vigorous Cogongrass (Cell C-3).

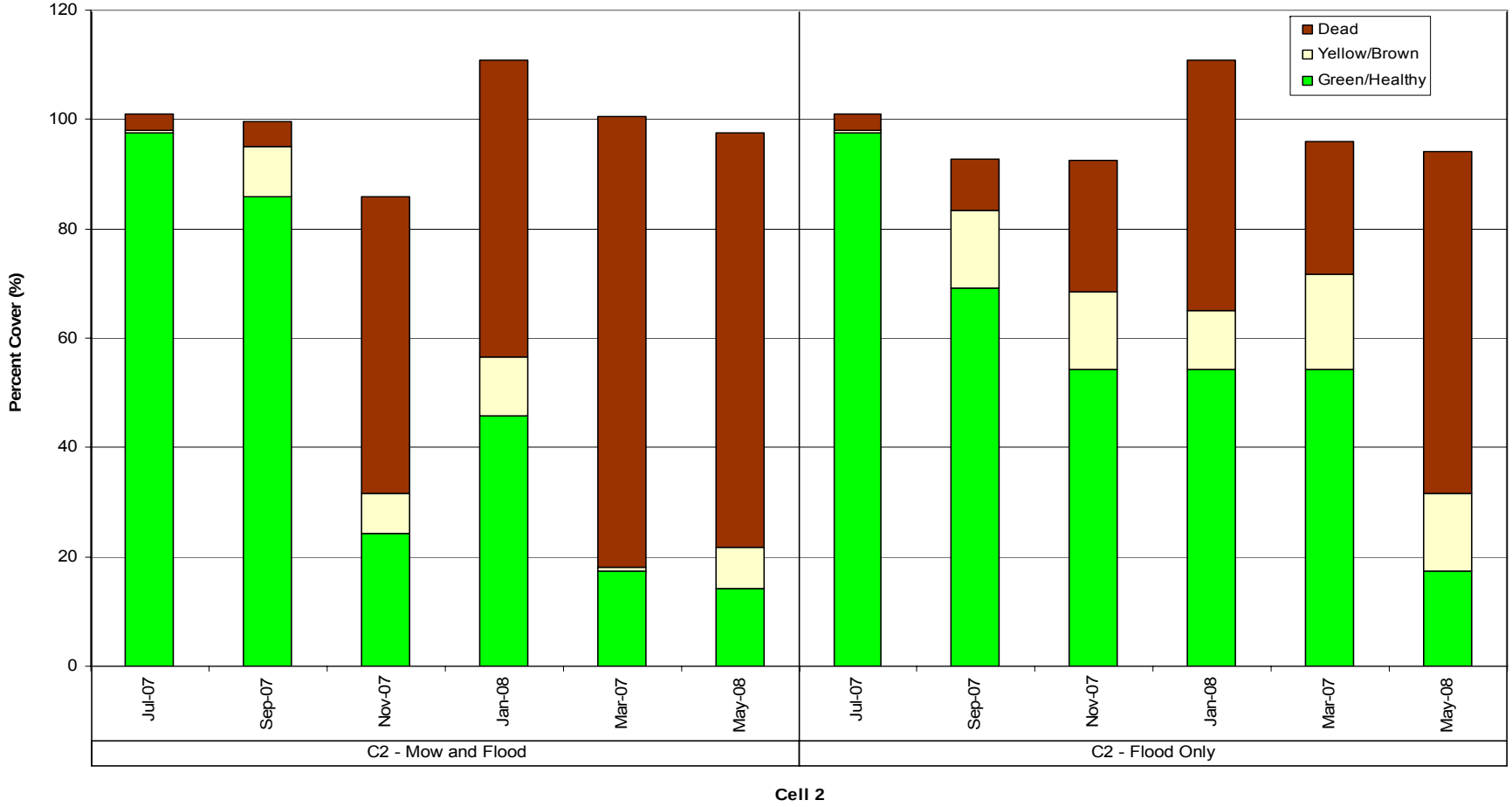


EXHIBIT 3-13
Lake Hancock Vegetation Establishment Study – Coverage of Three Cogongrass Foliar Conditions (Green/Healthy, Yellow/Brown, and Dead) in Cell C-2 Using Two Control Strategies: Mowing plus Immediate Flooding and Immediate Flooding Only.

more vigorous. Therefore, four additional Arsenal treatment plots were implemented to assess how well Arsenal could control more vigorous cogongrass with substantially more biomass. The location of the four additional cogongrass plots is shown on **Exhibit 2-3** and results of the additional Arsenal treatment plots are indicated as C-3 on **Exhibit 3-12**. The application of Arsenal to the vigorously growing cogongrass in C-3 produced a notable decline in the cogongrass as suggested by a high coverage of yellow/brown cogongrass foliage starting just one month after the June 2007 application. However, the cogongrass remained in an extended stressed state for about 9 – 10 months before the cogongrass finally started to die.

3.3.2 Immediate Flooding; Cell C-2

Two flooding strategies were investigated to monitor various cogongrass control strategies, a delayed flooding scenario and an immediate flooding scenario. Results of the delayed flooding scenario, C1, are discussed above. Immediate flooding was implemented in C2, and began in July right after construction. Mowing was also implemented in a portion of C2 to assess whether mowing + immediate flooding was more effective at controlling cogongrass than immediate flooding alone.

Mowing followed by immediate flooding produced a somewhat higher mortality of cogongrass (about 25 – 60 percent) as compared to immediate flooding without mowing (about 45 percent) (**Exhibit 3-13)**. Likewise, less green/healthy cogongrass was present in the mow plus immediate flooding throughout most of the 12-month study period as compared to the immediate flooding plot without mowing. However, mortality of both treatments was similar by the end of the study, with 75 percent mortality in the mow + immediate flood plot and 62 percent mortality in the immediate flood only plot.

High variability of cogongrass control was evident in C2 with areas of complete mortality next to areas with green/healthy cogongrass. The uneven ground topography in this plot affected the depth and duration of flooding and consequently the level of cogongrass control. Higher mortality of cogongrass occurred in low areas where cogongrass experienced deeper water levels for a longer duration. Mowing appeared to have accelerated the mortality of cogongrass when combined with flooding because it eliminated (although sometimes just temporarily) the amount of cogongrass biomass that extended above the water surface and consequently extract atmospheric oxygen.

3.4 Water Quality Monitoring

Water quality samples were collected monthly from the four wetland cells, the flooded cogongrass cell (C-2), and the Lake Hancock intake pipe area during the 12-month duration of the study. Collection of water quality samples in C-1, the delayed flooding cell, began in January once the cell began retaining water. Water quality data for field parameters and laboratory parameters are presented below.

3.4.1 Field Parameters

A summary of the field parameter water quality data is graphically presented as **Exhibits 3-14 through 3-16**. Tabulated water quality data summaries are provided in **Appendix D.** Water temperature reflected air temperature and was higher during late summer and fall and lower in the winter. Water temperature was often higher in Lake Hancock than in the

treatment cells presumably due to shading of the water surface by the plant cover (**Exhibit 3-14**).

Dissolved oxygen (DO) is influenced by the algal populations, biochemical oxygen demand, rotting vegetation, and seasonal sunlight and temperature patterns. DO as shown on **Exhibit 3-14**, is presented as percent saturation. DO measured during daylight hours in Lake Hancock source water generally exceeded 100 percent, presumably as a result of the high productivity of the planktonic algae in the lake which supersaturated the water with oxygen during daylight hours. In contrast, it is likely that nighttime DO concentrations in Lake Hancock were low due to algal respiration, reaching their lowest concentration just before dawn. DO concentrations in W-1, W-2, W-3, and W-4 sometimes exceeded 100 percent **(Exhibit 3-14)** and DO saturation values in these cells declined to 50 percent or less during the final three months of monitoring. Visual observations suggest that algal populations initially increased in the study cells, resulting in higher diurnal DO concentrations during the first nine months of monitoring and then declined as emergent macrophyte plant cover increased during the beginning of the second growing season. DO was lowest in the cogongrass eradication cells C-1 and C-2, which may be attributed to the decay of dead and dying cogongrass in these cells.

A further drop in percent saturation of DO would be likely if the plant establishment study were extended into a second year due to expected increases in the emergent plant cover and shading of the algal populations. Likewise, DO in the full-scale treatment wetland will likely exhibit similar patterns of a high initial diurnal DO and low nighttime DO when the large-scale treatment cells are full of algae and sparsely vegetated with emergent plants, followed by a decline in diurnal DO as the cells become more densely vegetated with emergent plants. A drop in DO below the Class III Water Quality Standard of 5.0 mg/L could occur as the full-scale treatment wetland matures.

The pH in Lake Hancock water pumped into the plant establishment cells averaged about 9.2 standard units (s.u.) and monthly values ranged between 8.1 and 10.1, presumably due to high productivity of planktonic algae (**Exhibit 3-15**). The pH in all of the plant establishment cells was consistently lower than the lake water, averaging between 7.6 and 8.6. Cell W-4 had the highest average pH presumably due to lower plant cover in this unplanted, excavated cell. These data support the general observation that pH is usually circum-neutral in constructed wetlands dominated by emergent wetland vegetation (Kadlec and Knight 1996).

Total suspended solids (TSS) were consistently elevated in the Lake Hancock source water with a period-of-record average concentration of 122 mg/L and a range between 25 and 182 mg/L (**Exhibit 3-15).** Substantial reductions in TSS occurred in all study cells compared to the source water. Average reduction of TSS over the 12-month study period ranged from 74 percent in cell C-2, to 90 percent reduction in W-3 **(Exhibit 3-16**).

Specific conductance in Lake Hancock ranged from 266 to 376 umhos/cm over the 12-month study period (**Exhibit 3-17)**. With the exception of the cogongrass cells, specific conductance in the study cells was generally somewhat lower than specific conductance in Lake Hancock. This finding is presumably due to a dilution effect by rainfall in these cells. Specific conductance in the two cogongrass cells was slightly higher than the source water, presumably due to high evaporation rates.

3.4.2 Nitrogen

Nitrogen, in its multiple forms, was analyzed to assess the dominant nitrogen compounds in the lake water that might be affecting plant germination and growth, and to a lesser extent to document the chemical transformations that are occurring once the lake water is pumped and retained in the study cells. Analytical results of total nitrogen (TN), total Kjeldahl nitrogen (TKN), dissolved TKN (TKN-D), ammonia nitrogen (NH_4-N), and nitrate + nitrite nitrogen (NO_x-N) are presented as **Exhibits 3-18, 3-19, and 3-20.** Tabulated water quality data summaries are provided in **Appendix D.** Laboratory reports are included in **Appendix E**.

TN was consistently and substantially higher in Lake Hancock than in the wetland study cells through the entire 12-month study period (**Exhibit 3-18)**. During the 12-month period of this study the average TN in the lake water pumped into the plant establishment cells was 15.2 mg/L. This average value was considerably higher than the average reported for the lake by ERD (1999) of 5.5 mg/L and used in water quality performance estimates for the preliminary site design (Parsons 2006). Average TN concentrations measured in the four wetland study cells were also much lower than in the inlet water, ranging from 2.6 to 4.9 mg/L.

The average TN in the two cogongrass cells was intermediate between the wetland cells and Lake Hancock, and was 8.0 mg/L in C-2 and 9.5 mg/L in C-1. In general, Cells W-1, W-2, W-3 and W-4 reduced TN concentrations by an average of 68 to 83 percent, while the flooded cogongrass cell C-2 reduced TN concentrations by an average of 47 over the one-year study period of the Plant Establishment Study (**Exhibit 3-16).** While some of this observed decline in TN concentrations may be due to dilution by rainfall to the cells, it is presumed that the majority of the TN concentration reduction was due to plant uptake and denitrification. These data provide a preliminary indication of a notable improvement in water quality by reduction of TN load in emergent wetland cells.

TKN, which is comprised of organic nitrogen (ON) and NH_4-N, was consistently and substantially higher in Lake Hancock than in the wetland cells throughout the 12-month study period of the Plant Establishment Study (**Exhibit 3-19).** Average TKN was almost equivalent to average TN in Lake Hancock and in the five study cells (**Exhibit 3-16).** A high TKN and low NH_4-N suggests that the TN is comprised primarily of ON. TKN is comprised of both particulate and dissolved ON, while TKN-D represents the dissolved fraction of ON. This differentiation is important in treatment wetlands because of the different processes involved in removal of the particulate and dissolved fractions. In Lake Hancock, average TKN (15.1 mg/L) exceeded average TKN-D (5.20 mg/L) suggesting that the ON in the lake is comprised primarily of particulate organic nitrogen rather than dissolved organic nitrogen and reflecting the large biomass of particulate algae in the lake water column. Cells W-1, W-2, W-3 and W-4 reduced TKN concentrations by an average of 68 to 83 percent, while the flooded cogongrass cell C-2 reduced TKN concentrations by an average of 47 percent over the course of the Plant Establishment Study (**Exhibit 3-16).**

Concentrations of TKN-D measured in Lake Hancock exceeded the concentrations of TKN-D in the treatment cells for the first half of the Plant Establishment Study, but then remained at an intermediate concentration when TKN-D in C-1, C-2 and W-2 increased during the second half of the study (**Exhibit 3-19).** With few exceptions, these data suggest that like the

particulate ON, the dissolved fraction of ON is also being effectively reduced in the study cells. The four wetland cells reduced a substantial amount of TKN-D (37 to 60 percent reductions from concentrations in the source water); although the reduction of TKN-D in the flooded cogongrass cell C-2 was much lower (2 percent), presumably due to decaying cogongrass biomass.

The inorganic nitrogen fractions, NH_4-N and NO_x-N, were assessed in Lake Hancock and in the treatment cells and are depicted on **Exhibit 3-20.** The observed concentration of NH_4-N was frequently higher in C-1 and C-2 during the latter half of this study when the cogongrass was dying and the cells were likely releasing stored nitrogen from the decaying plant biomass. The monthly concentrations of NH_4-N were typically lowest in the four wetland cells.

The period-of-record average NO_x-N concentration was highest in the Lake Hancock source water (0.055 mg/L) and lowest in the four wetland cells, ranging from 0.012 to 0.02 mg/L (**Exhibit 3-20)**. Overall, the wetland cells reduced a substantial amount of both NH_4-N and NO_x-N (average 59 to 83 percent reductions from Lake Hancock) during the 12-month study period (**Exhibit 16)**.

During the 12-month duration of the plant establishment study, the cogongrass cells were managed for plant eradication, whereas the wetland cells were managed for plant recruitment and plant growth. Consequently, the cogongrass cells assimilated less nitrogen due to the die-off and decay of the cogongrass biomass. In contrast to the cogongrass cells, the wetland cells assimilated a higher nitrogen mass during this study (both organic and inorganic), presumably through a combination of physical settling, plant assimilation, and denitrification.

3.4.3 Phosphorus

Phosphorus (P) was measured in the Lake Hancock source water and in the treatment cells as both ortho-phosphorus (ortho-P) and total phosphorus (TP). Results of the P measurements are presented in **Exhibit 3-21**. Average TP in the Lake Hancock source water was 0.56 mg/L compared to the value of 0.60 reported by ERD (1999). The average ortho-P concentration measured in the Lake Hancock source water during the plant establishment study period was 0.01 mg/L.

Average concentrations of ortho-P were highest in cells W-3 and W-4, the two excavated wetland cells, and lowest in Lake Hancock (**Exhibit 3-21)**. Ortho-P was particularly elevated at the initial startup months (June, July, and August), presumably due to an initial release of soluble soil P loads, and then declined somewhat after the initial startup. However, ortho-P in the wetland cells remained higher than in the Lake Hancock source water through the entire study period. The high ortho-P concentrations likely reflect the residual P remaining in the overburden soils after mining and reclamation were completed, in addition to the breakdown of algal biomass in the water column.

Like ortho-P, TP was highest during the initial startup but then stabilized to a lower concentration similar to background lake concentrations (**Exhibit 3-21)**. The noticeable decline in TP in the wetland cells suggest that the initial release of P from the soils subsided over time and plant assimilation of P increased as the wetland cells became more heavily vegetated.

P concentrations in Lake Hancock reflect background P concentrations that were introduced to the treatment cells during the weekly pumping events, whereas, P concentrations in the treatment cells reflected a combination of P introduced from lake water, P released from the soils, P released from algal decay, P assimilation by plants, and dilution of P from rainwater. These data provide a useful indication of the possible magnitude of an expected startup release of P from the soils in the full-scale wetland footprint and an indication of how long it might require for the growing plant community to fully assimilate this P load.

3.4.4 Additional Water Quality Parameters

Additional water quality sampling was requested by SWFWMD to better characterize the P concentrations in the soils and to better predict P levels in the full-scale wetland. Additional water quality sampling was implemented in December 2007, January 2008, and February 2008 to quantify concentrations of sulfate (SO_4-S), calcium (Ca), aluminum (Al), and iron (Fe) in the water column. Results of this additional sampling effort were presented in the 3rd Quarter Monitoring Report (WSI 2008b) and are also presented in this report as **Exhibit 3-22.**

The Lake Hancock source water had an average sulfate concentration of 14.7 mg/L which is in the normal range for Florida lakes. The concentration of sulfate was consistently reduced in all treatment cells compared to the Lake Hancock source water (**Exhibit 3-22)**. Average sulfate concentrations were below 7.7 mg/L in the six treatment cells and generally lowest in the planted cells. Sulfate concentrations in all six plant establishment cells peaked in January 2008 and were lower in all other months.

The concentration of Ca was highest in the two cogongrass cells (C-1 and C-2), intermediate in the Lake Hancock source water, and lowest in the four wetland treatment cells (**Exhibit 3-22)**. Average Ca concentration was about 40 mg/L in C-1 and C-2, 37.5 mg/L in Lake Hancock, and below 33 mg/L in the four wetland cells. The elevated Ca in the two cogongrass cells could represent a release of Ca from plant biomass as the treated cogongrass died and decomposed, whereas, the lower Ca concentrations in the wetland cells could represent co-precipitation with available P, assimilation of Ca into plant biomass, and/or dilution of Ca due to rainfall.

Unlike SO_4-S and Ca, Al concentrations were generally higher in the wetland treatment cells and lower in Lake Hancock and the two cogongrass cells (**Exhibit 3-22)**. Also unlike SO_4-S and Ca, the concentration of Al exhibited a notable decline in January 2008. Al was highest in W-4, the excavated and unplanted cell, during all three sampling events. Elevated Al concentrations in the plant establishment cells are most likely due to releases of this common element from overburden soils.

Concentrations of Fe were highest in the two cogongrass cells (C-1 and C-2) and in W-1, the scraped and planted wetland cell (**Exhibit 3-22).** Cell C-1 exhibited an unusually high concentration of Fe in February, which was two months after the cell began receiving supplemental hydration. All other cells had been continually hydrated with lake water for six months before the water samples were collected and analyzed for the additional water quality parameters. As noted above for Al, the elevated Fe concentrations in the water columns of the plant establishment cells are most likely due to releases of this common element from site soils.

3.5 Soil Sampling

Two soil sampling events were added to the field sampling regime mid-way through this study in order to chemically characterize the existing site soils and to better predict P levels that might be observed during start-up and initial flooding of the full-scale wetland. Laboratory reports are included in **Appendix E**.

TIP in the soil of the Plant Establishment cells was highly variable, ranging from 3,410 to 65,000 mg/kg. TIP concentrations in soil samples were generally higher in January 2008 (average 30,500 mg/kg) compared to April 2008 (**Exhibit 23)**. The average TIP concentration in the wetland cells in April 2008 was about 20,500 mg/kg and ranged from 16,300 to 22,600 mg/kg in the four wetland cells.

Similar to soil TIP, TP in the soil was highly variable between sampling sites, ranging from 21,600 to 66,700 mg/kg (**Exhibit 23).** Soil TP concentrations in the wetland cells were higher in January 2008 (average 60, 900 mg/kg), and lower in April 2008 (average 28,100 mg/kg).

Since there were no pre-flooding soil samples collected in the wetland cells there is no accurate baseline to compare subsequent soil samples. High observed variability in the soil P concentrations makes comparisons to control sites questionable. Soil P concentrations were measured in two unflooded sites, cell C-1 in October 2007 and from an adjacent cogongrass-covered area in April 2008. Neither of these unflooded areas had been scraped or excavated and soil samples were collected just below the cogongrass root zone. The only TIP sample collected outside the area of lake water addition and that could be considered a control for pre-project conditions returned a value of 17,000 mg/kg collected in April 2008. This value is lower than the TIP concentrations measured in almost all of the wetland cells after flooding and is not considered to be a reliable control for comparison to pre-flooded conditions. TP concentrations at these unflooded sites were 52,200 mg/kg in October 2007 and 21,900 mg/kg in April 2008, further illustrating the variable nature of TP in these mined soils.

Based on this review of soil P data from the Plant Establishment test cells, it appears that a significant mass of P was released upon initial flooding of these soils. This P was observed as elevated water column P concentrations as summarized above in Section 3.4. The actual quantity of P that was initially in these soils and that was released upon flooding could not be determined accurately due to extreme heterogeneity in soil P concentrations at this site. It is presumed that the range in P concentrations in site soils across the entire full-scale wetland project site is even greater than was observed at this particular site.

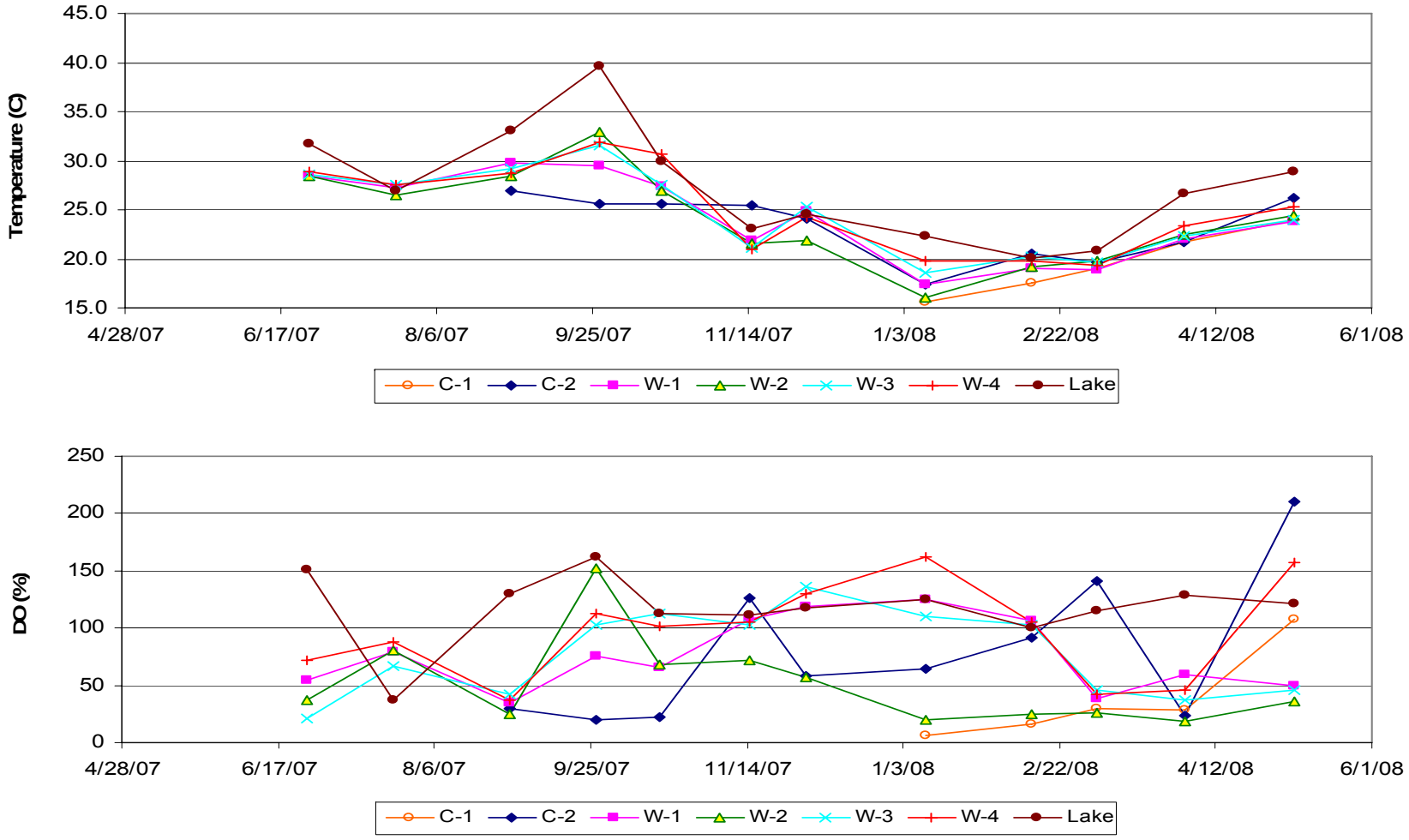
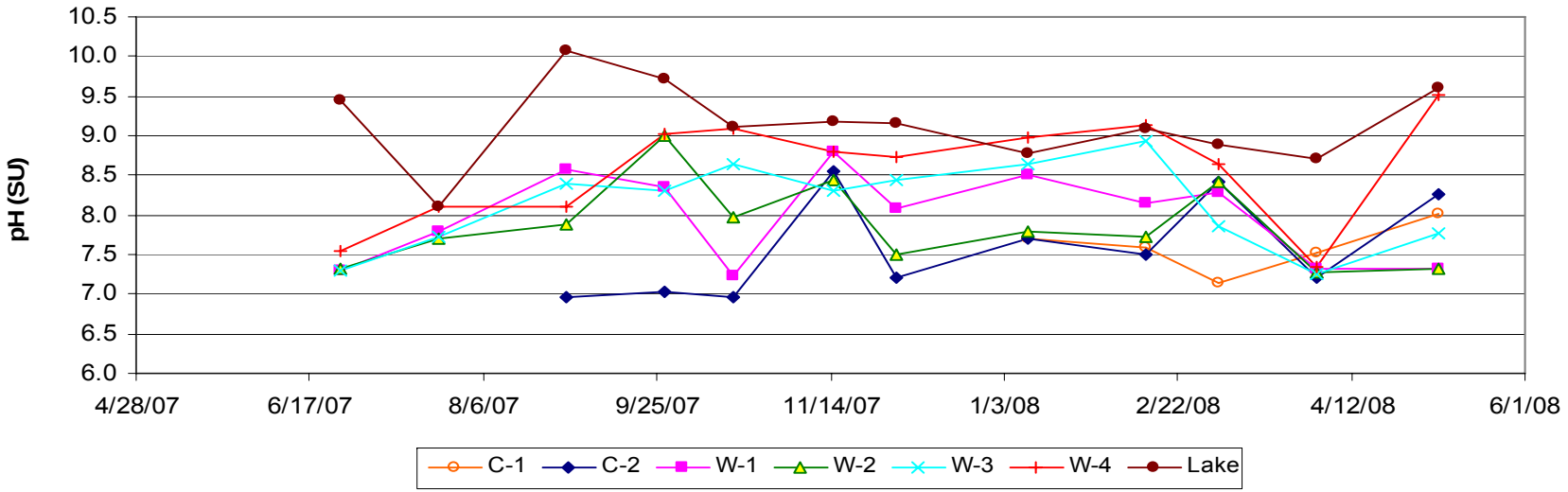


EXHIBIT 3-14
Water Quality Parameters –Temperature and DO at the Lake Hancock Plant Establishment Study from June 2007 through May 2008



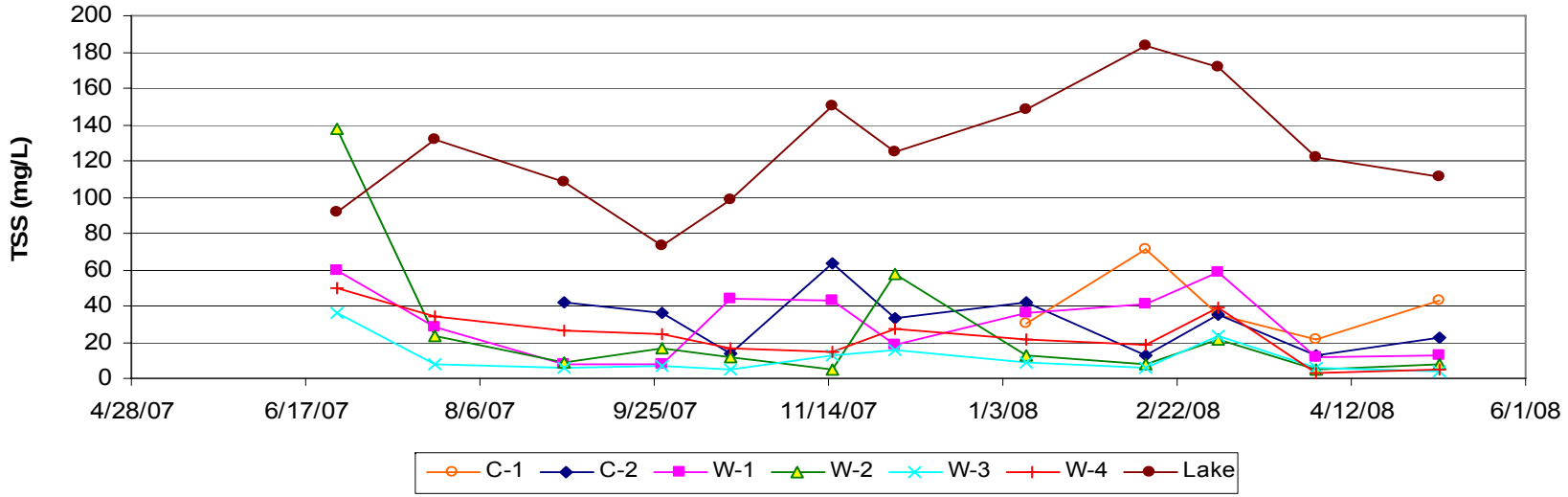


EXHIBIT 3-15
Water Quality Parameters – pH and Total Suspended Solids at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

GROUP	PARAMETER	Average Concentration (mg/L)						% Reduction from Lake Hancock				
		Lake H.	C-2	W-1	W-2	W-3	W-4	C-2	W-1	W-2	W-3	W-4
SOLID	TSS	122	31.4	28.7	25.6	11.6	23.6	74	76	79	90	81
NITROGEN	TN	15.2	8.00	4.90	4.00	2.60	3.50	47	68	74	83	77
	TKN	15.1	8.00	4.90	4.00	2.60	3.50	47	68	74	83	77
	TKN-D	5.20	5.10	3.30	3.20	2.10	2.40	2	37	38	60	54
	NOx-N	0.060	0.020	0.020	0.020	0.010	0.010	67	67	67	83	83
	NH4-N	0.170	1.30	0.060	0.200	0.070	0.050	-665	65	-18	59	71
PHOSPHORUS	OrthoP	0.010	0.030	0.290	0.240	0.450	0.320	-200	-2,800	-2,300	-4,400	-3,100
	TP	0.580	0.680	1.31	1.50	1.04	1.69	-17	-126	-159	-79	-191

EXHIBIT 3-16
Average Concentration of Water Quality Parameters and Average Percent Reduction of Water Quality Parameters at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

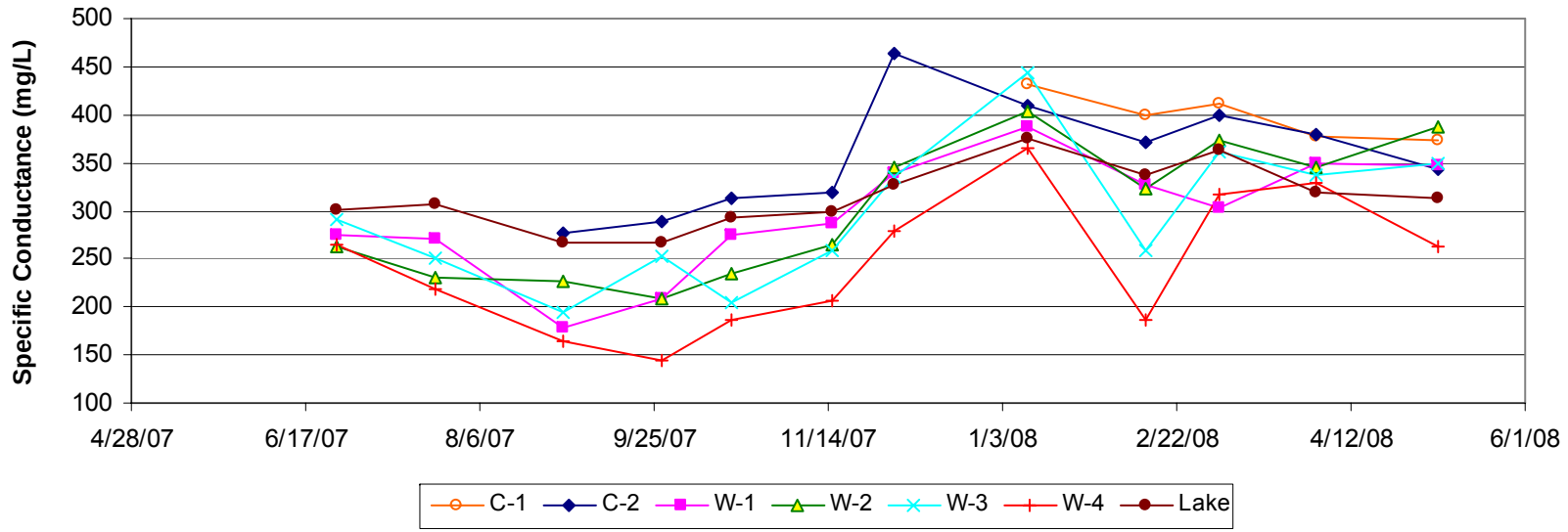


EXHIBIT 3-17
Water Quality Parameter –- Specific Conductance - at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

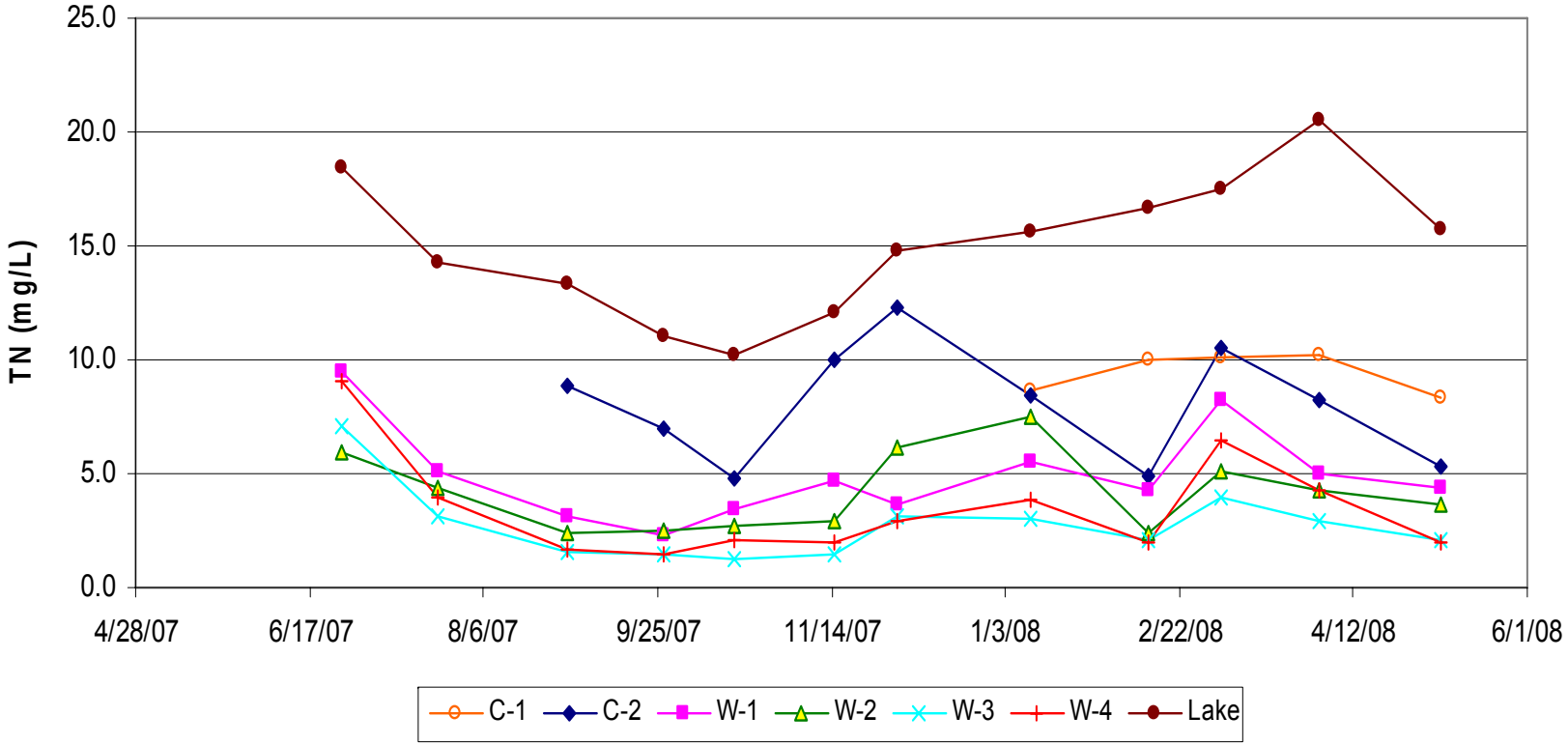


EXHIBIT 3-18
Water Quality Parameter – Total Nitrogen at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

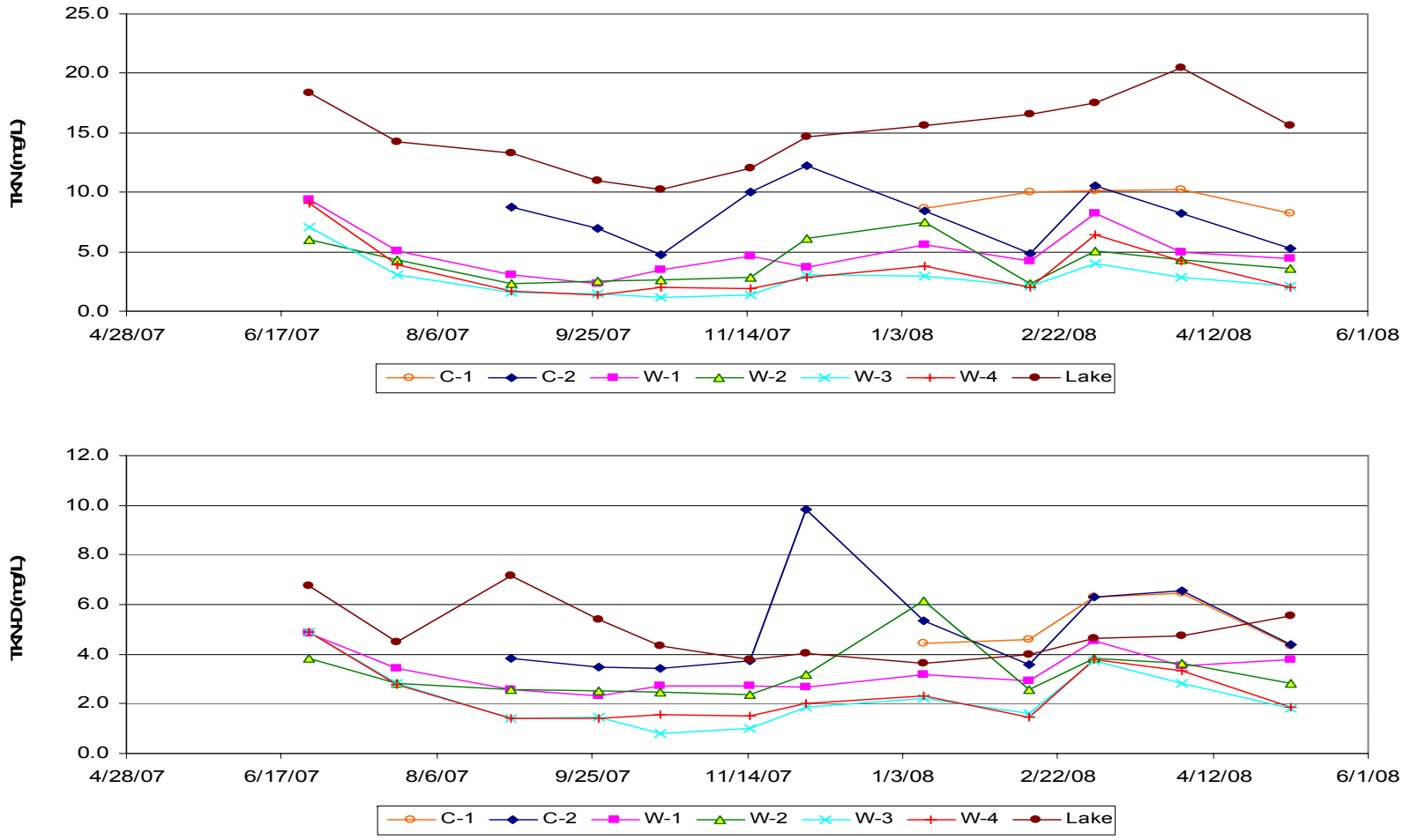


EXHIBIT 3-19
Water Quality Parameters – Total Kjeldahl Nitrogen and Dissolved Total Kjeldahl Nitrogen at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

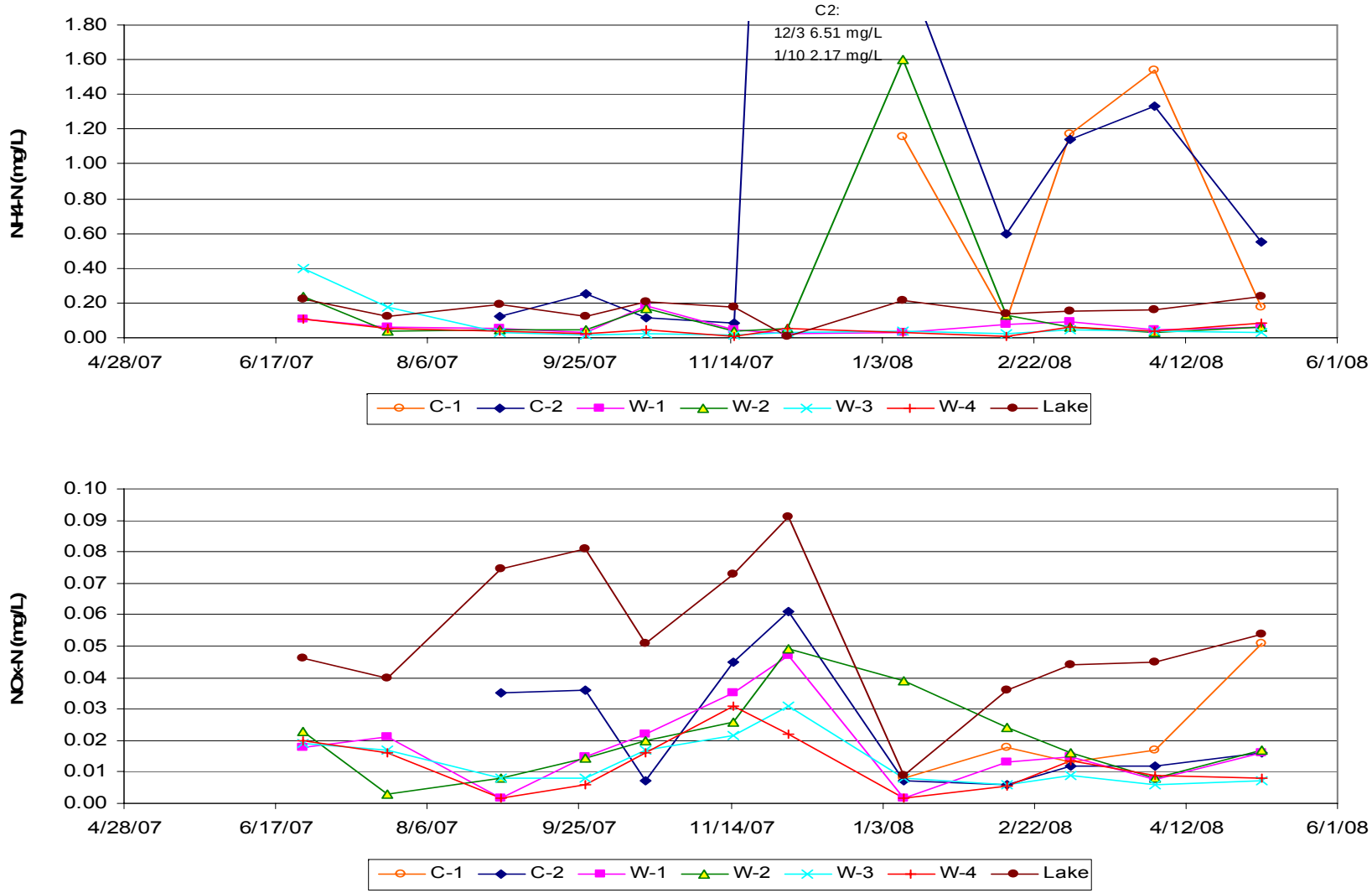


EXHIBIT 3-20
Water Quality Parameters – Ammonia Nitrogen and Nitrate + Nitrite Nitrogen at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

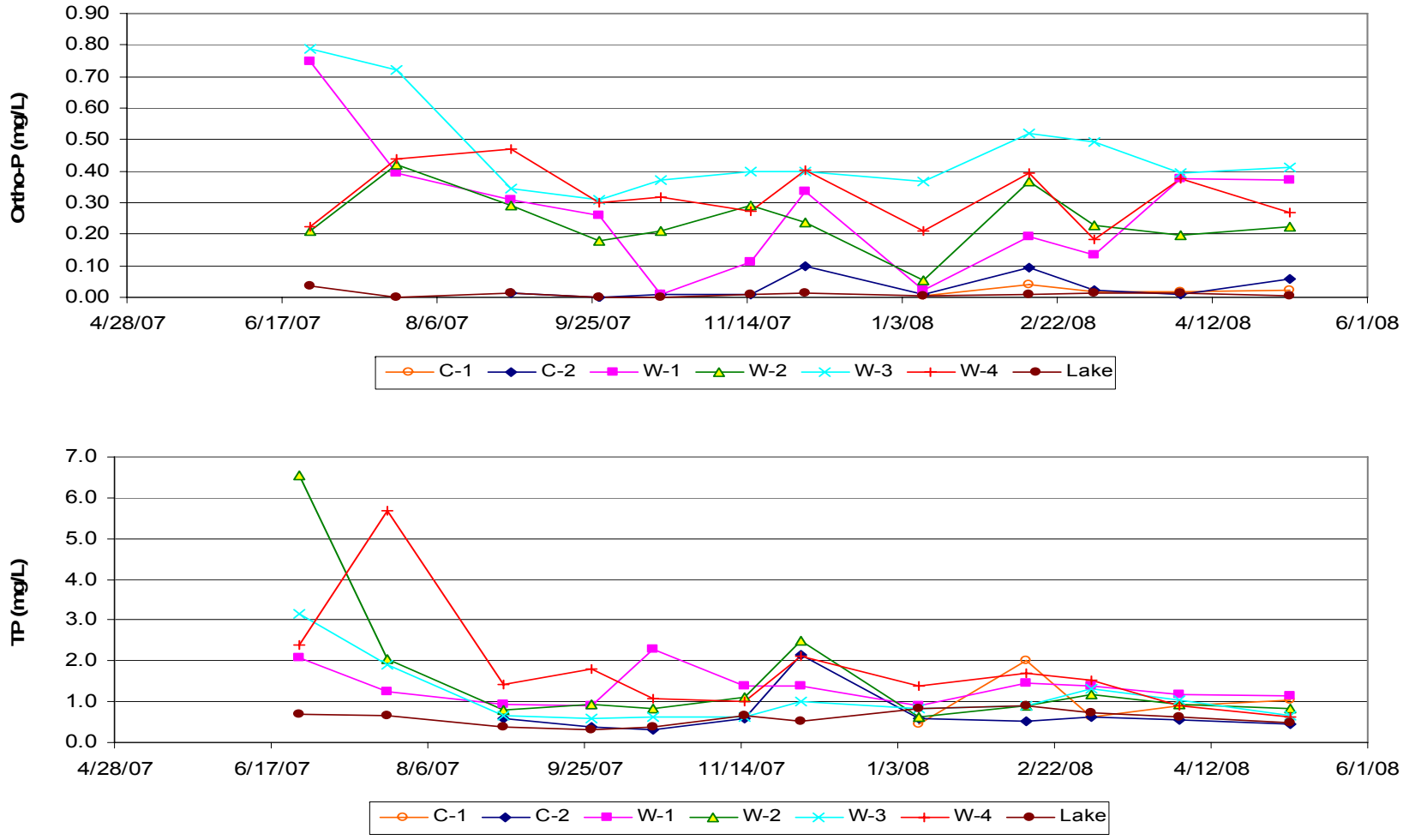


EXHIBIT 3-21
Water Quality Parameters - Ortho-Phosphorus and Total Phosphorus at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

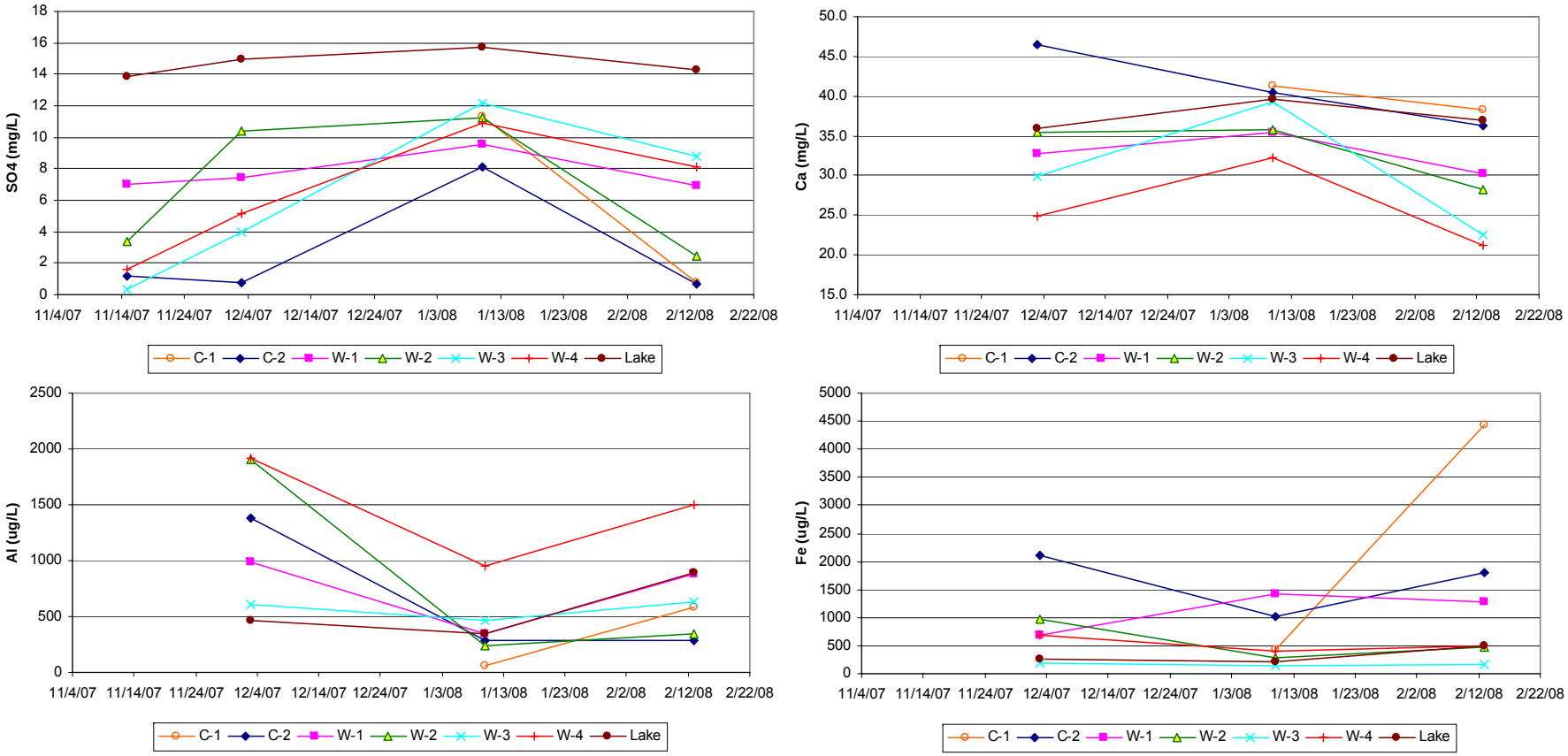


EXHIBIT 3-22
Water Quality Parameters – Sulfate, Calcium, Aluminum, and Iron at the Lake Hancock Plant Establishment Study from June 2007 through May 2008

EXHIBIT 3-23

Soil Sampling Parameters – Sulfate, Aluminum, Calcium, Iron, Bulk Density, and Dry Weight Solids - at the Lake Hancock Plant Establishment Study from October 2007, January 2008, and April 2008

GROUP	PARAMETER	UNITS	C-1			C-2			W-1			W-2			W-3			W-4		
			Oct-07	Jan-08	Apr-08	Oct-07	Jan-08	Apr-08	Oct-07	Jan-08	Apr-08	Oct-07	Jan-08	Apr-08	Oct-07	Jan-08	Apr-08	Oct-07	Jan-08	Apr-08
GENERAL INORGANIC	SO4	mg/L	30 U	1,660	---	137 U	1,190	---	199	610	---	1,260 U	119	---	372 U	43 I	---	1,020	324	---
METAL	Al-T	mg/kg	59,200	73,700	---	98,900	68,800	---	58,600	71,500	---	69,300	78,600	---	76,100	77,600	---	69,400	54,500	---
	Ca-T	mg/kg	109,000	110,000 V	---	92,800	98,000 V	---	108,000	121,000 V	---	128,000	122,000 V	---	86,100	104,000 V	---	131,000	95,600 V	---
	Fe-T	mg/kg	22,400	34,400 V	---	24,500	23,800 V	---	29,300	31,500 V	---	30,100	36,800 V	---	28,600	26,900 V	---	22,200	26,100 V	---
PHYSICAL	Bulk Density	g/cm^3	0.75 I	0.74	---	0.81 I	0.63	---	0.69 I	0.70	---	0.68 I	0.76	---	0.62 I	0.66	---	0.70 I	0.56	---
SOLID	Solids, Dry Wt	%	63.2	39.6	51.7	55.1	45.8	42.6	55	46.2	54.2	46.7	44.7	48.3	47.6	46.0	31.0	53.3	41.9	54.4
PHOSPHORUS	TIP	mg/kg	---	57,500	20,900	---	31,800	25,400	---	21,900	22,600	---	65,000	21,300	---	38,500	16,300	---	3,410	21,700
	TP	mg/kg	52,200	54,700	21,600	64,600	57,900	31,700	46,300	65,600	26,900	60,200	66,700	25,700	61,200	63,000	34,100	53,100	48,400	25,700

U = result below detection limit

I = result between detection limit and practical quantitation limit

V = analyte present in blank and samples

April-08 Sample ~100 yrds East of W-3

PHOSPHORUS	TIP	mg/kg	17,000
	TP	mg/kg	21,900
SOLID	Solids, Dry Wt	%	58.3

Soil sampling results from both sampling events for SO4, Al, Ca, and Fe are presented in **Exhibit 3-23**. Concentrations of SO4 in the soil in January 2008 ranged between 119 mg/L in W-2 to 1,660 mg/L in C-1, approximately the same range as observed in October 2007 samples (W-1 = 199 mg/L and W-4 = 1,020 mg/L). Concentrations of Al, Ca, and Fe measured in January 2008 were relatively consistent across cells and similar to the range of values observed during the October 2007 soil sampling event.

4.0 Recommendations

Treatment wetland success hinges on a high cover of self-sustaining emergent wetland vegetation (Kadlec and Knight 1996). Initial establishment of appropriate wetland plant species as well as long-term plant cover maintenance are critical to project success. While plant establishment techniques are well known from other treatment wetland projects, cost considerations for a specific project dictate finding the most economical blend of planting nursery grown plant materials and promoting natural recruitment of volunteer plants. The primary purpose of the Plant Establishment Study described in this report was to help develop site specific design and construction methods to optimize plant establishment under the constraints associated with the project site on reclaimed phosphatic waste clays.

Construction of the full-scale Lake Hancock treatment wetland will require considerable earthwork including various depths of excavation and fill to achieve the wetland cell design ground surface elevations. In areas with little depth of excavation or fill, the existing storage of plant seeds in the soils may accelerate volunteer plant establishment. A justified concern exists that more deeply excavated areas could expose a relatively sterile substrate that would be relatively devoid of a pre-existing seed bank. This concern was investigated by comparing plant establishment of both planted species and naturally recruited species in scraped and more deeply excavated cells to determine if either construction technique would result in more favorable plant recruitment and establishment. Results of this comparison suggest that planted wetland species survived similarly in both scraped and excavated scenarios. Relatively slight differences in the growth of planted species in the scraped and excavated cells were apparently due more to hydrologic variations rather than soil chemistry or textures.

> ***Recommendation #1: This study demonstrated that planted emergent wetland species were successful in surviving and spreading in both scraped and excavated consolidated phosphatic clay soils within one year at a planting density of about 1 plant per 3 ft. Careful management of hydrologic conditions during the critical period of early plant establishment will be an important factor in achieving early successful operation of the large-scale treatment wetland. Results of this Study suggest that early colonization tended to occur at median water depths not exceeding 0.7 – 0.8 ft, and colonization of most species occurred at median water depths not exceeding 0.2 – 0.3 ft. Careful site grading is important to successfully maintain these favorable hydrologic conditions.***

In the absence of planting nursery grown seedlings, volunteer plant recruitment was approximately equal in the scraped and excavated cells within one year of initial colonization. Establishment of volunteer plants was apparently influenced more by hydroperiod than by any significant pre-existing seed bank in either shallow or deeply excavated soils. Cattails, a plant well suited for growth and survival in treatment wetlands throughout Florida and the preferred emergent wetland species in the south Florida Stormwater Treatment Areas, was dominating this volunteer plant community after one year and could be expected to ultimately dominate unplanted zones in the full-scale treatment wetland as long as a favorable range of hydrologic conditions are maintained.

> ***Recommendation #2: This study demonstrated that volunteer plant establishment on scraped and excavated areas of consolidated phosphatic clays can be successful provided that a suitable hydroperiod is maintained following construction. Again, results of this Study suggest that early colonization tended to occur at median water depths not exceeding 0.7 – 0.8 ft, and colonization of most species occurred at median water depths not exceeding 0.2 – 0.3 ft.***

Establishment of wetland plants in the four study cells was accomplished through supplemental planting and natural recruitment. Seven species of wetland plants were installed in one scraped and one excavated cell. Five of the seven planted species (duck potato, spikerush, fireflag, pickerelweed, and arrowhead) quickly established after planting and began vigorously growing in the wetland cells. With the exception of duck potato, those species flowered, fruited, and expanded laterally through vegetative reproduction during the 12-month study period. Surprisingly, the other two planted species - bulrush and sawgrass - exhibited high initial mortality following planting and poor growth rates. By the end of the 12-month study, four planted species stood out as the most successful with respect to survival, growth, and overall plant vigor. Those four species – spikerush, pickerelweed, arrowhead, and fireflag exhibited over 80 percent cover within their planted zones at the end of the 12-month study period (except arrowhead, which had almost 70 percent cover).

> ***Recommendation #3: Relatively rapid plant establishment in the large-scale treatment wetland will help to displace the incoming algal population and accelerate nutrient assimilation. Thus, supplemental planting of wetland species can help jump-start the large-scale treatment wetland and promote greater nutrient assimilation during the early start-up period. Based on results of the supplemental plantings, it is recommended that the four most successful plant species – spikerush, pickerelweed, arrowhead, and fireflag – be planted on a small-scale basis in the large-scale treatment wetland. Due to the high cost of direct planting (compared to no planting), plants should be installed in linear zones with large gaps separating each zone. A similar method is utilized in the south Florida STAs where the standard planted zone covers the entire cell width perpendicular to the direction of water flow. Plants in the Plant Establishment Study were installed at 3-ft spacing and quickly expanded to fill in the gaps between each initial plant. Thus, supplemental planting within a small portion of the large-scale wetland is***

recommended to aid in more rapid plant establishment for enhanced nutrient assimilation.

Natural plant recruitment was most successful in the slightly raised areas and along the toe of the berm where water levels were shallower and with a shorter duration of inundation. Fully saturated soil conditions and a shallow water depth less than about 6 inches promoted the most successful recruitment of the desired wetland plant species, whereas, a deeper and more constantly inundated hydroperiod resulted in few recruited plants at the end of the 12-month study.

Recommendation #4: Optimal hydrologic conditions for growth of planted wetland species and colonization by desirable volunteer wetland plant species should be maintained for the first two years following the completion of site construction. In general, nursery-grown plants should be planted into saturated or shallowly-flooded soils (less than 0.5 ft water depth). Volunteer recruitment by wind-blown seeds for plant species such as cattails will also be optimized by soil saturation and minimal water depth. Highest recruitment and initial plant growth will occur during the first year if water depth does not exceed 0.7 to 0.8 ft in depth. Depending upon timing of the initial planting or end of site preparation, water levels in the wetland cells should be raised gradually as the desirable wetland plant species grow and multiply. Ideally, initial wetland plant establishment should begin in spring or early summer to minimize plant cover establishment time.

Some upland and facultative plant species germinated and began to colonize in the upper and drier reaches of the wetland cells during the Plant Establishment Study. This initial recruitment of upland species is not problematic as long as desirable wetland emergent species such as cattails, spikerush, pickerelweed, and duck potato also have a chance to germinate before the ground is fully covered by less desirable species. Most of the upland and facultative species can be excluded or maintained at low densities by gradually raising the water levels in the treatment wetland cells, favoring the obligate wetland plant species.

Recommendation #5: It is critical that water levels in the scraped and excavated treatment wetland cells be controlled as soon as final grading is complete to favor wetland plant species. This condition for successful plant establishment will require coordinated construction activities to provide sufficient water as soon as site work is complete in each cell.

Several alternative methods resulted in successful control of cogongrass. The most rapid and simple method of cogongrass control was with use of a single application of Arsenal herbicide. The disadvantage of this chemical control strategy is that this herbicide leaves a residual in the soil that is also toxic to many other plant species. Thus, the use of Arsenal as a site preparation method for a vegetated treatment wetland is not advised. Effective cogongrass control was also accomplished by flooding alone as long as water could be held over about one foot in depth for up to nine months. Two- and three-step effective cogongrass control methods included mow + flood, Gly Star Plus herbicide + flood, and mow + Gly Star Plus herbicide + flood. Flooding in late fall produced more immediate

cogongrass mortality than flooding in the summer, perhaps because the cogongrass had been subjected to previous control methods and was at a reduced state of vigor in late fall.

> ***Recommendation #6: Extensive stands of cogongrass may be present in the large-scale wetland in areas where neither excavation nor fill is needed, or if a sufficient amount of time elapses between earthwork and flooding. Flooding should be initiated as soon as possible following the completion of earth-work in the treatment cells to prevent cogongrass from establishing in the newly graded areas. The most cost-effective, multiple control approach for controlling cogongrass re-establishment will likely be excavation and/or mowing and disking during the non-growing season followed by flooding.***

Any control method that produces large-scale mortality of cogongrass will likely result in a large nutrient load to the treatment wetland when the extensive grass biomass dies and decays. Consequently, areas with treated cogongrass will assimilate less nitrogen as the cogongrass becomes stressed and then release nitrogen and other nutrients when the cogongrass dies.

> ***Recommendation #7: Once the large-scale treatment wetland is flooded or herbicided for cogongrass eradication, a subsequent release of nitrogen and biodegradable organic matter can be expected as the cogongrass biomass decays. Therefore, water from the treatment wetland should be retained in the cells (or circulated back to the lake) until the treatment wetland ecosystem becomes a net assimilator of nutrients.***

Dissolved oxygen (DO) in the plant establishment cells was influenced by algal productivity, oxygen demand from dying algae and other vegetation, and seasonal patterns in temperature and sunlight. Daytime DO concentrations in Lake Hancock almost continuously exceeded 100 percent as a result of the abundant planktonic algae in the lake, which super-saturated the water with oxygen during daylight hours. In contrast it is considered likely that nighttime DO concentrations in Lake Hancock are low due to algal respiration, reaching their lowest concentrations just before dawn. DO was also elevated in the Plant Establishment Study cells before emergent vegetative cover was able to shade out the incoming phytoplanktonic algae in the lake source water. When high plant cover levels were established the DO concentration remained lower in most of the cells. Likewise, DO concentrations in the full-scale treatment wetland will likely be elevated initially and then decline as emergent vegetation colonizes the cells and replaces the algal population. A drop in DO below the Class III Water Quality Standard of 5.0 mg/L could occur as the full-scale treatment wetland matures.

> **Recommendation #8: A *post-aeration system should be considered during the design of the full-scale project.***

The highly euthrophic water in Lake Hancock contains a very high TN concentration (average TN for the 12-month study was 15.2 mg/L). The high TN concentration is comprised primarily of particulate ON and reflects the large biomass of particulate algae in the lake water column. The treatment study cells were effective in assimilating the ON, in spite of receiving the highly euthrophic lake water on a generally 5 – 7 day pump cycle. The

wetland cells assimilated a significant mass of nitrogen (both organic and inorganic), presumably through a combination of physical settling, plant assimilation, and denitrification. Overall, the four wetland treatment study cells removed from 68 – 83 percent of the TN from Lake Hancock source water. The treatment cells were also effective in removing TSS (average removal was 76 to 90 percent). These ancillary results from the Plant Establishment Study provide a preliminary validation of the ability of emergent wetlands to assimilate nitrogen in Lake Hancock source water.

> ***Recommendation #9: The full-scale treatment wetland will likely be effective at removing TN and TSS from the lake water and providing a valuable water quality improvement function in proportion to the cover of emergent wetland vegetation. This expected removal efficiency will be increased if plant establishment can be accelerated by supplemental planting with wetland plants and managing the wetland hydroperiod to promote rapid recruitment of wetland plants. The removal efficiency of TN and TSS may be compromised, at least initially, if expansive areas of cogongrass are killed and the biomass is allowed to decompose in the wetland. An initial period of water retention within the full-scale wetland should be anticipated in design and in development of the startup operations plan.***

In contrast, the wetland treatment cells initially had phosphorus concentrations higher than the Lake Hancock source water. Water and soil monitoring suggested that this elevated phosphorus resulted from release of labile phosphorus from the exposed soils. Ortho-P concentrations appeared correlated to the degree of excavation depth and were highest in the water in the two excavated cells, intermediate in the two scraped cells, and lowest in the cogongrass cells where no excavation occurred. In comparison to Lake Hancock, ortho-P remained elevated in the treatment cells through the 12-month duration of the study, whereas TP declined considerably after the first three months of operation. These results lead to the preliminary conclusion that the increasing plant biomass will be able to provide a net assimilation of TP within one to two years post construction. Similar soil phosphorus releases and assimilation in the growing plant biomass have been seen and incorporated into design of the STAs in south Florida.

> ***Recommendation #10: The newly exposed phosphatic clay soils in the full-scale treatment wetland will likely provide a source of phosphorus following initial flooding. This phosphorus will be available at a time of maximum need for the wetland plant community and will help to fuel rapid plant colonization and increase in plant biomass. Other wetlands constructed on soils with high phosphorus concentrations have ultimately been able to assimilate this nutrient and achieve net removal rates (e.g., Lakeland and STA 1-W Cell 5). However, potential phosphorus releases during the first year of start-up should be further considered in the Operations Plan for the full-scale wetland system.***

5.0 References

Environmental Research & Design (ERD), Inc. 1999. Lake Hancock Water and Nutrient Budget and Water Quality Improvement Project. Prepared for the Southwest Florida Water Management District.

Kadlec, R.H. and R.L. Knight 1996. Treatment Wetlands. Lewis publishers/CRC Press. Boca Raton, FL. 896 pp.

Wetland Solutions, Inc. 2007. Lake Hancock Plant Establishment Study; First Quarter Report. Submitted to Parsons and the Southwest Florida Water Management District.

Wetland Solutions, Inc. 2008a. Lake Hancock Plant Establishment Study; Second Quarter Report. Submitted to Parsons and the Southwest Florida Water Management District.

Wetland Solutions, Inc. 2008b. Lake Hancock Plant Establishment Study; Third Quarter Report. Submitted to Parsons and the Southwest Florida Water Management District.

Appendix A

Site Photographs

W-1 scraped & planted cell from photo station P-6 on 6/21/07; looking north.

W-1 scraped & planted cell from photo station P-6 on 11/14/07; looking north- note high plant growth.

W-1 scraped & planted cell from photo station P-6 on 2/13/08; looking north.

W-1 scraped & planted cell from photo station P-6 on 5/22/08; looking north- note high plant growth.

W-2 scraped & unplanted cell from photo station P-3 on 6/21/07; looking south.

W-2 scraped & unplanted cell from photo station P-3 on 11/14/07; looking south

W-2 scraped & unplanted cell from photo station P-3 on 2/13/08; looking south.

W-2 scraped & unplanted cell from photo station P-3 on 5/22//08; looking south.

W-3 excavated & planted cell from photo station P-11 on 6/21/07; looking north.

W-3 excavated & planted cell from photo station P-11 on 11/14/07; looking north.

W-3 excavated & planted cell from photo station P-11 on 2/13/08; looking north.

W-3 excavated & planted cell from photo station P-11 on 5/22/08; looking north.

W-4 excavated & unplanted cell from photo station P-5 on 6/21/07; looking south.

W-4 excavated & unplanted cell from photo station P-5 on 11/14/07; looking south.

W-4 excavated & unplanted cell from photo station P-5 on 2/13/08; looking south.

W-4 excavated & unplanted cell from photo station P-5 on 5/22/08; looking south.

North end of C-1 (delayed flooding cogon cell) from photo station P-1 on 6/21/07

North end of C-1 (delayed flooding cogon cell) from photo station P-1 on 11/14/07; note Arsenal plot in foreground

North end of C-1 (delayed flooding cogon cell) from photo station P-1 on 2/13/08; note Arsenal plot in foreground

North end of C-1 (delayed flooding cogon cell) from photo station P-1 on 5/22/08; note Arsenal plot in foreground

South end of C-1 (delayed flooding cogon cell) from photo station P-8 on 6/21/07

South end of C-1 (delayed flooding cogon cell) from photo station P-8 on 11/14/07; note Gly-Pro plot in foreground

South end of C-1 (delayed flooding cogon cell) from photo station P-8 on 2/13/08; note Gly-Pro plot in foreground

South end of C-1 (delayed flooding cogon cell) from photo station P-8 on 5/22/08; note Gly-Pro plot in foreground

North end of C-2 (immediate flooding cogon cell) from photo station P-9 on 6/21/07

North end of C-2 (immediate flooding cogon cell) from photo station P-9 on 11/14/07; flood only in the foreground

North end of C-2 (immediate flooding cogon cell) from photo station P-9 on 2/13/08; flood only in the foreground

North end of C-2 (immediate flooding cogon cell) from photo station P-9 on 5/22/08; flood only in the foreground

South end of C-2 (immediate flooding cogon cell) from photo station P-10 on 6/21/07; mow + flood in the foreground

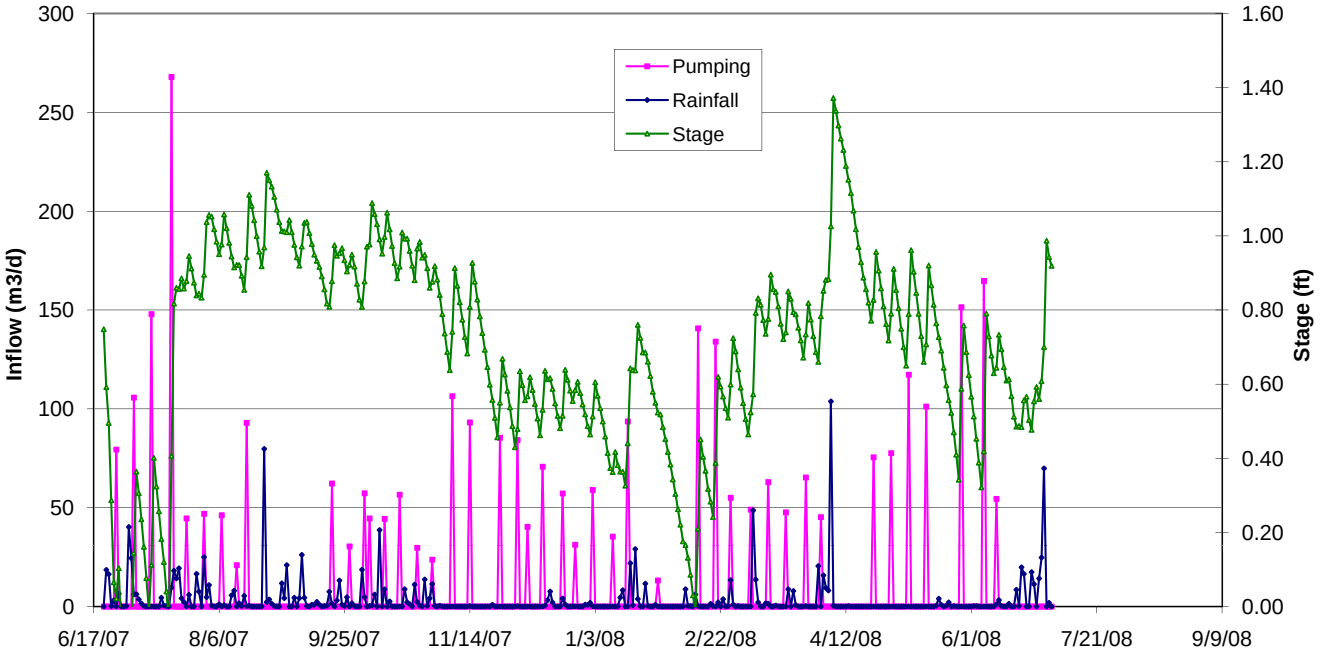
South end of C-2 (immediate flooding cogon cell) from photo station P-10 on 11/14/07; mow + flood in the foreground

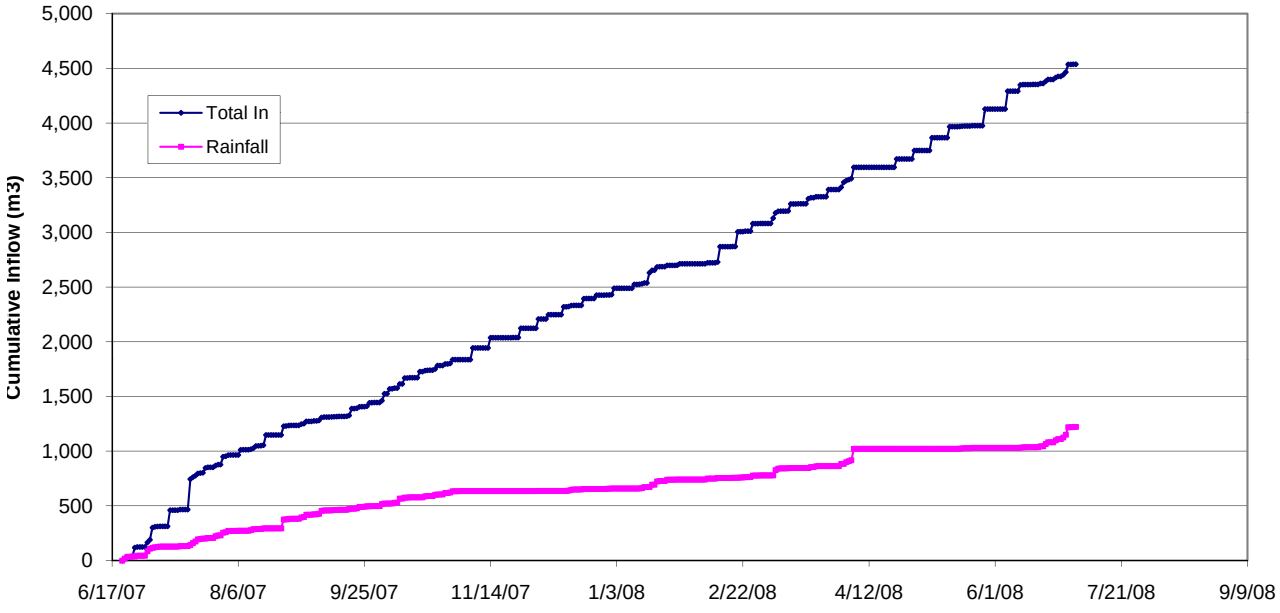
South end of C-2 (immediate flooding cogon cell) from photo station P-10 on 2/13/08; mow + flood in the foreground

South end of C-2 (immediate flooding cogon cell) from photo station P-10 on 5/22/08; mow + flood in the foreground

Appendix B

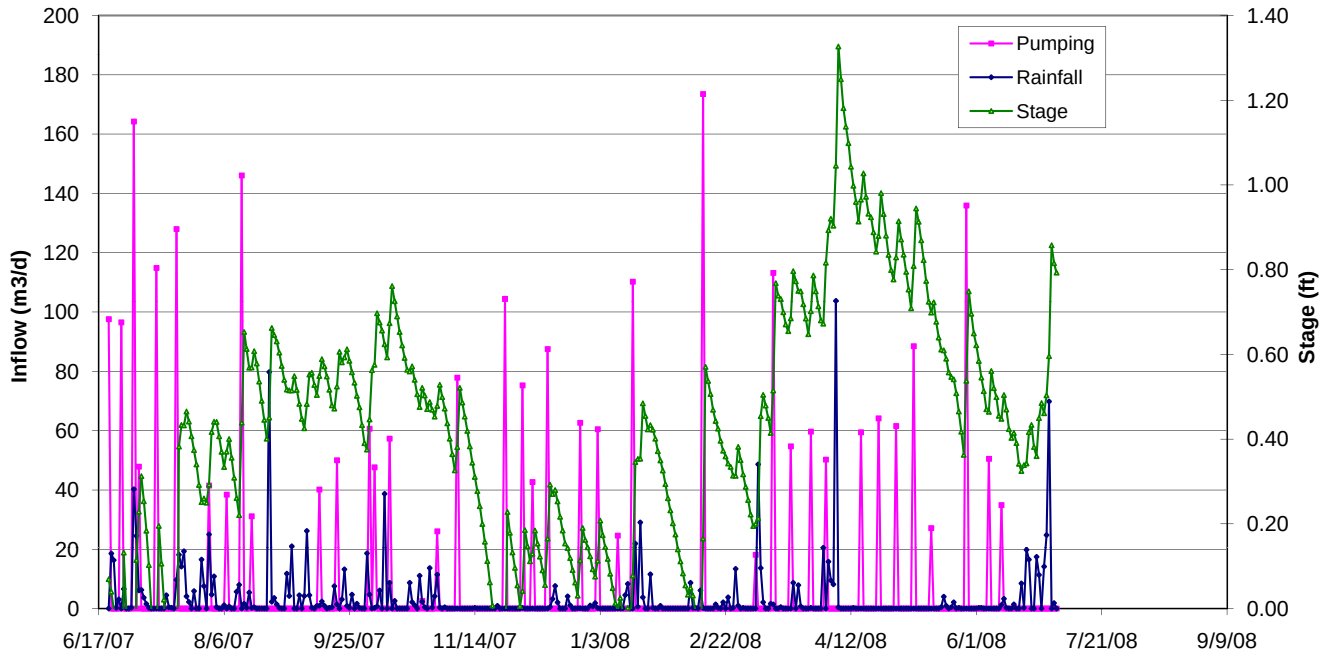
Inflow Water Budget (Rainfall and Lake Water Pumping) and Period-of-Record Stage-Frequency Curves for Wetland Cells W-1, W-2, W-3, and W-4

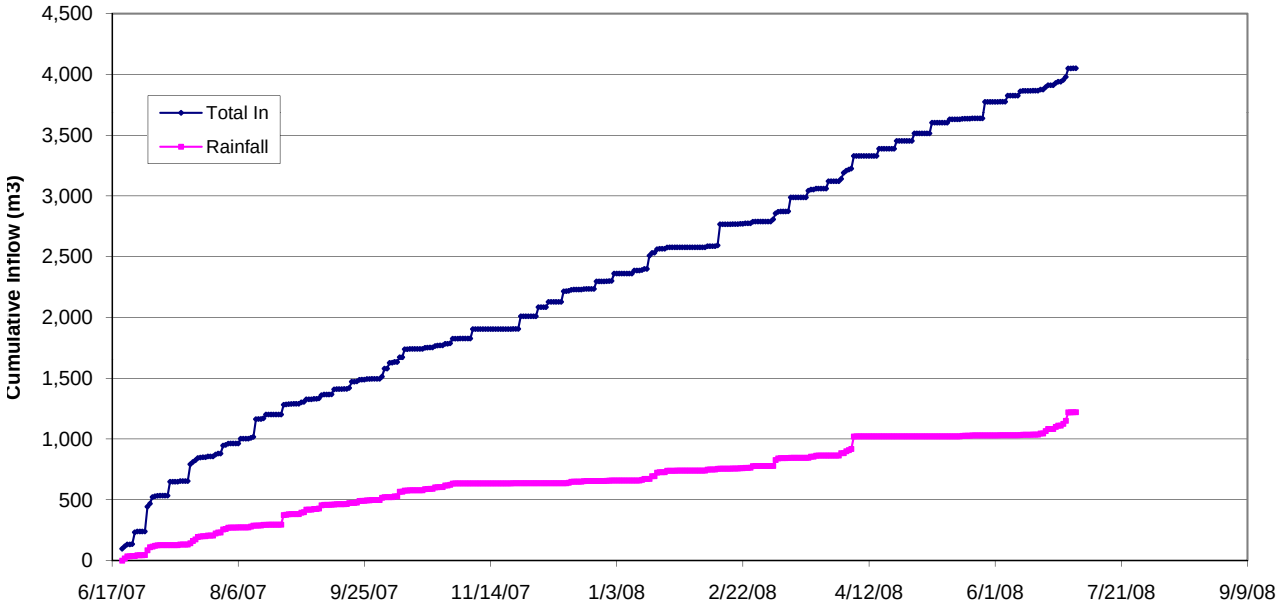




APPENDIX B

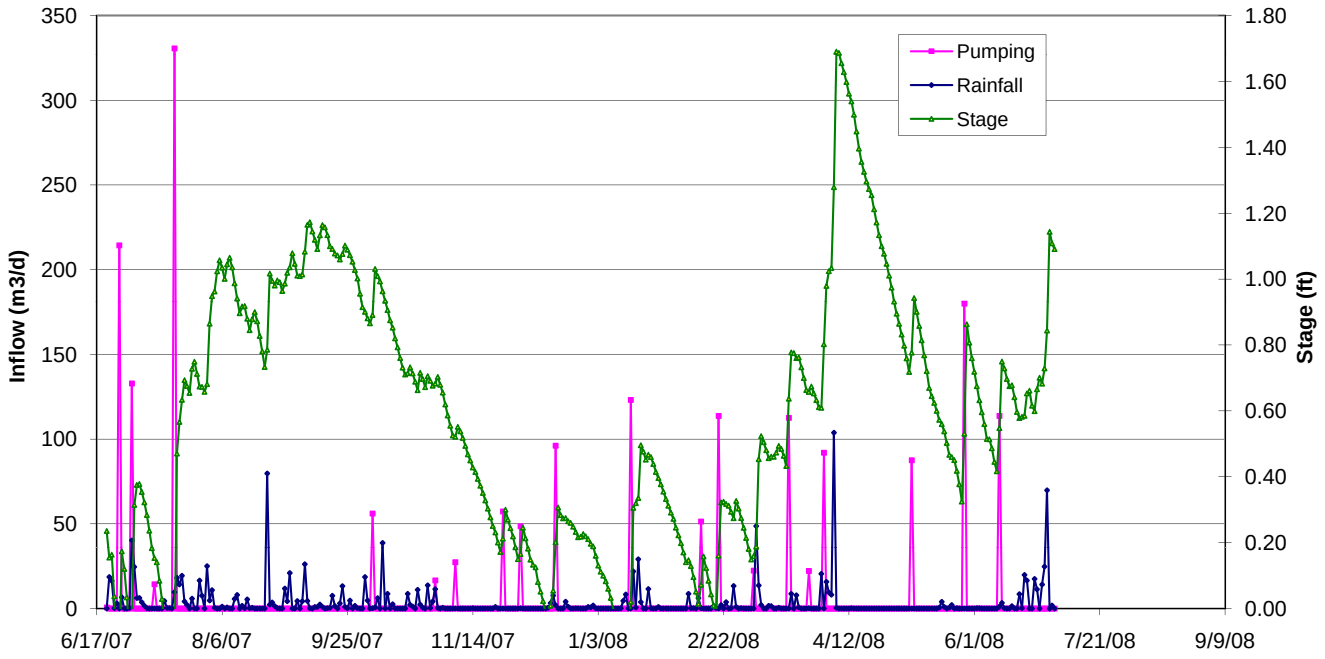
LAKE HANCOCK VEGETATION STUDY - W1 INPUTS

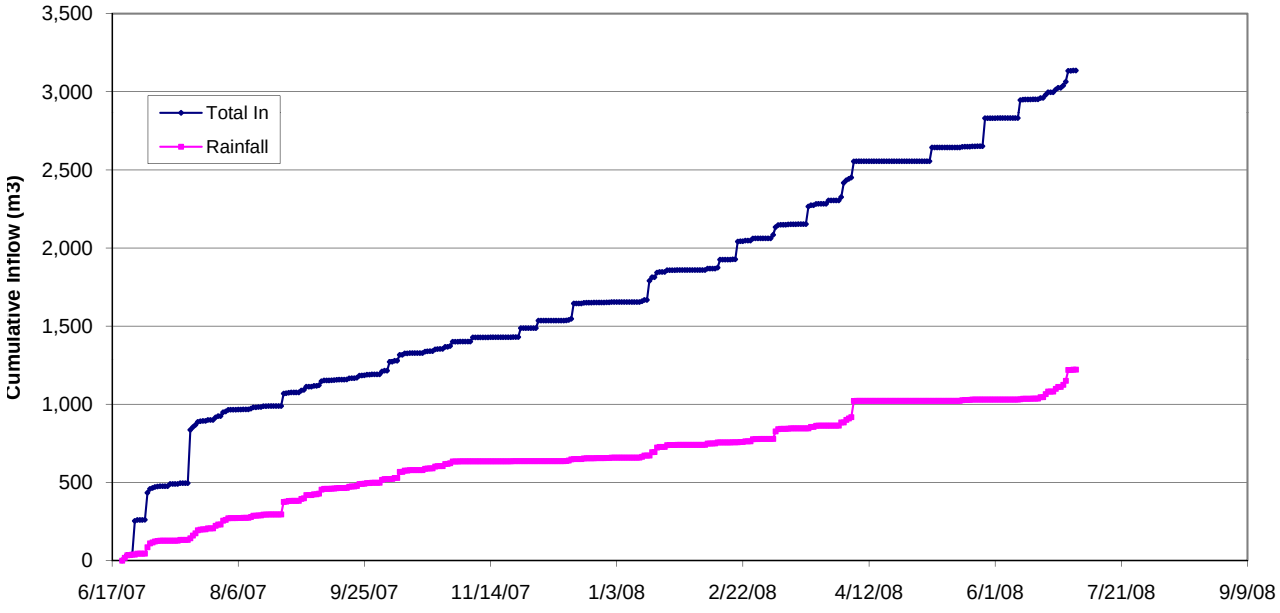




APPENDIX B

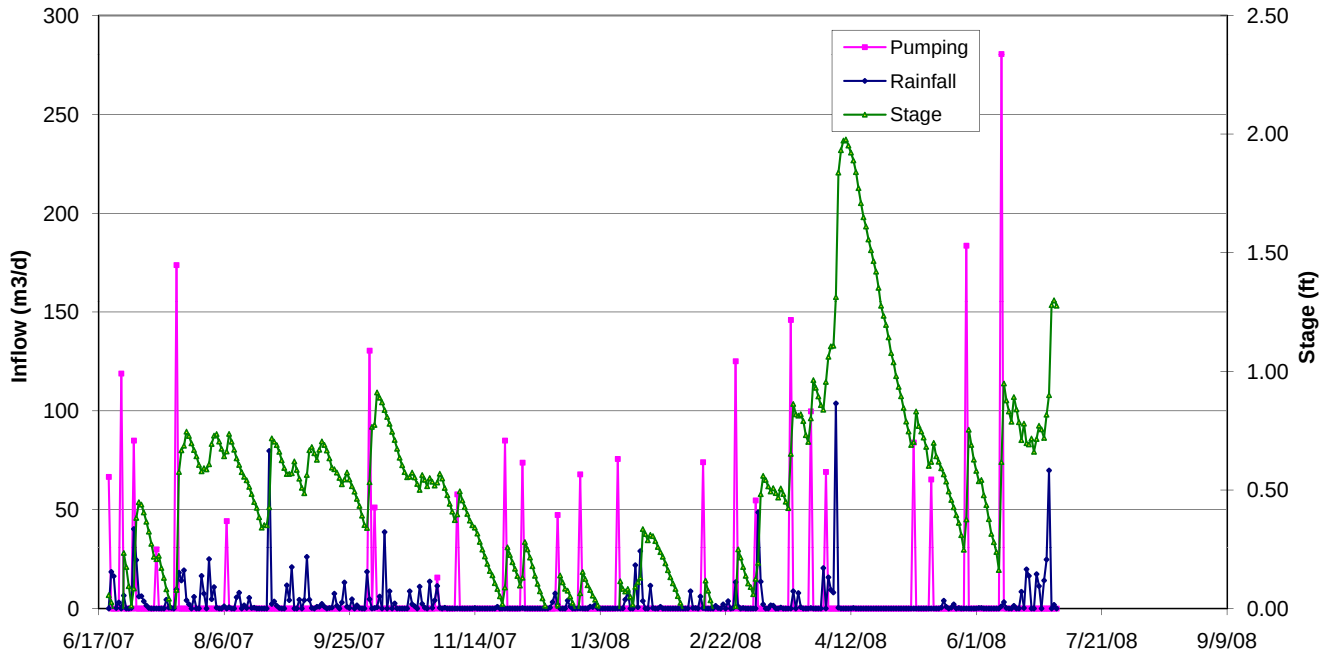
LAKE HANCOCK VEGETATION STUDY - W2 INPUTS

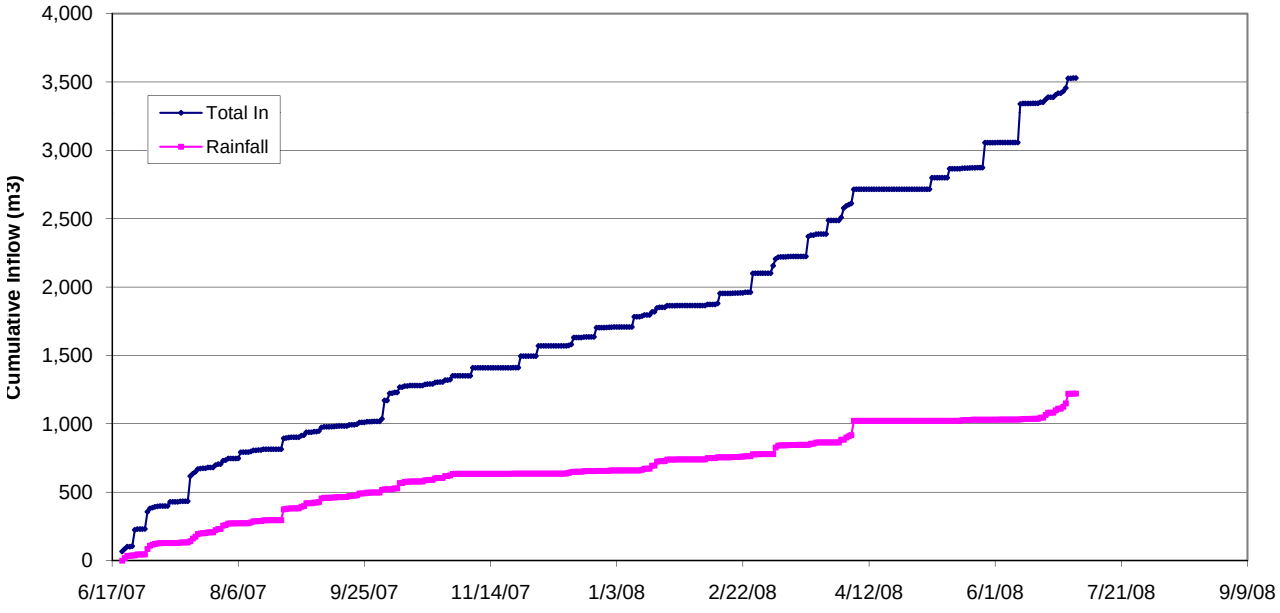




APPENDIX B

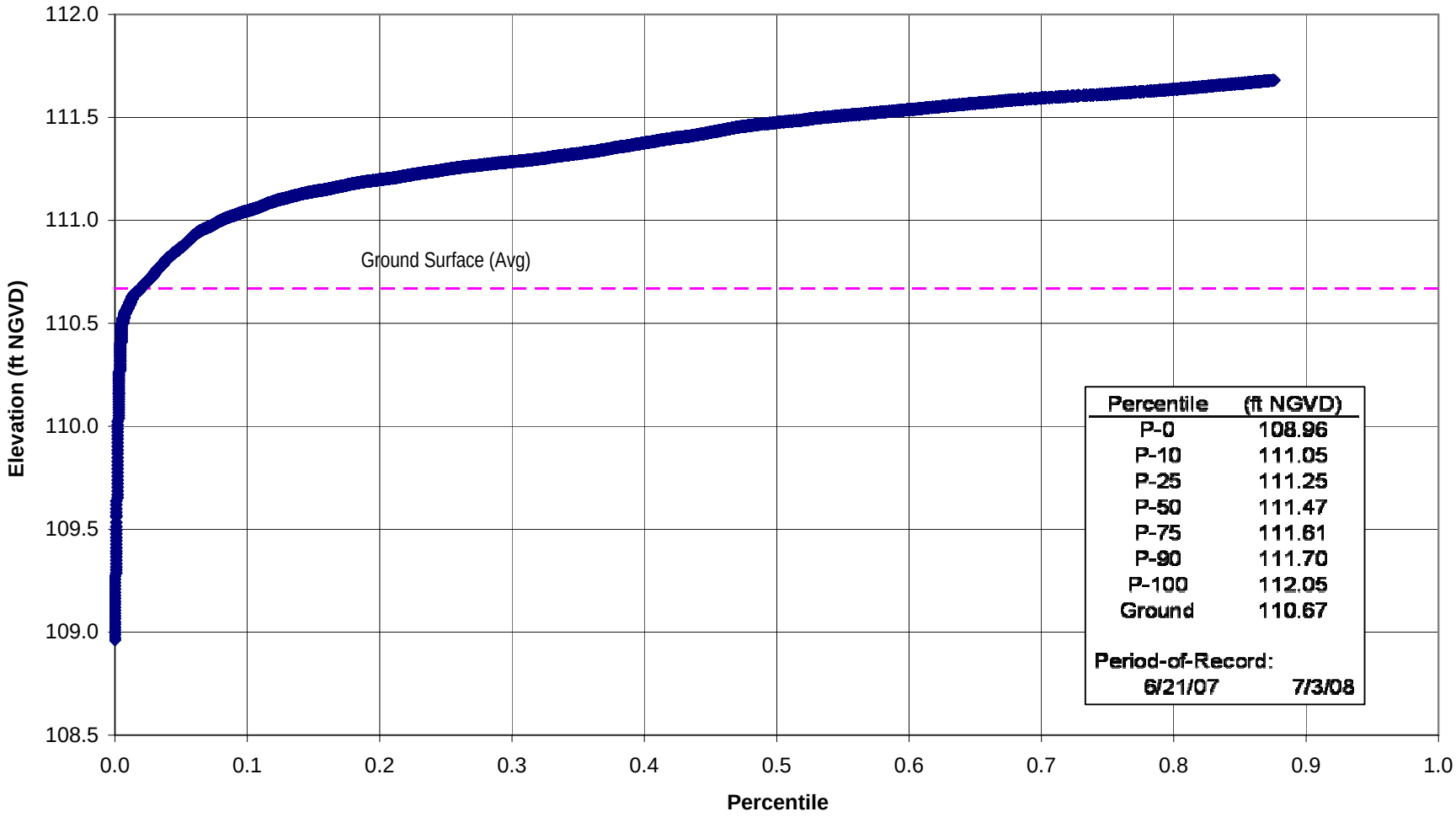
LAKE HANCOCK VEGETATION STUDY - W3 INPUTS





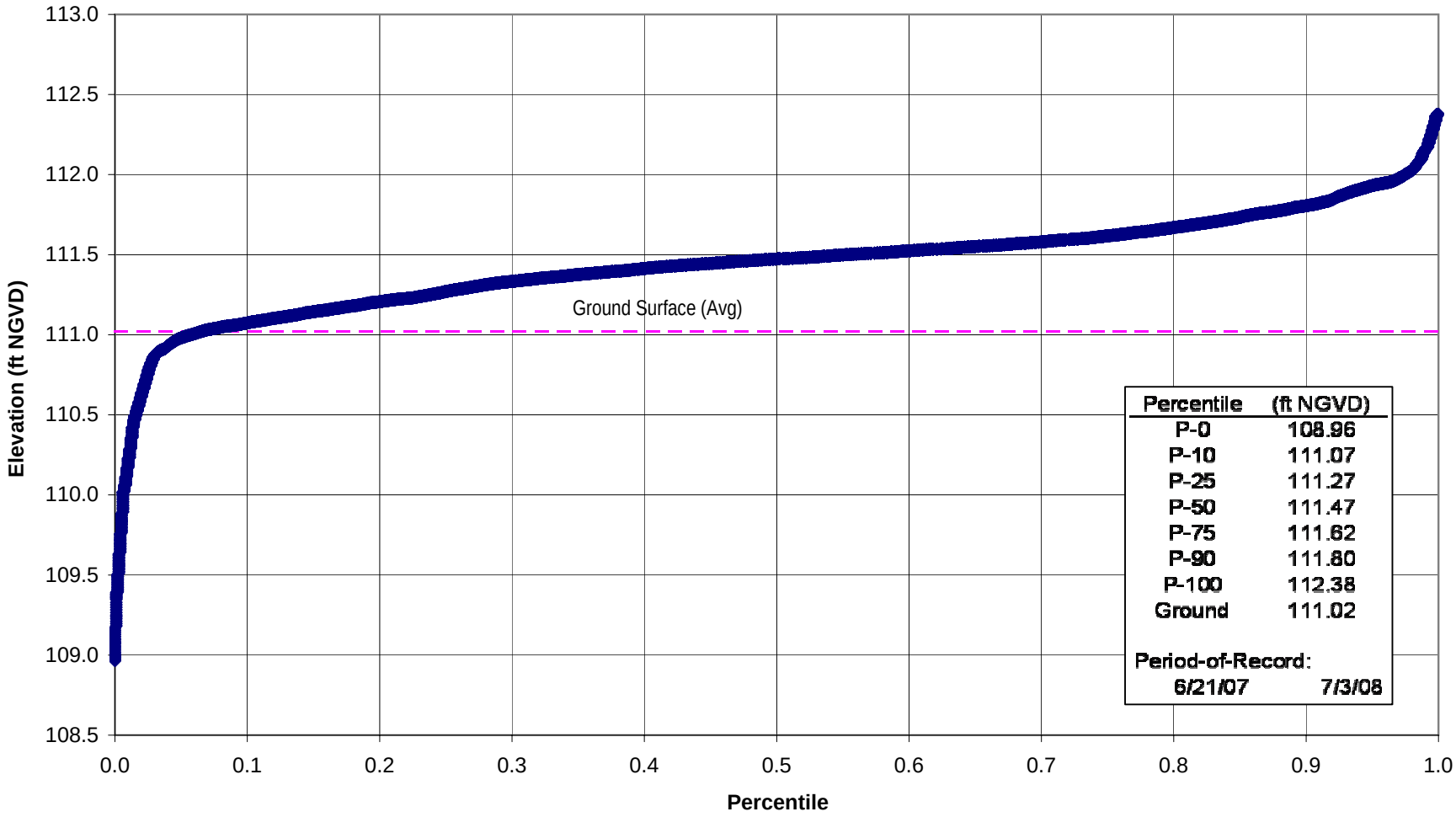
APPENDIX B

LAKE HANCOCK VEGETATION STUDY - W4 INPUTS



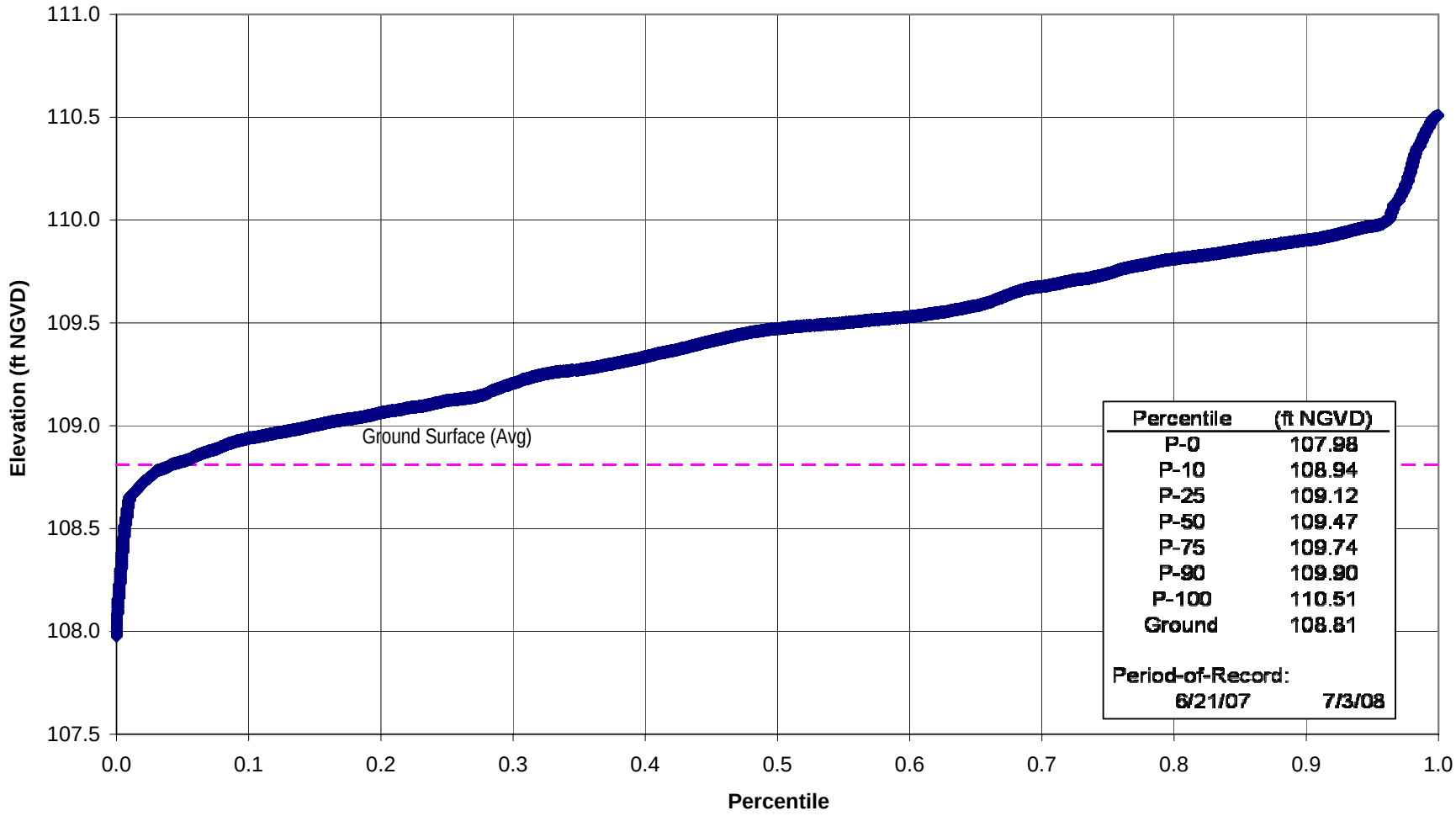
APPENDIX B

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-1 STAGE FREQUENCY CURVE



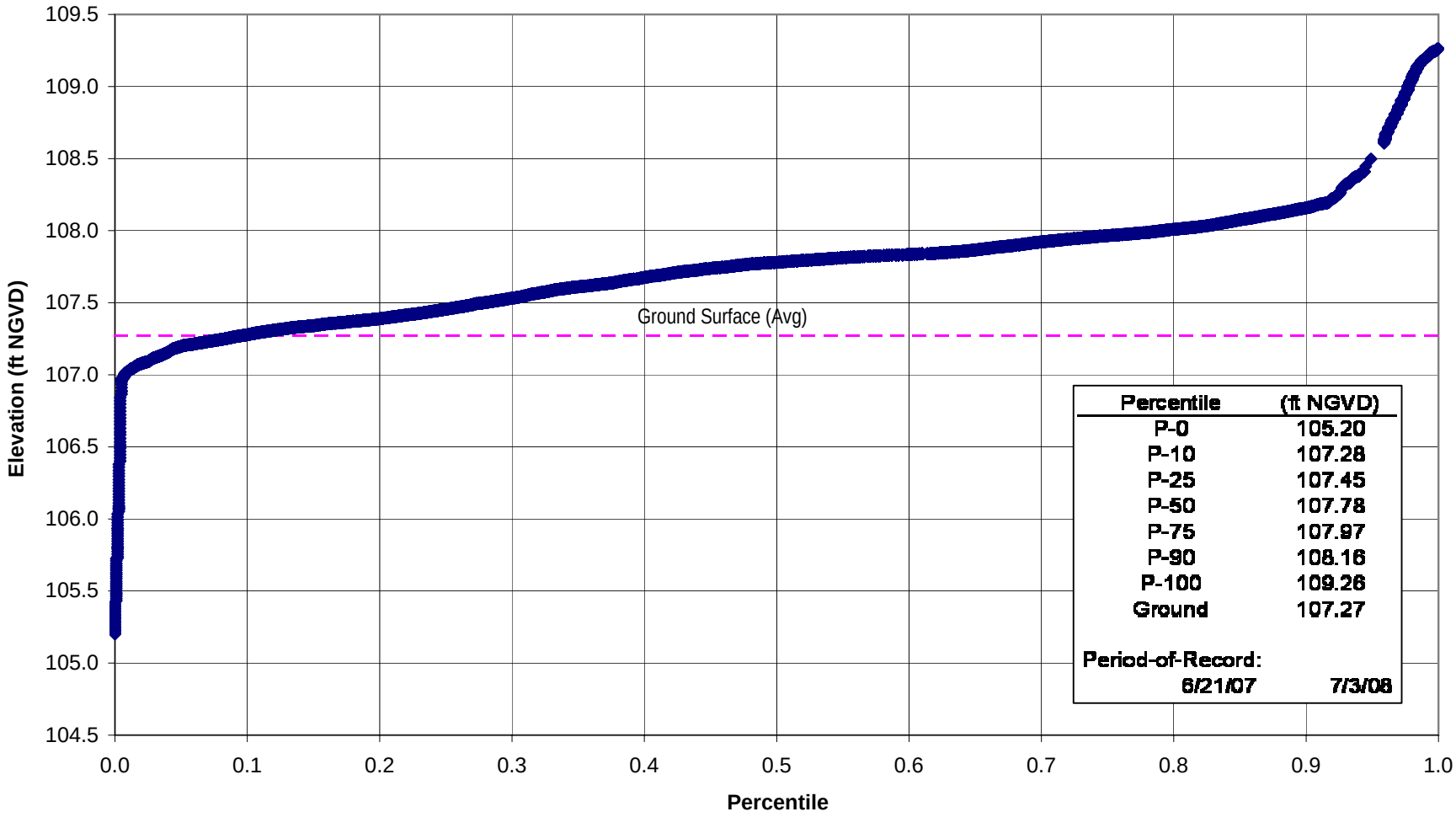
APPENDIX B

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-2 STAGE FREQUENCY CURVE



APPENDIX B

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-3 STAGE FREQUENCY CURVE



APPENDIX B
LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-4 STAGE FREQUENCY CURVE

Appendix C

Estimated Cover for Volunteer (Natural Recruitment) Plants and Water Regime Effects on Plant Recruitment

APPENDIX C
TOTAL COVER OF RECRUITED SPECIES IN THE WETLAND CELLS

Average		DATE												
CELL	SPECIES	6/21/2007	7/17/2007	8/3/2007	8/13/2007	9/13/2007	10/11/2007	11/14/2007	12/13/2007	1/16/2008	2/13/2008	3/12/2008	4/16/2008	5/22/2008
C1	Aeschynomene indica						0.02%							
	Amaranthus australis													0.07%
	Ampelopsis arboreum	0.05%	0.02%		0.02%				0.05%		0.02%	0.05%	0.02%	
	Boehmeria cylindrica												0.09%	
	Commelina diffusa							0.02%	0.02%	0.29%	0.29%	0.33%	0.33%	
	Diospyros virginiana	0.02%												
	Eupatorium sp.											0.05%	0.05%	
	Imperata cylindrica	64.76%	58.10%		39.00%	37.67%	32.55%	29.81%	22.05%	19.59%	17.59%	16.33%	1.02%	3.67%
	Indigophera hirsuta	0.17%	0.93%		0.67%	6.95%	6.50%	9.17%	2.48%	1.14%				
	Legume unknown								0.02%					
	Ludwigia decurrens						0.02%	0.02%		0.02%				
	Ludwigia octovalvis								0.02%					0.43%
	Ludwigia peruviana												0.02%	0.14%
	Macroptilium lathyroides	0.07%	0.62%		0.17%	0.17%	0.48%	0.62%	0.02%		0.02%			0.02%
	Merremia dissecta				0.07%	0.50%	3.69%	7.88%	4.81%	0.29%				
	Physalis angulata		0.02%		0.02%									
	Polygonum punctatum								0.02%			0.02%		
	Rumex sp.												0.22%	
	Sagittaria latifolia													0.02%
	Salix caroliniana	0.05%	0.05%		0.05%	0.57%	0.09%	0.05%	0.05%	0.05%	0.29%	0.31%	0.29%	0.09%
	Sesbania exulta	0.07%	0.57%		3.26%	1.90%	0.79%	0.52%	0.05%	0.43%				
	Toxicodendron radicans		0.02%											
	Unk. Opposite Broadleaf											0.09%		
	Urena lobata	0.31%	0.19%		0.12%	0.52%	0.76%	3.12%	3.83%	1.19%	0.50%	0.57%		0.02%
C2	Aeschynomene indica						0.02%							
	Ampelopsis arboreum	0.12%	0.12%		0.02%	0.07%	0.05%							
	Bare Ground						8.10%							
	Cynodon dactylon											0.29%		
	Cyperus odoratus						0.10%	0.09%	0.02%	0.57%	0.14%	0.10%	0.07%	0.07%
	Cyperus small fruit									0.14%			0.02%	
	Eclipta alba											0.02%		
	Eichornia crassipes											0.02%	0.17%	0.71%
	Eupatorium sp.											0.02%		
	Fuirena sp.						0.05%							
	Imperata cylindrica	27.86%	27.38%		25.24%	24.29%	17.14%	11.67%	19.52%	13.81%	15.00%	10.71%	5.05%	11.19%
	Indigophera hirsuta	0.10%	0.12%		0.02%	0.19%	0.05%							
	Ludwigia decurrens							0.02%		0.02%				
	Ludwigia octovalvis						0.02%						0.02%	0.02%
	Ludwigia peruviana						0.02%			0.14%		0.02%		
	Macroptilium lathyroides		0.07%		0.07%	0.24%	0.05%					0.02%		
	Merremia dissecta	0.02%	0.02%											
	Polygonum punctatum										0.02%			
	Rumex sp.												0.02%	
	Salix caroliniana	0.02%	0.02%		0.02%	0.29%	0.17%	0.17%	0.17%	0.29%	0.29%	0.50%	0.29%	0.31%
	Sesbania exulta		0.02%		0.07%	0.19%	0.05%	0.02%	0.02%	0.02%				
	Unk. Opposite Broadleaf											0.05%		
	Urena lobata	0.05%	0.07%			0.02%	0.09%	0.05%		0.17%		0.09%		

APPENDIX C
TOTAL COVER OF RECRUITED SPECIES IN THE WETLAND CELLS

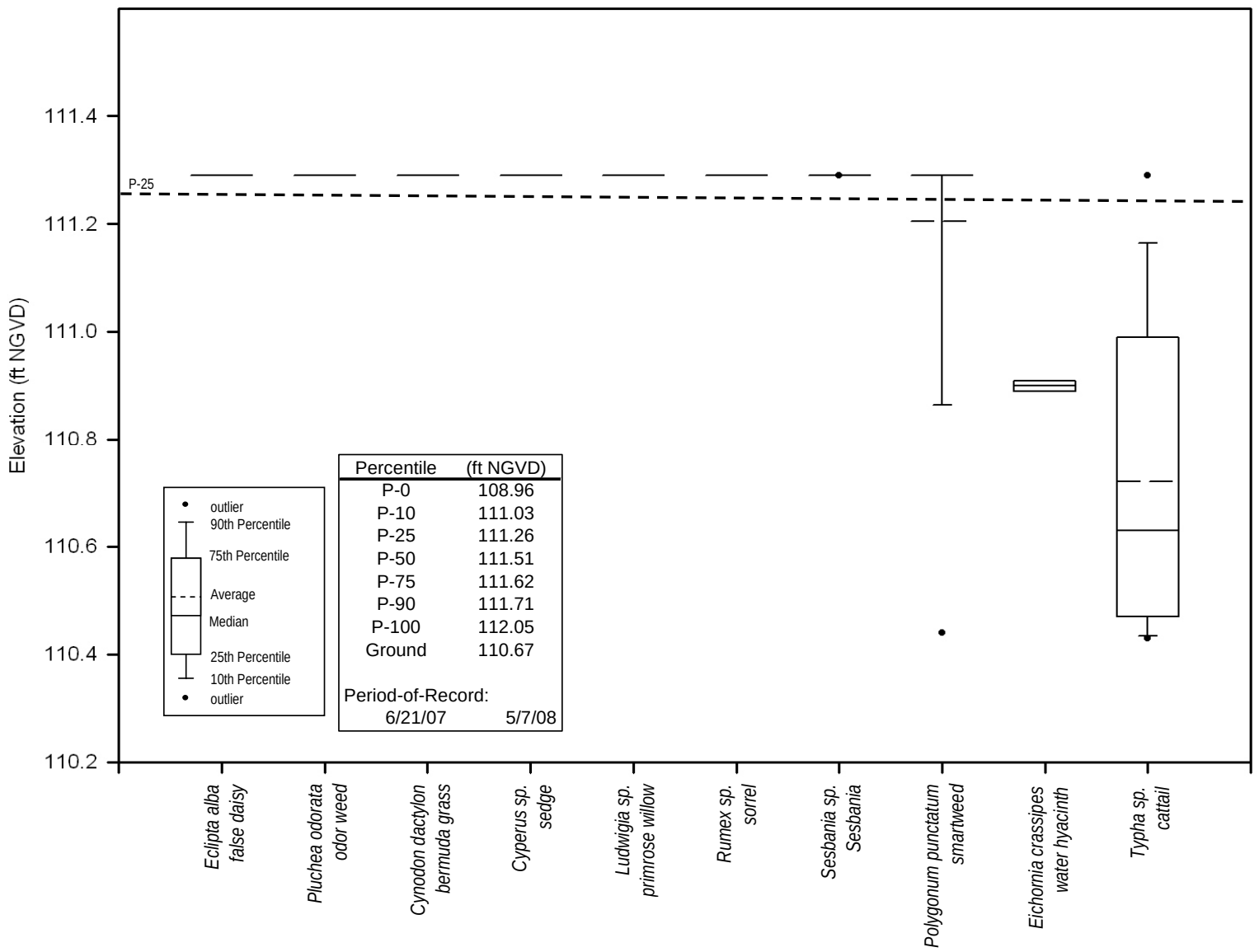
Average		DATE												
CELL	SPECIES	6/21/2007	7/17/2007	8/3/2007	8/13/2007	9/13/2007	10/11/2007	11/14/2007	12/13/2007	1/16/2008	2/13/2008	3/12/2008	4/16/2008	5/22/2008
W1	Aeschynomene indica					0.05%	0.05%	0.07%	0.45%					0.19%
	Alternanthera philoxeroides				0.05%	0.19%	0.05%						0.02%	
	Amaranthus australis													0.69%
	Ampelopsis arboreum						0.17%	0.71%						
	Bacharis halimifolia												0.07%	0.22%
	Bidens alba											0.02%		
	Chara sp.												0.98%	
	Cicuta mexicana													0.07%
	Commelina diffusa								0.02%	0.02%	0.14%	0.14%	0.02%	
	Cynodon dactylon								0.12%	0.36%	0.45%	0.38%	0.76%	0.14%
	Cyperus odoratus					0.24%	0.47%	0.50%	0.74%	1.07%	2.02%	1.19%	0.62%	0.62%
	Cyperus small fruit					0.05%			0.05%	0.10%			0.98%	
	Cyperus species													0.36%
	Eclipta alba						0.02%	0.07%	0.12%	0.33%	0.74%	0.55%	0.36%	0.50%
	Eichornia crassipes				0.02%	0.24%	0.31%	1.60%	1.14%	0.86%	1.83%	0.67%	0.33%	0.17%
	Eupatorium sp.								0.02%		0.52%	0.19%	0.26%	0.45%
	Fuirena sp.						0.10%							
	Grass unknown							0.10%		0.17%		0.05%	0.02%	0.52%
	Hydrilla verticulata										0.57%			0.02%
	Hydrocotyl species												0.02%	
	Hymenachne amplexicaulis								0.29%	0.29%			0.29%	1.55%
	Imperata cylindrica		0.33%		0.62%	0.10%			0.29%	0.81%	1.60%	1.05%	0.55%	0.86%
	Legume unknown								0.02%					
	Lemna sp.										0.14%			
	Lippia nodiflora													0.36%
	Ludwigia decurrens						0.02%	0.05%	0.14%	0.07%				
	Ludwigia octovalvis						0.19%	0.55%	0.12%	0.31%			0.05%	1.36%
	Ludwigia peruviana							0.07%	0.24%	0.33%	0.45%	0.50%	0.33%	0.79%
	Ludwigia sp					0.12%								
	Macroptilium lathyroides												0.02%	0.10%
	Nonvascular unknown								0.02%					
	Panicum hemitomon				0.02%	0.14%	0.02%							
	Panicum repens					0.05%	0.17%							
	Pluchua odorata											0.05%	0.02%	0.05%
	Polygonum punctatum					0.05%	0.05%	0.07%	0.10%	0.67%	0.29%	0.40%	0.60%	0.81%
	Red-center grass				0.02%	0.12%	0.05%		0.02%			0.02%	0.02%	0.02%
	Sedge unknown						0.02%							
	Sesbania exulta		0.02%		0.14%	0.17%	0.12%	0.07%	0.07%	0.05%			0.07%	0.41%
	Typha sp.						0.02%	0.07%	0.26%	0.52%	1.12%	0.48%	1.43%	2.98%
	Unk. Opposite Broadleaf								0.05%	0.29%	1.10%	0.31%	2.10%	
	Urena lobata				0.02%				0.10%		0.07%	0.05%	0.02%	0.02%
W2	Aeschynomene indica					0.10%	0.22%	0.41%	0.12%					
	Alternanthera philoxeroides					0.12%	0.02%							
	Amaranthus australis													0.07%
	Ammannia coccinia						0.07%	0.05%	0.07%	0.05%		0.05%		
	Bacharis halimifolia									0.05%				
	Bidens alba											0.14%		
	Cynodon dactylon									0.76%	0.93%	0.48%	0.14%	0.02%
	Cyperus odoratus					0.50%	1.22%	0.45%	1.57%	2.69%	2.00%	0.95%	1.31%	0.17%
	Cyperus small fruit					0.48%	0.22%	0.12%	0.02%	0.17%		0.02%	0.22%	
	Cyperus species							0.02%	0.02%					0.19%
	Eclipta alba								0.05%	0.07%	2.43%	1.88%	1.60%	0.36%
	Eichornia crassipes				0.12%	0.69%	1.95%	5.86%	7.69%	20.21%	19.07%	7.09%	15.00%	12.50%

APPENDIX C
TOTAL COVER OF RECRUITED SPECIES IN THE WETLAND CELLS

Average		DATE												
CELL	SPECIES	6/21/2007	7/17/2007	8/3/2007	8/13/2007	9/13/2007	10/11/2007	11/14/2007	12/13/2007	1/16/2008	2/13/2008	3/12/2008	4/16/2008	5/22/2008
W2 Cont.	Eleocharis interstincta												0.02%	
	Eupatorium sp.								0.10%	0.05%	1.71%	0.31%	0.17%	0.05%
	Fuirena sp.						0.02%							
	Grass unknown								0.02%	0.29%				
	Imperata cylindrica		0.97%		2.33%	7.60%	4.29%	3.17%	2.64%	12.07%	10.21%	3.05%	5.55%	2.88%
	Legume unknown								0.05%					
	Ludwigia decurrens						0.22%	0.07%	1.21%					
	Ludwigia octovalvis						0.78%	0.45%	0.19%	1.64%			0.19%	0.83%
	Ludwigia peruviana						0.19%	0.24%	0.64%	1.03%	1.64%	1.03%	1.10%	1.74%
	Ludwigia sp				0.07%	0.40%			0.05%					
	Pluchua odorata								0.05%	0.02%	0.29%	0.22%	0.10%	0.10%
	Polygonum punctatum										0.14%			0.05%
	Pontederia cordata													0.14%
	Red-center grass				0.07%	0.12%	0.10%		0.02%					
	Rumex sp.												0.78%	
	Sagittaria latifolia					0.07%	0.21%	1.00%	0.76%	0.72%	2.86%	2.17%	5.10%	6.03%
	Scirpus californicus								0.02%		0.14%	0.02%	0.14%	0.17%
	Sesbania exulta				0.24%	0.31%	0.21%	0.29%	0.60%	0.07%				
	Typha sp.						0.12%	0.64%	1.45%	2.38%	3.93%	4.59%	7.29%	12.74%
	Unk. Opposite Broadleaf									0.02%	2.21%	0.84%	0.53%	
	Urena lobata				0.02%				0.02%		0.02%			
W3	Aeschynomene indica						0.05%	0.05%	0.07%					
	Amaranthus australis													0.17%
	Ampelopsis arboreum				0.05%			0.02%		0.14%				
	Bacharis halimifolia												0.07%	0.05%
	Bidens alba											0.02%		
	Boehmeria cylindrica												0.15%	
	Chara sp.						0.93%							
	Cicuta mexicana													0.02%
	Commelina diffusa											0.02%	0.02%	
	Cynodon dactylon								0.24%	0.64%	0.86%	0.26%	0.79%	0.31%
	Cyperus odoratus					0.05%	0.09%	0.19%	0.60%	1.64%	1.57%	0.19%	0.60%	0.36%
	Cyperus small fruit					0.02%	0.02%						0.02%	
	Cyperus species													0.02%
	Eclipta alba							0.02%	0.43%	0.81%	2.50%	0.31%	0.64%	0.45%
	Eichornia crassipes						0.05%	0.19%	0.07%	3.14%	0.43%	0.02%	0.02%	0.02%
	Eupatorium sp.								0.12%	0.14%	2.00%	0.35%	0.33%	0.35%
	Grass unknown					0.02%			0.02%	0.57%	1.14%	0.05%		
	Hydrocotyl species											0.02%		
	Hymenachne amplexicaulis								0.07%		0.14%	0.10%		
	Imperata cylindrica		0.40%		0.31%	0.14%			0.14%	1.91%	1.57%	0.26%	0.17%	0.12%
	Ludwigia decurrens							0.02%	0.26%	0.45%				
	Ludwigia octovalvis						0.07%	0.10%	0.10%	0.43%		0.02%	0.05%	0.12%
	Ludwigia peruviana						0.05%	0.10%	0.07%	0.31%	0.71%	0.15%	0.22%	0.17%
	Ludwigia sp				0.02%	0.05%								
	Panicum repens											0.07%		
	Pluchua odorata							0.02%	0.02%	0.02%		0.02%	0.12%	0.07%
	Polygonum punctatum					0.02%	0.05%	0.05%	0.05%	0.45%	0.57%	0.64%	1.79%	1.05%
	Red-center grass					0.05%	0.05%	0.02%	0.07%	0.88%		0.05%	1.50%	0.38%
	Rumex sp.												0.64%	
	Sesbania exulta				0.05%	0.12%	0.07%		0.05%	0.05%			0.02%	0.09%
	Typha sp.							0.05%	0.07%	0.19%	0.29%	0.17%	0.91%	0.79%
	Unk. Opposite Broadleaf								0.07%	1.31%	2.43%	0.31%	0.31%	
	Urena lobata								0.02%		0.14%			

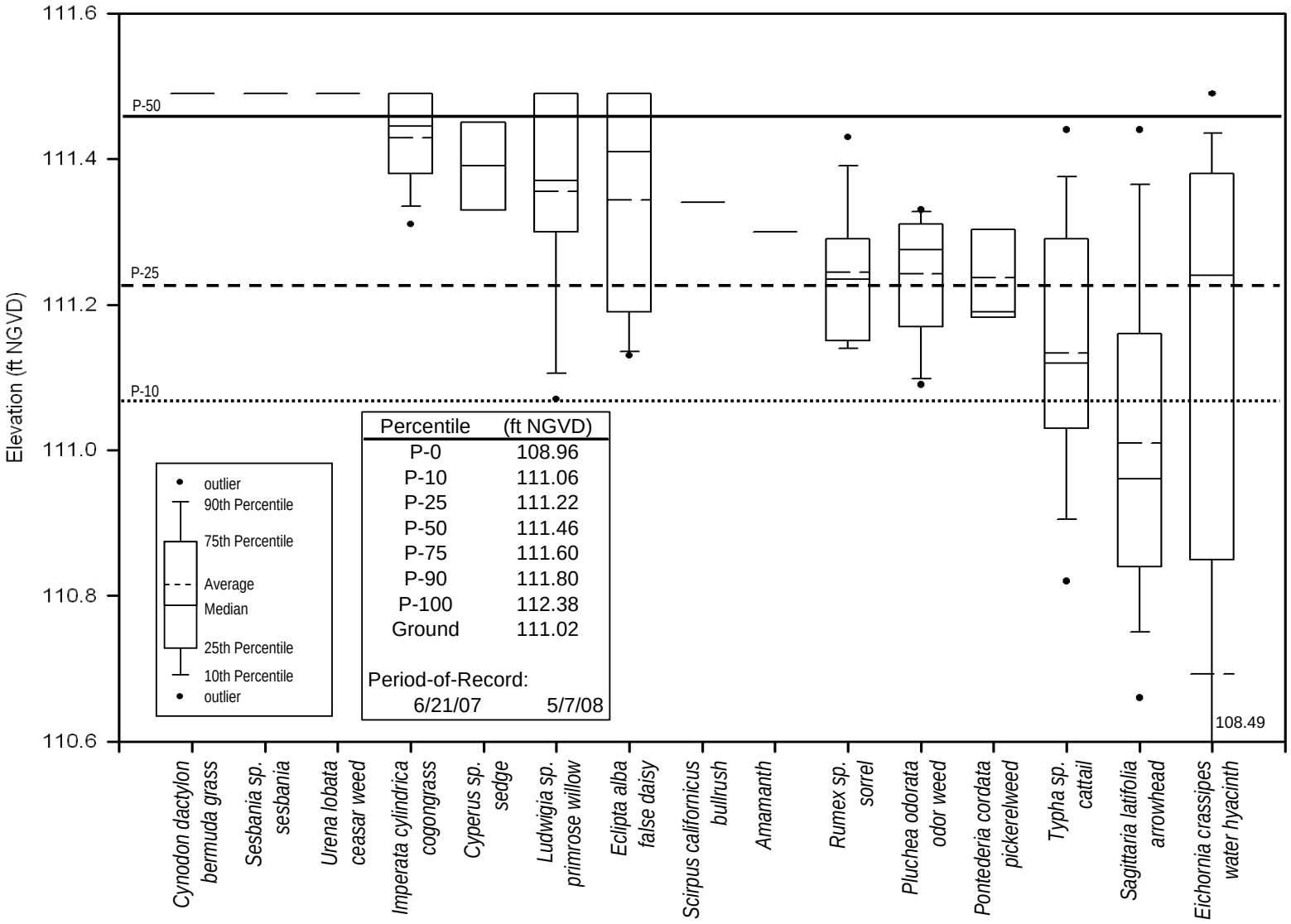
APPENDIX C
TOTAL COVER OF RECRUITED SPECIES IN THE WETLAND CELLS

Average		DATE												
CELL	SPECIES	6/21/2007	7/17/2007	8/3/2007	8/13/2007	9/13/2007	10/11/2007	11/14/2007	12/13/2007	1/16/2008	2/13/2008	3/12/2008	4/16/2008	5/22/2008
W4	Aeschynomene indica					0.21%	0.86%	0.21%	0.17%					
	Albizia julibrissin							0.02%	0.02%	0.02%	0.14%	0.02%		
	Alternanthera philoxeroides									0.14%				
	Amaranthus australis													0.14%
	Ampelopsis arboreum				0.05%			0.02%	0.05%				0.02%	
	Bacharis halimifolia									0.02%				
	Bidens alba											0.02%		
	Boehmeria cylindrica												0.33%	
	Callicarpa americana								0.02%					
	Commelina diffusa							0.05%	0.02%					0.02%
	Cynodon dactylon								1.64%	4.29%	7.57%	3.21%		3.88%
	Cyperus odoratus					0.43%	1.43%	0.55%	0.86%	2.14%	1.43%	0.36%	0.57%	0.19%
	Cyperus small fruit					0.45%	1.29%	0.41%	1.07%					
	Cyperus species						0.19%							0.10%
	Desmodium species									0.02%				
	Eclipta alba						0.05%	0.02%	0.24%	2.81%	3.10%	0.71%	2.14%	0.98%
	Eichornia crassipes				0.02%	0.22%	0.67%	1.86%	0.76%	2.33%	2.98%	1.14%	7.69%	8.76%
	Eupatorium sp.							0.19%	0.26%	1.62%	2.29%	0.40%	0.93%	0.22%
	Grass unknown							0.67%	0.26%	0.43%	0.57%	0.50%		0.05%
	Hymenachne amplexicaulis								0.05%					
	Imperata cylindrica		0.40%		0.38%	0.17%		0.48%	0.76%	2.14%	4.57%	0.76%	3.79%	1.05%
	Indigophera hirsuta								0.05%					
	Legume unknown							0.17%	0.02%					
	Ludwigia decurrens							0.02%	0.57%	0.43%				
	Ludwigia octovalvis						0.55%	0.57%	0.17%	1.86%		0.05%	0.12%	0.33%
	Ludwigia peruviana						0.24%	0.17%	0.14%	0.86%	1.00%	0.24%	0.38%	0.36%
	Ludwigia sp				0.14%	0.14%			0.05%					
	Macroptilium lathyroides						0.02%		0.02%					0.07%
	Nonvascular unknown						0.19%	0.10%	0.02%					
	Opposite leaf succulent					0.02%								
	Panicum repens					0.10%	1.36%							
	Pluchua odorata							0.10%	0.14%	0.17%	0.57%	0.19%	0.26%	0.22%
	Polygonum punctatum								0.02%					0.02%
	Red-center grass				0.14%	0.48%	1.98%	0.48%	0.62%	0.14%				
	Rumex sp.												4.74%	
	Sagittaria latifolia						0.02%		0.02%	0.02%	0.14%	0.02%	0.36%	0.55%
	Scirpus californicus											0.02%		
	Sesbania exulta		0.02%		0.14%	0.24%	0.45%	0.10%	0.12%	0.36%				0.07%
	Typha sp.						0.07%	0.55%	0.67%	1.81%	4.07%	4.26%	9.50%	11.67%
	Unk. Opposite Broadleaf								0.33%	1.79%	3.14%	1.19%	4.69%	
	Urena lobata					0.02%	0.05%	0.02%	0.02%		0.57%	0.02%		0.05%



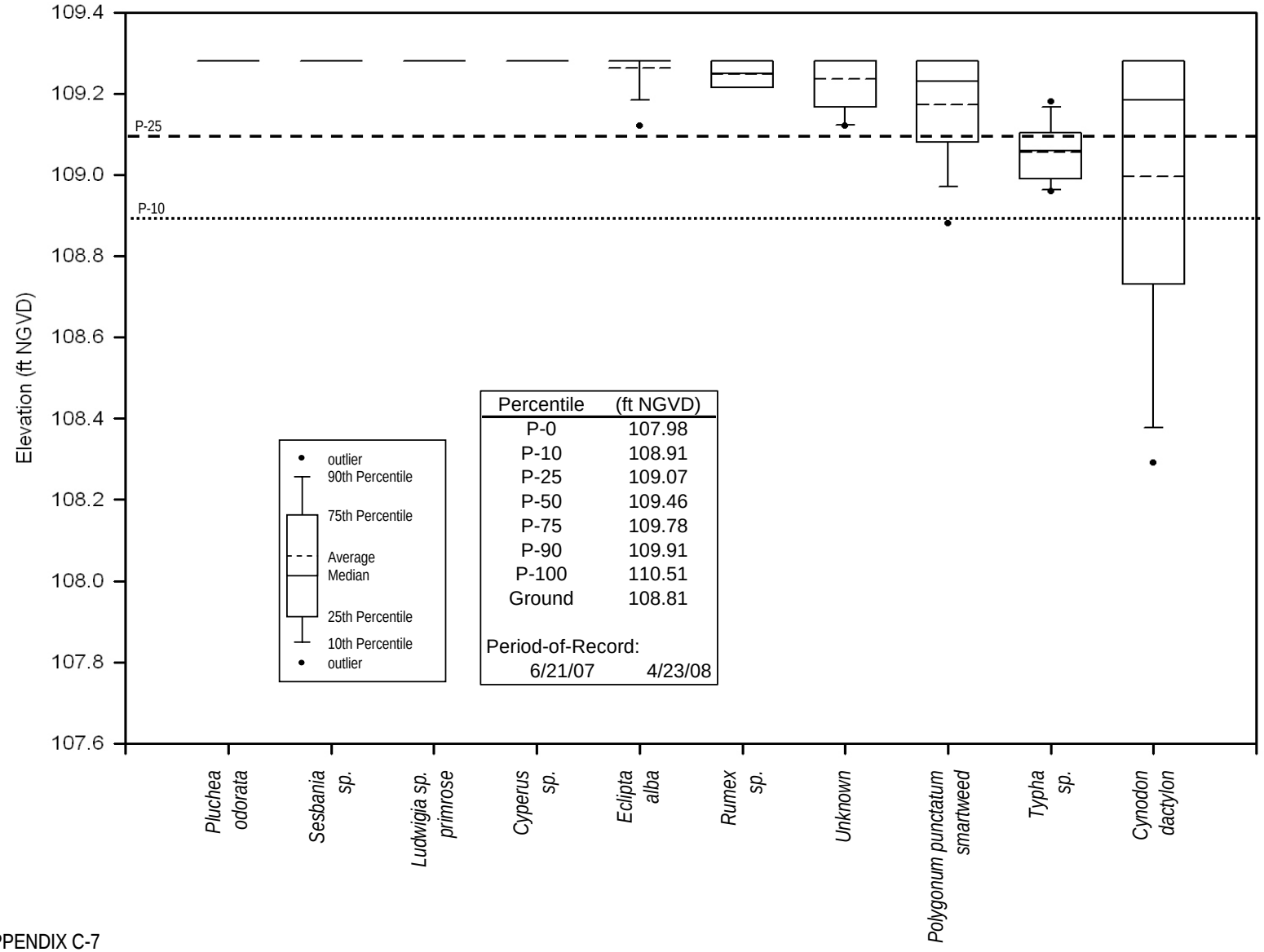
APPENDIX C-5

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-1 WATER REGIME EFFECTS ON PLANT GERMINATION (05/22/08)



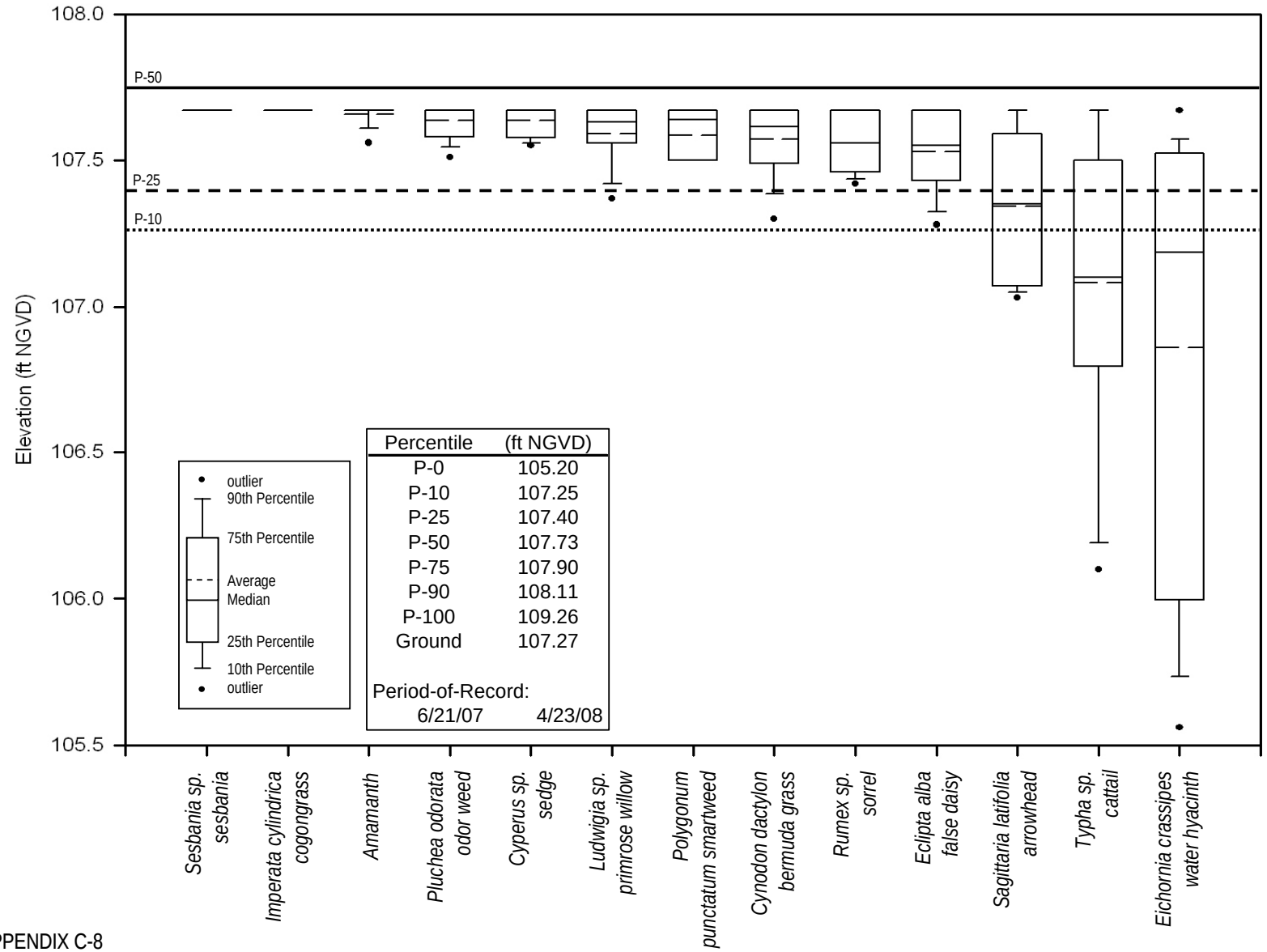
APPENDIX C-6

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-2 WATER REGIME EFFECTS ON PLANT GERMINATION (05/22/08)



APPENDIX C-7

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-3 WATER REGIME EFFECTS ON PLANT GERMINATION (05/22/08)



APPENDIX C-8

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - CELL W-4 WATER REGIME EFFECTS ON PLANT GERMINATION (05/22/08)

Appendix D

Water Quality Summary

APPENDIX D

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - WATER QUALITY STATISTICS

June 2007 - May 2008

				STATISTICS				
GROUP	**PARAMETER**	**UNITS**	**STATION**	**AVG**	**MAX**	**MIN**	**STD DEV**	**N**
TEMPERATURE	Wtr Temp	C	C-1	19.6	24.0	15.6	3.34	5
			C-2	23.3	27.0	17.4	3.25	10
			W-1	24.2	29.8	17.4	4.36	12
			W-2	24.1	32.9	16.1	4.77	12
			W-3	24.6	31.6	18.5	4.28	12
			W-4	25.0	31.8	19.3	4.49	12
			W-5	27.4	39.7	20.0	5.49	13
DISSOLVED OXYGEN	DO	mg/L	C-1	3.29	9.03	0.58	3.32	5
			C-2	6.74	17.0	1.59	5.31	10
			W-1	6.51	11.9	2.60	3.02	12
			W-2	4.17	11.0	1.57	2.78	12
			W-3	6.50	11.3	1.66	3.28	12
			W-4	8.09	14.9	2.90	3.72	12
			W-5	9.37	11.4	2.97	2.10	13
	DO	%	C-1	37.6	107.3	5.80	40.2	5
			C-2	78.7	210	19.4	63.6	10
			W-1	76.1	125	34.3	31.5	12
			W-2	51.3	152	18.0	38.5	12
			W-3	77.3	136	21.5	37.9	12
			W-4	96.8	162	37.5	41.7	12
			W-5	118	162	37.2	29.3	13
PHYSICAL	pH	SU	C-1	7.59	8.01	7.14	0.315	5
			C-2	7.58	8.56	6.97	0.623	10
			W-1	7.98	8.79	7.24	0.561	12
			W-2	7.86	9.01	7.27	0.530	12
			W-3	8.13	8.94	7.26	0.543	12
			W-4	8.58	9.51	7.34	0.670	12
			W-5	9.19	10.1	8.11	0.514	13
	Secchi	m	C-1	0.477	0.900	0.178	0.310	5
			C-2	0.377	0.700	0.122	0.207	6
			W-1	0.752	1.52	0.160	0.495	10
			W-2	0.932	1.80	0.110	0.616	9
			W-3	1.25	2.60	0.200	0.861	8
			W-4	0.881	1.80	0.190	0.587	9
			W-5	0.187	0.400	0.061	0.135	11
	SpCond	umhos/cm	C-1	399	432	374	24.3	5
			C-2	357	464	277	58.9	10
			W-1	296	388	179	60.3	12
			W-2	301	404	208	70.4	12
			W-3	295	444	194	72.7	12
			W-4	244	366	144	70.3	12
			W-5	314	376	266	32.4	13

APPENDIX D

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - WATER QUALITY STATISTICS

June 2007 - May 2008

				STATISTICS				
GROUP	**PARAMETER**	**UNITS**	**STATION**	**AVG**	**MAX**	**MIN**	**STD DEV**	**N**
SOLID	TSS	mg/L	C-1	40.0	71.0	21.0	19.1	5
			C-2	31.4	63.3	13.0	16.2	10
			W-1	28.7	60.0	8.00	17.7	15
			W-2	25.6	138	5.00	36.5	13
			W-3	11.6	36.0	4.00	9.11	13
			W-4	23.6	50.0	3.0	13.1	15
			W-5	122	183	25.0	40.4	15
BIOLOGICAL	Chl-a corr	µg/L	W-2	21.4	21.4	21.4	---	1
			W-3	13.1	13.1	13.1	---	1
			W-4	39.7	39.7	39.7	---	1
			W-5	306	384	228	110	2
GENERAL INORGANIC	SO4	mg/L	C-1	6.02	11.3	0.740	7.47	2
			C-2	2.67	8.13	0.638	3.65	4
			W-1	7.68	9.57	6.92	1.09	5
			W-2	6.86	11.2	2.43	4.58	4
			W-3	5.14	12.2	0.165	5.26	5
			W-4	6.78	10.9	1.64	3.55	5
			W-5	14.7	15.7	13.9	0.793	4
NITROGEN	NH4-N	mg/L	C-1	0.829	1.54	0.101	0.650	5
			C-2	1.29	6.51	0.082	1.95	10
			W-1	0.063	0.181	0.020	0.042	15
			W-2	0.197	1.60	0.032	0.426	13
			W-3	0.069	0.395	0.010	0.107	13
			W-4	0.045	0.107	0.005	0.028	15
			W-5	0.173	0.244	0.005	0.061	15
	TKN-D	mg/L	C-1	5.23	6.47	4.34	1.056	5
			C-2	5.05	9.84	3.42	2.05	10
			W-1	3.25	4.83	2.32	0.731	15
			W-2	3.17	6.16	2.34	1.04	13
			W-3	2.11	4.89	0.830	1.19	13
			W-4	2.35	4.91	1.42	1.11	15
			W-5	5.20	7.69	3.63	1.31	15
	TKN	mg/L	C-1	9.45	10.2	8.27	0.905	5
			C-2	8.00	12.2	4.79	2.52	10
			W-1	4.85	9.43	2.32	1.85	15
			W-2	4.00	7.45	2.34	1.70	13
			W-3	2.63	7.05	1.21	1.59	13
			W-4	3.45	9.02	1.42	2.24	15
			W-5	15.1	20.5	10.2	3.01	15

APPENDIX D

LAKE HANCOCK VEGETATION ESTABLISHMENT STUDY - WATER QUALITY STATISTICS

June 2007 - May 2008

				STATISTICS				
GROUP	**PARAMETER**	**UNITS**	**STATION**	**AVG**	**MAX**	**MIN**	**STD DEV**	**N**
NITROGEN	NOx-N	mg/L	C-1	0.021	0.051	0.008	0.017	5
			C-2	0.024	0.061	0.006	0.019	10
			W-1	0.019	0.060	0.002	0.015	15
			W-2	0.020	0.049	0.003	0.013	13
			W-3	0.014	0.031	0.006	0.008	13
			W-4	0.012	0.031	0.002	0.009	15
			W-5	0.055	0.091	0.009	0.022	15
	TN	mg/L	C-1	9.47	10.2	8.32	0.896	5
			C-2	8.03	12.3	4.80	2.53	10
			W-1	4.87	9.45	2.34	1.85	15
			W-2	4.02	7.49	2.35	1.70	13
			W-3	2.64	7.07	1.23	1.59	13
			W-4	3.46	9.04	1.43	2.24	15
			W-5	15.2	20.5	10.3	3.00	15
PHOSPHORUS	OrthoP	mg/L	C-1	0.021	0.041	0.006	0.013	5
			C-2	0.033	0.100	0.001	0.037	10
			W-1	0.291	0.748	0.008	0.186	15
			W-2	0.238	0.422	0.053	0.092	13
			W-3	0.454	0.787	0.307	0.145	13
			W-4	0.317	0.514	0.180	0.105	15
			W-5	0.012	0.051	0.001	0.013	15
	TP	mg/L	C-1	1.00	2.00	0.438	0.60	5
			C-2	0.675	2.16	0.316	0.531	10
			W-1	1.31	2.28	0.871	0.390	16
			W-2	1.50	6.54	0.629	1.54	14
			W-3	1.04	3.16	0.589	0.707	14
			W-4	1.69	5.70	0.641	1.16	17
			W-5	0.581	0.887	0.327	0.180	15
METAL	Al-T	µg/L	C-1	323	581	64.7	365	2
			C-2	651	1,380	284	631	3
			W-1	802	1,040	347	310	4
			W-2	831	1,910	241	936	3
			W-3	567	633	466	88.8	3
			W-4	1,466	2,400	596	837	4
			W-5	570	898	343	291	3
	Ca-T	mg/L	C-1	39.8	41.3	38.2	2.19	2
			C-2	41.0	46.5	36.2	5.18	3
			W-1	32.8	35.4	30.3	2.12	4
			W-2	33.1	35.7	28.3	4.19	3
			W-3	30.6	39.2	22.6	8.32	3
			W-4	24.9	32.3	19.8	5.37	4
			W-5	37.5	39.6	35.9	1.90	3
	Fe-T	µg/L	C-1	2,425	4,430	420	2,835	2
			C-2	1,643	2,110	1,030	555	3
			W-1	1,025	1,430	681	387	4
			W-2	576	971	290	353	3
			W-3	166	192	144	24.2	3
			W-4	522	833	165	301	4
			W-5	330	504	217	153	3

Note: Statistics calculated using half the detection limit when results reported as below the detection limit

Appendix E

Analytical Laboratory Reports

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

July 25, 2007

Serial: LAB-070725 13549

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0706338

Enclosed are the results of analyses for samples received by the laboratory on June 27, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
07/25/07 13:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0706338-01	Water	06/26/07 10:50	06/27/07 11:15
W - 2	0706338-02	Water	06/26/07 11:15	06/27/07 11:15
W - 3	0706338-03	Water	06/26/07 11:25	06/27/07 11:15
W - 4	0706338-04	Water	06/26/07 11:30	06/27/07 11:15
W - 5	0706338-05	Water	06/26/07 12:00	06/27/07 11:15
Dup	0706338-06	Water	06/26/07 12:00	06/27/07 11:15

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REPORT OF RESULTS

W - 1

0706338-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.108	0.009	mg/L	1	7070602	07/06/07	07/09/07 12:57	
Nitrate-Nitrite, Total EPA 353.2	0.018	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:41	
Soluble Reactive Phosphate EPA 365.2	0.748	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.83	0.08	mg/L	1	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	9.43	0.24	mg/L	3	7070302	07/03/07	07/05/07 12:20	
Total Suspended Solids EPA 160.2 - 100mL	60.0	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

W - 1

0706338-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.08	0.030	mg/L	5	7062901	07/02/07	07/03/07 16:00	

W - 2

0706338-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.241	0.009	mg/L	1	7070602	07/06/07	07/09/07 13:10	
Chlorophyll A Monochromatic SM10200H	21.4	1.1	mg/m³	1	7062713	06/27/07	07/07/07 15:15	
Nitrate-Nitrite, Total EPA 353.2	0.023	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:43	
Soluble Reactive Phosphate EPA 365.2	0.212	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.82	0.08	mg/L	1	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.96	0.16	mg/L	2	7070302	07/03/07	07/05/07 12:20	
Total Suspended Solids EPA 160.2 - 100mL	138	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

W - 2

0706338-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	6.54	0.090	mg/L	15	7062901	07/02/07	07/03/07 16:00	

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Project Manager: Ron Clarke

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W - 3

0706338-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.395	0.009	mg/L	1	7070602	07/06/07	07/09/07 13:11	
Chlorophyll A Monochromatic SM10200H	13.1	1.1	mg/m³	1	7062713	06/27/07	07/07/07 15:15	
Nitrate-Nitrite, Total EPA 353.2	0.019	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:45	
Soluble Reactive Phosphate EPA 365.2	0.787	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.89	0.08	mg/L	1	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	7.05	0.16	mg/L	2	7070302	07/03/07	07/05/07 12:20	
Total Suspended Solids EPA 160.2 - 100mL	36.0	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

W - 3

0706338-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	3.16	0.030	mg/L	5	7062901	07/02/07	07/03/07 16:00	

W - 4

0706338-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.107	0.009	mg/L	1	7070602	07/06/07	07/09/07 13:12	
Chlorophyll A Monochromatic SM10200H	39.7	1.1	mg/m³	1	7062713	06/27/07	07/07/07 15:15	
Nitrate-Nitrite, Total EPA 353.2	0.020	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:46	
Soluble Reactive Phosphate EPA 365.2	0.225	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.91	0.08	mg/L	1	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	9.02	0.24	mg/L	3	7070302	07/03/07	07/05/07 12:20	
Total Suspended Solids EPA 160.2 - 100mL	50.0	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

W - 4

0706338-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.39	0.030	mg/L	5	7062901	07/02/07	07/03/07 16:00	

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W - 5
0706338-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.212	0.009	mg/L	1	7070602	07/06/07	07/09/07 13:14	
Chlorophyll A Monochromatic SM10200H	384	1.1	mg/m³	1	7062713	06/27/07	07/07/07 15:15	
Nitrate-Nitrite, Total EPA 353.2	0.048	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:47	
Soluble Reactive Phosphate EPA 365.2	0.023	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	7.69	0.16	mg/L	2	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	16.8	0.40	mg/L	5	7070302	07/03/07	07/05/07 12:20	
Total Phosphorus, Total EPA 365.3 (Spec)	0.695	0.006	mg/L	1	7062804	06/28/07	06/28/07 16:00	
Total Suspended Solids EPA 160.2 - 100mL	25.0	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

W - 5
0706338-05RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Suspended Solids EPA 160.2 - 100mL	132	2.0	mg/L	1	7070306	07/03/07	07/03/07 16:25	

Dup
0706338-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.239	0.009	mg/L	1	7070602	07/06/07	07/09/07 13:16	
Chlorophyll A Monochromatic SM10200H	228	1.1	mg/m³	1	7062713	06/27/07	07/07/07 15:15	
Nitrate-Nitrite, Total EPA 353.2	0.044	0.003	mg/L	1	7071701	07/17/07	07/17/07 11:55	
Soluble Reactive Phosphate EPA 365.2	0.051	0.002	mg/L	1	7062723	06/27/07	06/27/07 19:20	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.87	0.16	mg/L	2	7070202	07/02/07	07/05/07 12:20	
Total Kjeldahl Nitrogen, Total EPA 351.2	20.0	0.40	mg/L	5	7070302	07/03/07	07/05/07 12:20	
Total Phosphorus, Total EPA 365.3 (Spec)	0.660	0.006	mg/L	1	7062804	06/28/07	06/28/07 16:00	
Total Suspended Solids EPA 160.2 - 100mL	158	2.0	mg/L	1	7062903	06/29/07	06/29/07 11:44	

Dup
0706338-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.06	0.16	mg/L	2	7071105	07/11/07	07/16/07 12:35	

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QUALITY CONTROL FOR SAMPLES

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7062713 = Chlorophyll A Monochromatic SM10200H										
Blank (7062713-BLK1)										
Chlorophyll A Monochromatic SM10200H	1.1 U	1.1	mg/m³							
Duplicate (7062713-DUP1) **Source: 0706338-02**										
Chlorophyll A Monochromatic SM10200H	18.3	1.1	mg/m³		21.4			16	20	
Reference (7062713-SRM1)										
Chlorophyll A Monochromatic SM10200H	507		mg/m³	500		101	90-110			

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7062903 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7062903-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7062903-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7062903-BLK3)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (7062903-DUP5) **Source: 0706338-05**										
Total Suspended Solids EPA 160.2 - 100mL	25.0	2.0	mg/L		25.0			0	20	
Reference (7062903-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	44.0		mg/L	45.5		97	80-120			
Batch 7070306 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7070306-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (7070306-DUP1) **Source: 0706338-05RE1**										
Total Suspended Solids EPA 160.2 - 100mL	132	2.0	mg/L		132			0	20	
Reference (7070306-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	44.0		mg/L	45.5		97	80-120			

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Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070306 = Total Suspended Solids EPA 160.2 - 100mL										

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7062723 = Soluble Reactive Phosphate EPA 365.2										
Blank (7062723-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (7062723-DUP1)	**Source: 0706338-01**									
Soluble Reactive Phosphate EPA 365.2	0.741	0.002	mg/L		0.748			0.9	20	
Matrix Spike (7062723-MS1)	**Source: 0706338-02**									
Soluble Reactive Phosphate EPA 365.2	0.465		mg/L	0.250	0.207	103	85-115			
Reference (7062723-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.676		mg/L	0.610		111	80-120			
Batch 7062804 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7062804-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7062804-DUP2)	**Source: 0706338-02**									
Total Phosphorus, Total EPA 365.3 (Spec)	3.41	0.006	mg/L		3.45			1	20	CUST
Matrix Spike (7062804-MS2)	**Source: 0706338-03**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.92	0.006	mg/L	0.267	1.86	22	80-120			CUST
Reference (7062804-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.099	0.006	mg/L	0.108		92	0-200			
Batch 7062901 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7062901-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7062901-DUP1)	**Source: 0706338-02RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	6.70	0.090	mg/L		6.54			2	20	
Duplicate (7062901-DUP2)	**Source: 0706338-04RE2**									
Total Phosphorus, Total EPA 365.3 (Spec)	2.35	0.090	mg/L		2.35			0	20	

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7062901 = Total Phosphorus, Total EPA 365.3 (Spec)										
Reference (7062901-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.104	0.006	mg/L	0.108		96	0-200			
Batch 7070202 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7070202-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7070202-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.92	0.08	mg/L	2.00		96	90-110			
Duplicate (7070202-DUP2) **Source: 0706338-05**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	8.15	0.16	mg/L		7.69			6	20	
Matrix Spike (7070202-MS2) **Source: 0706338-06**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	7.83	0.16	mg/L	1.00	5.87	196	85-115			S-REX
Batch 7070302 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7070302-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7070302-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.95	0.08	mg/L	2.00		98	90-110			
Duplicate (7070302-DUP1) **Source: 0706338-03**										
Total Kjeldahl Nitrogen, Total EPA 351.2	6.65	0.16	mg/L		7.05			6	20	
Matrix Spike (7070302-MS1) **Source: 0706338-04**										
Total Kjeldahl Nitrogen, Total EPA 351.2	9.83	0.24	mg/L	1.00	9.02	81	80-120			
Batch 7070602 = Ammonia, Total EPA 350.1										
Blank (7070602-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (7070602-DUP1) **Source: 0706338-04**										
Ammonia, Total EPA 350.1	0.106	0.009	mg/L		0.107			0.9	20	
Matrix Spike (7070602-MS1) **Source: 0706338-05**										
Ammonia, Total EPA 350.1	0.576	0.009	mg/L	0.400	0.212	91	80-120			
Reference (7070602-SRM1)										
Ammonia, Total EPA 350.1	0.766	0.009	mg/L	0.815		94	90-110			

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7071105 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7071105-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7071105-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.95	0.08	mg/L	2.00		98	90-110			
Duplicate (7071105-DUP1) **Source: 0706338-06RE1**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.26	0.16	mg/L		6.06			14	20	
Matrix Spike (7071105-MS1) **Source: 0706338-06RE1**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	9.01	0.16	mg/L	2.00	6.06	148	85-115			S-CON
Batch 7071701 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7071701-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (7071701-DUP1) **Source: 0706338-01**										
Nitrate-Nitrite, Total EPA 353.2	0.019	0.003	mg/L		0.018			5	20	
Matrix Spike (7071701-MS1) **Source: 0706338-02**										
Nitrate-Nitrite, Total EPA 353.2	0.399	0.003	mg/L	0.400	0.023	94	90-110			
Reference (7071701-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.08	0.003	mg/L	1.06		102	90-110			
Reference (7071701-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.02	0.003	mg/L	1.00		102	0-200			

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 07/25/07 13:35

NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUST	over the curve RE extr
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Advanced
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August 14, 2007

Serial: LAB-070814 25638

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0707263

Enclosed are the results of analyses for samples received by the laboratory on July 25, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
08/14/07 14:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0707263-01	Water	07/24/07 11:05	07/25/07 10:11
W - 2	0707263-02	Water	07/24/07 11:15	07/25/07 10:11
W - 3	0707263-03	Water	07/24/07 11:20	07/25/07 10:11
W - 4	0707263-04	Water	07/24/07 11:25	07/25/07 10:11
W - 5	0707263-05	Water	07/24/07 11:30	07/25/07 10:11
Dup	0707263-06	Water	07/24/07 11:00	07/25/07 10:11

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 08/14/07 14:56

REPORT OF RESULTS

W - 1

0707263-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.085	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:48	
Nitrate-Nitrite, Total EPA 353.2	0.019	0.003	mg/L	1	7080106	08/01/07	08/01/07 11:53	
Soluble Reactive Phosphate EPA 365.2	0.389	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.37	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.94	0.16	mg/L	2	7073110	07/31/07	08/01/07 12:04	
Total Suspended Solids EPA 160.2 - 100mL	27.0	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

W - 1

0707263-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.23	0.018	mg/L	3	7073106	07/31/07	08/03/07 15:00	

W - 2

0707263-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.037	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:49	
Nitrate-Nitrite, Total EPA 353.2	0.003 I	0.003	mg/L	1	7080106	08/01/07	08/01/07 12:03	
Soluble Reactive Phosphate EPA 365.2	0.422	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.81	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.34	0.08	mg/L	1	7073110	07/31/07	08/01/07 12:04	
Total Suspended Solids EPA 160.2 - 100mL	23.0	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

W - 2

0707263-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.06	0.030	mg/L	5	7073106	07/31/07	08/03/07 15:00	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 08/14/07 14:56

W - 3
0707263-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.175	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:50	
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L	1	7080106	08/01/07	08/01/07 11:57	
Soluble Reactive Phosphate EPA 365.2	0.720	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.82	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.11	0.08	mg/L	1	7073110	07/31/07	08/01/07 12:04	
Total Suspended Solids EPA 160.2 - 100mL	8.0 I	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

W - 3
0707263-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.90	0.030	mg/L	5	7073106	07/31/07	08/03/07 15:00	

W - 4
0707263-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.054	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:51	
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L	1	7080106	08/01/07	08/01/07 11:58	
Soluble Reactive Phosphate EPA 365.2	0.437	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.79	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.93	0.08	mg/L	1	7073110	07/31/07	08/01/07 12:04	
Total Suspended Solids EPA 160.2 - 100mL	34.0	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

W - 4
0707263-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	4.68	0.030	mg/L	5	7073106	07/31/07	08/03/07 15:00	CUST

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
08/14/07 14:56

W - 4

0707263-04RE2 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	5.70	0.060	mg/L	10	7080604	08/06/07	08/06/07 15:00	

W - 5

0707263-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.125	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:52	
Nitrate-Nitrite, Total EPA 353.2	0.040	0.003	mg/L	1	7080106	08/01/07	08/01/07 11:59	
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.48	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	14.2	0.32	mg/L	4	7073110	07/31/07	08/01/07 12:04	
Total Phosphorus, Total EPA 365.3 (Spec)	0.653	0.006	mg/L	1	7072605	07/26/07	07/27/07 14:30	
Total Suspended Solids EPA 160.2 - 100mL	132	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

Dup

0707263-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.042	0.009	mg/L	1	7080203	08/02/07	08/02/07 13:55	
Nitrate-Nitrite, Total EPA 353.2	0.023	0.003	mg/L	1	7080106	08/01/07	08/01/07 12:00	
Soluble Reactive Phosphate EPA 365.2	0.395	0.002	mg/L	1	7072511	07/25/07	07/25/07 16:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.46	0.08	mg/L	1	7073109	07/31/07	08/01/07 12:04	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.20	0.16	mg/L	2	7073110	07/31/07	08/01/07 12:04	
Total Suspended Solids EPA 160.2 - 100mL	29.0	2.0	mg/L	1	7072509	07/25/07	07/25/07 15:09	

Dup

0707263-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.26	0.018	mg/L	3	7073106	07/31/07	08/03/07 15:00	

Serial: LAB-070814 25638

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
08/14/07 14:56

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7072509 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7072509-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7072509-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Reference (7072509-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	44.0		mg/L	45.5		97	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7072511 = Soluble Reactive Phosphate EPA 365.2										
Blank (7072511-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Matrix Spike (7072511-MS1) **Source: 0707263-01**										
Soluble Reactive Phosphate EPA 365.2	0.646		mg/L	0.250	0.380	106	80-120			
Reference (7072511-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.658		mg/L	0.610		108	80-120			
Batch 7072605 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7072605-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (7072605-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.097	0.006	mg/L	0.108		90	0-200			
Batch 7073106 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7073106-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7073106-DUP1) **Source: 0707263-01RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	1.21	0.018	mg/L		1.23			2	20	

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
08/14/07 14:56

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7073106 = Total Phosphorus, Total EPA 365.3 (Spec)										
Duplicate (7073106-DUP2)	**Source: 0707263-02RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.98	0.030	mg/L		2.06			4	20	
Duplicate (7073106-DUP3)	**Source: 0707263-03RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	2.04	0.030	mg/L		1.90			7	20	
Duplicate (7073106-DUP4)	**Source: 0707263-04RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	4.98	0.030	mg/L		4.68			6	20	CUST
Duplicate (7073106-DUP5)	**Source: 0707263-06RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.24	0.018	mg/L		1.26			2	20	
Matrix Spike (7073106-MS1)	**Source: 0707263-03RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	3.42	0.031	mg/L	1.33	1.90	114	80-120			
Reference (7073106-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.103	0.006	mg/L	0.108		95	0-200			
Batch 7073109 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7073109-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7073109-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.96	0.08	mg/L	2.00		98	90-110			
Batch 7073110 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7073110-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7073110-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7073110-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.88	0.08	mg/L	2.00		94	90-110			
LCS (7073110-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.12	0.08	mg/L	2.00		106	90-110			
Duplicate (7073110-DUP3)	**Source: 0707263-01**									
Total Kjeldahl Nitrogen, Total EPA 351.2	5.04	0.16	mg/L		4.94			2	20	
Matrix Spike (7073110-MS3)	**Source: 0707263-02**									

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
08/14/07 14:56

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7073110 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Matrix Spike (7073110-MS3)	**Source: 0707263-02**									
Total Kjeldahl Nitrogen, Total EPA 351.2	5.20	0.16	mg/L	1.00	4.34	86	80-120			
Batch 7080106 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7080106-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (7080106-DUP1)	**Source: 0707263-01**									
Nitrate-Nitrite, Total EPA 353.2	0.018	0.003	mg/L		0.019			5	20	
Matrix Spike (7080106-MS1)	**Source: 0707263-02**									
Nitrate-Nitrite, Total EPA 353.2	0.425	0.003	mg/L	0.400	0.003	106	90-110			
Reference (7080106-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.13	0.003	mg/L	1.06		107	90-110			
Reference (7080106-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.05	0.003	mg/L	1.00		105	0-200			
Batch 7080203 = Ammonia, Total EPA 350.1										
Blank (7080203-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Reference (7080203-SRM1)										
Ammonia, Total EPA 350.1	0.779	0.009	mg/L	0.815		96	90-110			
Batch 7080604 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7080604-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7080604-DUP1)	**Source: 0707263-04RE2**									
Total Phosphorus, Total EPA 365.3 (Spec)	5.43	0.060	mg/L		5.70			5	20	
Reference (7080604-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.106	0.006	mg/L	0.108		98	0-200			

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 08/14/07 14:56

NOTES AND DEFINITIONS

D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUST	over the curve RE extr 10X
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Advanced Environmental Laboratories, Inc.

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September 24, 2007

Serial: LAB-070924 52818

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0708366

Enclosed are the results of analyses for samples received by the laboratory on August 30, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
09/24/07 17:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0708366-01	Water	08/30/07 10:04	08/30/07 16:50
W - 2	0708366-02	Water	08/30/07 10:09	08/30/07 16:50
W - 3	0708366-03	Water	08/30/07 10:26	08/30/07 16:50
W - 4	0708366-04	Water	08/30/07 10:36	08/30/07 16:50
W - 5	0708366-05	Water	08/30/07 11:03	08/30/07 16:50
C - 2	0708366-06	Water	08/30/07 09:45	08/30/07 16:50
DUP	0708366-07	Water	08/30/07 11:03	08/30/07 16:50

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REPORT OF RESULTS

W - 1

0708366-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.053	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:25	
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	7090616	09/06/07	09/07/07 14:45	
Soluble Reactive Phosphate EPA 365.2	0.311	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.59	0.08	mg/L	1	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.09	0.08	mg/L	1	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.871	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	8.0 I	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

W - 1

0708366-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.987	0.012	mg/L	2	7091007	09/10/07	09/11/07 13:33	

W - 2

0708366-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.047	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:25	
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:20	
Soluble Reactive Phosphate EPA 365.2	0.291	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.56	0.08	mg/L	1	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.34	0.08	mg/L	1	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.777	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	9.0	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

W - 2

0708366-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.789	0.012	mg/L	2	7091007	09/10/07	09/11/07 13:33	

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W - 3
0708366-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.034 I	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:27	
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:10	
Soluble Reactive Phosphate EPA 365.2	0.343	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.41	0.08	mg/L	1	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.53	0.08	mg/L	1	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.644	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	6.0 I	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

W - 3
0708366-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.671	0.012	mg/L	2	7091007	09/10/07	09/11/07 13:33	

W - 4
0708366-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.041	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:38	
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:12	
Soluble Reactive Phosphate EPA 365.2	0.468	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.43	0.08	mg/L	1	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.70	0.08	mg/L	1	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	1.58	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	26.0	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

W - 4
0708366-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.85	0.012	mg/L	2	7091007	09/10/07	09/11/07 13:33	

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W - 4

0708366-04RE2 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.869	0.012	mg/L	2	7091208	09/12/07	09/13/07 18:19	

W - 5

0708366-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.186	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:48	
Nitrate-Nitrite, Total EPA 353.2	0.076	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:13	
Soluble Reactive Phosphate EPA 365.2	0.014	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	7.01	0.16	mg/L	2	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	13.6	0.24	mg/L	3	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.393	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	90.0	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

C - 2

0708366-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.124	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:40	
Nitrate-Nitrite, Total EPA 353.2	0.035	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:14	
Soluble Reactive Phosphate EPA 365.2	0.014	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.83	0.08	mg/L	1	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	8.79	0.24	mg/L	3	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.578	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	41.8	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

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DUP

0708366-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.197	0.009	mg/L	1	7090301	09/03/07	09/04/07 13:41	
Nitrate-Nitrite, Total EPA 353.2	0.073	0.003	mg/L	1	7090712	09/07/07	09/08/07 11:15	
Soluble Reactive Phosphate EPA 365.2	0.013	0.002	mg/L	1	7083107	08/31/07	08/31/07 14:45	CUSTa
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	7.32	0.24	mg/L	3	7090505	09/07/07	09/11/07 16:54	
Total Kjeldahl Nitrogen, Total EPA 351.2	12.9	0.24	mg/L	3	7090504	09/06/07	09/07/07 15:35	
Total Phosphorus, Total EPA 365.3 (Spec)	0.377	0.006	mg/L	1	7090407	09/04/07	09/05/07 14:19	
Total Suspended Solids EPA 160.2 - 100mL	126	2.0	mg/L	1	7090501	09/05/07	09/05/07 08:48	

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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090501 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7090501-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7090501-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Reference (7090501-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	80.0		mg/L	76.3		105	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7083107 = Soluble Reactive Phosphate EPA 365.2										
Blank (7083107-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.006	0.002	mg/L							CUST
Duplicate (7083107-DUP1) **Source: 0708366-01**										
Soluble Reactive Phosphate EPA 365.2	0.314	0.002	mg/L		0.311			1	20	CUSTa
Matrix Spike (7083107-MS1) **Source: 0708366-02**										
Soluble Reactive Phosphate EPA 365.2	0.533		mg/L	0.250	0.284	100	85-115			CUSTa
Reference (7083107-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.644		mg/L	0.610		106	80-120			
Batch 7090301 = Ammonia, Total EPA 350.1										
Blank (7090301-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (7090301-DUP4) **Source: 0708366-02**										
Ammonia, Total EPA 350.1	0.045	0.009	mg/L		0.047			4	20	
Matrix Spike (7090301-MS4) **Source: 0708366-03**										
Ammonia, Total EPA 350.1	0.410	0.009	mg/L	0.400	0.034	94	80-120			
Reference (7090301-SRM1)										
Ammonia, Total EPA 350.1	0.627	0.009	mg/L	0.635		99	0-200			

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090301 = Ammonia, Total EPA 350.1										
Batch 7090407 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7090407-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7090407-DUP1) **Source: 0708366-01**										
Total Phosphorus, Total EPA 365.3 (Spec)	0.894	0.006	mg/L		0.871			3	20	
Matrix Spike (7090407-MS1) **Source: 0708366-03**										
Total Phosphorus, Total EPA 365.3 (Spec)	0.864	0.006	mg/L	0.267	0.644	82	80-120			
Reference (7090407-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.106	0.006	mg/L	0.108		98	0-200			
Batch 7090504 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7090504-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7090504-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.91	0.08	mg/L	2.00		96	90-110			
Matrix Spike (7090504-MS2) **Source: 0708366-03**										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.48	0.08	mg/L	1.00	1.53	95	80-120			
Batch 7090505 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7090505-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7090505-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.88	0.08	mg/L	2.00		94	90-110			
Duplicate (7090505-DUP4) **Source: 0708366-02**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.39	0.08	mg/L		2.56			7	20	
Matrix Spike (7090505-MS4) **Source: 0708366-03**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.45	0.08	mg/L	1.00	1.41	104	85-115			
Batch 7090616 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7090616-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7090616 = Nitrate-Nitrite, Total EPA 353.2										
Reference (7090616-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.37	0.003	mg/L	1.38		99	0-200			
Reference (7090616-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.02	0.003	mg/L	1.00		102	0-200			
Batch 7090712 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7090712-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (7090712-DUP1) **Source: 0708366-02**										
Nitrate-Nitrite, Total EPA 353.2	0.008	0.003	mg/L		0.008			0	20	
Matrix Spike (7090712-MS1) **Source: 0708366-03**										
Nitrate-Nitrite, Total EPA 353.2	0.395	0.003	mg/L	0.400	0.008	97	90-110			
Reference (7090712-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.48	0.003	mg/L	1.38		107	0-200			
Reference (7090712-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.10	0.003	mg/L	1.00		110	0-200			
Batch 7091007 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7091007-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7091007-DUP1) **Source: 0708366-01RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	0.971	0.012	mg/L		0.987			2	20	
Matrix Spike (7091007-MS1) **Source: 0708366-03RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	1.19	0.012	mg/L	0.533	0.671	97	80-120			
Reference (7091007-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.102	0.006	mg/L	0.108		94	0-200			
Batch 7091208 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7091208-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7091208-DUP1) **Source: 0708366-04RE2**										
Total Phosphorus, Total EPA 365.3 (Spec)	0.863	0.012	mg/L		0.869			0.7	20	

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7091208 = Total Phosphorus, Total EPA 365.3 (Spec)										
Reference (7091208-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.105	0.006	mg/L	0.108		97	0-200			

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 09/24/07 17:27

NOTES AND DEFINITIONS

S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
D-REX	Poor duplicates; Created reextract.
CUSTa	Method blank is elevated due to regression equation, not due to contamination. Results in samples are elevated by an amount equal to the blank for this reason.
CUST	Blank passes
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Items for Project Manager Review

LabNumber	Analysis	Exception
		Default Report (not modified)
		VERSION 5.8.5.2709
	Ammonia, Total EPA 350.1	Result calculations based on MDL
	Ammonia, Total EPA 350.1	RPD calculations based on %Recovery
	Nitrate-Nitrite, Total EPA 353.2	Result calculations based on MDL
	Nitrate-Nitrite, Total EPA 353.2	RPD calculations based on %Recovery
	Soluble Reactive Phosphate EPA 365.2	Result calculations based on MDL
	Soluble Reactive Phosphate EPA 365.2	RPD calculations based on %Recovery
0708366-01	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-02	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-03	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-04	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-05	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-06	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0708366-07	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV1	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV2	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV3	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV4	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV5	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV6	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV7	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV8	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCV9	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCVA	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
0735057-CCVB	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-BLK1	Soluble Reactive Phosphate EPA 365.2	Blank >1 x MRL
7083107-BLK1	Soluble Reactive Phosphate EPA 365.2	CUST: Blank passes
7083107-DUP1	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-DUP2	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-DUP3	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-DUP4	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam

Items for Project Manager Review

LabNumber	Analysis	Exception
7083107-DUP5	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-DUP6	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS1	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS2	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS3	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS4	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS5	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
7083107-MS6	Soluble Reactive Phosphate EPA 365.2	CUSTa: Method blank is elevated due to regression equation, not due to contamination. Results in sam
	Total Kjeldahl Nitrogen, Dissolved EPA 351.2	Result calculations based on MDL
	Total Kjeldahl Nitrogen, Dissolved EPA 351.2	RPD calculations based on %Recovery
7090505-MS1	Total Kjeldahl Nitrogen, Dissolved EPA 351.2	Exceeds lower control limit
7090505-MS1	Total Kjeldahl Nitrogen, Dissolved EPA 351.2	S-CON: Poor matrix spike recovery on reextract; results and recoveries confirm.
	Total Kjeldahl Nitrogen, Total EPA 351.2	Result calculations based on MDL
	Total Kjeldahl Nitrogen, Total EPA 351.2	RPD calculations based on %Recovery
7090504-DUP2	Total Kjeldahl Nitrogen, Total EPA 351.2	D-RNG: The difference of the concentrations of the sample and its duplicate is low in comparison to
7090504-DUP2	Total Kjeldahl Nitrogen, Total EPA 351.2	Exceeds RPD limit
	Total Phosphorus, Total EPA 365.3 (Spec)	Result calculations based on MDL
	Total Phosphorus, Total EPA 365.3 (Spec)	RPD calculations based on %Recovery
7091208-DUP4	Total Phosphorus, Total EPA 365.3 (Spec)	D-REX: Poor duplicates; Created reextract.
7091208-DUP4	Total Phosphorus, Total EPA 365.3 (Spec)	Exceeds RPD limit
	Total Suspended Solids EPA 160.2 - 100mL	Result calculations based on MDL
	Total Suspended Solids EPA 160.2 - 100mL	RPD calculations based on %Recovery

Advanced
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October 9, 2007

Serial: LAB-0710

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0709309

Enclosed are the results of analyses for samples received by the laboratory on September 28, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
10/09/07 11:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0709309-01	Water	09/27/07 13:20	09/28/07 10:00
W - 2	0709309-02	Water	09/27/07 13:30	09/28/07 10:00
W - 3	0709309-03	Water	09/27/07 13:40	09/28/07 10:00
W - 4	0709309-04	Water	09/27/07 13:45	09/28/07 10:00
W - 5	0709309-05	Water	09/27/07 14:00	09/28/07 10:00
C-2	0709309-06	Water	09/27/07 12:34	09/28/07 10:00
DUP	0709309-07	Water	09/27/07 13:30	09/28/07 10:00

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 10/09/07 11:35

REPORT OF RESULTS

W - 1

0709309-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.030 I	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:34	
Nitrate-Nitrite, Total EPA 353.2	0.015	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:32	
Soluble Reactive Phosphate EPA 365.2	0.260	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.32	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.32	0.08	mg/L	1	7100103	10/01/07	10/02/07 15:13	
Total Suspended Solids EPA 160.2 - 100mL	8.0 I	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

W - 1

0709309-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.907	0.030	mg/L	5	7100407	10/04/07	10/05/07 02:00	

W - 2

0709309-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.046	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:36	
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:34	
Soluble Reactive Phosphate EPA 365.2	0.178	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.34	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.34	0.08	mg/L	1	7100103	10/01/07	10/02/07 15:13	
Total Suspended Solids EPA 160.2 - 100mL	17.0	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

W - 2

0709309-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.893	0.030	mg/L	5	7100407	10/04/07	10/05/07 02:00	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 10/09/07 11:35

W - 3

0709309-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.019 I	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:37	
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:36	
Soluble Reactive Phosphate EPA 365.2	0.307	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.45	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.45	0.08	mg/L	1	7100103	10/01/07	10/02/07 15:13	
Total Phosphorus, Total EPA 365.3 (Spec)	0.589	0.006	mg/L	1	7100105	10/01/07	10/02/07 15:45	CUST
Total Suspended Solids EPA 160.2 - 100mL	7.0 I	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

W - 3

0709309-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.586	0.018	mg/L	3	7100407	10/04/07	10/05/07 02:00	

W - 4

0709309-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.024 I	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:38	
Nitrate-Nitrite, Total EPA 353.2	0.006 I	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:47	
Soluble Reactive Phosphate EPA 365.2	0.300	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.42	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.42	0.08	mg/L	1	7100103	10/01/07	10/02/07 15:13	
Total Suspended Solids EPA 160.2 - 100mL	24.0	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

W - 4

0709309-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.81	0.018	mg/L	3	7100407	10/04/07	10/05/07 02:00	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 10/09/07 11:35

W - 5

0709309-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.124	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:39	
Nitrate-Nitrite, Total EPA 353.2	0.081	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:54	
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.37	0.16	mg/L	2	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	11.0	0.32	mg/L	4	7100103	10/01/07	10/02/07 15:13	
Total Phosphorus, Total EPA 365.3 (Spec)	0.327	0.006	mg/L	1	7100105	10/01/07	10/02/07 15:45	
Total Suspended Solids EPA 160.2 - 100mL	72.7	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

C-2

0709309-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.253	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:40	
Nitrate-Nitrite, Total EPA 353.2	0.036	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:39	
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.48	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	6.99	0.16	mg/L	2	7100103	10/01/07	10/02/07 15:13	
Total Phosphorus, Total EPA 365.3 (Spec)	0.377	0.006	mg/L	1	7100105	10/01/07	10/02/07 15:45	
Total Suspended Solids EPA 160.2 - 100mL	36.4	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

DUP

0709309-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.042	0.009	mg/L	1	7100303	10/03/07	10/03/07 13:41	
Nitrate-Nitrite, Total EPA 353.2	0.012 I	0.003	mg/L	1	7100108	10/01/07	10/02/07 12:40	
Soluble Reactive Phosphate EPA 365.2	0.178	0.002	mg/L	1	7092803	09/28/07	09/28/07 17:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.71	0.08	mg/L	1	7100102	10/01/07	10/02/07 15:13	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.71	0.08	mg/L	1	7100103	10/01/07	10/02/07 15:13	
Total Suspended Solids EPA 160.2 - 100mL	16.0	2.0	mg/L	1	7100104	10/01/07	10/01/07 10:33	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 10/09/07 11:35

DUP

0709309-07RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.00	0.018	mg/L	3	7100407	10/04/07	10/05/07 02:00	

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
10/09/07 11:35

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100104 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7100104-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7100104-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (7100104-DUP4) **Source: 0709309-06**										
Total Suspended Solids EPA 160.2 - 100mL	38.2	2.0	mg/L		36.4			5	20	
Reference (7100104-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	72.0		mg/L	76.3		94	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7092803 = Soluble Reactive Phosphate EPA 365.2										
Blank (7092803-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (7092803-DUP1) **Source: 0709309-01**										
Soluble Reactive Phosphate EPA 365.2	0.254	0.002	mg/L		0.260			2	20	
Matrix Spike (7092803-MS1) **Source: 0709309-02**										
Soluble Reactive Phosphate EPA 365.2	0.416		mg/L	0.250	0.173	97	80-120			
Reference (7092803-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.662		mg/L	0.610		109	80-120			
Batch 7100102 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7100102-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7100102-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Batch 7100103 = Total Kjeldahl Nitrogen, Total EPA 351.2										

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
10/09/07 11:35

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100103 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7100103-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7100103-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7100103-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.90	0.08	mg/L	2.00		95	90-110			
Duplicate (7100103-DUP3) **Source: 0709309-06**										
Total Kjeldahl Nitrogen, Total EPA 351.2	6.81	0.16	mg/L		6.99			3	20	
Batch 7100105 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7100105-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (7100105-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.105	0.006	mg/L	0.108		97	0-200			
Batch 7100108 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7100108-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.004	0.003	mg/L							CUSTb
Duplicate (7100108-DUP1) **Source: 0709309-05**										
Nitrate-Nitrite, Total EPA 353.2	0.085	0.003	mg/L		0.081			5	20	
Matrix Spike (7100108-MS1) **Source: 0709309-02**										
Nitrate-Nitrite, Total EPA 353.2	0.444	0.003	mg/L	0.400	0.017	107	90-110			
Reference (7100108-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.41	0.003	mg/L	1.38		102	0-200			
Reference (7100108-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	0.990	0.003	mg/L	1.00		99	0-200			
Batch 7100303 = Ammonia, Total EPA 350.1										
Blank (7100303-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (7100303-DUP1) **Source: 0709309-01**										
Ammonia, Total EPA 350.1	0.030	0.009	mg/L		0.030			0	20	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 10/09/07 11:35

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100303 = Ammonia, Total EPA 350.1										
Matrix Spike (7100303-MS1)	**Source: 0709309-02**									
Ammonia, Total EPA 350.1	0.412	0.009	mg/L	0.400	0.046	92	80-120			
Reference (7100303-SRM1)										
Ammonia, Total EPA 350.1	0.634	0.009	mg/L	0.635		100	90-110			
Batch 7100407 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7100407-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (7100407-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.096	0.006	mg/L	0.108		89	0-200			

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NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUSTb	Value is 0.0035 which is less than 0.004
CUSTa	SJRWMD spike limit is 70-130%, so passes their specs
CUST	over the curve RE extr
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

0709309

CHAIN-OF-CUSTODY FORM

Wetland Solutions, Inc.

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

TURN AROUND TIME: X Standard Rush

LAB: Advanced Environmental Laboratories, Inc.

Special Instructions/Comments:

No Chl a this month. Please ~~use contents of brown bottle~~ for TSS, Ortho-P, and TKN-Dissolved. No samples filtered in field.

3.2°C

ANALYSIS REQUESTED

PRESERVATIVE

		3		0	
	TSS	NH3 / TKN / TP	~~NO3~~ NOx PLC 92807	~~Ortho-P~~ SRP PLC 92807	TKN - Dissolved

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP		TSS	NH3 / TKN / TP	NOx	SRP	TKN - Dissolved	REMARKS / ALTERNATE DESC	
9.27.07	1320	W-1	SW	G		X	X	X	X	X	208 µS/cm	-01
9.27.07	1330	W-2	SW	G		X	X	X	X	X	208	-02
9.27.07	1340	W-3	SW	G		X	X	X	X	X	252	-03
9.27.07	1345	W-4	SW	G		X	X	X	X	X	144	-04
9.27.07	1400	W-5	SW	G		X	X	X	X	X	266	-05
9.27.07	1234	C-2	SW	G		X	X	X	X	X	289	-06
9.27.07	1330	DUP	SW	G		X	X	X	X	X	208	-07

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Henry Brennan	Paul Llantin		
Printed Name	Printed Name	Printed Name	Printed Name
Wetland Solutions, Inc.			
Company	Company	Company	Company
9.28.07 1060	9-28-07 1005		
Date / Time	Date / Time	Date / Time	Date / Time

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 9-28-07 1000 Log-In request number: 0709309

Received by: PLT Completed by: PLT

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1				
Temp (°C)	3.2				
Temp taken from	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☒ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments:

Advanced
Environmental Laboratories, Inc.

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November 20, 2007

Serial: LAB-0711

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0710221

Enclosed are the results of analyses for samples received by the laboratory on October 18, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

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NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0710221-01	Water	10/17/07 13:40	10/18/07 09:20
W - 2	0710221-02	Water	10/17/07 13:46	10/18/07 09:20
W - 3	0710221-03	Water	10/17/07 13:55	10/18/07 09:20
W - 4	0710221-04	Water	10/17/07 14:04	10/18/07 09:20
W - 5	0710221-05	Water	10/17/07 16:53	10/18/07 09:20
C-2	0710221-06	Water	10/17/07 13:10	10/18/07 09:20
DUP	0710221-07	Water	10/17/07 14:04	10/18/07 09:20
W-1	0710221-08	Soil	10/17/07 14:30	10/18/07 09:20
W-2	0710221-09	Soil	10/17/07 14:48	10/18/07 09:20
W-3	0710221-10	Soil	10/17/07 15:00	10/18/07 09:20
W-4	0710221-11	Soil	10/17/07 15:25	10/18/07 09:20
C-1	0710221-12	Soil	10/17/07 16:05	10/18/07 09:20
C-2	0710221-13	Soil	10/17/07 15:50	10/18/07 09:20

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

REPORT OF RESULTS

W - 1

0710221-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.181	0.009	mg/L	1	7110710	11/07/07	11/07/07 15:57	
Nitrate-Nitrite, Total EPA 353.2	0.022	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:27	
Soluble Reactive Phosphate EPA 365.2	0.008 I	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.70	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.46	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Suspended Solids EPA 160.2 - 100mL	44.0	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

W - 1

0710221-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.28	0.060	mg/L	10	7102912	10/29/07	10/30/07 14:00	

W - 2

0710221-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.166	0.009	mg/L	1	7110710	11/07/07	11/07/07 15:58	
Nitrate-Nitrite, Total EPA 353.2	0.020	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:18	
Soluble Reactive Phosphate EPA 365.2	0.211	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.47	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.67	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Suspended Solids EPA 160.2 - 100mL	12.0	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

W - 2

0710221-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.824	0.012	mg/L	2	7102912	10/29/07	10/30/07 14:00	

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

W - 3

0710221-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.024 I	0.009	mg/L	1	7110710	11/07/07	11/07/07 16:04	
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:21	
Soluble Reactive Phosphate EPA 365.2	0.371	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.83	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.21	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Phosphorus, Total EPA 365.3 (Spec)	0.612	0.006	mg/L	1	7102502	10/25/07	10/26/07 15:00	
Total Suspended Solids EPA 160.2 - 100mL	5.0 I	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

W - 4

0710221-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.045	0.009	mg/L	1	7110710	11/07/07	11/07/07 16:05	
Nitrate-Nitrite, Total EPA 353.2	0.023	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:22	
Soluble Reactive Phosphate EPA 365.2	0.262	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.59	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.09	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

W - 4

0710221-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.09	0.012	mg/L	2	7102912	10/29/07	10/30/07 14:00	

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

W - 5

0710221-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.205	0.009	mg/L	1	7110710	11/07/07	11/07/07 16:00	
Nitrate-Nitrite, Total EPA 353.2	0.051	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:23	
Soluble Reactive Phosphate EPA 365.2	0.002 I	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.33	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Phosphorus, Total EPA 365.3 (Spec)	0.387	0.006	mg/L	1	7102502	10/25/07	10/26/07 15:00	
Total Suspended Solids EPA 160.2 - 100mL	98.6	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

W - 5

0710221-05RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Total EPA 351.2	10.2	0.32	mg/L	4	7110202	11/02/07	11/05/07 13:40	

C-2

0710221-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.115	0.009	mg/L	1	7110710	11/07/07	11/07/07 16:02	
Nitrate-Nitrite, Total EPA 353.2	0.007 I	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:24	
Soluble Reactive Phosphate EPA 365.2	0.007 I	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.42	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.79	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Phosphorus, Total EPA 365.3 (Spec)	0.316	0.006	mg/L	1	7102502	10/25/07	10/26/07 15:00	
Total Suspended Solids EPA 160.2 - 100mL	14.0	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

DUP
0710221-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.049	0.009	mg/L	1	7110710	11/07/07	11/07/07 16:11	
Nitrate-Nitrite, Total EPA 353.2	0.009 I	0.003	mg/L	1	7110707	11/07/07	11/09/07 14:25	
Soluble Reactive Phosphate EPA 365.2	0.370	0.002	mg/L	1	7101813	10/18/07	10/18/07 17:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.54	0.08	mg/L	1	7102914	10/29/07	10/30/07 12:06	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.95	0.08	mg/L	1	7102606	10/26/07	10/30/07 12:06	
Total Suspended Solids EPA 160.2 - 100mL	20.0	2.0	mg/L	1	7102410	10/24/07	10/24/07 10:52	

DUP
0710221-07RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.09	0.012	mg/L	2	7102912	10/29/07	10/30/07 14:00	

W-1
0710221-08 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	58600	206	mg/kg dry	1	7102918	10/29/07	11/02/07 13:49	
Calcium Sediment EPA 6010B (ICP)	108000	0.11	mg/kg dry	1	7102918	10/29/07	11/02/07 13:49	
Iron Sediment EPA 6010B (ICP)	29300	5.7	mg/kg dry	1	7102918	10/29/07	11/02/07 13:49	
Phosphorus, Inorganic in Sediment	41.4	0.9	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	55.0	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	199	40	mg/kg dry	4	7103103	10/31/07	10/31/07 10:00	

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

W-2

0710221-09 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	69300	205	mg/kg dry	1	7102918	10/29/07	11/02/07 13:58	
Calcium Sediment EPA 6010B (ICP)	128000	0.11	mg/kg dry	1	7102918	10/29/07	11/02/07 13:58	
Iron Sediment EPA 6010B (ICP)	30100	5.7	mg/kg dry	1	7102918	10/29/07	11/02/07 13:58	
Phosphorus, Inorganic in Sediment	39.0	1.1	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	46.7	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	1260 U	1260	mg/kg dry	32	7103103	10/31/07	10/31/07 10:00	

W-3

0710221-10 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	76100	268	mg/kg dry	1	7102918	10/29/07	11/02/07 14:08	
Calcium Sediment EPA 6010B (ICP)	86100	0.15	mg/kg dry	1	7102918	10/29/07	11/02/07 14:08	
Iron Sediment EPA 6010B (ICP)	28600	7.4	mg/kg dry	1	7102918	10/29/07	11/02/07 14:08	
Phosphorus, Inorganic in Sediment	34.1	1.1	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	47.6	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	372 U	372	mg/kg dry	10	7103103	10/31/07	10/31/07 10:00	

W-4

0710221-11 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	69400	165	mg/kg dry	1	7102918	10/29/07	11/02/07 14:18	
Calcium Sediment EPA 6010B (ICP)	131000	0.09	mg/kg dry	1	7102918	10/29/07	11/02/07 14:18	
Iron Sediment EPA 6010B (ICP)	22200	4.6	mg/kg dry	1	7102918	10/29/07	11/02/07 14:18	
Phosphorus, Inorganic in Sediment	31.8	0.9	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	53.3	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	1020	72	mg/kg dry	4	7103103	10/31/07	10/31/07 10:00	

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Project Manager: Ron Clarke

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11/20/07 10:49

C-1

0710221-12 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	59200	214	mg/kg dry	1	7102918	10/29/07	11/02/07 14:27	
Calcium Sediment EPA 6010B (ICP)	109000	0.12	mg/kg dry	1	7102918	10/29/07	11/02/07 14:27	
Iron Sediment EPA 6010B (ICP)	22400	5.9	mg/kg dry	1	7102918	10/29/07	11/02/07 14:27	
Phosphorus, Inorganic in Sediment	37.3	0.8	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	63.2	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	30 U	30	mg/L	1	7103103	10/31/07	10/31/07 10:00	

C-2

0710221-13 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	98900	159	mg/kg dry	1	7102918	10/29/07	11/02/07 14:37	
Calcium Sediment EPA 6010B (ICP)	92800	0.09	mg/kg dry	1	7102918	10/29/07	11/02/07 14:37	
Iron Sediment EPA 6010B (ICP)	24500	4.4	mg/kg dry	1	7102918	10/29/07	11/02/07 14:37	
Phosphorus, Inorganic in Sediment	31.4	0.9	mg/kg dry	1	7111312	11/13/07	11/13/07 19:45	
Solids, Dry Weight	55.1	0.1	% by Weight	1	7102407	10/24/07	10/24/07 10:24	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						
Sulfate, Total EPA 375.4	137 U	137	mg/kg dry	4	7103103	10/31/07	10/31/07 10:00	

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11/20/07 10:49

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102407 = Solids, Dry Weight										
Blank (7102407-BLK1)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							
Duplicate (7102407-DUP3)	**Source: 0710221-08**									
Solids, Dry Weight	53.8	0.1	% by Weight		55.0			2	20	
Batch 7102410 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7102410-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7102410-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (7102410-DUP2)	**Source: 0710221-03**									
Total Suspended Solids EPA 160.2 - 100mL	6.0	2.0	mg/L		5.0			18	20	
Reference (7102410-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	84.0		mg/L	76.3		110	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101813 = Soluble Reactive Phosphate EPA 365.2										
Blank (7101813-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (7101813-DUP3)	**Source: 0710221-05**									
Soluble Reactive Phosphate EPA 365.2	0.002	0.002	mg/L		0.002			0	20	
Matrix Spike (7101813-MS3)	**Source: 0710221-06**									
Soluble Reactive Phosphate EPA 365.2	0.242		mg/L	0.250	0.00661	94	80-120			
Reference (7101813-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.663		mg/L	0.610		109	80-120			
Batch 7102502 = Total Phosphorus, Total EPA 365.3 (Spec)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102502 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7102502-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7102502-DUP3)	**Source: 0710221-02**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.794	0.006	mg/L		0.802			1	20	
Matrix Spike (7102502-MS1)	**Source: 0710221-03**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.846	0.006	mg/L	0.267	0.612	88	80-120			
Reference (7102502-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.102	0.006	mg/L	0.108		94	0-200			
Batch 7102606 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7102606-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7102606-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7102606-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.92	0.08	mg/L	2.00		96	90-110			
LCS (7102606-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.83	0.08	mg/L	2.00		92	90-110			
Duplicate (7102606-DUP1)	**Source: 0710221-04**									
Total Kjeldahl Nitrogen, Total EPA 351.2	1.81	0.08	mg/L		2.09			14	20	
Matrix Spike (7102606-MS3)	**Source: 0710221-05**									**S-REX**
Total Kjeldahl Nitrogen, Total EPA 351.2	8.51	0.16	mg/L	1.00	9.47	NR	80-120			
Batch 7102912 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7102912-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (7102912-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.100	0.006	mg/L	0.108		93	0-200			
Batch 7102914 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7102914-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102914 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
LCS (7102914-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.86	0.08	mg/L	2.00		93	90-110			
Duplicate (7102914-DUP1) **Source: 0710221-02**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.51	0.08	mg/L		2.47			2	20	
Matrix Spike (7102914-MS1) **Source: 0710221-03**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.89	0.08	mg/L	1.00	0.83	106	80-120			
Batch 7110202 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7110202-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7110202-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7110202-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.82	0.08	mg/L	2.00		91	90-110			
LCS (7110202-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.89	0.08	mg/L	2.00		94	90-110			
Matrix Spike (7110202-MS1) **Source: 0710221-05RE1**										
Total Kjeldahl Nitrogen, Total EPA 351.2	13.8	0.32	mg/L	4.00	10.2	90	80-120			
Batch 7110707 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7110707-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (7110707-DUP1) **Source: 0710221-01**										
Nitrate-Nitrite, Total EPA 353.2	0.020	0.003	mg/L		0.022			10	20	
Matrix Spike (7110707-MS1) **Source: 0710221-02**										
Nitrate-Nitrite, Total EPA 353.2	0.433	0.003	mg/L	0.400	0.020	103	90-110			
Reference (7110707-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.39	0.003	mg/L	1.38		101	90-110			
Reference (7110707-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.04	0.003	mg/L	1.00		104	0-200			
Batch 7110710 = Ammonia, Total EPA 350.1										

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Project Manager: Ron Clarke

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11/20/07 10:49

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110710 = Ammonia, Total EPA 350.1										
Blank (7110710-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (7110710-DUP2)	**Source: 0710221-05**									
Ammonia, Total EPA 350.1	0.210	0.009	mg/L		0.205			2	20	
Matrix Spike (7110710-MS2)	**Source: 0710221-06**									
Ammonia, Total EPA 350.1	0.506	0.009	mg/L	0.400	0.115	98	80-120			
Reference (7110710-SRM1)										
Ammonia, Total EPA 350.1	0.652	0.009	mg/L	0.635		103	90-110			
Batch 7111312 = Phosphorus, Inorganic in Sediment										
Blank (7111312-BLK1)										
Phosphorus, Inorganic in Sediment	0.5 U	0.5	mg/kg wet							
Blank (7111312-BLK2)										
Phosphorus, Inorganic in Sediment	1.0 U	1.0	mg/kg wet							
LCS (7111312-BS1)										
Phosphorus, Inorganic in Sediment	6.5	0.2	mg/kg wet				85-115			
Duplicate (7111312-DUP1)	**Source: 0710221-08**									
Phosphorus, Inorganic in Sediment	39.7	0.9	mg/kg dry		41.4			4	20	
Duplicate (7111312-DUP2)	**Source: 0710221-09**									
Phosphorus, Inorganic in Sediment	39.1	1.1	mg/kg dry		39.0			0.3	20	
Duplicate (7111312-DUP3)	**Source: 0710221-10**									
Phosphorus, Inorganic in Sediment	33.3	1.1	mg/kg dry		34.1			2	20	
Duplicate (7111312-DUP4)	**Source: 0710221-11**									
Phosphorus, Inorganic in Sediment	29.3	0.9	mg/kg dry		31.8			8	20	
Duplicate (7111312-DUP5)	**Source: 0710221-12**									
Phosphorus, Inorganic in Sediment	34.5	0.8	mg/kg dry		37.3			8	20	
Duplicate (7111312-DUP6)	**Source: 0710221-13**									
Phosphorus, Inorganic in Sediment	28.7	0.9	mg/kg dry		31.4			9	20	
Matrix Spike (7111312-MS1)	**Source: 0710221-12**									
Phosphorus, Inorganic in Sediment	1.3		mg/L	4.00	0.943	152	75-125			

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
11/20/07 10:49

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111312 = Phosphorus, Inorganic in Sediment										
Matrix Spike Dup (7111312-MSD1) **Source: 0710221-12**										
Phosphorus, Inorganic in Sediment	1.3		mg/L	4.00	0.943	137	75-125	0	20	

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7103103 = Sulfate, Total EPA 375.4										
Blank (7103103-BLK1)										
Sulfate, Total EPA 375.4	1.00 U	1.00	mg/L							
Reference (7103103-SRM1)										
Sulfate, Total EPA 375.4	41.0		mg/L	38.6		106	90-110			

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102918 = ICP Metals										
Blank (7102918-BLK1)										
Iron Sediment EPA 6010B (ICP)	0.8	0.1	mg/kg wet							PB-10
Calcium Sediment EPA 6010B (ICP)	3.34	0.002	mg/kg wet							PB-10
Aluminum Sediment EPA 6010B (ICP)	3.6 U	3.6	mg/kg wet							
LCS (7102918-BS1)										
Iron Sediment EPA 6010B (ICP)	8210	0.5	mg/kg wet	10800		76	85-115			CUST
Calcium Sediment EPA 6010B (ICP)	2960	0.009	mg/kg wet	3040		97	85-115			
Aluminum Sediment EPA 6010B (ICP)	6040	16.8	mg/kg wet	5810		104	85-115			
Duplicate (7102918-DUP1) **Source: 0710221-13**										
Calcium Sediment EPA 6010B (ICP)	90000	0.12	mg/kg dry		92800			3	20	
Aluminum Sediment EPA 6010B (ICP)	105000	214	mg/kg dry		98900			6	20	
Iron Sediment EPA 6010B (ICP)	24400	6.0	mg/kg dry		24500			0.4	20	

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Wetlands Solutions Inc.		
2809 NW 161 Ct	Project: Lake Hancock	**Reported:**
Gainesville, FL 32609	Project Manager: Ron Clarke	11/20/07 10:49

NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
PSIN	Poor matrix spike recovery; post digestion spike within acceptance criteria.
PB-10	Prep blank hit less than 10% of smallest sample value.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUSTa	Original result over the curve, diluted result reported.
CUST	ERA limits 4340-17700mg/kg
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Advanced
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January 22, 2008

Serial: LAB-080122 81658

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609
RE: Lake Hancock
Work Order: 0710221

Enclosed are the results of analyses for samples received by the laboratory on October 18, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. The results relate only to the samples listed on the chain of custody. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety. The report pages are numbered separately from the chain of custody and any sample receipt documentation, which, if appropriate, are included in an unnumbered appendix.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

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Wetlands Solutions Inc.
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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
01/22/08 08:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W-1	0710221-08	Soil	10/17/07 14:30	10/18/07 09:20
W-2	0710221-09	Soil	10/17/07 14:48	10/18/07 09:20
W-3	0710221-10	Soil	10/17/07 15:00	10/18/07 09:20
W-4	0710221-11	Soil	10/17/07 15:25	10/18/07 09:20
C-1	0710221-12	Soil	10/17/07 16:05	10/18/07 09:20
C-2	0710221-13	Soil	10/17/07 15:50	10/18/07 09:20

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NELAP Certified - FDH #E82001

Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 01/22/08 08:16

REPORT OF RESULTS

W-1

0710221-08 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	46300	70.2	mg/kg dry	1	8011411	01/14/08	01/18/08 16:48	Q-A, V

W-2

0710221-09 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	60200	75.7	mg/kg dry	1	8011411	01/14/08	01/18/08 16:57	Q-A, V

W-3

0710221-10 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	61200	65.2	mg/kg dry	1	8011411	01/14/08	01/18/08 17:07	Q-A, V

W-4

0710221-11 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	53100	60.9	mg/kg dry	1	8011411	01/14/08	01/18/08 17:26	Q-A, V

C-1

0710221-12 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	52200	56.3	mg/kg dry	1	8011411	01/14/08	01/18/08 18:04	Q-A, V

C-2

0710221-13 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	64600	48.2	mg/kg dry	1	8011411	01/14/08	01/18/08 18:14	Q-A, V

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
01/22/08 08:16

QUALITY CONTROL FOR SAMPLES

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011411 = Phosphorus in Sediment Not NELAC certified										
Blank (8011411-BLK1)										
Phosphorus in Sediment Not NELAC certified	4.0	1.0	mg/kg wet							V
Duplicate (8011411-DUP1) **Source: 0710221-10**										
Phosphorus in Sediment Not NELAC certified	53700	78.4	mg/kg dry		61200			13	20	
Reference (8011411-SRM1)										
Phosphorus in Sediment Not NELAC certified	2610	7.7	mg/kg wet	3070		85	85-115			

WO# 0710221

CHAIN-OF-CUSTODY FORM

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

Wetland Solutions, Inc.

TURN AROUND TIME: X Standard Rush

LAB: Advanced Environmental Laboratories, Inc.

Special Instructions/Comments:

No Chl a this month. Please use contents of brown bottle for TSS, Ortho-P, and TKN-Dissolved. No samples filtered in field.

ANALYSIS REQUESTED / PRESERVATIVE

PRESERVATIVE KEY
0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3 / TKN / TKN Dis	TP / Ortho-P	Ca / Al / Fe / SO4 rec 10/18/07	Bulk Density	% Solids	REMARKS / ALTERNATE DESC
10/17/2007	1340	W-1	SW	G	X	X	X				-01
10/17/2007	1346	W-2	SW	G	X	X	X				-02
10/17/2007	1355	W-3	SW	G	X	X	X				-03
10/17/2007	1404	W-4	SW	G	X	X	X				-04
10/17/2007	~~1404~~ 1653	W-5	SW	G	X	X	X				-05
10/17/2007	1310	C-2	SW	G	X	X	X				-06
10/17/2007	1404	DUP	SW	G	X	X	X				-07
10/17/2007	1430	W-1	S	Comp			X	X	X	X	-08
10/17/2007	1448	W-2	S	Comp			X	X	X	X	-09
10/17/2007	1500	W-3	S	Comp			X	X	X	X	-10
10/17/2007	1525	W-4	S	Comp			X	X	X	X	-11
10/17/2007	1605	C-1	S	Comp			X	X	X	X	-12
10/17/2007	1550	C-2	S	Comp			X	X	X	X	-13

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Henry Brennan	Signature: Paul Hantin	Signature	Signature
Henry Brennan Printed Name	Paul Hantin Printed Name	Printed Name	Printed Name
Wetland Solutions, Inc. Company	Company	Company	Company
10.18.07 0920 Date / Time	10-18-07 0920 Date / Time	Date / Time	Date / Time

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 10-18-07 0920 Log-In request number: 0710221

Received by: PLT Completed by: PLT

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1	C-2			
Temp (°C)	4.2	3.4			
Temp taken from	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☒ IR gun ☐ Thermometer (enter ID):	☒ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?		X	
16. Were samples accepted into the laboratory?	X		

Comments:

C:\Documents and Settings\TWilliams\Desktop\Login Checklist.doc

MACTEC

REPORT OF SOIL TESTING

Project: Lake Hancock Vegitation Study

Project Number: 6738-03-4343-03

Client: Advanced Environmental Laboratories, Inc.

Date: October 31, 2007

As requested by Paul Berman of Advanced Environmental Laboratories, Inc., MACTEC Engineering & Consulting Inc. has completed Bulk Density with Moisture Content testing of six samples that were delivered to our Jacksonville office on October 22, 2007. The results are outlined below.

Sample No.	Sample ID	Percent Moisture (% Wet)	Percent Moisture (% Dry)	Percent Solids	Bulk Density pcf (wet)	Bulk Density pcf (dry)
10710221-08	W-1	52.7	111.5	47.3	90.5	42.8
0710221-09	W-2	53.1	113.3	46.9	91.0	42.7
1710221-10	W-3	54.4	119.2	45.6	85.4	39.0
0710221-11	W-4	52.7	111.5	47.3	91.8	43.4
0710221-12	C-1	35.8	55.7	64.2	72.8	46.8
0710221-13	C-2	46.5	86.9	53.5	94.3	50.4

Respectfully Submitted,

Mike Holm, P.E.

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

December 16, 2007

Serial: LAB-0712

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0711158

Enclosed are the results of analyses for samples received by the laboratory on November 15, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

Advanced Environmental Laboratories, Inc.

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NELAP Certified - FDH #E82001

Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/16/07 12:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0711158-01	Water	11/15/07 12:18	11/15/07 16:15
W - 2	0711158-02	Water	11/15/07 12:23	11/15/07 16:15
W - 3	0711158-03	Water	11/15/07 12:27	11/15/07 16:15
W - 4	0711158-04	Water	11/15/07 12:34	11/15/07 16:15
W - 5	0711158-05	Water	11/15/07 12:43	11/15/07 16:15
C - 2	0711158-06	Water	11/15/07 12:37	11/15/07 16:15
DUP	0711158-07	Water	11/15/07 12:27	11/15/07 16:15

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/16/07 12:05

REPORT OF RESULTS

W - 1

0711158-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.046	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:13	
Nitrate-Nitrite, Total EPA 353.2	0.035	0.003	mg/L	1	7112908	11/29/07	11/29/07 16:57	
Soluble Reactive Phosphate EPA 365.2	0.113	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	6.99	0.33	mg/L	1	7111907	11/20/07	11/20/07 11:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.73	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.68	0.08	mg/L	1	7112612	11/26/07	11/27/07 00:00	
Total Suspended Solids EPA 160.2 - 100mL	43.0	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

W - 1

0711158-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.37	0.030	mg/L	5	7111801	11/16/07	11/19/07 17:00	

W - 2

0711158-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.039	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:19	
Nitrate-Nitrite, Total EPA 353.2	0.026	0.003	mg/L	1	7112908	11/29/07	11/29/07 16:58	
Soluble Reactive Phosphate EPA 365.2	0.291	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	3.42	0.33	mg/L	1	7111907	11/20/07	11/20/07 11:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.37	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.86	0.08	mg/L	1	7112612	11/26/07	11/27/07 00:00	
Total Suspended Solids EPA 160.2 - 100mL	5.0 I	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

W - 2

0711158-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.10	0.030	mg/L	5	7111801	11/16/07	11/19/07 17:00	

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/16/07 12:05

W - 3

0711158-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.020 I	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:20	
Nitrate-Nitrite, Total EPA 353.2	0.028	0.003	mg/L	1	7112908	11/29/07	11/29/07 16:59	
Soluble Reactive Phosphate EPA 365.2	0.384	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	0.33 U	0.33	mg/L	1	7111907	11/20/07	11/20/07 11:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.99	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.36	0.08	mg/L	1	7112612	11/26/07	11/27/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.640	0.006	mg/L	1	7111619	11/16/07	11/17/07 12:00	
Total Suspended Solids EPA 160.2 - 100mL	10.0	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

W - 4

0711158-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:17	
Nitrate-Nitrite, Total EPA 353.2	0.031	0.003	mg/L	1	7112908	11/29/07	11/29/07 17:00	
Soluble Reactive Phosphate EPA 365.2	0.275	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	1.64	0.33	mg/L	1	7112626	11/27/07	11/27/07 13:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.50	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.92	0.08	mg/L	1	7112612	11/26/07	11/27/07 00:00	
Total Suspended Solids EPA 160.2 - 100mL	15.0	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

W - 4

0711158-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.01	0.030	mg/L	5	7111801	11/16/07	11/19/07 17:00	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 12/16/07 12:05

W - 5

0711158-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.175	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:29	
Nitrate-Nitrite, Total EPA 353.2	0.073	0.003	mg/L	1	7112908	11/29/07	11/29/07 17:01	
Soluble Reactive Phosphate EPA 365.2	0.008 I	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	13.9	0.33	mg/L	1	7112626	11/27/07	11/27/07 13:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.79	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	12.0	0.32	mg/L	4	7112612	11/26/07	11/27/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.648	0.006	mg/L	1	7111619	11/16/07	11/17/07 12:00	
Total Suspended Solids EPA 160.2 - 100mL	150	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

C - 2

0711158-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.082	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:30	
Nitrate-Nitrite, Total EPA 353.2	0.045	0.003	mg/L	1	7112908	11/29/07	11/29/07 17:02	
Soluble Reactive Phosphate EPA 365.2	0.008 I	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	1.20 I	0.33	mg/L	1	7112626	11/27/07	11/27/07 13:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.72	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	10.0	0.32	mg/L	4	7112612	11/26/07	11/27/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.590	0.006	mg/L	1	7111619	11/16/07	11/17/07 12:00	
Total Suspended Solids EPA 160.2 - 100mL	63.3	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 12/16/07 12:05

DUP

0711158-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.010 I	0.009	mg/L	1	7120615	12/06/07	12/07/07 13:31	
Nitrate-Nitrite, Total EPA 353.2	0.015	0.003	mg/L	1	7112908	11/29/07	11/29/07 17:09	
Soluble Reactive Phosphate EPA 365.2	0.410	0.002	mg/L	1	7111606	11/16/07	11/16/07 10:00	
Sulfate, Total EPA 375.4	0.57 I	0.33	mg/L	1	7112626	11/27/07	11/27/07 13:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.00	0.08	mg/L	1	7112613	11/26/07	11/27/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.41	0.08	mg/L	1	7112612	11/26/07	11/27/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.640	0.006	mg/L	1	7111619	11/16/07	11/17/07 12:00	
Total Suspended Solids EPA 160.2 - 100mL	15.0	2.0	mg/L	1	7111903	11/19/07	11/19/07 10:39	

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/16/07 12:05

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111903 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7111903-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7111903-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (7111903-DUP4) **Source: 0711158-03**										
Total Suspended Solids EPA 160.2 - 100mL	10.0	2.0	mg/L		10.0			0	20	
Reference (7111903-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	44.0		mg/L	45.5		97	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111606 = Soluble Reactive Phosphate EPA 365.2										
Blank (7111606-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (7111606-DUP1) **Source: 0711158-01**										
Soluble Reactive Phosphate EPA 365.2	0.113	0.002	mg/L		0.113			0	20	
Matrix Spike (7111606-MS1) **Source: 0711158-02**										
Soluble Reactive Phosphate EPA 365.2	0.541		mg/L	0.250	0.283	103	80-120			
Reference (7111606-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.654		mg/L	0.610		107	80-120			
Batch 7111619 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7111619-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (7111619-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.099	0.006	mg/L	0.108		92	0-200			
Batch 7111801 = Total Phosphorus, Total EPA 365.3 (Spec)										

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12/16/07 12:05

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111801 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7111801-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7111801-DUP3) **Source: 0711158-01RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	1.33	0.030	mg/L		1.37			3	20	
Duplicate (7111801-DUP4) **Source: 0711158-02RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	1.17	0.030	mg/L		1.10			6	20	
Duplicate (7111801-DUP5) **Source: 0711158-04RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	1.01	0.030	mg/L		1.01			0	20	
Matrix Spike (7111801-MS1) **Source: 0711158-02RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	2.63	0.031	mg/L	1.33	1.10	115	80-120			
Reference (7111801-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.101	0.006	mg/L	0.108		94	0-200			
Batch 7112612 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7112612-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7112612-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7112612-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.83	0.08	mg/L	2.00		92	90-110			
LCS (7112612-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Duplicate (7112612-DUP2) **Source: 0711158-01**										
Total Kjeldahl Nitrogen, Total EPA 351.2	5.18	0.16	mg/L		4.68			10	20	
Matrix Spike (7112612-MS3) **Source: 0711158-02**										
Total Kjeldahl Nitrogen, Total EPA 351.2	4.06	0.08	mg/L	1.00	2.86	120	80-120			
Batch 7112613 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7112613-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (7112613-BS1)										

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Project: Lake Hancock
Project Manager: Ron Clarke

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12/16/07 12:05

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7112613 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
LCS (7112613-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.07	0.08	mg/L	2.00		104	90-110			
Duplicate (7112613-DUP3) **Source: 0711158-03**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.13	0.08	mg/L		0.99			13	20	
Matrix Spike (7112613-MS2) **Source: 0711158-04**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.49	0.08	mg/L	1.00	1.50	99	80-120			
Batch 7112908 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7112908-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (7112908-DUP4) **Source: 0711158-07**										
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L		0.015			13	20	
Reference (7112908-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.37	0.003	mg/L	1.38		99	90-110			
Reference (7112908-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.09	0.003	mg/L	1.00		109	0-200			
Batch 7120615 = Ammonia, Total EPA 350.1										
Blank (7120615-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Matrix Spike (7120615-MS2) **Source: 0711158-01**										
Ammonia, Total EPA 350.1	0.426	0.009	mg/L	0.400	0.046	95	80-120			
Reference (7120615-SRM1)										
Ammonia, Total EPA 350.1	0.627	0.009	mg/L	0.635		99	90-110			

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111907 = Sulfate, Total EPA 375.4										
Blank (7111907-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/16/07 12:05

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7111907 = Sulfate, Total EPA 375.4										
Duplicate (7111907-DUP2)	**Source: 0711158-03**									
Sulfate, Total EPA 375.4	0.33 U	0.33	mg/L		0.33 U				20	
Matrix Spike (7111907-MS2)	**Source: 0711158-03**									
Sulfate, Total EPA 375.4	11.2		mg/L	10.0	-0.142	113	85-115			
Reference (7111907-SRM1)										
Sulfate, Total EPA 375.4	7.65		mg/L	7.37		104	90-110			
Batch 7112626 = Sulfate, Total EPA 375.4										
Blank (7112626-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Duplicate (7112626-DUP1)	**Source: 0711158-04**									
Sulfate, Total EPA 375.4	1.26	0.33	mg/L		1.64			26	20	D-RNG
Matrix Spike (7112626-MS1)	**Source: 0711158-04**									
Sulfate, Total EPA 375.4	12.5		mg/L	10.0	1.63	109	85-115			
Reference (7112626-SRM1)										
Sulfate, Total EPA 375.4	7.80		mg/L	7.37		106	90-110			

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 12/16/07 12:05

NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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December 28, 2007

Serial: LAB-0712

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0712016

Enclosed are the results of analyses for samples received by the laboratory on December 4, 2007.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Berman
Quality Assurance Manager
pberman@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
12/28/07 11:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0712016-01	Water	12/03/07 13:57	12/04/07 08:50
W - 2	0712016-02	Water	12/03/07 14:12	12/04/07 08:50
W - 3	0712016-03	Water	12/03/07 14:26	12/04/07 08:50
W - 4	0712016-04	Water	12/03/07 14:47	12/04/07 08:50
W - 5	0712016-05	Water	12/03/07 15:45	12/04/07 08:50
C - 2	0712016-06	Water	12/03/07 15:22	12/04/07 08:50
DUP	0712016-07	Water	12/03/07 13:57	12/04/07 08:50

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	Reported: 12/28/07 11:49

REPORT OF RESULTS

W - 1

0712016-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	1040	13.9	ug/L	1	7120618	12/06/07	12/10/07 18:32	
Ammonia, Total EPA 350.1	0.026 I	0.009	mg/L	1	7121213	12/12/07	12/13/07 15:48	
Calcium Total EPA 200.7/6010 (ICP)	33.2	0.02	mg/L	1	7120618	12/06/07	12/10/07 18:32	
Iron Total EPA 200.7/6010 (ICP)	707	0.7	ug/L	1	7120618	12/06/07	12/10/07 18:32	
Nitrate-Nitrite, Total EPA 353.2	0.060	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:00	
Soluble Reactive Phosphate EPA 365.2	0.412	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	7.38	0.33	mg/L	1	7120401	12/04/07	12/04/07 10:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.37	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.57	0.08	mg/L	1	7120705	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.32	0.030	mg/L	5	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	19.0	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

W - 2

0712016-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	1910	13.9	ug/L	1	7120618	12/06/07	12/10/07 18:41	
Ammonia, Total EPA 350.1	0.053	0.009	mg/L	1	7121213	12/12/07	12/13/07 15:49	
Calcium Total EPA 200.7/6010 (ICP)	35.4	0.02	mg/L	1	7120618	12/06/07	12/10/07 18:41	
Iron Total EPA 200.7/6010 (ICP)	971	0.7	ug/L	1	7120618	12/06/07	12/10/07 18:41	
Nitrate-Nitrite, Total EPA 353.2	0.049	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:01	
Soluble Reactive Phosphate EPA 365.2	0.236	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	10.4	0.33	mg/L	1	7120401	12/04/07	12/04/07 10:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.19	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	6.09	0.16	mg/L	2	7120705	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	2.50	0.060	mg/L	10	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	58.0	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	Reported: 12/28/07 11:49

W - 3

0712016-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	602	13.9	ug/L	1	7120618	12/06/07	12/10/07 18:51	
Ammonia, Total EPA 350.1	0.033 I	0.009	mg/L	1	7121213	12/12/07	12/13/07 15:50	
Calcium Total EPA 200.7/6010 (ICP)	29.9	0.02	mg/L	1	7120618	12/06/07	12/10/07 18:51	
Iron Total EPA 200.7/6010 (ICP)	192	0.7	ug/L	1	7120618	12/06/07	12/10/07 18:51	
Nitrate-Nitrite, Total EPA 353.2	0.031	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:02	
Soluble Reactive Phosphate EPA 365.2	0.397	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	3.94	0.33	mg/L	1	7120401	12/04/07	12/04/07 10:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.88	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.05	0.08	mg/L	1	7120705	12/07/07	12/12/07 00:00	
Total Suspended Solids EPA 160.2 - 100mL	16.0	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

W - 3

0712016-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.00	0.030	mg/L	5	7120402	12/10/07	12/11/07 15:30	

W - 4

0712016-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	1920	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:10	
Ammonia, Total EPA 350.1	0.050	0.009	mg/L	1	7122604	12/26/07	12/27/07 13:29	
Calcium Total EPA 200.7/6010 (ICP)	24.9	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:10	
Iron Total EPA 200.7/6010 (ICP)	698	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:10	
Nitrate-Nitrite, Total EPA 353.2	0.022	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:03	
Soluble Reactive Phosphate EPA 365.2	0.403	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	5.15	0.33	mg/L	1	7120616	12/06/07	12/07/07 11:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.00	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.88	0.08	mg/L	1	7120708	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	2.11	0.030	mg/L	5	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	27.0	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 12/28/07 11:49

W - 5

0712016-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	470	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:39	
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L	1	7122604	12/26/07	12/27/07 13:19	
Calcium Total EPA 200.7/6010 (ICP)	35.9	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:39	
Iron Total EPA 200.7/6010 (ICP)	269	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:39	
Nitrate-Nitrite, Total EPA 353.2	0.091	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:09	
Soluble Reactive Phosphate EPA 365.2	0.015	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	15.0	0.33	mg/L	1	7121201	12/12/07	12/12/07 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.04	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	14.7	0.32	mg/L	4	7120708	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.520	0.006	mg/L	1	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	125	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

C - 2

0712016-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	1380	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:48	
Ammonia, Total EPA 350.1	6.51	0.090	mg/L	10	7122604	12/26/07	12/27/07 13:35	
Calcium Total EPA 200.7/6010 (ICP)	46.5	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:48	
Iron Total EPA 200.7/6010 (ICP)	2110	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:48	
Nitrate-Nitrite, Total EPA 353.2	0.061	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:10	
Soluble Reactive Phosphate EPA 365.2	0.100	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	0.73 I	0.33	mg/L	1	7121201	12/12/07	12/12/07 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	9.84	0.32	mg/L	4	7121013	12/10/07	12/27/07 11:58	
Total Kjeldahl Nitrogen, Total EPA 351.2	12.2	0.32	mg/L	4	7120708	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	2.16	0.120	mg/L	20	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	33.3	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	Reported: 12/28/07 11:49

W - 5
0712016-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	470	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:39	
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L	1	7122604	12/26/07	12/27/07 13:19	
Calcium Total EPA 200.7/6010 (ICP)	35.9	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:39	
Iron Total EPA 200.7/6010 (ICP)	269	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:39	
Nitrate-Nitrite, Total EPA 353.2	0.091	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:09	
Soluble Reactive Phosphate EPA 365.2	0.015	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	15.0	0.33	mg/L	1	7121201	12/12/07	12/12/07 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.04	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	14.7	0.32	mg/L	4	7120708	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.520	0.006	mg/L	1	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	125	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

C - 2
0712016-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	1380	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:48	
Ammonia, Total EPA 350.1	6.51	0.090	mg/L	10	7122604	12/26/07	12/27/07 13:35	
Calcium Total EPA 200.7/6010 (ICP)	46.5	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:48	
Iron Total EPA 200.7/6010 (ICP)	2110	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:48	
Nitrate-Nitrite, Total EPA 353.2	0.061	0.003	mg/L	1	7121908	[illegible]	[illegible]	
Soluble Reactive Phosphate EPA 365.2	0.100	0.00[illegible]						
Sulfate, Total EPA 375.4	0.73 I	0.3[illegible]						
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	9.84	0.3[illegible]						
Total Kjeldahl Nitrogen, Total EPA 351.2	12.2	0.32						
Total Phosphorus, Total EPA 365.3 (Spec)	2.16	0.12[illegible]						
Total Suspended Solids EPA 160.2 - 100mL	33.3	2.0						

1/9/08 Corrected w/ T QC

1/9 + 1/17 Both check out okay (Rerun Sim

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DUP

0712016-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	940	13.9	ug/L	1	7120618	12/06/07	12/10/07 19:58	
Ammonia, Total EPA 350.1	0.020 I	0.009	mg/L	1	7122604	12/26/07	12/27/07 13:21	
Calcium Total EPA 200.7/6010 (ICP)	32.3	0.02	mg/L	1	7120618	12/06/07	12/10/07 19:58	
Iron Total EPA 200.7/6010 (ICP)	681	0.7	ug/L	1	7120618	12/06/07	12/10/07 19:58	
Nitrate-Nitrite, Total EPA 353.2	0.034	0.003	mg/L	1	7121908	12/19/07	12/19/07 15:11	
Soluble Reactive Phosphate EPA 365.2	0.259	0.002	mg/L	1	7120405	12/04/07	12/04/07 15:00	
Sulfate, Total EPA 375.4	7.52	0.33	mg/L	1	7121201	12/12/07	12/12/07 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.99	0.08	mg/L	1	7121013	12/10/07	12/12/07 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.72	0.08	mg/L	1	7120708	12/07/07	12/12/07 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.45	0.120	mg/L	20	7120402	12/10/07	12/11/07 15:30	
Total Suspended Solids EPA 160.2 - 100mL	19.0	2.0	mg/L	1	7120703	12/07/07	12/07/07 11:51	

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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120703 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (7120703-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7120703-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7120703-BLK3)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (7120703-BLK4)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Reference (7120703-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	48.0		mg/L	45.5		105	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120402 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (7120402-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (7120402-DUP4) **Source: 0712016-02RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	2.59	0.120	mg/L		2.65			2	20	
Matrix Spike (7120402-MS1) **Source: 0712016-03RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	2.35	0.031	mg/L	1.33	1.00	102	80-120			
Reference (7120402-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.105	0.006	mg/L	0.108		97	0-200			
Batch 7120405 = Soluble Reactive Phosphate EPA 365.2										
Blank (7120405-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002	0.002	mg/L							CUST
Duplicate (7120405-DUP1) **Source: 0712016-01**										
Soluble Reactive Phosphate EPA 365.2	0.410	0.002	mg/L		0.412			0.5	20	

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120405 = Soluble Reactive Phosphate EPA 365.2										
Matrix Spike (7120405-MS1) **Source: 0712016-02**										
Soluble Reactive Phosphate EPA 365.2	0.487		mg/L	0.250	0.230	103	80-120			
Reference (7120405-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.644		mg/L	0.610		106	80-120			
Batch 7120705 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7120705-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (7120705-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7120705-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.06	0.08	mg/L	2.00		103	90-110			
LCS (7120705-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.99	0.08	mg/L	2.00		100	90-110			
Duplicate (7120705-DUP1) **Source: 0712016-01**										
Total Kjeldahl Nitrogen, Total EPA 351.2	3.66	0.08	mg/L		3.57			2	20	
Batch 7120708 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (7120708-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (7120708-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.94	0.08	mg/L	2.00		97	90-110			
Duplicate (7120708-DUP1) **Source: 0712016-04**										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.98	0.08	mg/L		2.88			3	20	
Matrix Spike (7120708-MS1) **Source: 0712016-05**										
Total Kjeldahl Nitrogen, Total EPA 351.2	18.3	0.32	mg/L	4.00	14.7	90	85-115			
Batch 7121013 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (7121013-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (7121013-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7121013 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
LCS (7121013-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.95	0.08	mg/L	2.00		98	90-110			
LCS (7121013-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.99	0.08	mg/L	2.00		100	90-110			
Duplicate (7121013-DUP2) **Source: 0712016-03**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.28	0.08	mg/L		1.88			19	20	
Matrix Spike (7121013-MS1) **Source: 0712016-04**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.11	0.08	mg/L	1.00	2.00	111	85-115			
Batch 7121213 = Ammonia, Total EPA 350.1										
Blank (7121213-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Reference (7121213-SRM1)										
Ammonia, Total EPA 350.1	0.611	0.009	mg/L	0.635		96	90-110			
Batch 7121908 = Nitrate-Nitrite, Total EPA 353.2										
Blank (7121908-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Reference (7121908-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.48	0.003	mg/L	1.38		107	90-110			
Reference (7121908-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.03	0.003	mg/L	1.00		103	0-200			
Batch 7122604 = Ammonia, Total EPA 350.1										
Blank (7122604-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Matrix Spike (7122604-MS1) **Source: 0712016-04**										
Ammonia, Total EPA 350.1	0.415	0.009	mg/L	0.400	0.050	91	80-120			
Reference (7122604-SRM1)										
Ammonia, Total EPA 350.1	0.579	0.009	mg/L	0.635		91	90-110			

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 12/28/07 11:49

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120401 = Sulfate, Total EPA 375.4										
Blank (7120401-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Duplicate (7120401-DUP2)	**Source: 0712016-03**									
Sulfate, Total EPA 375.4	3.20	0.33	mg/L		3.94			21	20	D-RNG
Matrix Spike (7120401-MS2)	**Source: 0712016-03**									
Sulfate, Total EPA 375.4	15.8		mg/L	10.0	3.91	119	75-125			
Reference (7120401-SRM1)										
Sulfate, Total EPA 375.4	7.31		mg/L	7.37		99	90-110			
Batch 7120616 = Sulfate, Total EPA 375.4										
Blank (7120616-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Blank (7120616-BLK2)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Blank (7120616-BLK3)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Duplicate (7120616-DUP2)	**Source: 0712016-04**									
Sulfate, Total EPA 375.4	4.79	0.33	mg/L		5.15			7	20	
Matrix Spike (7120616-MS2)	**Source: 0712016-04**									
Sulfate, Total EPA 375.4	16.0		mg/L	10.0	5.10	109	80-120			
Reference (7120616-SRM1)										
Sulfate, Total EPA 375.4	7.47		mg/L	7.37		101	90-110			
Batch 7121201 = Sulfate, Total EPA 375.4										
Blank (7121201-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Reference (7121201-SRM1)										
Sulfate, Total EPA 375.4	7.69		mg/L	7.37		104	90-110			

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120618 = ICP Metals										
Blank (7120618-BLK1)										
Aluminum Total EPA 200.7/6010 (ICP)	13.9 U	13.9	ug/L							
Calcium Total EPA 200.7/6010 (ICP)	0.02 U	0.02	mg/L							
Iron Total EPA 200.7/6010 (ICP)	0.7 U	0.7	ug/L							
LCS (7120618-BS1)										
Iron Total EPA 200.7/6010 (ICP)	102	0.7	ug/L	100		102	85-115			
Aluminum Total EPA 200.7/6010 (ICP)	98.2	13.9	ug/L	100		98	85-115			
Calcium Total EPA 200.7/6010 (ICP)	9.68	0.02	mg/L	10.0		97	85-115			
Duplicate (7120618-DUP2)	**Source: 0712016-03**									
Aluminum Total EPA 200.7/6010 (ICP)	594	13.9	ug/L		602			1	20	
Calcium Total EPA 200.7/6010 (ICP)	29.6	0.02	mg/L		29.9			1	20	
Iron Total EPA 200.7/6010 (ICP)	190	0.7	ug/L		192			1	20	
Matrix Spike (7120618-MS2)	**Source: 0712016-04**									
Aluminum Total EPA 200.7/6010 (ICP)	2170	13.9	ug/L	100	1920	250	75-125			PSOUT
Iron Total EPA 200.7/6010 (ICP)	792	0.7	ug/L	100	698	94	75-125			
Calcium Total EPA 200.7/6010 (ICP)	34.6	0.02	mg/L	10.0	24.9	97	75-125			
Post Spike (7120618-PS2)	**Source: 0712016-04**									
Aluminum Total EPA 200.7/6010 (ICP)	8840		ug/L	5310	1850	132	75-125			PSOUT
Calcium Total EPA 200.7/6010 (ICP)	75.8		mg/L	48.8	24.1	106	75-125			
Iron Total EPA 200.7/6010 (ICP)	6540		ug/L	5310	674	110	75-125			

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NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
PSOUT	Poor matrix spike recovery; post digestion spike outside acceptance criteria.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUSTb	use results from 7120618-MS1
CUSTa	SJRWMD ACCEPTS 70-130%
CUST	actual value 0.0017
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Advanced
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January 30, 2008

Serial: LAB-080130 31143

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0801106

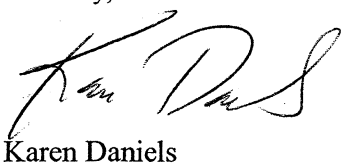
Enclosed are the results of analyses for samples received by the laboratory on January 11, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
01/30/08 15:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0801106-01	Water	01/10/08 12:59	01/11/08 08:40
W - 2	0801106-02	Water	01/10/08 13:20	01/11/08 08:40
W - 3	0801106-03	Water	01/10/08 13:38	01/11/08 08:40
W - 4	0801106-04	Water	01/10/08 13:53	01/11/08 08:40
W - 5	0801106-05	Water	01/10/08 16:13	01/11/08 08:40
C-1	0801106-06	Water	01/10/08 10:44	01/11/08 08:40
C-2	0801106-07	Water	01/10/08 12:49	01/11/08 08:40
W-1	0801106-08	Soil	01/10/08 14:35	01/11/08 08:40
W-2	0801106-09	Soil	01/10/08 14:50	01/11/08 08:40
W-3	0801106-10	Soil	01/10/08 15:05	01/11/08 08:40
W-4	0801106-11	Soil	01/10/08 15:20	01/11/08 08:40
C-1	0801106-12	Soil	01/10/08 15:30	01/11/08 08:40
C-2	0801106-13	Soil	01/10/08 15:50	01/11/08 08:40

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 01/30/08 15:11

REPORT OF RESULTS

W - 1

0801106-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	347	13.9	ug/L	1	8011413	01/14/08	01/16/08 15:45	
Ammonia, Total EPA 350.1	0.030 I	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:27	
Calcium Total EPA 200.7/6010 (ICP)	35.4	0.02	mg/L	1	8011413	01/14/08	01/16/08 15:45	
Iron Total EPA 200.7/6010 (ICP)	1430	0.7	ug/L	1	8011413	01/14/08	01/16/08 15:45	V
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:01	
Soluble Reactive Phosphate EPA 365.2	0.023	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	9.57	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.19	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.55	0.16	mg/L	2	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	36.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 1

0801106-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.909	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

W - 2

0801106-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	241	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:05	
Ammonia, Total EPA 350.1	0.534	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:32	
Calcium Total EPA 200.7/6010 (ICP)	35.7	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:05	
Iron Total EPA 200.7/6010 (ICP)	290	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:05	V
Nitrate-Nitrite, Total EPA 353.2	0.039	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:03	
Soluble Reactive Phosphate EPA 365.2	0.053	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	11.2	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Total EPA 351.2	7.45	0.16	mg/L	2	8011507	01/15/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.629	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

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Project Manager: Ron Clarke

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W - 2

0801106-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.16	0.16	mg/L	2	8011803	01/18/08	01/24/08 00:00	

W - 3

0801106-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	466	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:33	
Ammonia, Total EPA 350.1	0.037	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:28	
Calcium Total EPA 200.7/6010 (ICP)	39.2	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:33	
Iron Total EPA 200.7/6010 (ICP)	144	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:33	V
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:12	
Soluble Reactive Phosphate EPA 365.2	0.365	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	12.2	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.22	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.99	0.08	mg/L	1	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	9.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 3

0801106-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.837	0.018	mg/L	3	8012410	01/25/08	01/25/08 13:00	

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Reported:
01/30/08 15:11

W - 4
0801106-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	948	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:43	
Ammonia, Total EPA 350.1	0.032 I	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:34	
Calcium Total EPA 200.7/6010 (ICP)	32.3	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:43	
Iron Total EPA 200.7/6010 (ICP)	391	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:43	V
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:13	
Soluble Reactive Phosphate EPA 365.2	0.209	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	10.9	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.32	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.85	0.08	mg/L	1	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	21.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 4
0801106-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.37	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

W - 5
0801106-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	343	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:12	
Ammonia, Total EPA 350.1	0.216	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:39	
Calcium Total EPA 200.7/6010 (ICP)	39.6	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:12	
Iron Total EPA 200.7/6010 (ICP)	217	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:12	V
Nitrate-Nitrite, Total EPA 353.2	0.009 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:14	
Soluble Reactive Phosphate EPA 365.2	0.006 I	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	15.7	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.63	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	15.6	0.32	mg/L	4	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	148	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

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W - 5

0801106-05RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.815	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

C-1

0801106-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	64.7	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:21	
Ammonia, Total EPA 350.1	0.388	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:47	
Calcium Total EPA 200.7/6010 (ICP)	41.3	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:21	
Iron Total EPA 200.7/6010 (ICP)	420	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:21	V
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:15	
Soluble Reactive Phosphate EPA 365.2	0.006 I	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	11.3	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.44	0.16	mg/L	2	8011603	01/16/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.438	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	30.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

C-1

0801106-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Total EPA 351.2	8.67	0.32	mg/L	4	8011802	01/18/08	01/24/08 00:00	

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C-2
0801106-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	289	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:31	
Ammonia, Total EPA 350.1	0.434	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:52	
Calcium Total EPA 200.7/6010 (ICP)	40.4	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:31	
Iron Total EPA 200.7/6010 (ICP)	1030	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:31	V
Nitrate-Nitrite, Total EPA 353.2	0.007 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:17	
Soluble Reactive Phosphate EPA 365.2	0.011	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	8.13	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.36	0.32	mg/L	4	8011603	01/16/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.602	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	42.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

C-2
0801106-07RE2 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Total EPA 351.2	8.40	0.32	mg/L	4	8012505	01/25/08	01/28/08 00:00	

W-1
0801106-08 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	71500	206	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	
Calcium Sediment EPA 6010B (ICP)	121000	0.11	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Iron Sediment EPA 6010B (ICP)	31500	5.7	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Phosphorus in Sediment Not NELAC certified	65600	57.1	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Phosphorus, Inorganic in Sediment	21900	1080	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	46.2	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

W-1
0801106-08RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	610	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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W-2

0801106-09 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	78600	275	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	
Calcium Sediment EPA 6010B (ICP)	122000	0.15	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Iron Sediment EPA 6010B (ICP)	36800	7.6	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Phosphorus in Sediment Not NELAC certified	66700	76.3	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Phosphorus, Inorganic in Sediment	65000	2240	mg/kg dry	1000	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	44.7	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						

W-2

0801106-09RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	119	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

W-3

0801106-10 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	77600	212	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	
Calcium Sediment EPA 6010B (ICP)	104000	0.12	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Iron Sediment EPA 6010B (ICP)	26900	5.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Phosphorus in Sediment Not NELAC certified	63000	58.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Phosphorus, Inorganic in Sediment	38500	1090	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	46.0	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						

W-3

0801106-10RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	43 I	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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W-4

0801106-11 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	54500	241	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	
Calcium Sediment EPA 6010B (ICP)	95600	0.13	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Iron Sediment EPA 6010B (ICP)	26100	6.7	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Phosphorus in Sediment Not NELAC certified	48400	66.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Phosphorus, Inorganic in Sediment	3410	239	mg/kg dry	100	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	41.9	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						

W-4

0801106-11RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	324	20	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

C-1

0801106-12 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	73700	271	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	
Calcium Sediment EPA 6010B (ICP)	110000	0.15	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Iron Sediment EPA 6010B (ICP)	34400	7.5	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Phosphorus in Sediment Not NELAC certified	54700	75.3	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Phosphorus, Inorganic in Sediment	57500	1260	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	39.6	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses		Sample was subcontracted. Please see attached report.						

C-1

0801106-12RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	1660	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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C-2

0801106-13 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	68800	213	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	
Calcium Sediment EPA 6010B (ICP)	98000	0.12	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Iron Sediment EPA 6010B (ICP)	23800	5.9	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Phosphorus in Sediment Not NELAC certified	57900	59.1	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Phosphorus, Inorganic in Sediment	31800	1090	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	45.8	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

C-2

0801106-13RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	1190	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011102 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8011102-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8011102-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8011102-BLK3)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (8011102-DUP2)	**Source: 0801106-02**									
Total Suspended Solids EPA 160.2 - 100mL	15.0	2.0	mg/L		13.0			14	20	
Reference (8011102-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	56.0		mg/L	51.0		110	80-120			
Batch 8011506 = Solids, Dry Weight										
Blank (8011506-BLK1)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							
Blank (8011506-BLK2)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011110 = Soluble Reactive Phosphate EPA 365.2										
Blank (8011110-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8011110-DUP5)	**Source: 0801106-01**									
Soluble Reactive Phosphate EPA 365.2	0.023	0.002	mg/L		0.023			0	20	
Matrix Spike (8011110-MS5)	**Source: 0801106-02**									
Soluble Reactive Phosphate EPA 365.2	0.307		mg/L	0.250	0.0512	102	85-115			
Reference (8011110-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.646		mg/L	0.610		106	80-120			

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011110 = Soluble Reactive Phosphate EPA 365.2										
Batch 8011411 = Phosphorus in Sediment Not NELAC certified										
Blank (8011411-BLK1)										
Phosphorus in Sediment Not NELAC certified	4.0	1.0	mg/kg wet							V
LCS (8011411-BS1)										
Phosphorus in Sediment Not NELAC certified	660	3.8	mg/kg wet				85-115			NT
Duplicate (8011411-DUP2) **Source: 0801106-10**										
Phosphorus in Sediment Not NELAC certified	56300	56.3	mg/kg dry		63000			11	20	
Reference (8011411-SRM1)										
Phosphorus in Sediment Not NELAC certified	2610	7.7	mg/kg wet	3070		85	85-115			
Batch 8011505 = Ammonia, Total EPA 350.1										
Blank (8011505-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (8011505-DUP6) **Source: 0801106-06**										
Ammonia, Total EPA 350.1	0.411	0.009	mg/L		0.388			6	20	
Reference (8011505-SRM1)										
Ammonia, Total EPA 350.1	0.653	0.009	mg/L	0.635		103	90-110			
Batch 8011507 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011507-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011507-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011507-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.92	0.08	mg/L	2.00		96	90-110			
LCS (8011507-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Duplicate (8011507-DUP3) **Source: 0801106-01**										
Total Kjeldahl Nitrogen, Total EPA 351.2	5.39	0.16	mg/L		5.55			3	20	
Matrix Spike (8011507-MS3) **Source: 0801106-03**										
Total Kjeldahl Nitrogen, Total EPA 351.2	3.96	0.08	mg/L	1.00	2.99	97	85-115			

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011508 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011508-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011508-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011508-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.97	0.08	mg/L	2.00		98	90-110			
LCS (8011508-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.83	0.08	mg/L	2.00		92	90-110			
Duplicate (8011508-DUP3) **Source: 0801106-01**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.90	0.08	mg/L		3.19			10	20	
Matrix Spike (8011508-MS3) **Source: 0801106-02**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.70	0.16	mg/L	1.00	5.85	NR	85-115			S-REX
Batch 8011602 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011602-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011602-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011602-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.93	0.08	mg/L	2.00		96	90-110			
LCS (8011602-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Duplicate (8011602-DUP1) **Source: 0801106-06**										
Total Kjeldahl Nitrogen, Total EPA 351.2	6.60	0.32	mg/L		8.62			27	20	D-REX
Matrix Spike (8011602-MS1) **Source: 0801106-07**										
Total Kjeldahl Nitrogen, Total EPA 351.2	9.24	0.32	mg/L	4.00	8.10	28	85-115			S-REX
Batch 8011603 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011603-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011603-BLK2)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011603 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011603-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011603-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.89	0.08	mg/L	2.00		94	90-110			
LCS (8011603-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.94	0.08	mg/L	2.00		97	90-110			
Duplicate (8011603-DUP1) **Source: 0801106-06**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.79	0.08	mg/L		4.44			8	20	
Matrix Spike (8011603-MS1) **Source: 0801106-07**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	9.40	0.32	mg/L	4.00	5.36	101	85-115			
Batch 8011720 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8011720-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8011720-DUP1) **Source: 0801106-01**										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L		0.003 U				20	
Matrix Spike (8011720-MS1) **Source: 0801106-02**										
Nitrate-Nitrite, Total EPA 353.2	0.405	0.003	mg/L	0.400	0.039	92	90-110			
Reference (8011720-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.37	0.003	mg/L	1.38		99	90-110			
Reference (8011720-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	0.984	0.003	mg/L	1.00		98	0-200			
Batch 8011802 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011802-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011802-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011802-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.97	0.08	mg/L	2.00		98	90-110			
LCS (8011802-BS2)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011802 = Total Kjeldahl Nitrogen, Total EPA 351.2										
LCS (8011802-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.07	0.08	mg/L	2.00		104	90-110			
Duplicate (8011802-DUP1)	**Source: 0801106-06RE1**									
Total Kjeldahl Nitrogen, Total EPA 351.2	8.05	0.32	mg/L		8.67			7	20	
Matrix Spike (8011802-MS1)	**Source: 0801106-07RE1**									**S-RX+**
Total Kjeldahl Nitrogen, Total EPA 351.2	13.4	0.32	mg/L	4.00	8.21	130	80-120			
Batch 8011803 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011803-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011803-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011803-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.99	0.08	mg/L	2.00		100	90-110			
LCS (8011803-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.00	0.08	mg/L	2.00		100	90-110			
Matrix Spike (8011803-MS2)	**Source: 0801106-02RE1**									
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	8.34	0.16	mg/L	2.00	6.16	109	85-115			
Batch 8012202 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012202-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK3)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK4)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK5)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK6)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8012202 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012202-BLK6)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8012202-DUP2)	**Source: 0801106-02**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.608	0.006	mg/L		0.629			3	20	
Reference (8012202-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.104	0.006	mg/L	0.108		96	0-200			
Batch 8012303 = Phosphorus, Inorganic in Sediment										
Blank (8012303-BLK1)										
Phosphorus, Inorganic in Sediment	1.0 U	1.0	mg/kg wet							
Blank (8012303-BLK2)										
Phosphorus, Inorganic in Sediment	14.5	1.0	mg/kg wet							V
Duplicate (8012303-DUP2)	**Source: 0801106-09**									
Phosphorus, Inorganic in Sediment	64300	2240	mg/kg dry		65000			1	20	
Batch 8012410 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012410-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012410-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8012410-DUP2)	**Source: 0801106-01RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.882	0.030	mg/L		0.909			3	20	
Duplicate (8012410-DUP3)	**Source: 0801106-03RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.813	0.018	mg/L		0.837			3	20	
Duplicate (8012410-DUP4)	**Source: 0801106-04RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.34	0.030	mg/L		1.37			2	20	
Duplicate (8012410-DUP5)	**Source: 0801106-05RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.815	0.030	mg/L		0.815			0	20	
Matrix Spike (8012410-MS1)	**Source: 0801106-01RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	2.27	0.031	mg/L	1.33	0.909	102	80-120			
Reference (8012410-SRM1)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8012410 = Total Phosphorus, Total EPA 365.3 (Spec)										
Reference (8012410-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.103	0.006	mg/L	0.108		95	0-200			
Batch 8012505 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8012505-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8012505-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.82	0.08	mg/L	2.00		91	90-110			
Matrix Spike (8012505-MS1)	**Source: 0801106-07RE2**									**S-CON**
Total Kjeldahl Nitrogen, Total EPA 351.2	11.2	0.32	mg/L	4.00	8.40	70	80-120			

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011706 = Sulfate, Total EPA 375.4										
Blank (8011706-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Reference (8011706-SRM1)										
Sulfate, Total EPA 375.4	24.9		mg/L	24.8		100	90-110			
Batch 8012215 = Sulfate, Total EPA 375.4										
Blank (8012215-BLK1)										
Sulfate, Total EPA 375.4	1.00 U	20	mg/L							
Reference (8012215-SRM1)										
Sulfate, Total EPA 375.4	26.3		mg/L	24.8		106	90-110			

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011413 = ICP Metals										

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011413 = ICP Metals										
Blank (8011413-BLK1)										
Aluminum Total EPA 200.7/6010 (ICP)	13.9 U	13.9	ug/L							
Calcium Total EPA 200.7/6010 (ICP)	0.02 U	0.02	mg/L							
Iron Total EPA 200.7/6010 (ICP)	3.5	0.7	ug/L							V
LCS (8011413-BS1)										
Iron Total EPA 200.7/6010 (ICP)	101	0.7	ug/L	100		101	85-115			
Calcium Total EPA 200.7/6010 (ICP)	9.53	0.02	mg/L	10.0		95	85-115			
Aluminum Total EPA 200.7/6010 (ICP)	94.0	13.9	ug/L	100		94	85-115			
Duplicate (8011413-DUP1)	**Source: 0801106-01**									
Iron Total EPA 200.7/6010 (ICP)	1420	0.7	ug/L		1430			0.7	20	
Calcium Total EPA 200.7/6010 (ICP)	34.9	0.02	mg/L		35.4			1	20	
Aluminum Total EPA 200.7/6010 (ICP)	347	13.9	ug/L		347			0	20	
Matrix Spike (8011413-MS1)	**Source: 0801106-02**									
Iron Total EPA 200.7/6010 (ICP)	383	0.7	ug/L	100	290	93	75-125			
Aluminum Total EPA 200.7/6010 (ICP)	317	13.9	ug/L	100	241	76	75-125			
Calcium Total EPA 200.7/6010 (ICP)	45.2	0.02	mg/L	10.0	35.7	95	75-125			
Post Spike (8011413-PS1)	**Source: 0801106-02**									
Iron Total EPA 200.7/6010 (ICP)	5390		ug/L	5310	281	96	75-125			
Aluminum Total EPA 200.7/6010 (ICP)	5350		ug/L	5310	233	96	75-125			
Calcium Total EPA 200.7/6010 (ICP)	80.4		mg/L	49.0	34.5	94	75-125			

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011411 = ICP Metals										
Blank (8011411-BLK1)										
Iron Sediment EPA 6010B (ICP)	1.0	0.1	mg/kg wet							
Calcium Sediment EPA 6010B (ICP)	4.52	0.002	mg/kg wet							V
Aluminum Sediment EPA 6010B (ICP)	3.6 U	3.6	mg/kg wet							V
LCS (8011411-BS1)										
Calcium Sediment EPA 6010B (ICP)	6630	0.008	mg/kg wet	6740		98	85-115			
Iron Sediment EPA 6010B (ICP)	11900	0.4	mg/kg wet	15100		79	85-115			
Aluminum Sediment EPA 6010B (ICP)	8840	13.6	mg/kg wet	8720		101	85-115			CUST

Serial: LAB-080130 31144

Advanced Environmental Laboratories, Inc.

6815 SW Archer Rd
Gainesville, FL 32608
352.377.2349 Phone
352.395.6639 Fax
NELAP Certified - FDH #E82001

Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
01/30/08 15:11

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011411 = ICP Metals										
Duplicate (8011411-DUP2)	**Source: 0801106-10**									
Aluminum Sediment EPA 6010B (ICP)	68100	203	mg/kg dry		77600			13	20	
Iron Sediment EPA 6010B (ICP)	22700	5.6	mg/kg dry		26900			17	20	
Calcium Sediment EPA 6010B (ICP)	87900	0.11	mg/kg dry		104000			17	20	
Matrix Spike (8011411-MS2)	**Source: 0801106-11**									
Aluminum Sediment EPA 6010B (ICP)	56000	295	mg/kg dry	20.5	54500	NR	75-125			PSIN
Calcium Sediment EPA 6010B (ICP)	101000	0.16	mg/kg dry	2050	95600	263	75-125			PSIN
Iron Sediment EPA 6010B (ICP)	25700	8.2	mg/kg dry	20.5	26100	NR	75-125			PSIN
Matrix Spike Dup (8011411-MSD2)	**Source: 0801106-11**									
Iron Sediment EPA 6010B (ICP)	26900	7.6	mg/kg dry	19.0	26100	NR	75-125	NR	20	PSIN
Calcium Sediment EPA 6010B (ICP)	106000	0.15	mg/kg dry	1900	95600	547	75-125	70	20	PSIN
Aluminum Sediment EPA 6010B (ICP)	57000	274	mg/kg dry	19.0	54500	NR	75-125	57	20	PSIN
Post Spike (8011411-PS2)	**Source: 0801106-11**									
Calcium Sediment EPA 6010B (ICP)	73.5		mg/L	48.6	27.5	95	75-125			
Aluminum Sediment EPA 6010B (ICP)	20700		ug/L	5290	15700	95	75-125			
Iron Sediment EPA 6010B (ICP)	12500		ug/L	5290	7500	95	75-125			

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Wetlands Solutions Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 01/30/08 15:11

NOTES AND DEFINITIONS

V	Analyte present in blank and samples.
S-RX+	Poor matrix spike recovery on reextract; results or recoveries do not confirm; created rextract.
S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
PSIN	Poor matrix spike recovery; post digestion spike within acceptance criteria.
NT	Result is for a nontarget analyte.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
D-REX	Poor duplicates; Created reextract.
CUST	ERA limits 8660-21600mg/kg
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CASE NARRATIVE

Sample 0801106-02 (W-2) was reanalyzed for TKN-Dissolved due to an initial matrix spike result that was outside of control limits. The reanalysis QC met acceptable criteria. The reanalysis result is reported.

Sample 0801106-06 (C-1) was reanalyzed for TKN-Total due to an initial duplicate results that was outside of control limits. The reanalysis duplicate confirmed the original run and the reanalysis QC was within acceptable limits. The reanalysis result is reported.

Sample 0801106-07 (C-2) was reanalyzed for TKN-Total due to an initial matrix spike result that was outside of control limits. The reanalyis result was also outside of limits, confirming a matrix effect for this sample. The sample results confirmed the original results and the reanalysis result is reported.

WO/ 0801106

CHAIN-OF-CUSTODY FORM

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

Wetland Solutions, Inc.

TURN AROUND TIME: X Standard Rush

Special Instructions/Comments:

No Chl a this month.
No samples filtered in field.

ANALYSIS REQUESTED
PRESERVATIVE

LAB: Advanced Environmental Laboratories, Inc.

PRESERVATIVE KEY
0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3 / TKN / TKN Diss	TP / Ortho-P	Ca, Fe, Al	SO4	Bulk Density / % Solids	REMARKS / ALTERNATE DESC
1/10/2008	1259	W-1	SW	GRAB	X	X	X	X	X		-01
1/10/2008	1320	W-2	SW	GRAB	X	X	X	X	X		-02
1/10/2008	1338	W-3	SW	GRAB	X	X	X	X	X		-03
1/10/2008	1353	W-4	SW	GRAB	X	X	X	X	X		-04
1/10/2008	1613	W-5	SW	GRAB	X	X	X	X	X		-05
1/10/2008	1249	C-2	SW	GRAB	X	X	X	X	X		-07
~~1/10/2008~~		~~DUP~~	~~SW~~	~~GRAB~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
1/10/2008	1435	W-1	S	COMP			X	X	X	X	-08
1/10/2008	1450	W-2	S	COMP			X	X	X	X	-09
1/10/2008	1505	W-3	S	COMP			X	X	X	X	-10
1/10/2008	1520	W-4	S	COMP			X	X	X	X	-11
1/10/2008	1530 / 1044	C-1	S ~~SW~~	COMP/G	X	X	X	X	X	X	-06
1/10/2008	1550	C-2	S	COMP			X	X	X	X	-12

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Henry Brennan	Signature: Paul Hontin	Signature	Signature
Henry Brennan Printed Name	Paul Hontin Printed Name	Printed Name	Printed Name
Wetland Solutions, Inc. Company	AEL Company	Company	Company
1-11-08 0838 Date / Time	1-11-08 0840 Date / Time	Date / Time	Date / Time

C-1 2.2°C
C-2 5.4°C

Advanced Environmental Laboratories, Inc.

- ❑ Jacksonville: 6601 Southpoint Parkway, Jacksonville, FL 32216 • (904) 363-9350 Fax (904) 363-9354
- ❑ Tampa: 9610 Princess Palm Avenue, Tampa, FL 33619 • (813) 630-9616 Fax (813) 630-4327
- ❑ Gainesville: 6815 SW Archer Road, Gainesville, FL 32608 • (352) 377-2349 Fax (352) 395-6639
- ❑ Orlando: 528 S. North Lake Blvd., Suite 1016, Altamonte Springs, FL 32701 • (407) 937-1594 Fax (407) 937-1597

CHAIN OF CUSTODY RECORD

LAB NUMBER: 0801106

Page _____ of _____

CLIENT NAME:	PROJECT NAME:
Wetland Solutions, INC.	Lake Hancock
ADDRESS: 2809 NW 16l Court, Gainesville, FL 32609	P.O. NUMBER / PROJECT NUMBER:
	PROJECT LOCATION:
PHONE: (386) 462-9286 FAX: (386) 462-3196	
CONTACT: Chris Keller	SAMPLED BY:

TURN AROUND TIME:

☒ STANDARD

❑ RUSH _____

REMARKS / SPECIAL INSTRUCTIONS:

WW= waste water **SW**=surface water **GW**=ground water **DW**=drinking water **OIL** **A**=air **SO**=soil **SL**=sludge

SAMPLE ID	SAMPLE DESCRIPTION	Grab Composite	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. CONT.	Preserv	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: TP, OP	Ca, Fe, Al	SO4	Bulk Density, % Solids				LAB NUMBER
	C-1	C	1/10/08	1530	S				X	X	X	X				-12

I = Ice H = (HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Shipment	Method	Sample Kit	Cooler #		Relinquished by:	Date	Time	Received by:	Date	Time
Out: / /	Via: _____	RB _____	D/T _____	1						
		AB _____	D/T _____	2						
Ret: / /	Via: _____	Trip Bl. ❑	❑	3						
				4						

Received on ice: ❑ yes ❑ no QC ❑ sent ❑ received

revised 8/01

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 1-11-08 0840 Log-In request number: 0801106

Received by: PL Completed by: PL

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1	C-2			
Temp (°C)	2.2	5.4			
Temp taken from	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☒ IR gun ☐ Thermometer (enter ID):	☒ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?		X	
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments:

Different matrix were included in the same line on the C.O.C.

MACTEC

REPORT OF SOIL TESTING

Project: Lake Hancock Vegitation Study

Project Number: 6738-03-4343-03

Client: Advanced Environmental Laboratories, Inc.

Date: January 23, 2008

As requested by Karen Daniels of Advanced Environmental Laboratories, Inc., MACTEC Engineering & Consulting Inc. has completed Bulk Density with Moisture Content testing of six samples that were delivered to our Jacksonville office on January 15, 2008. The results are outlined below.

Sample No.	Sample ID	Percent Moisture (% Wet)	Percent Moisture (% Dry)	Percent Solids	Bulk Density pcf (wet)	Bulk Density pcf (dry)
0801106-08	W-1	51.1	104.5	48.9	88.9	43.5
0801106-09	W-2	53.6	115.4	46.4	101.6	47.2
0801106-10	W-3	54.9	121.8	45.1	91.7	41.3
0801106-11	W-4	59.5	146.9	40.5	86.7	35.1
0801106-12	C-1	53.0	112.9	47.0	98.6	46.3
0801106-13	C-2	55.3	123.7	44.7	87.9	39.3

Respectfully Submitted,

Michael Holm

Mike Holm, P.E.

Advanced Environmental Laboratories, Inc.

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- ☐ Tampa: 9610 Princess Palm Avenue, Tampa, FL 33619 • (813) 630-9616 Fax (813) 630-4327
- ☐ Gainesville: 6815 SW Archer Road, Gainesville, FL 32608 • (352) 377-2349 Fax (352) 395-6639
- ☐ Orlando: 528 S. North Lake Blvd., Suite 1016, Altamonte Springs, FL 32701 • (407) 937-1594 Fax (407) 937-1597

CHAIN OF CUSTODY RECORD

LAB NUMBER: 0801106

CLIENT NAME: PEL Gainesville	PROJECT NAME: Lake Hancock
ADDRESS: 6815 SW Archer Rd Gainesville FL 32608	P.O. NUMBER / PROJECT NUMBER:
PHONE: 352 377-2349 FAX:	PROJECT LOCATION:
CONTACT: Kacen Daniels	SAMPLED BY:

TURN AROUND TIME:
☐ STANDARD Due 1/25/08
☐ RUSH _____

REMARKS / SPECIAL INSTRUCTIONS:
email results to
kdaniels@golder.com

WW= waste water **SW**=surface water **GW**=ground water **DW**=drinking water **OIL** **A**=air **SO**=soil **SL**=sludge

SAMPLE ID	SAMPLE DESCRIPTION	Grab Composite	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. CONT.	Preserv	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: Bill Daniels	LAB NUMBER
0801106-08	W-1	C	1/16/08	1435	SO	1			X	
09	W-2			1450					X	
10	W-3			1505					X	
11	W-4			1520					X	
12	C-1			1530					X	
13	C-2	↓	↓	1550	↓	↓			X	

I = Ice H = (HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Shipment	Method	Sample Kit	Cooler #		Relinquished by:	Date	Time	Received by:	Date	Time
Out: / /	Via: FedEx	RB	D/T	1	K Daniels	1/16/08	1900			
Ret: / /	Via:	AB	D/T	2						
		Trip Bl. ☐	☐	3						
				4						

Received on ice: ☐ yes ☐ no QC ☐ sent ☐ received

revised 8/01

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

February 7, 2008

Serial: LAB-08027 44236

Ron Clarke
Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0801106 - REVISED

Enclosed are the results of analyses for samples received by the laboratory on January 11, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

Advanced Environmental Laboratories, Inc.

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NELAP Certified - FDH #E82001

Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
02/07/08 16:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0801106-01	Water	01/10/08 12:59	01/11/08 08:40
W - 2	0801106-02	Water	01/10/08 13:20	01/11/08 08:40
W - 3	0801106-03	Water	01/10/08 13:38	01/11/08 08:40
W - 4	0801106-04	Water	01/10/08 13:53	01/11/08 08:40
W - 5	0801106-05	Water	01/10/08 16:13	01/11/08 08:40
C-1	0801106-06	Water	01/10/08 10:44	01/11/08 08:40
C-2	0801106-07	Water	01/10/08 12:49	01/11/08 08:40
W-1	0801106-08	Soil	01/10/08 14:35	01/11/08 08:40
W-2	0801106-09	Soil	01/10/08 14:50	01/11/08 08:40
W-3	0801106-10	Soil	01/10/08 15:05	01/11/08 08:40
W-4	0801106-11	Soil	01/10/08 15:20	01/11/08 08:40
C-1	0801106-12	Soil	01/10/08 15:30	01/11/08 08:40
C-2	0801106-13	Soil	01/10/08 15:50	01/11/08 08:40

Advanced Environmental Laboratories, Inc.

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Wetlands Solutions Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
02/07/08 16:42

REPORT OF RESULTS

W - 1

0801106-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	347	13.9	ug/L	1	8011413	01/14/08	01/16/08 15:45	
Ammonia, Total EPA 350.1	0.030 I	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:27	
Calcium Total EPA 200.7/6010 (ICP)	35.4	0.02	mg/L	1	8011413	01/14/08	01/16/08 15:45	
Iron Total EPA 200.7/6010 (ICP)	1430	0.7	ug/L	1	8011413	01/14/08	01/16/08 15:45	V
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:01	
Soluble Reactive Phosphate EPA 365.2	0.023	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	9.57	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.19	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.55	0.16	mg/L	2	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	36.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 1

0801106-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.909	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

W - 2

0801106-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	241	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:05	
Ammonia, Total EPA 350.1	1.60	0.027	mg/L	3	8011505	01/15/08	01/15/08 14:32	
Calcium Total EPA 200.7/6010 (ICP)	35.7	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:05	
Iron Total EPA 200.7/6010 (ICP)	290	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:05	V
Nitrate-Nitrite, Total EPA 353.2	0.039	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:03	
Soluble Reactive Phosphate EPA 365.2	0.053	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	11.2	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Total EPA 351.2	7.45	0.16	mg/L	2	8011507	01/15/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.629	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

Serial: LAB-08027 44237

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Project: Lake Hancock
Project Manager: Ron Clarke

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02/07/08 16:42

W - 2

0801106-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.16	0.16	mg/L	2	8011803	01/18/08	01/24/08 00:00	

W - 3

0801106-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	466	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:33	
Ammonia, Total EPA 350.1	0.037	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:28	
Calcium Total EPA 200.7/6010 (ICP)	39.2	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:33	
Iron Total EPA 200.7/6010 (ICP)	144	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:33	V
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:12	
Soluble Reactive Phosphate EPA 365.2	0.365	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	12.2	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.22	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.99	0.08	mg/L	1	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	9.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 3

0801106-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.837	0.018	mg/L	3	8012410	01/25/08	01/25/08 13:00	

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W - 4
0801106-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	948	13.9	ug/L	1	8011413	01/14/08	01/16/08 16:43	
Ammonia, Total EPA 350.1	0.032 I	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:34	
Calcium Total EPA 200.7/6010 (ICP)	32.3	0.02	mg/L	1	8011413	01/14/08	01/16/08 16:43	
Iron Total EPA 200.7/6010 (ICP)	391	0.7	ug/L	1	8011413	01/14/08	01/16/08 16:43	V
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:13	
Soluble Reactive Phosphate EPA 365.2	0.209	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	10.9	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.32	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.85	0.08	mg/L	1	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	21.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

W - 4
0801106-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.37	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

W - 5
0801106-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	343	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:12	
Ammonia, Total EPA 350.1	0.216	0.009	mg/L	1	8011505	01/15/08	01/15/08 14:39	
Calcium Total EPA 200.7/6010 (ICP)	39.6	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:12	
Iron Total EPA 200.7/6010 (ICP)	217	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:12	V
Nitrate-Nitrite, Total EPA 353.2	0.009 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:14	
Soluble Reactive Phosphate EPA 365.2	0.006 I	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	15.7	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.63	0.08	mg/L	1	8011508	01/15/08	01/17/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	15.6	0.32	mg/L	4	8011507	01/15/08	01/17/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	148	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

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W - 5

0801106-05RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.815	0.030	mg/L	5	8012410	01/25/08	01/25/08 13:00	

C-1

0801106-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	64.7	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:21	
Ammonia, Total EPA 350.1	1.16	0.027	mg/L	3	8011505	01/15/08	01/15/08 14:47	
Calcium Total EPA 200.7/6010 (ICP)	41.3	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:21	
Iron Total EPA 200.7/6010 (ICP)	420	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:21	V
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:15	
Soluble Reactive Phosphate EPA 365.2	0.006 I	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	11.3	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.44	0.16	mg/L	2	8011603	01/16/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.438	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	30.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

C-1

0801106-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Total EPA 351.2	8.67	0.32	mg/L	4	8011802	01/18/08	01/24/08 00:00	

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C-2

0801106-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	289	13.9	ug/L	1	8011413	01/14/08	01/16/08 17:31	
Ammonia, Total EPA 350.1	2.17	0.045	mg/L	5	8011505	01/15/08	01/15/08 14:52	
Calcium Total EPA 200.7/6010 (ICP)	40.4	0.02	mg/L	1	8011413	01/14/08	01/16/08 17:31	
Iron Total EPA 200.7/6010 (ICP)	1030	0.7	ug/L	1	8011413	01/14/08	01/16/08 17:31	V
Nitrate-Nitrite, Total EPA 353.2	0.007 I	0.003	mg/L	1	8011720	01/17/08	01/18/08 12:17	
Soluble Reactive Phosphate EPA 365.2	0.011	0.002	mg/L	1	8011110	01/11/08	01/11/08 17:00	
Sulfate, Total EPA 375.4	8.13	0.33	mg/L	1	8011706	01/17/08	01/17/08 10:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.36	0.32	mg/L	4	8011603	01/16/08	01/17/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.602	0.006	mg/L	1	8012202	01/22/08	01/23/08 16:30	
Total Suspended Solids EPA 160.2 - 100mL	42.0	2.0	mg/L	1	8011102	01/11/08	01/11/08 09:34	

C-2

0801106-07RE2 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Kjeldahl Nitrogen, Total EPA 351.2	8.40	0.32	mg/L	4	8012505	01/25/08	01/28/08 00:00	

W-1

0801106-08 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	71500	206	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	
Calcium Sediment EPA 6010B (ICP)	121000	0.11	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Iron Sediment EPA 6010B (ICP)	31500	5.7	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Phosphorus in Sediment Not NELAC certified	65600	57.1	mg/kg dry	1	8011411	01/14/08	01/18/08 18:42	V
Phosphorus, Inorganic in Sediment	21900	1080	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	46.2	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

W-1

0801106-08RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	610	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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W-2

0801106-09 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	78600	275	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	
Calcium Sediment EPA 6010B (ICP)	122000	0.15	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Iron Sediment EPA 6010B (ICP)	36800	7.6	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Phosphorus in Sediment Not NELAC certified	66700	76.3	mg/kg dry	1	8011411	01/14/08	01/18/08 18:52	V
Phosphorus, Inorganic in Sediment	65000	2240	mg/kg dry	1000	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	44.7	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

W-2

0801106-09RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	119	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

W-3

0801106-10 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	77600	212	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	
Calcium Sediment EPA 6010B (ICP)	104000	0.12	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Iron Sediment EPA 6010B (ICP)	26900	5.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Phosphorus in Sediment Not NELAC certified	63000	58.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:02	V
Phosphorus, Inorganic in Sediment	38500	1090	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	46.0	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

W-3

0801106-10RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	43 I	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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W-4

0801106-11 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	54500	241	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	
Calcium Sediment EPA 6010B (ICP)	95600	0.13	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Iron Sediment EPA 6010B (ICP)	26100	6.7	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Phosphorus in Sediment Not NELAC certified	48400	66.9	mg/kg dry	1	8011411	01/14/08	01/18/08 19:21	V
Phosphorus, Inorganic in Sediment	3410	239	mg/kg dry	100	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	41.9	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

W-4

0801106-11RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	324	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

C-1

0801106-12 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	73700	271	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	
Calcium Sediment EPA 6010B (ICP)	110000	0.15	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Iron Sediment EPA 6010B (ICP)	34400	7.5	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Phosphorus in Sediment Not NELAC certified	54700	75.3	mg/kg dry	1	8011411	01/14/08	01/18/08 19:59	V
Phosphorus, Inorganic in Sediment	57500	1260	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	39.6	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

C-1

0801106-12RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	1660	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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C-2

0801106-13 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Sediment EPA 6010B (ICP)	68800	213	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	
Calcium Sediment EPA 6010B (ICP)	98000	0.12	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Iron Sediment EPA 6010B (ICP)	23800	5.9	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Phosphorus in Sediment Not NELAC certified	57900	59.1	mg/kg dry	1	8011411	01/14/08	01/18/08 20:09	V
Phosphorus, Inorganic in Sediment	31800	1090	mg/kg dry	500	8012303	01/23/08	01/28/08 14:59	
Solids, Dry Weight	45.8	0.1	% by Weight	1	8011506	01/15/08	01/15/08 09:22	
Subcontracted Analyses	Sample was subcontracted. Please see attached report.							

C-2

0801106-13RE1 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Sulfate, Total EPA 375.4	1190	40	mg/kg dry	20	8012910	01/29/08	01/29/08 12:56	

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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011102 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8011102-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8011102-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8011102-BLK3)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (8011102-DUP2)	**Source: 0801106-02**									
Total Suspended Solids EPA 160.2 - 100mL	15.0	2.0	mg/L		13.0			14	20	
Reference (8011102-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	56.0		mg/L	51.0		110	80-120			
Batch 8011506 = Solids, Dry Weight										
Blank (8011506-BLK1)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							
Blank (8011506-BLK2)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011110 = Soluble Reactive Phosphate EPA 365.2										
Blank (8011110-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8011110-DUP5)	**Source: 0801106-01**									
Soluble Reactive Phosphate EPA 365.2	0.023	0.002	mg/L		0.023			0	20	
Matrix Spike (8011110-MS5)	**Source: 0801106-02**									
Soluble Reactive Phosphate EPA 365.2	0.307		mg/L	0.250	0.0512	102	85-115			
Reference (8011110-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.646		mg/L	0.610		106	80-120			

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011110 = Soluble Reactive Phosphate EPA 365.2										
Batch 8011411 = Phosphorus in Sediment Not NELAC certified										
Blank (8011411-BLK1)										
Phosphorus in Sediment Not NELAC certified	4.0	1.0	mg/kg wet							V
LCS (8011411-BS1)										
Phosphorus in Sediment Not NELAC certified	660	3.8	mg/kg wet				85-115			NT
Duplicate (8011411-DUP2) Source: 0801106-10										
Phosphorus in Sediment Not NELAC certified	56300	56.3	mg/kg dry		63000			11	20	
Reference (8011411-SRM1)										
Phosphorus in Sediment Not NELAC certified	2610	7.7	mg/kg wet	3070		85	85-115			
Batch 8011505 = Ammonia, Total EPA 350.1										
Blank (8011505-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (8011505-DUP6) Source: 0801106-06										
Ammonia, Total EPA 350.1	1.23	0.027	mg/L		1.16			6	20	
Reference (8011505-SRM1)										
Ammonia, Total EPA 350.1	0.653	0.009	mg/L	0.635		103	90-110			
Batch 8011507 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011507-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011507-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011507-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.92	0.08	mg/L	2.00		96	90-110			
LCS (8011507-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Duplicate (8011507-DUP3) Source: 0801106-01										
Total Kjeldahl Nitrogen, Total EPA 351.2	5.39	0.16	mg/L		5.55			3	20	
Matrix Spike (8011507-MS3) Source: 0801106-03										
Total Kjeldahl Nitrogen, Total EPA 351.2	3.96	0.08	mg/L	1.00	2.99	97	85-115			

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

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02/07/08 16:42

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011508 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011508-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011508-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011508-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.97	0.08	mg/L	2.00		98	90-110			
LCS (8011508-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.83	0.08	mg/L	2.00		92	90-110			
Duplicate (8011508-DUP3) **Source: 0801106-01**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.90	0.08	mg/L		3.19			10	20	
Matrix Spike (8011508-MS3) **Source: 0801106-02**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.70	0.16	mg/L	1.00	5.85	NR	85-115			**S-REX**
Batch 8011602 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011602-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011602-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011602-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.93	0.08	mg/L	2.00		96	90-110			
LCS (8011602-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.85	0.08	mg/L	2.00		92	90-110			
Duplicate (8011602-DUP1) **Source: 0801106-06**										
Total Kjeldahl Nitrogen, Total EPA 351.2	6.60	0.32	mg/L		8.62			27	20	**D-REX**
Matrix Spike (8011602-MS1) **Source: 0801106-07**										
Total Kjeldahl Nitrogen, Total EPA 351.2	9.24	0.32	mg/L	4.00	8.10	28	85-115			**S-REX**
Batch 8011603 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011603-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011603-BLK2)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011603 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011603-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011603-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.89	0.08	mg/L	2.00		94	90-110			
LCS (8011603-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.94	0.08	mg/L	2.00		97	90-110			
Duplicate (8011603-DUP1) **Source: 0801106-06**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.79	0.08	mg/L		4.44			8	20	
Matrix Spike (8011603-MS1) **Source: 0801106-07**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	9.40	0.32	mg/L	4.00	5.36	101	85-115			
Batch 8011720 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8011720-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8011720-DUP1) **Source: 0801106-01**										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L		0.003 U				20	
Matrix Spike (8011720-MS1) **Source: 0801106-02**										
Nitrate-Nitrite, Total EPA 353.2	0.405	0.003	mg/L	0.400	0.039	92	90-110			
Reference (8011720-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.37	0.003	mg/L	1.38		99	90-110			
Reference (8011720-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	0.984	0.003	mg/L	1.00		98	0-200			
Batch 8011802 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8011802-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011802-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011802-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.97	0.08	mg/L	2.00		98	90-110			
LCS (8011802-BS2)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011802 = Total Kjeldahl Nitrogen, Total EPA 351.2										
LCS (8011802-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.07	0.08	mg/L	2.00		104	90-110			
Duplicate (8011802-DUP1) **Source: 0801106-06RE1**										
Total Kjeldahl Nitrogen, Total EPA 351.2	8.05	0.32	mg/L		8.67			7	20	
Matrix Spike (8011802-MS1) **Source: 0801106-07RE1**										
Total Kjeldahl Nitrogen, Total EPA 351.2	13.4	0.32	mg/L	4.00	8.21	130	80-120			S-RX+
Batch 8011803 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8011803-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8011803-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8011803-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.99	0.08	mg/L	2.00		100	90-110			
LCS (8011803-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.00	0.08	mg/L	2.00		100	90-110			
Matrix Spike (8011803-MS2) **Source: 0801106-02RE1**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	8.34	0.16	mg/L	2.00	6.16	109	85-115			
Batch 8012202 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012202-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK3)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK4)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK5)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012202-BLK6)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8012202 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012202-BLK6)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8012202-DUP2)	**Source: 0801106-02**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.608	0.006	mg/L		0.629			3	20	
Reference (8012202-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.104	0.006	mg/L	0.108		96	0-200			
Batch 8012303 = Phosphorus, Inorganic in Sediment										
Blank (8012303-BLK1)										
Phosphorus, Inorganic in Sediment	1.0 U	1.0	mg/kg wet							
Blank (8012303-BLK2)										
Phosphorus, Inorganic in Sediment	14.5	1.0	mg/kg wet							V
Duplicate (8012303-DUP2)	**Source: 0801106-09**									
Phosphorus, Inorganic in Sediment	64300	2240	mg/kg dry		65000			1	20	
Batch 8012410 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8012410-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8012410-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8012410-DUP2)	**Source: 0801106-01RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.882	0.030	mg/L		0.909			3	20	
Duplicate (8012410-DUP3)	**Source: 0801106-03RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.813	0.018	mg/L		0.837			3	20	
Duplicate (8012410-DUP4)	**Source: 0801106-04RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.34	0.030	mg/L		1.37			2	20	
Duplicate (8012410-DUP5)	**Source: 0801106-05RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	0.815	0.030	mg/L		0.815			0	20	
Matrix Spike (8012410-MS1)	**Source: 0801106-01RE1**									
Total Phosphorus, Total EPA 365.3 (Spec)	2.27	0.031	mg/L	1.33	0.909	102	80-120			
Reference (8012410-SRM1)										

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8012410 = Total Phosphorus, Total EPA 365.3 (Spec)										
Reference (8012410-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.103	0.006	mg/L	0.108		95	0-200			
Batch 8012505 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8012505-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8012505-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.82	0.08	mg/L	2.00		91	90-110			
Matrix Spike (8012505-MS1)	**Source: 0801106-07RE2**									
Total Kjeldahl Nitrogen, Total EPA 351.2	11.2	0.32	mg/L	4.00	8.40	70	80-120			**S-CON**

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011706 = Sulfate, Total EPA 375.4										
Blank (8011706-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Reference (8011706-SRM1)										
Sulfate, Total EPA 375.4	24.9		mg/L	24.8		100	90-110			
Batch 8012215 = Sulfate, Total EPA 375.4										
Blank (8012215-BLK1)										
Sulfate, Total EPA 375.4	1.00 U	1.00	mg/L							
Reference (8012215-SRM1)										
Sulfate, Total EPA 375.4	26.3		mg/L	24.8		106	90-110			

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011413 = ICP Metals										

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011413 = ICP Metals										
Blank (8011413-BLK1)										
Aluminum Total EPA 200.7/6010 (ICP)	13.9 U	13.9	ug/L							
Calcium Total EPA 200.7/6010 (ICP)	0.02 U	0.02	mg/L							
Iron Total EPA 200.7/6010 (ICP)	3.5	0.7	ug/L							V
LCS (8011413-BS1)										
Iron Total EPA 200.7/6010 (ICP)	101	0.7	ug/L	100		101	85-115			
Calcium Total EPA 200.7/6010 (ICP)	9.53	0.02	mg/L	10.0		95	85-115			
Aluminum Total EPA 200.7/6010 (ICP)	94.0	13.9	ug/L	100		94	85-115			
Duplicate (8011413-DUP1)	**Source: 0801106-01**									
Iron Total EPA 200.7/6010 (ICP)	1420	0.7	ug/L		1430			0.7	20	
Calcium Total EPA 200.7/6010 (ICP)	34.9	0.02	mg/L		35.4			1	20	
Aluminum Total EPA 200.7/6010 (ICP)	347	13.9	ug/L		347			0	20	
Matrix Spike (8011413-MS1)	**Source: 0801106-02**									
Iron Total EPA 200.7/6010 (ICP)	383	0.7	ug/L	100	290	93	75-125			
Aluminum Total EPA 200.7/6010 (ICP)	317	13.9	ug/L	100	241	76	75-125			
Calcium Total EPA 200.7/6010 (ICP)	45.2	0.02	mg/L	10.0	35.7	95	75-125			
Post Spike (8011413-PS1)	**Source: 0801106-02**									
Iron Total EPA 200.7/6010 (ICP)	5390		ug/L	5310	281	96	75-125			
Aluminum Total EPA 200.7/6010 (ICP)	5350		ug/L	5310	233	96	75-125			
Calcium Total EPA 200.7/6010 (ICP)	80.4		mg/L	49.0	34.5	94	75-125			

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011411 = ICP Metals										
Blank (8011411-BLK1)										
Iron Sediment EPA 6010B (ICP)	1.0	0.1	mg/kg wet							
Calcium Sediment EPA 6010B (ICP)	4.52	0.002	mg/kg wet							V
Aluminum Sediment EPA 6010B (ICP)	3.6 U	3.6	mg/kg wet							V
LCS (8011411-BS1)										
Calcium Sediment EPA 6010B (ICP)	6630	0.008	mg/kg wet	6740		98	85-115			
Iron Sediment EPA 6010B (ICP)	11900	0.4	mg/kg wet	15100		79	85-115			
Aluminum Sediment EPA 6010B (ICP)	8840	13.6	mg/kg wet	8720		101	85-115			CUST

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Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8011411 = ICP Metals										
Duplicate (8011411-DUP2)	**Source: 0801106-10**									
Aluminum Sediment EPA 6010B (ICP)	68100	203	mg/kg dry		77600			13	20	
Iron Sediment EPA 6010B (ICP)	22700	5.6	mg/kg dry		26900			17	20	
Calcium Sediment EPA 6010B (ICP)	87900	0.11	mg/kg dry		104000			17	20	
Matrix Spike (8011411-MS2)	**Source: 0801106-11**									
Aluminum Sediment EPA 6010B (ICP)	56000	295	mg/kg dry	20.5	54500	NR	75-125			PSIN
Calcium Sediment EPA 6010B (ICP)	101000	0.16	mg/kg dry	2050	95600	263	75-125			PSIN
Iron Sediment EPA 6010B (ICP)	25700	8.2	mg/kg dry	20.5	26100	NR	75-125			PSIN
Matrix Spike Dup (8011411-MSD2)	**Source: 0801106-11**									
Iron Sediment EPA 6010B (ICP)	26900	7.6	mg/kg dry	19.0	26100	NR	75-125	NR	20	PSIN
Calcium Sediment EPA 6010B (ICP)	106000	0.15	mg/kg dry	1900	95600	547	75-125	70	20	PSIN
Aluminum Sediment EPA 6010B (ICP)	57000	274	mg/kg dry	19.0	54500	NR	75-125	57	20	PSIN
Post Spike (8011411-PS2)	**Source: 0801106-11**									
Calcium Sediment EPA 6010B (ICP)	73.5		mg/L	48.6	27.5	95	75-125			
Aluminum Sediment EPA 6010B (ICP)	20700		ug/L	5290	15700	95	75-125			
Iron Sediment EPA 6010B (ICP)	12500		ug/L	5290	7500	95	75-125			

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NOTES AND DEFINITIONS

V	Analyte present in blank and samples.
S-RX+	Poor matrix spike recovery on reextract; results or recoveries do not confirm; created rextract.
S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
PSIN	Poor matrix spike recovery; post digestion spike within acceptance criteria.
NT	Result is for a nontarget analyte.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
D-REX	Poor duplicates; Created reextract.
CUST	ERA limits 8660-21600mg/kg
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CASE NARRATIVE

Sample 0801106-02 (W-2) was reanalyzed for TKN-Dissolved due to an initial matrix spike result that was outside of control limits. The reanalysis QC met acceptable criteria. The reanalysis result is reported.

Sample 0801106-06 (C-1) was reanalyzed for TKN-Total due to an initial duplicate results that was outside of control limits. The reanalysis duplicate confirmed the original run and the reanalysis QC was within acceptable limits. The reanalysis result is reported.

Sample 0801106-07 (C-2) was reanalyzed for TKN-Total due to an initial matrix spike result that was outside of control limits. The reanalyis result was also outside of limits, confirming a matrix effect for this sample. The sample results confirmed the original results and the reanalysis result is reported.

WO/ 0801106

CHAIN-OF-CUSTODY FORM

Wetland Solutions, Inc.

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

TURN AROUND TIME: X Standard Rush

Special Instructions/Comments:

No Chl a this month.
No samples filtered in field.

LAB: **Advanced Environmental Laboratories, Inc.**

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3 / TKN / TKN Dis	TP / Ortho-P	Ca, Fe, Al	SO4	Bulk Density / % Solids	REMARKS / ALTERNATE DESC
1/10/2008	1259	W-1	SW	GRAB	X	X	X	X	X		-01
1/10/2008	1320	W-2	SW	GRAB	X	X	X	X	X		-02
1/10/2008	1338	W-3	SW	GRAB	X	X	X	X	X		-03
1/10/2008	1353	W-4	SW	GRAB	X	X	X	X	X		-04
1/10/2008	1613	W-5	SW	GRAB	X	X	X	X	X		-05
1/10/2008	1249	C-2	SW	GRAB	X	X	X	X	X		-07
~~1/10/2008~~		~~DUP~~	~~SW~~	~~GRAB~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
1/10/2008	1435	W-1	S	COMP			X	X	X	X	-08
1/10/2008	1450	W-2	S	COMP			X	X	X	X	-09
1/10/2008	1505	W-3	S	COMP			X	X	X	X	-10
1/10/2008	1520	W-4	S	COMP			X	X	X	X	-11
1/10/2008	1530 / 1044	C-1	S ~~SW~~	COMP/G	X	X	X	X	X	X	-06
1/10/2008	1550	C-2	S	COMP			X	X	X	X	-12

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Henry Brennan	Signature: Paul Hontin	Signature	Signature
Printed Name: Henry Brennan	Printed Name: Paul Hontin	Printed Name	Printed Name
Company: Wetland Solutions, Inc.	Company: AEL	Company	Company
Date / Time: 1-11-08 0838	Date / Time: 1-11-08 0840	Date / Time	Date / Time

C1 2.2°C
C-2 5.4°C

Advanced Environmental Laboratories, Inc.

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- ❑ Tampa: 9610 Princess Palm Avenue, Tampa, FL 33619 • (813) 630-9616 Fax (813) 630-4327
- ❑ Gainesville: 6815 SW Archer Road, Gainesville, FL 32608 • (352) 377-2349 Fax (352) 395-6639
- ❑ Orlando: 528 S. North Lake Blvd., Suite 1016, Altamonte Springs, FL 32701 • (407) 937-1594 Fax (407) 937-1597

CHAIN OF CUSTODY RECORD

LAB NUMBER: 0801106

Page _____ of _____

CLIENT NAME: Wetland Solutions, inc.

ADDRESS: 2804 NW 16 Court, Gainesville, FL 32609

PHONE: (386) 462-9286 FAX: (386) 462-3196

CONTACT: Chris Keller

PROJECT NAME: Lake Hancock

P.O. NUMBER / PROJECT NUMBER:

PROJECT LOCATION:

SAMPLED BY:

TURN AROUND TIME:

☒ STANDARD

❑ RUSH _____

REMARKS / SPECIAL INSTRUCTIONS:

WW= waste water **SW**=surface water **GW**=ground water **DW**=drinking water **OIL** **A**=air **SO**=soil **SL**=sludge

SAMPLE ID	SAMPLE DESCRIPTION	Grab / Composite	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. CONT.	Preserv	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: TP, OP	Ca, Fe, Al	SO_4	Bulk Density, % Solids				LAB NUMBER
	C-1	C	1/10/08	1530	S				X	X	X	X				-12

I = Ice H = (HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Shipment	Method	Sample Kit	Cooler #
Out: / /	Via:	RB	D/T
		AB	D/T
Ret: / /	Via:	Trip Bl. ❑	❑

	Relinquished by:	Date	Time	Received by:	Date	Time
1						
2						
3						
4						

Received on ice: ❑ yes ❑ no QC ❑ sent ❑ received

revised 8/01

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 1-11-08 0840 Log-In request number: 0801106

Received by: PL Completed by: PL

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1	C-2			
Temp (°C)	2.2	5.4			
Temp taken from	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☒ IR gun ☐ Thermometer (enter ID):	☒ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?		X	
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments:

Different matrix were included in the same line on the C.O.C.

MACTEC

REPORT OF SOIL TESTING

Project: Lake Hancock Vegitation Study

Project Number: 6738-03-4343-03

Client: Advanced Environmental Laboratories, Inc.

Date: January 23, 2008

As requested by Karen Daniels of Advanced Environmental Laboratories, Inc., MACTEC Engineering & Consulting Inc. has completed Bulk Density with Moisture Content testing of six samples that were delivered to our Jacksonville office on January 15, 2008. The results are outlined below.

Sample No.	Sample ID	Percent Moisture (% Wet)	Percent Moisture (% Dry)	Percent Solids	Bulk Density pcf (wet)	Bulk Density pcf (dry)
0801106-08	W-1	51.1	104.5	48.9	88.9	43.5
0801106-09	W-2	53.6	115.4	46.4	101.6	47.2
0801106-10	W-3	54.9	121.8	45.1	91.7	41.3
0801106-11	W-4	59.5	146.9	40.5	86.7	35.1
0801106-12	C-1	53.0	112.9	47.0	98.6	46.3
0801106-13	C-2	55.3	123.7	44.7	87.9	39.3

Respectfully Submitted,

Michael Holm

Mike Holm, P.E.

Advanced Environmental Laboratories, Inc.
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- ☐ Orlando: 528 S. North Lake Blvd., Suite 1016, Altamonte Springs, FL 32701 • (407) 937-1594 Fax (407) 937-1597

CHAIN OF CUSTODY RECORD

LAB NUMBER: 0801106

Page 1 of 1

CLIENT NAME: AEL Gainesville	PROJECT NAME: Lake Hancock
ADDRESS: 6815 SW Archer Rd Gainesville FL 32608	P.O. NUMBER / PROJECT NUMBER:
PHONE: 352 377-2349 FAX:	PROJECT LOCATION:
CONTACT: Karen Daniels	SAMPLED BY:

TURN AROUND TIME:
☐ STANDARD due 1/25/08
☐ RUSH _____

REMARKS / SPECIAL INSTRUCTIONS:
email results to kdaniels@aelab.com

WW= waste water **SW**=surface water **GW**=ground water **DW**=drinking water **OIL** **A**=air **SO**=soil **SL**=sludge

SAMPLE ID	SAMPLE DESCRIPTION	Grab / Composite	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. CONT.	Preserv	BOTTLE SIZE & TYPE: Bulk Tanks	ANALYSIS REQUIRED	LAB NUMBER
0801106-08	W-1	C	1/10/08	1435	SO	1			X	
09	W-2			1450					X	
10	W-3			1505					X	
11	W-4			1520					X	
12	C-1			1530					X	
13	C-2	↓	↓	1530	↓	↓			X	

I = Ice H = (HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Shipment	Method	Sample Kit	Cooler #		Relinquished by:	Date	Time	Received by:	Date	Time
Out: / /	Via: FedEx	RB	D/T	1		1/10/08	1400			
Ret: / /	Via:	AB	D/T	2						
		Trip Bl ☐	☐	3						
				4						

Received on ice: ☐ yes ☐ no QC ☐ sent ☐ received

revised 8/01

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

March 4, 2008

Serial: LAB-08034 52009

Ron Clarke
Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0802136

Enclosed are the results of analyses for samples received by the laboratory on February 14, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

Advanced Environmental Laboratories, Inc.

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352.377.2349 Phone
352.395.6639 Fax
NELAP Certified - FDH #E82001

Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0802136-01	Water	02/13/08 10:59	02/14/08 08:30
W - 2	0802136-02	Water	02/13/08 11:12	02/14/08 08:30
W - 3	0802136-03	Water	02/13/08 11:24	02/14/08 08:30
W - 4	0802136-04	Water	02/13/08 11:40	02/14/08 08:30
W - 5	0802136-05	Water	02/13/08 12:26	02/14/08 08:30
C - 1	0802136-06	Water	02/13/08 10:01	02/14/08 08:30
C - 2	0802136-07	Water	02/13/08 10:30	02/14/08 08:30
DUP	0802136-08	Water	02/13/08 11:24	02/14/08 08:30

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

REPORT OF RESULTS

W - 1

0802136-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	881	13.9	ug/L	1	8021817	02/18/08	02/21/08 14:40	
Ammonia, Total EPA 350.1	0.076	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:05	
Calcium Total EPA 200.7/6010 (ICP)	30.3	0.02	mg/L	1	8021817	02/18/08	02/21/08 14:40	
Iron Total EPA 200.7/6010 (ICP)	1280	0.7	ug/L	1	8021817	02/18/08	02/21/08 14:40	V
Nitrate-Nitrite, Total EPA 353.2	0.013	0.003	mg/L	1	8021418	02/14/08	02/14/08 15:01	
Soluble Reactive Phosphate EPA 365.2	0.191	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	6.92	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.90	0.08	mg/L	1	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.21	0.16	mg/L	2	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	41.0	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

W - 1

0802136-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.44	0.030	mg/L	5	8022507	02/25/08	02/26/08 14:00	

W - 2

0802136-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	342	13.9	ug/L	1	8021817	02/18/08	02/21/08 14:50	
Ammonia, Total EPA 350.1	0.128	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:06	
Calcium Total EPA 200.7/6010 (ICP)	28.3	0.02	mg/L	1	8021817	02/18/08	02/21/08 14:50	
Iron Total EPA 200.7/6010 (ICP)	468	0.7	ug/L	1	8021817	02/18/08	02/21/08 14:50	V
Nitrate-Nitrite, Total EPA 353.2	0.024	0.003	mg/L	1	8021418	02/14/08	02/14/08 14:49	
Soluble Reactive Phosphate EPA 365.2	0.369	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	2.43	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.55	0.16	mg/L	2	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.37	0.16	mg/L	2	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	8.0 I	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

Serial: LAB-08034 52009

Advanced Environmental Laboratories, Inc.

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

W - 2

0802136-02RE2 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.887	0.030	mg/L	5	8022507	02/25/08	02/26/08 14:00	

W - 3

0802136-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	633	13.9	ug/L	1	8021817	02/18/08	02/21/08 14:59	
Ammonia, Total EPA 350.1	0.023 I	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:22	
Calcium Total EPA 200.7/6010 (ICP)	22.6	0.02	mg/L	1	8021817	02/18/08	02/21/08 14:59	
Iron Total EPA 200.7/6010 (ICP)	162	0.7	ug/L	1	8021817	02/18/08	02/21/08 14:59	V
Nitrate-Nitrite, Total EPA 353.2	0.006 I	0.003	mg/L	1	8021418	02/14/08	02/14/08 14:50	
Soluble Reactive Phosphate EPA 365.2	0.518	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	8.83	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.60	0.08	mg/L	1	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.12	0.08	mg/L	1	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	6.0 I	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

W - 3

0802136-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.908	0.018	mg/L	3	8022507	02/25/08	02/26/08 14:00	

Advanced Environmental Laboratories, Inc.

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352.395.6639 Fax
NELAP Certified - FDH #E82001

Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

W - 4
0802136-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	2400	13.9	ug/L	1	8021817	02/18/08	02/21/08 15:09	
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:23	
Calcium Total EPA 200.7/6010 (ICP)	19.8	0.02	mg/L	1	8021817	02/18/08	02/21/08 15:09	
Iron Total EPA 200.7/6010 (ICP)	833	0.7	ug/L	1	8021817	02/18/08	02/21/08 15:09	V
Nitrate-Nitrite, Total EPA 353.2	0.006 I	0.003	mg/L	1	8021418	02/14/08	02/14/08 14:52	
Soluble Reactive Phosphate EPA 365.2	0.276	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	8.78	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.42	0.08	mg/L	1	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.96	0.08	mg/L	1	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	26.0	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

W - 4
0802136-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.43	0.030	mg/L	5	8022507	02/25/08	02/26/08 14:00	

W - 5
0802136-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	898	13.9	ug/L	1	8021817	02/18/08	02/21/08 15:38	
Ammonia, Total EPA 350.1	0.135	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:24	
Calcium Total EPA 200.7/6010 (ICP)	37.0	0.02	mg/L	1	8021817	02/18/08	02/21/08 15:38	
Iron Total EPA 200.7/6010 (ICP)	504	0.7	ug/L	1	8021817	02/18/08	02/21/08 15:38	V
Nitrate-Nitrite, Total EPA 353.2	0.036	0.003	mg/L	1	8021418	02/14/08	02/14/08 14:54	
Soluble Reactive Phosphate EPA 365.2	0.010	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	14.3	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.96	0.08	mg/L	1	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	16.6	0.32	mg/L	4	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	183	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

Advanced Environmental Laboratories, Inc.

6815 SW Archer Rd
Gainesville, FL 32608
352.377.2349 Phone
352.395.6639 Fax
NELAP Certified - FDH #E82001

Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

W - 5

0802136-05RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.887	0.030	mg/L	5	8022507	02/25/08	02/26/08 14:00	

C - 1

0802136-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	581	13.9	ug/L	1	8021817	02/18/08	02/21/08 15:47	
Ammonia, Total EPA 350.1	0.101	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:26	
Calcium Total EPA 200.7/6010 (ICP)	38.2	0.02	mg/L	1	8021817	02/18/08	02/21/08 15:47	
Iron Total EPA 200.7/6010 (ICP)	4430	0.7	ug/L	1	8021817	02/18/08	02/21/08 15:47	V
Nitrate-Nitrite, Total EPA 353.2	0.018	0.003	mg/L	1	8021418	02/14/08	02/14/08 14:55	
Soluble Reactive Phosphate EPA 365.2	0.041	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	0.74 I	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.61	0.16	mg/L	2	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	9.99	0.16	mg/L	2	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	71.0	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

C - 1

0802136-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	2.00	0.030	mg/L	5	8022507	02/25/08	02/26/08 14:00	

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/04/08 17:19

C - 2

0802136-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	284	13.9	ug/L	1	8021817	02/18/08	02/21/08 16:06	
Ammonia, Total EPA 350.1	0.600	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:31	
Calcium Total EPA 200.7/6010 (ICP)	36.2	0.02	mg/L	1	8021817	02/18/08	02/21/08 16:06	
Iron Total EPA 200.7/6010 (ICP)	1790	0.7	ug/L	1	8021817	02/18/08	02/21/08 16:06	V
Nitrate-Nitrite, Total EPA 353.2	0.006 I	0.003	mg/L	1	8021418	02/14/08	02/14/08 15:05	
Soluble Reactive Phosphate EPA 365.2	0.093	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	0.51 I	0.33	mg/L	1	8022704	02/27/08	02/27/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.59	0.16	mg/L	2	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.90	0.16	mg/L	2	8022103	02/21/08	02/26/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.638	0.006	mg/L	1	8022114	02/21/08	02/22/08 01:00	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

DUP

0802136-08 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Aluminum Total EPA 200.7/6010 (ICP)	596	13.9	ug/L	1	8021817	02/18/08	02/21/08 16:35	
Ammonia, Total EPA 350.1	0.014 I	0.009	mg/L	1	8022002	02/20/08	02/21/08 13:32	
Calcium Total EPA 200.7/6010 (ICP)	22.5	0.02	mg/L	1	8021817	02/18/08	02/21/08 16:35	
Iron Total EPA 200.7/6010 (ICP)	165	0.7	ug/L	1	8021817	02/18/08	02/21/08 16:35	V
Nitrate-Nitrite, Total EPA 353.2	0.005 I	0.003	mg/L	1	8021418	02/14/08	02/14/08 15:06	
Soluble Reactive Phosphate EPA 365.2	0.514	0.002	mg/L	1	8021404	02/14/08	02/14/08 09:46	
Sulfate, Total EPA 375.4	7.42	0.33	mg/L	1	8022807	02/28/08	02/28/08 12:00	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.55	0.08	mg/L	1	8022505	02/25/08	02/26/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.97	0.16	mg/L	2	8022103	02/21/08	02/26/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	12.0	2.0	mg/L	1	8021809	02/18/08	02/18/08 12:00	

DUP

0802136-08RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.938	0.018	mg/L	3	8022507	02/25/08	02/26/08 14:00	

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Project: Lake Hancock
Project Manager: Ron Clarke

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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8021809 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8021809-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (8021809-DUP2) **Source: 0802136-06**										
Total Suspended Solids EPA 160.2 - 100mL	79.0	2.0	mg/L		71.0			11	20	
Reference (8021809-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	80.0		mg/L	74.5		107	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8021404 = Soluble Reactive Phosphate EPA 365.2										
Blank (8021404-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8021404-DUP2) **Source: 0802136-06**										
Soluble Reactive Phosphate EPA 365.2	0.041	0.002	mg/L		0.041			0	20	
Matrix Spike (8021404-MS2) **Source: 0802136-07**										
Soluble Reactive Phosphate EPA 365.2	0.347		mg/L	0.250	0.0911	102	80-120			
Reference (8021404-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.624		mg/L	0.610		102	80-120			
Batch 8021418 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8021418-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8021418-DUP3) **Source: 0802136-03**										
Nitrate-Nitrite, Total EPA 353.2	0.007	0.003	mg/L		0.006			15	20	
Matrix Spike (8021418-MS3) **Source: 0802136-04**										
Nitrate-Nitrite, Total EPA 353.2	0.409	0.003	mg/L	0.400	0.006	101	90-110			
Reference (8021418-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.32	0.003	mg/L	1.38		96	90-110			

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2809 NW 161 Ct
Gainesville, FL 32609

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8021418 = Nitrate-Nitrite, Total EPA 353.2										
Reference (8021418-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.04	0.003	mg/L	1.00		104	0-200			
Batch 8022002 = Ammonia, Total EPA 350.1										
Blank (8022002-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (8022002-DUP2)	**Source: 0802136-05**									
Ammonia, Total EPA 350.1	0.135	0.009	mg/L		0.135			0	20	
Matrix Spike (8022002-MS2)	**Source: 0802136-06**									
Ammonia, Total EPA 350.1	0.471	0.009	mg/L	0.400	0.101	92	80-120			
Reference (8022002-SRM1)										
Ammonia, Total EPA 350.1	0.640	0.009	mg/L	0.635		101	90-110			
Batch 8022103 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8022103-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8022103-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8022103-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.80	0.08	mg/L	2.00		90	90-110			
LCS (8022103-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.94	0.08	mg/L	2.00		97	90-110			
Batch 8022114 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8022114-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8022114-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8022114-BLK3)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8022114-BLK4)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8022114 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8022114-BLK5)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8022114-BLK6)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (8022114-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.092	0.006	mg/L	0.108		85	0-200			
Batch 8022505 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8022505-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
Blank (8022505-BLK2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8022505-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.88	0.08	mg/L	2.00		94	90-110			
LCS (8022505-BS2)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.86	0.08	mg/L	2.00		93	90-110			
Batch 8022507 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8022507-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8022507-DUP2) **Source: 0802136-03RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	0.923	0.018	mg/L		0.908			2	20	
Matrix Spike (8022507-MS3) **Source: 0802136-02RE2**										
Total Phosphorus, Total EPA 365.3 (Spec)	2.20	0.031	mg/L	1.33	0.887	99	80-120			
Reference (8022507-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.098	0.006	mg/L	0.108		91	0-200			
Batch 8030408 = Soluble Reactive Phosphate EPA 365.2										
Blank (8030408-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8030408-DUP2) **Source: 0802136-01RE1**										
Soluble Reactive Phosphate EPA 365.2	0.193	0.002	mg/L		0.200			4	20	

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8030408 = Soluble Reactive Phosphate EPA 365.2										
Reference (8030408-SRM1)										
Soluble Reactive Phosphate EPA 365.2	1.27	0.004	mg/L	1.22		104	80-120			

Minerals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8022704 = Sulfate, Total EPA 375.4										
Blank (8022704-BLK1)										
Sulfate, Total EPA 375.4	0.33 U	0.33	mg/L							
Reference (8022704-SRM1)										
Sulfate, Total EPA 375.4	30.9		mg/L	29.1		106	90-110			
Batch 8022807 = Sulfate, Total EPA 375.4										
Blank (8022807-BLK1)										
Sulfate, Total EPA 375.4	0.20 U	0.20	mg/L							
Reference (8022807-SRM1)										
Sulfate, Total EPA 375.4	30.4		mg/L	29.1		104	90-110			

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8021817 = ICP Metals										
Blank (8021817-BLK1)										
Aluminum Total EPA 200.7/6010 (ICP)	13.9 U	13.9	ug/L							
Calcium Total EPA 200.7/6010 (ICP)	0.02 U	0.02	mg/L							
Iron Total EPA 200.7/6010 (ICP)	0.7	0.7	ug/L							V
LCS (8021817-BS1)										
Iron Total EPA 200.7/6010 (ICP)	99.8	0.7	ug/L	100		100	85-115			
Aluminum Total EPA 200.7/6010 (ICP)	92.6	13.9	ug/L	100		93	85-115			
Calcium Total EPA 200.7/6010 (ICP)	9.72	0.02	mg/L	10.0		97	85-115			

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8021817 = ICP Metals										
Duplicate (8021817-DUP2)	**Source: 0802136-06**									
Aluminum Total EPA 200.7/6010 (ICP)	576	13.9	ug/L		581			0.9	20	
Calcium Total EPA 200.7/6010 (ICP)	37.8	0.02	mg/L		38.2			1	20	
Iron Total EPA 200.7/6010 (ICP)	4390	0.7	ug/L		4430			0.9	20	
Matrix Spike (8021817-MS2)	**Source: 0802136-07**									
Aluminum Total EPA 200.7/6010 (ICP)	311	13.9	ug/L	100	284	27	75-125			PSIN
Calcium Total EPA 200.7/6010 (ICP)	44.3	0.02	mg/L	10.0	36.2	81	75-125			
Iron Total EPA 200.7/6010 (ICP)	1820	0.7	ug/L	100	1790	30	75-125			PSIN
Post Spike (8021817-PS2)	**Source: 0802136-07**									
Aluminum Total EPA 200.7/6010 (ICP)	5140		ug/L	5310	275	92	75-125			
Iron Total EPA 200.7/6010 (ICP)	6590		ug/L	5310	1730	92	75-125			
Calcium Total EPA 200.7/6010 (ICP)	78.8		mg/L	49.0	35.0	89	75-125			

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Reported:
03/04/08 17:19

NOTES AND DEFINITIONS

V	Analyte present in blank and samples.
PSIN	Poor matrix spike recovery; post digestion spike within acceptance criteria.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUST	Value 86%, within criteria per SOP
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Serial: LAB-08034 52009

CHAIN-OF-CUSTODY FORM

WD-080213b

Page 1 of 1

PROJECT:	**Lake Hancock Vegetation Study**
PROJECT MANAGER:	**Chris Keller**
PHONE:	**(386) 462-9286**
FAX:	**(386) 462-3196**
E-MAIL:	ckeller@wetlandsolutionsinc.com
ADDRESS:	**2809 NW 161 Court, Gainesville, FL 32609**

TURN AROUND TIME: X **Standard** **Rush**

Special Instructions/Comments:

No Chl a.
No samples filtered in field.

LAB: Advanced Environmental Laboratories, Inc.

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3 / TKN / TKN Dis	TP / Ortho-P	Ca, Fe, Al	SO4		REMARKS / ALTERNATE DESC
					ANALYSIS REQUESTED						
					PRESERVATIVE						
2/13/2008	1059	W-1	SW	GRAB	X	X	X	X	X		-01
2/13/2008	1112	W-2	SW	GRAB	X	X	X	X	X		-02
2/13/2008	1129	W-3	SW	GRAB	X	X	X	X	X		-03
2/13/2008	1140	W-4	SW	GRAB	X	X	X	X	X		-04
2/13/2008	1226	W-5	SW	GRAB	X	X	X	X	X		-05
2/13/2008	1001	C-1	SW	GRAB	X	X	X	X	X		-06
2/13/2008	1030	C-2	SW	GRAB	X	X	X	X	X		-07
2/13/2008	1124	DUP	SW	GRAB	X	X	X	X	X		-08

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Henry Brennan	Signature: Paul Hunt	Signature	Signature
Henry Brennan Printed Name	Printed Name: Paul Hunt	Printed Name	Printed Name
Wetland Solutions, Inc. Company	Company: AEL	Company	Company
2-14-08 08:27 Date / Time	Date / Time: 2-14-08 0830	Date / Time	Date / Time

1.2°C

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 2-14-08/0830 Log-In request number: 0802136

Received by: P. L. Completed by: CSH

Cooler/Shipping Information:

Courier: ☐ AEL ☑ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☑ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1				
Temp (°C)	1.2°C				
Temp taken from	☐ Temp blank ☑ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☑ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments:

C:\Documents and Settings\TWilliams\Desktop\Login Checklist.doc

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

March 18, 2008

Serial: LAB-080318 35006

Ron Clarke
Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0803039

Enclosed are the results of analyses for samples received by the laboratory on March 6, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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NELAP Certified - FDH #E82001

Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/18/08 15:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0803039-01	Water	03/05/08 08:05	03/06/08 08:20
W - 2	0803039-02	Water	03/05/08 08:50	03/06/08 08:20
W - 3	0803039-03	Water	03/05/08 09:04	03/06/08 08:20
W - 4	0803039-04	Water	03/05/08 09:14	03/06/08 08:20
W - 5	0803039-05	Water	03/05/08 10:02	03/06/08 08:20
C - 1	0803039-06	Water	03/05/08 09:25	03/06/08 08:20
C - 2	0803039-07	Water	03/05/08 09:36	03/06/08 08:20
DUP	0803039-08	Water	03/05/08 09:14	03/06/08 08:20

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/18/08 15:49

REPORT OF RESULTS

W - 1

0803039-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.089	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:31	
Nitrate-Nitrite, Total EPA 353.2	0.015	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:51	
Soluble Reactive Phosphate EPA 365.2	0.135	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.54	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	8.21	0.16	mg/L	2	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.39	0.030	mg/L	5	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	59.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

W - 2

0803039-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.061	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:37	
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:52	
Soluble Reactive Phosphate EPA 365.2	0.229	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.82	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.05	0.16	mg/L	2	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.18	0.012	mg/L	2	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	21.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

W - 3

0803039-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.048	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:34	
Nitrate-Nitrite, Total EPA 353.2	0.009 I	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:53	
Soluble Reactive Phosphate EPA 365.2	0.491	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.75	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.98	0.08	mg/L	1	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.31	0.012	mg/L	2	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	23.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

Serial: LAB-080318 35009

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/18/08 15:49

W - 4

0803039-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.061	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:44	
Nitrate-Nitrite, Total EPA 353.2	0.011 I	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:54	
Soluble Reactive Phosphate EPA 365.2	0.180	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.82	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	6.03	0.16	mg/L	2	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.52	0.060	mg/L	10	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	40.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

W - 5

0803039-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.150	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:45	
Nitrate-Nitrite, Total EPA 353.2	0.044	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:55	
Soluble Reactive Phosphate EPA 365.2	0.014	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.64	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	17.5	0.40	mg/L	5	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.730	0.012	mg/L	2	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	172	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

C - 1

0803039-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	1.17	0.027	mg/L	3	8031401	03/14/08	03/14/08 13:53	
Nitrate-Nitrite, Total EPA 353.2	0.013	0.003	mg/L	1	8031111	03/11/08	03/12/08 13:56	
Soluble Reactive Phosphate EPA 365.2	0.016	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.29	0.16	mg/L	2	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	10.1	0.32	mg/L	4	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.632	0.030	mg/L	5	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	35.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/18/08 15:49

C - 2

0803039-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	1.14	0.027	mg/L	3	8031401	03/14/08	03/14/08 13:55	
Nitrate-Nitrite, Total EPA 353.2	0.012 I	0.003	mg/L	1	8031111	03/11/08	03/12/08 14:06	
Soluble Reactive Phosphate EPA 365.2	0.022	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.30	0.16	mg/L	2	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	10.5	0.32	mg/L	4	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.621	0.030	mg/L	5	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	35.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

DUP

0803039-08 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.060	0.009	mg/L	1	8031401	03/14/08	03/14/08 13:48	
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L	1	8031111	03/11/08	03/12/08 14:08	
Soluble Reactive Phosphate EPA 365.2	0.188	0.002	mg/L	1	8030616	03/06/08	03/06/08 14:45	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.73	0.08	mg/L	1	8031206	03/12/08	03/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	6.77	0.16	mg/L	2	8031205	03/12/08	03/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.50	0.030	mg/L	5	8031108	03/11/08	03/12/08 13:00	
Total Suspended Solids EPA 160.2 - 100mL	38.0	2.0	mg/L	1	8030707	03/07/08	03/07/08 12:00	

Serial: LAB-080318 35009

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
03/18/08 15:49

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8030707 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8030707-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8030707-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (8030707-DUP4) **Source: 0803039-06**										
Total Suspended Solids EPA 160.2 - 100mL	35.0	2.0	mg/L		35.0			0	20	
Reference (8030707-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	76.0		mg/L	74.5		102	80-120			
Reference (8030707-SRM2)										
Total Suspended Solids EPA 160.2 - 100mL	68.0		mg/L	74.5		91	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8030616 = Soluble Reactive Phosphate EPA 365.2										
Blank (8030616-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8030616-DUP1) **Source: 0803039-01**										
Soluble Reactive Phosphate EPA 365.2	0.135	0.002	mg/L		0.135			0	20	
Matrix Spike (8030616-MS1) **Source: 0803039-02**										
Soluble Reactive Phosphate EPA 365.2	0.488		mg/L	0.250	0.224	106	80-120			
Reference (8030616-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.649		mg/L	0.610		106	80-120			
Batch 8031108 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8031108-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (8031108-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.099	0.006	mg/L	0.108		92	0-200			

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Reported:
03/18/08 15:49

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8031108 = Total Phosphorus, Total EPA 365.3 (Spec)										
Batch 8031111 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8031111-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8031111-DUP4)	**Source: 0803039-06**									
Nitrate-Nitrite, Total EPA 353.2	0.014	0.003	mg/L		0.013			7	20	
Matrix Spike (8031111-MS4)	**Source: 0803039-07**									
Nitrate-Nitrite, Total EPA 353.2	0.421	0.003	mg/L	0.400	0.012	102	90-110			
Reference (8031111-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.31	0.003	mg/L	1.38		95	90-110			
Reference (8031111-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.03	0.003	mg/L	1.00		103	0-200			
Batch 8031205 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8031205-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8031205-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8031205-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.80	0.08	mg/L	2.00		90	90-110			
LCS (8031205-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.88	0.08	mg/L	2.00		94	90-110			
Batch 8031206 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8031206-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8031206-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.98	0.08	mg/L	2.00		99	90-110			
Batch 8031401 = Ammonia, Total EPA 350.1										
Blank (8031401-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							

Serial: LAB-080318 35009

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Project Manager: Ron Clarke

Reported:
03/18/08 15:49

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8031401 = Ammonia, Total EPA 350.1										
Duplicate (8031401-DUP2)	**Source: 0803039-02**									
Ammonia, Total EPA 350.1	0.064	0.009	mg/L		0.061			5	20	
Matrix Spike (8031401-MS2)	**Source: 0803039-03**									
Ammonia, Total EPA 350.1	0.431	0.009	mg/L	0.400	0.048	96	80-120			
Reference (8031401-SRM1)										
Ammonia, Total EPA 350.1	0.577	0.009	mg/L	0.635		91	90-110			

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Wetland Solutions, Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 03/18/08 15:49

NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

wo#0803039

CHAIN-OF-CUSTODY FORM

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

Wetland Solutions, Inc.

TURN AROUND TIME: X Standard Rush

Special Instructions/Comments:

No Chl a.
No samples filtered in field.

1.0 °C

ANALYSIS REQUESTED

PRESERVATIVE

LAB: Advanced Environmental Laboratories, Inc.

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3	TKN / TKN Dissolved	TP / Ortho P			REMARKS / ALTERNATE DESC
3/5/2008	0805	W-1	SW	GRAB	X	X	X	X			-01
3/5/2008	0850	W-2	SW	GRAB	X	X	X	X			-02
3/5/2008	0904	W-3	SW	GRAB	X	X	X	X			-03
3/5/2008	0914	W-4	SW	GRAB	X	X	X	X			-04
3/5/2008	1002	W-5	SW	GRAB	X	X	X	X			-05
3/5/2008	0925	C-1	SW	GRAB	X	X	X	X			-06
3/5/2008	0936	C-2	SW	GRAB	X	X	X	X			-07
3/5/2008	0914	DUP	SW	GRAB	X	X	X	X			-08

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Christopher H. Keller	Signature: Paul	Signature	Signature
Printed Name: ~~Henry Brennan~~ Chris Keller	Printed Name: Paul Hunter	Printed Name	Printed Name
Company: Wetland Solutions, Inc.	Company: AEL	Company	Company
Date / Time: 3-6-08 0818	Date / Time: 3-6-08 820	Date / Time	Date / Time

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: W.S.I. **Project name:** Lake Hancock

Date/Time Rcvd: 3-6-08 8:20 **Log-In request number:** 0803039

Received by: PL **Completed by:** PL

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1				
Temp (°C)	1.0				
Temp taken from	☐ Temp blank ☒ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☒ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			✓
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?	✓		
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Did the sample labels agree with the chain of custody?	✓		
7. Were correct bottles used for the tests indicated?	✓		
8. Were proper sample preservation techniques indicated on the label?	✓		
9. Were samples received within holding times?	✓		
10. Were all VOA vials checked for the presence of air bubbles?			✓
11. Were there air bubbles present in the VOA vials?			✓
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	✓		
13. Was the cooler temperature less than 6°C?	✓		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	✓		
15. Were the sample containers provided by AEL?	✓		
16. Were samples accepted into the laboratory?	✓		

Comments:

Advanced
Environmental Laboratories, Inc.

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April 21, 2008

Serial: LAB-080421 40432

Ron Clarke
Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0804076

Enclosed are the results of analyses for samples received by the laboratory on April 3, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0804076-01	Water	04/02/08 10:25	04/03/08 08:04
W - 2	0804076-02	Water	04/02/08 10:29	04/03/08 08:04
W - 3	0804076-03	Water	04/02/08 10:15	04/03/08 08:04
W - 4	0804076-04	Water	04/02/08 10:19	04/03/08 08:04
W - 5	0804076-05	Water	04/02/08 10:44	04/03/08 08:04
C - 1	0804076-06	Water	04/02/08 09:54	04/03/08 08:04
C - 2	0804076-07	Water	04/02/08 10:03	04/03/08 08:04
DUP - 1	0804076-08	Water	04/02/08 10:26	04/03/08 08:04
W-1	0804076-09	Soil	04/02/08 12:30	04/03/08 08:04
W-2	0804076-10	Soil	04/02/08 12:39	04/03/08 08:04
W-3	0804076-11	Soil	04/02/08 12:50	04/03/08 08:04
W-4	0804076-12	Soil	04/02/08 12:59	04/03/08 08:04
C-1	0804076-13	Soil	04/02/08 13:26	04/03/08 08:04
C-2	0804076-14	Soil	04/02/08 13:39	04/03/08 08:04
DUP-2	0804076-15	Soil	04/02/08 13:46	04/03/08 08:04

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Project Manager: Ron Clarke

Reported:
04/21/08 16:04

REPORT OF RESULTS

W - 1

0804076-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.048	0.009	mg/L	1	8040805	04/08/08	04/08/08 12:42	
Nitrate-Nitrite, Total EPA 353.2	0.011 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:02	
Soluble Reactive Phosphate EPA 365.2	0.372	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.40	0.08	mg/L	1	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.17	0.16	mg/L	2	8040813	04/08/08	04/09/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	11.0	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

W - 1

0804076-01RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.22	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

W - 2

0804076-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.032 I	0.009	mg/L	1	8040805	04/08/08	04/08/08 12:43	
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:03	
Soluble Reactive Phosphate EPA 365.2	0.197	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.64	0.08	mg/L	1	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.28	0.16	mg/L	2	8040813	04/08/08	04/09/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	5.0 I	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

W - 2

0804076-02RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.930	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

W - 3

0804076-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.040	0.009	mg/L	1	8040805	04/08/08	04/08/08 12:44	
Nitrate-Nitrite, Total EPA 353.2	0.006 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:04	
Soluble Reactive Phosphate EPA 365.2	0.393	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.82	0.08	mg/L	1	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.87	0.08	mg/L	1	8040813	04/08/08	04/09/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	6.0 I	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

W - 3

0804076-03RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.04	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

W - 4

0804076-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.038	0.009	mg/L	1	8040805	04/08/08	04/08/08 12:45	
Nitrate-Nitrite, Total EPA 353.2	0.009 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:05	
Soluble Reactive Phosphate EPA 365.2	0.375	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.32	0.08	mg/L	1	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.27	0.16	mg/L	2	8040813	04/08/08	04/09/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	3.0 I	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

W - 4

0804076-04RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.904	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

W - 5

0804076-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.162	0.009	mg/L	1	8040805	04/08/08	04/08/08 12:46	
Nitrate-Nitrite, Total EPA 353.2	0.045	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:12	
Soluble Reactive Phosphate EPA 365.2	0.014	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.73	0.08	mg/L	1	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	20.5	0.40	mg/L	5	8040813	04/08/08	04/09/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.628	0.006	mg/L	1	8040709	04/07/08	04/08/08 12:00	
Total Suspended Solids EPA 160.2 - 100mL	122	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

C - 1

0804076-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	1.54	0.045	mg/L	5	8040805	04/08/08	04/08/08 13:10	
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:14	
Soluble Reactive Phosphate EPA 365.2	0.018	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.47	0.16	mg/L	2	8040812	04/08/08	04/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	10.2	0.40	mg/L	5	8040813	04/08/08	04/09/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	21.0	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

C - 1

0804076-06RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	0.904	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

Serial: LAB-080421 40433

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Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

C - 2

0804076-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	1.33	0.045	mg/L	5	8040805	04/08/08	04/08/08 13:14	
Nitrate-Nitrite, Total EPA 353.2	0.012 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:16	
Soluble Reactive Phosphate EPA 365.2	0.011	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	6.55	0.16	mg/L	2	8041004	04/10/08	04/11/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	8.18	0.32	mg/L	4	8041003	04/10/08	04/11/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.548	0.006	mg/L	1	8040709	04/07/08	04/08/08 12:00	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

DUP - 1

0804076-08 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.042	0.009	mg/L	1	8040805	04/08/08	04/08/08 13:01	
Nitrate-Nitrite, Total EPA 353.2	0.004 I	0.003	mg/L	1	8040702	04/07/08	04/07/08 15:17	
Soluble Reactive Phosphate EPA 365.2	0.377	0.002	mg/L	1	8040312	04/03/08	04/03/08 14:30	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.62	0.08	mg/L	1	8041004	04/10/08	04/11/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.79	0.16	mg/L	2	8041003	04/10/08	04/11/08 00:00	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8040809	04/08/08	04/08/08 12:00	

DUP - 1

0804076-08RE1 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Total Phosphorus, Total EPA 365.3 (Spec)	1.12	0.030	mg/L	5	8040912	04/09/08	04/11/08 11:00	

W-1

0804076-09 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	26900	3.2	mg/kg dry	1	8040321	04/03/08	04/08/08 16:09	V
Phosphorus, Inorganic in Sediment	22600	1850	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	54.2	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

Serial: LAB-080421 40433

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

W-2

0804076-10 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	25700	3.4	mg/kg dry	1	8040321	04/03/08	04/08/08 16:19	V
Phosphorus, Inorganic in Sediment	21300	2070	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	48.3	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

W-3

0804076-11 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	34100	5.8	mg/kg dry	1	8040321	04/03/08	04/08/08 17:10	V
Phosphorus, Inorganic in Sediment	16300	3230	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	31.0	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

W-4

0804076-12 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	25700	3.3	mg/kg dry	1	8040321	04/03/08	04/08/08 17:48	V
Phosphorus, Inorganic in Sediment	21700	1840	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	54.4	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

C-1

0804076-13 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	21600	2.8	mg/kg dry	1	8040321	04/03/08	04/08/08 17:58	V
Phosphorus, Inorganic in Sediment	20900	1930	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	51.7	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

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Reported:
04/21/08 16:04

C-2

0804076-14 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	31700	3.8	mg/kg dry	1	8040321	04/03/08	04/08/08 18:07	V
Phosphorus, Inorganic in Sediment	25400	2350	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	42.6	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

DUP-2

0804076-15 (Soil)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Phosphorus in Sediment Not NELAC certified	21900	3.0	mg/kg dry	1	8040321	04/03/08	04/08/08 18:17	V
Phosphorus, Inorganic in Sediment	17000	1720	mg/kg dry	1000	8041709	04/17/08	04/18/08 16:35	
Solids, Dry Weight	58.3	0.1	% by Weight	1	8040406	04/04/08	04/04/08 12:00	

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Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040406 = Solids, Dry Weight										
Blank (8040406-BLK1)										
Solids, Dry Weight	0.1 U	0.1	% by Weight							
Batch 8040809 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8040809-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Duplicate (8040809-DUP1) **Source: 0804076-01**										
Total Suspended Solids EPA 160.2 - 100mL	15.0	2.0	mg/L		11.0			31	20	D-RNG
Reference (8040809-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	60.0		mg/L	51.0		118	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040312 = Soluble Reactive Phosphate EPA 365.2										
Blank (8040312-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Matrix Spike (8040312-MS2) **Source: 0804076-01**										
Soluble Reactive Phosphate EPA 365.2	0.620		mg/L	0.250	0.363	103	80-120			
Reference (8040312-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.698		mg/L	0.680		103	80-120			
Batch 8040321 = Phosphorus in Sediment Not NELAC certified										
Blank (8040321-BLK1)										
Phosphorus in Sediment Not NELAC certified	3.5	1.0	mg/kg wet							V
Duplicate (8040321-DUP1) **Source: 0804076-10**										
Phosphorus in Sediment Not NELAC certified	26700	3.7	mg/kg dry		25700			4	20	
Reference (8040321-SRM1)										
Phosphorus in Sediment Not NELAC certified	2620	6.0	mg/kg wet	3070		85	85-115			

Advanced Environmental Laboratories, Inc.

6815 SW Archer Rd
Gainesville, FL 32608
352.377.2349 Phone
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NELAP Certified - FDH #E82001

Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040702 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8040702-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8040702-DUP3)	**Source: 0804076-05**									
Nitrate-Nitrite, Total EPA 353.2	0.048	0.003	mg/L		0.045			6	20	
Matrix Spike (8040702-MS3)	**Source: 0804076-06**									
Nitrate-Nitrite, Total EPA 353.2	0.444	0.003	mg/L	0.400	0.017	107	90-110			
Reference (8040702-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	1.47	0.003	mg/L	1.38		107	90-110			
Reference (8040702-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	1.02	0.003	mg/L	1.00		102	0-200			
Batch 8040709 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8040709-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8040709-BLK2)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Blank (8040709-BLK3)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Reference (8040709-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L	0.108			0-200			
Batch 8040805 = Ammonia, Total EPA 350.1										
Blank (8040805-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (8040805-DUP3)	**Source: 0804076-06**									
Ammonia, Total EPA 350.1	1.53	0.045	mg/L		1.54			0.7	20	
Matrix Spike (8040805-MS3)	**Source: 0804076-08**									
Ammonia, Total EPA 350.1	0.435	0.009	mg/L	0.400	0.042	98	80-120			
Reference (8040805-SRM1)										
Ammonia, Total EPA 350.1	0.571	0.009	mg/L	0.580		98	90-110			
Batch 8040812 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										

Serial: LAB-080421 40433

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2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040812 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8040812-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8040812-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.01	0.08	mg/L	2.00		100	90-110			
Duplicate (8040812-DUP1) Source: 0804076-01										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.42	0.08	mg/L		3.40			0.6	20	
Matrix Spike (8040812-MS2) Source: 0804076-02										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.63	0.08	mg/L	1.00	3.64	99	90-110			
Batch 8040813 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8040813-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8040813-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.16	0.08	mg/L	2.00		108	90-110			
Batch 8040912 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8040912-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8040912-DUP5) Source: 0804076-01RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	1.21	0.030	mg/L		1.22			0.8	20	
Duplicate (8040912-DUP6) Source: 0804076-02RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	0.917	0.030	mg/L		0.930			1	20	
Duplicate (8040912-DUP7) Source: 0804076-03RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	0.996	0.030	mg/L		1.04			4	20	
Duplicate (8040912-DUP8) Source: 0804076-04RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	0.917	0.030	mg/L		0.904			1	20	
Duplicate (8040912-DUP9) Source: 0804076-06RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	0.864	0.030	mg/L		0.904			5	20	
Duplicate (8040912-DUPB) Source: 0804076-08RE1										
Total Phosphorus, Total EPA 365.3 (Spec)	1.10	0.030	mg/L		1.12			2	20	
Matrix Spike (8040912-MS1) Source: 0804076-03RE1										

Serial: LAB-080421 40433

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
04/21/08 16:04

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040912 = Total Phosphorus, Total EPA 365.3 (Spec)										
Matrix Spike (8040912-MS1) **Source: 0804076-03RE1**										
Total Phosphorus, Total EPA 365.3 (Spec)	2.29	0.031	mg/L	1.33	1.04	94	80-120			
Reference (8040912-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.096	0.006	mg/L	0.108		89	0-200			
Batch 8041003 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8041003-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8041003-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8041003-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.04	0.08	mg/L	2.00		102	90-110			
LCS (8041003-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.90	0.08	mg/L	2.00		95	90-110			
Batch 8041004 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8041004-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8041004-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.99	0.08	mg/L	2.00		100	90-110			
Batch 8041709 = Phosphorus, Inorganic in Sediment										
Blank (8041709-BLK1)										
Phosphorus, Inorganic in Sediment	1.0 U	1.0	mg/kg wet							
Duplicate (8041709-DUP1) **Source: 0804076-09**										
Phosphorus, Inorganic in Sediment	27200	1850	mg/kg dry		22600			18	20	

Serial: LAB-080421 40433

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Wetland Solutions, Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 04/21/08 16:04

NOTES AND DEFINITIONS

V	Analyte present in blank and samples.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
CUST	bad dup RE extr
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN-OF-CUSTODY FORM

WO#0804076

PROJECT: Lake Hancock Vegetation Study

PROJECT MANAGER: Chris Keller

PHONE: (386) 462-9286

FAX: (386) 462-3196

E-MAIL: ckeller@wetlandsolutionsinc.com

ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

Wetland Solutions, Inc.

TURN AROUND TIME: X Standard Rush

Special Instructions/Comments:

No samples filtered in field.

LAB: Advanced Environmental Laboratories, Inc.

ANALYSIS REQUESTED

PRESERVATIVE

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3	TKN / TKN Dissolved	TP	Ortho-P	REMARKS / ALTERNATE DESC
4/2/2008	1025	W-1	SW	GRAB	X	X	X	X	X	-01
4/2/2008	1029	W-2	SW	GRAB	X	X	X	X	X	-02
4/2/2008	1015	W-3	SW	GRAB	X	X	X	X	X	-03
4/2/2008	1019	W-4	SW	GRAB	X	X	X	X	X	-04
4/2/2008	1044	W-5	SW	GRAB	X	X	X	X	X	-05
4/2/2008	0954	C-1	SW	GRAB	X	X	X	X	X	-06
4/2/2008	1003	C-2	SW	GRAB	X	X	X	X	X	-07
4/2/2008	1026	DUP-1	SW	GRAB	X	X	X	X	X	-08
4/2/2008	1230	W-1	S	COMP				X	X	-09
4/2/2008	1239	W-2	S	COMP				X	X	-10
4/2/2008	1250	W-3	S	COMP				X	X	-11
4/2/2008	1259	W-4	S	COMP				X	X	-12
4/2/2008	1326	C-1	S	COMP				X	X	-13
4/2/2008	1339	C-2	S	COMP				X	X	-14
4/2/2008	1346	DUP-2	S	COMP				X	X	-15

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Henry Brennan	Signature: Paul Hanlon	Signature	Signature
Printed Name: Henry Brennan	Printed Name: Paul Hanlon	Printed Name	Printed Name
Company: Wetland Solutions, Inc.	Company: AEL	Company	Company
Date / Time: 4-3-08 0803	Date / Time: 4-3-08 0804	Date / Time	Date / Time

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions
Date/Time Rcvd: 4-3-08/0804
Received by: P.L.

Project name: Lake Hancock
Log-In request number: 0804076
Completed by: CSH

Cooler/Shipping Information:

Courier: ☐ AEL ☑ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☑ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1				
Temp (°C)	5.8°C				
Temp taken from	☐ Temp blank ☑ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☑ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments:

Advanced
Environmental Laboratories, Inc.

6815 SW Archer Road
Gainesville, Florida 32608
(352) 377-2349
FAX (352) 395-6639

May 21, 2008

Serial: LAB-080521 42732

Ron Clarke
Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

RE: Lake Hancock
Work Order: 0805062

Enclosed are the results of analyses for samples received by the laboratory on May 8, 2008.

All data were determined in accordance with published procedures (EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Rev March 1983; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001).

All results were determined in accordance with NELAP requirements and in accordance with the chain of custody document unless noted in the report case narrative or data report. All data is subject to a degree of uncertainty. For a discussion of laboratory uncertainty, please contact your project manager. This analytical report must be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen Daniels
Operations Manager
kdaniels@aellab.com

NELAC requires that any value reported be listed as having less certainty if the result is between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ). The levels shown in the table below are the laboratories MDL and LOQ. Any result reported that falls between these two values should be considered to have less certainty.

Analyte	units	Method	MDL	LOQ
Ammonia	mg/L	EPA 350.1	0.009	0.01
Chloride	mg/L	EPA 325.2	0.12	1
Chromium +6	ug/L	3500CrB, EPA 7196	4.5	7.8
COD	mg/L	EPA 410.4	6.2	7.8
Conductivity	uS/cm	EPA 120.1	9.2	14.9
Cyanide	mg/L	335.2, 9010/9014	0.002	0.004
Fluoride (undistilled)	mg/L	EPA 340.2	0.02	0.05
Kjeldahl Nitrogen (Alpkem - CuSO4 digestion)	mg/L	EPA 351.2	0.08	0.1
Nitrite (Spectrophotometer)	mg/L	EPA 353.3	0.004	0.004
Nitrite/Nitrate	mg/L	EPA 353.2	0.003	0.004
Organic Carbon	mg/L	EPA 415.2	0.7	3
Ortho Phosphorus, Genesys II	mg/L	EPA 365.2	0.002	0.004
Dissolved Silica	mg/L	EPA 370.1	0.05	1
Sulfate	mg/L	EPA 375.4	0.33	1
Total Carbon	mg/L	EPA 415.2	0.5	3
Total Phosphorus, Spec - Genesys II	mg/L	EPA 365.3	0.006	0.006
Total Phosphorus, Alpkem	mg/L	EPA 365.1	0.002	0.006
Turbidity	NTU	EPA 180.1	0.03	0.1
Silver	ug/L	EPA 272.2/7761	0.1	0.16
Tin	ug/L	EPA 282.2/7871	1.8	3.12
Aluminum	ug/L	EPA 200.7/6010	13.9	50
Antimony	ug/L	EPA 200.7/6010	2.9	50
Arsenic	ug/L	EPA 200.7/6010	2.3	50
Barium	ug/L	EPA 200.7/6010	0.2	50
Beryllium	ug/L	EPA 200.7/6010	0.10	50
Boron	ug/L	EPA 200.7/6010	1.5	50
Cadmium	ug/L	EPA 200.7/6010	0.4	50
Calcium	mg/L	EPA 200.7/6010	0.02	0.05
Chromium	ug/L	EPA 200.7/6010	0.4	50
Cobalt	ug/L	EPA 200.7/6010	0.4	50
Copper	ug/L	EPA 200.7/6010	0.4	50
Iron	ug/L	EPA 200.7/6010	0.7	50
Lead	ug/L	EPA 200.7/6010	1.9	50
Magnesium	mg/L	EPA 200.7/6010	0.014	0.05
Manganese	ug/L	EPA 200.7/6010	0.15	50
Molybdenum	ug/L	EPA 200.7/6010	0.7	50
Nickel	ug/L	EPA 200.7/6010	0.7	50
Potassium	mg/L	EPA 200.7/6010	0.006	0.05
Selenium	ug/L	EPA 200.7/6010	2.4	50
Sodium	mg/L	EPA 200.7/6010	0.065	0.1
Strontium	ug/L	EPA 200.7/6010	0.19	50
Thallium	ug/L	EPA 200.7/6010	3.6	50
Titanium	ug/L	EPA 200.7/6010	0.26	50
Vanadium	ug/L	EPA 200.7/6010	0.5	50
Zinc	ug/L	EPA 200.7/6010	1.65	50

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
05/21/08 16:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W - 1	0805062-01	Water	05/07/08 10:10	05/08/08 08:00
W - 2	0805062-02	Water	05/07/08 10:30	05/08/08 08:00
W - 3	0805062-03	Water	05/07/08 11:20	05/08/08 08:00
W - 4	0805062-04	Water	05/07/08 11:30	05/08/08 08:00
LAKE	0805062-05	Water	05/07/08 12:00	05/08/08 08:00
C - 1	0805062-06	Water	05/07/08 11:40	05/08/08 08:00
C - 2	0805062-07	Water	05/07/08 11:50	05/08/08 08:00
DUP	0805062-08	Water	05/07/08 12:05	05/08/08 08:00

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
05/21/08 16:27

REPORT OF RESULTS

W - 1

0805062-01 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.064	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:41	
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:36	
Soluble Reactive Phosphate EPA 365.2	0.372	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	3.76	0.08	mg/L	1	8050811	05/08/08	05/09/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	4.41	0.16	mg/L	2	8050810	05/08/08	05/09/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.15	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	13.0	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

W - 2

0805062-02 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.063	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:42	
Nitrate-Nitrite, Total EPA 353.2	0.017	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:34	
Soluble Reactive Phosphate EPA 365.2	0.222	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.81	0.08	mg/L	1	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	3.58	0.16	mg/L	2	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.840	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	8.0 I	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

W - 3

0805062-03 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.033 I	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:43	
Nitrate-Nitrite, Total EPA 353.2	0.007 I	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:44	
Soluble Reactive Phosphate EPA 365.2	0.412	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.81	0.08	mg/L	1	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	2.06	0.08	mg/L	1	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.673	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	4.0 I	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

Advanced Environmental Laboratories, Inc.

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NELAP Certified - FDH #E82001

Wetland Solutions, Inc.	Project: Lake Hancock	**Reported:**
2809 NW 161 Ct	Project Manager: Ron Clarke	05/21/08 16:27
Gainesville, FL 32609		

W - 4

0805062-04 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.088	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:49	
Nitrate-Nitrite, Total EPA 353.2	0.008 I	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:45	
Soluble Reactive Phosphate EPA 365.2	0.270	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.88	0.08	mg/L	1	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	1.97	0.08	mg/L	1	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.641	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	5.0 I	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

LAKE

0805062-05 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.244	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:50	
Nitrate-Nitrite, Total EPA 353.2	0.035	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:50	
Soluble Reactive Phosphate EPA 365.2	0.004 I	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.91	0.16	mg/L	2	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	14.3	0.40	mg/L	5	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.328	0.006	mg/L	1	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	117	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

C - 1

0805062-06 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.174	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:51	
Nitrate-Nitrite, Total EPA 353.2	0.051	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:47	
Soluble Reactive Phosphate EPA 365.2	0.022	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.34	0.16	mg/L	2	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	8.27	0.32	mg/L	4	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	1.03	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	43.0	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

Advanced Environmental Laboratories, Inc.

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Wetland Solutions, Inc.
2809 NW 161 Ct
Gainesville, FL 32609

Project: Lake Hancock
Project Manager: Ron Clarke

Reported:
05/21/08 16:27

C - 2

0805062-07 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.555	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:52	
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:48	
Soluble Reactive Phosphate EPA 365.2	0.060	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	4.39	0.16	mg/L	2	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	5.27	0.32	mg/L	4	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.452	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	22.0	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

DUP

0805062-08 (Water)

Analysis	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Ammonia, Total EPA 350.1	0.227	0.009	mg/L	1	8051206	05/12/08	05/21/08 14:53	
Nitrate-Nitrite, Total EPA 353.2	0.073	0.003	mg/L	1	8050901	05/09/08	05/13/08 12:49	
Soluble Reactive Phosphate EPA 365.2	0.004 I	0.002	mg/L	1	8050814	05/08/08	05/08/08 13:15	
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	5.20	0.16	mg/L	2	8051214	05/12/08	05/13/08 00:00	
Total Kjeldahl Nitrogen, Total EPA 351.2	17.0	0.40	mg/L	5	8051213	05/12/08	05/13/08 00:00	
Total Phosphorus, Total EPA 365.3 (Spec)	0.662	0.012	mg/L	2	8050816	05/08/08	05/08/08 15:15	
Total Suspended Solids EPA 160.2 - 100mL	105	2.0	mg/L	1	8051212	05/12/08	05/12/08 12:00	

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Project Manager: Ron Clarke

Reported:
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QUALITY CONTROL FOR SAMPLES

Solids - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8051212 = Total Suspended Solids EPA 160.2 - 100mL										
Blank (8051212-BLK1)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Blank (8051212-BLK2)										
Total Suspended Solids EPA 160.2 - 100mL	2.0 U	2.0	mg/L							
Reference (8051212-SRM1)										
Total Suspended Solids EPA 160.2 - 100mL	106		mg/L	100		106	80-120			

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8050810 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8050810-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8050810-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	2.00	0.08	mg/L	2.00		100	90-110			
Batch 8050811 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8050811-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8050811-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	1.88	0.08	mg/L	2.00		94	90-110			
Batch 8050814 = Soluble Reactive Phosphate EPA 365.2										
Blank (8050814-BLK1)										
Soluble Reactive Phosphate EPA 365.2	0.002 U	0.002	mg/L							
Duplicate (8050814-DUP1)	**Source: 0805062-02**									
Soluble Reactive Phosphate EPA 365.2	0.220	0.002	mg/L		0.222			0.9	20	
Matrix Spike (8050814-MS1)	**Source: 0805062-03**									
Soluble Reactive Phosphate EPA 365.2	0.638		mg/L	0.250	0.402	94	80-120			

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Project Manager: Ron Clarke

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Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8050814 = Soluble Reactive Phosphate EPA 365.2										
Reference (8050814-SRM1)										
Soluble Reactive Phosphate EPA 365.2	0.681		mg/L	0.680		100	80-120			
Batch 8050816 = Total Phosphorus, Total EPA 365.3 (Spec)										
Blank (8050816-BLK1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.006 U	0.006	mg/L							
Duplicate (8050816-DUP4)	**Source: 0805062-06**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.04	0.012	mg/L		1.03			1	20	
Matrix Spike (8050816-MS4)	**Source: 0805062-07**									
Total Phosphorus, Total EPA 365.3 (Spec)	1.00	0.012	mg/L	0.533	0.452	103	80-120			
Reference (8050816-SRM1)										
Total Phosphorus, Total EPA 365.3 (Spec)	0.100	0.006	mg/L	0.108		93	90-110			
Batch 8050901 = Nitrate-Nitrite, Total EPA 353.2										
Blank (8050901-BLK1)										
Nitrate-Nitrite, Total EPA 353.2	0.003 U	0.003	mg/L							
Duplicate (8050901-DUP3)	**Source: 0805062-01**									
Nitrate-Nitrite, Total EPA 353.2	0.016	0.003	mg/L		0.016			0	20	
Matrix Spike (8050901-MS3)	**Source: 0805062-02**									
Nitrate-Nitrite, Total EPA 353.2	0.435	0.003	mg/L	0.400	0.017	104	90-110			
Reference (8050901-SRM1)										
Nitrate-Nitrite, Total EPA 353.2	0.398	0.003	mg/L	0.402		99	90-110			
Reference (8050901-SRM2)										
Nitrate-Nitrite, Total EPA 353.2	0.944	0.003	mg/L	1.00		94	90-110			
Batch 8051206 = Ammonia, Total EPA 350.1										
Blank (8051206-BLK1)										
Ammonia, Total EPA 350.1	0.009 U	0.009	mg/L							
Duplicate (8051206-DUP3)	**Source: 0805062-08**									
Ammonia, Total EPA 350.1	0.232	0.009	mg/L		0.227			2	20	
Reference (8051206-SRM1)										
Ammonia, Total EPA 350.1	0.602	0.009	mg/L	0.580		104	90-110			

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Project: Lake Hancock
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05/21/08 16:27

Nutrients - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8051213 = Total Kjeldahl Nitrogen, Total EPA 351.2										
Blank (8051213-BLK1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
Blank (8051213-BLK2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	0.08 U	0.08	mg/L							
LCS (8051213-BS1)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.92	0.08	mg/L	2.00		96	90-110			
LCS (8051213-BS2)										
Total Kjeldahl Nitrogen, Total EPA 351.2	1.94	0.08	mg/L	2.00		97	90-110			
Duplicate (8051213-DUP2) **Source: 0805062-06**										
Total Kjeldahl Nitrogen, Total EPA 351.2	7.84	0.32	mg/L		8.27			5	20	
Matrix Spike (8051213-MS3) **Source: 0805062-07**										
Total Kjeldahl Nitrogen, Total EPA 351.2	9.47	0.32	mg/L	4.00	5.27	105	90-110			
Batch 8051214 = Total Kjeldahl Nitrogen, Dissolved EPA 351.2										
Blank (8051214-BLK1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	0.08 U	0.08	mg/L							
LCS (8051214-BS1)										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.08	0.08	mg/L	2.00		104	90-110			
Duplicate (8051214-DUP1) **Source: 0805062-02**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.90	0.08	mg/L		2.81			3	20	
Matrix Spike (8051214-MS1) **Source: 0805062-03**										
Total Kjeldahl Nitrogen, Dissolved EPA 351.2	2.81	0.08	mg/L	1.00	1.81	100	90-110			

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Wetland Solutions, Inc. 2809 NW 161 Ct Gainesville, FL 32609	Project: Lake Hancock Project Manager: Ron Clarke	**Reported:** 05/21/08 16:27

NOTES AND DEFINITIONS

S-REX	Poor matrix spike recovery; created reextract.
S-CON	Poor matrix spike recovery on reextract; results and recoveries confirm.
D-RNG	The difference of the concentrations of the sample and its duplicate is low in comparison to the MDL. It is the general policy of the laboratory that when the range is at this level the sample is not rerun and the data is considered acceptable.
U	Analyte not detected at or above the method detection limit
I	Analyte not detected above the practical quantitation limit.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN-OF-CUSTODY FORM

PROJECT: Lake Hancock Vegetation Study
PROJECT MANAGER: Chris Keller
PHONE: (386) 462-9286
FAX: (386) 462-3196
E-MAIL: ckeller@wetlandsolutionsinc.com
ADDRESS: 2809 NW 161 Court, Gainesville, FL 32609

Wetland Solutions, Inc.

WO-080506 2

TURN AROUND TIME: X Standard Rush

Special Instructions/Comments:

No Chl a.
No samples filtered in field.

ANALYSIS REQUESTED
PRESERVATIVE

LAB: **Advanced Environmental Laboratories, Inc.**

PRESERVATIVE KEY

0. NONE 3. H2SO4
1. HCL 4. Sodium Thiosulfate
2. NHO3 5. Other _____

Matrix: SW (Surface Water), GW (Ground Water), S (Soil), P (Periphyton)

DATE	TIME	SAMPLE I. D.	MATRIX	GRAB/ COMP	TSS	NH3 / NO3	TKN / TKN Dissolved	TP / Ortho P			REMARKS / ALTERNATE DESC
5/7/2008	1010	W-1	SW	GRAB	X	X	X	X			-01
5/7/2008	1030	W-2	SW	GRAB	X	X	X	X			-02
5/7/2008	1120	W-3	SW	GRAB	X	X	X	X			-03
5/7/2008	1130	W-4	SW	GRAB	X	X	X	X			-04
5/7/2008	1200	~~W-5~~ Lake	SW	GRAB	X	X	X	X			-05
5/7/2008	1140	C-1	SW	GRAB	X	X	X	X			-06
5/7/2008	1150	C-2	SW	GRAB	X	X	X	X			-07
5/7/2008	1205	DUP	SW	GRAB	X	X	X	X			-08
		bottles labelled as lake									

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature Sky Notestein	Signature	Signature	Signature
Sky Notestein Printed Name	Printed Name Pat	Printed Name	Printed Name
Wetland Solutions, Inc. Company	Company AEL	Company	Company
Date / Time 5/08/2008 0800	Date / Time 5-8-8 0800	Date / Time	Date / Time

Advanced Environmental Labs Inc

Advanced Environmental Labs
6815 SW Archer Rd.
Gainesville, FL 32608

Client: Wetland Solutions Project name: Lake Hancock

Date/Time Rcvd: 5-8-08/0800 Log-In request number: 0805062

Received by: P.L. Completed by: CSJ

Cooler/Shipping Information:

Courier: ☐ AEL ☑ Client ☐ UPS ☐ Pony Express ☐ FedEx ☐ Blue Streak ☐ ASAP ☐ Other (describe): _____

Type: ☑ Cooler ☐ Box ☐ Other (describe) Used LT-1 mini temp. F.S.

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	C-1				
Temp (°C)	1.4°C				
Temp taken from	☐ Temp blank ☑ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle	☐ Temp blank ☐ Sample bottle
Temp measured with	☑ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):	☐ IR gun ☐ Thermometer (enter ID):

Other Information:

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			X
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Did the sample labels agree with the chain of custody?	X		
7. Were correct bottles used for the tests indicated?	X		
8. Were proper sample preservation techniques indicated on the label?	X		
9. Were samples received within holding times?	X		
10. Were all VOA vials checked for the presence of air bubbles?			X
11. Were there air bubbles present in the VOA vials?			X
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	X		
13. Was the cooler temperature less than 6°C?	X		
14. Were sample pHs checked and recorded by Sample Control? *NOTE: VOA samples are checked by laboratory analysis.*	X		
15. Were the sample containers provided by AEL?	X		
16. Were samples accepted into the laboratory?	X		

Comments: