GeoDesign Inc

ANNUAL MONITORING AND MAINTENANCE REPORT

Ross Island Sand & Gravel

4315 SE McLoughlin Boulevard

Portland, Oregon

For

Ross Island Sand & Gravel

July 30, 2012

GeoDesign Project: RossIsland-2-05-01

GeoDesign INC

July 30, 2012

Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201

Attention: Ms. Jennifer Sutter

Annual Monitoring and Maintenance Report
Ross Island Sand & Gravel
4315 SE McLoughlin Boulevard
Portland, Oregon
GeoDesign Project: RossIsland-2-05-01

On behalf of RISG, GeoDesign, Inc. is pleased to submit this Annual Monitoring and Maintenance report for the RISG facility (project site) on Ross and Hardtack islands in Portland, Oregon. Monitoring and maintenance of the completed remedial actions at the project site have been conducted under the Consent Order (DEQ No. LQVC-NWR-11-01). Attachment B of the Consent Order includes the LTMMCP. RISG completed the first year of monitoring and maintenance to verify that the engineering controls remain in place and protective over the long term.

♦ ♦ ♦

15575 SW Sequoia Pkwy - Suite 100 | Portland, OR 97224 | Off 503.968.8787 | Fax 503.968.3068

We appreciate your assistance on this project. Please call if you have questions regarding this document.

Sincerely,

GeoDesign, Inc

Craig W. Ware, R.G.
Principal Geologist

cc: Mr. Aaron Courtney, Stoel Rives, LLP (via email only)
Mr. Charles Steinwandel, Ross Island Sand & Gravel (two copies)
Mr. Craig Jacobs, Ross Island Sand & Gravel (via email only)

MFC:CWW:kt
Attachments
One copy submitted
Document ID: RossIsland-2-05-01-073012-envr-AnnualMMReport.doc

TABLE OF CONTENTS **PAGE NO.**

1.0 INTRODUCTION

RISG completed annual monitoring and maintenance of the remedial action areas as described in the LTMMCP (GeoDesign, 2011b) for the RISG facility located on Ross and Hardtack islands in Portland, Oregon (project site). Monitoring included visual observations of the upland remedial action areas, updated bathymetry of the sediment cap, and pH monitoring in the four designated zones with historical elevated pH. Additional monitoring was conducted following rain events as described below.

The project site is shown relative to surrounding physical features on Figure 1. A site plan of the project site is shown on Figure 2.

For your reference, definitions of all acronyms used herein are defined at the end of this document.

2.0 BACKGROUND

2.1 PROJECT SITE LOCATION AND DESCRIPTION

The project site is located at approximately river mile 15 of the Willamette River, approximately 1 mile upstream of downtown Portland, Oregon (as shown on Figure 1). As shown on Figure 2, the Willamette River flows to the west of the project site and the Holgate Slough flows to the east of the project site.

For documentation purposes, the project site has been divided into two geographical areas: the uplands and the lagoon. The uplands include the Process Operations Area and the Fill Area (as shown on Figure 2). Currently, the Process Operations Area includes the aggregate processing plant, an office, and maintenance sheds. The Fill Area is vegetated with a variety of shrubs, conifers, cottonwood trees, and vine maples, except along the shoreline areas where reclamation is ongoing. The lagoon was created by a dike created in the 1920s connecting Ross and Hardtack islands. Typical seasonal low and high water in the lagoon ranges from approximate elevation -1.0 to +15.0 feet RID.

2.2 PROJECT SITE HISTORY

The RISG facility is a major supplier of aggregate in the Portland area. Mining and processing of sand and gravel from the Willamette River at the project site began in the 1920s and continued until 2001. Aggregate processing activities by RISG continue on Hardtack Island and will continue for the foreseeable future.

A Conditional Use Permit was issued in 1979 by COP, which formally established the need for RISG to reclaim uplands and in-water mined areas. From 1979 through 1999, RISG began importing fill material under the Conditional Use Permit. Fill was accepted from various outside sources and used to backfill mined areas of the lagoon. Available documentation indicated fill accepted between the early 1980s and 1998 originated primarily from the following sources:

- Non-commercial material generated from on-site processing
- Material dredged from other local sites as part of maintenance activities
- Waste rock from a U.S. Army Corps of Engineers navigation project at Bonneville Locks

The 1979 Reclamation Plan was updated in 2002 based on a more current and complete scientific understanding of the river, the island complex, and surrounding habitat. The strategies in the updated reclamation plan (Landau, 2002a) reinforced existing public policies by using clean fill to achieve the reclamation and to create diverse habitat development on an accelerated basis. The 2002 reclamation approach estimated that placement of approximately 4 to 4.6 million cubic yards of reclamation fill over a 10-year period would achieve habitat creation objectives described in the 2002 Reclamation Plan. Fill placed at the project site (both in-water and upland) between approximately 1979 and 2002 is documented in the RI/RA report (Landau, 2002b).

Since 2003, approximately 4.5 million cubic yards have been placed in the remedial action and reclamation areas as documented in the Annual Monitoring Reports (GeoDesign 2005a, 2005b, 2006b, 2007a, 2008, 2009, 2010b, 2011a) submitted to DSL in accordance with the DSL Removal Fill Permit No. 26. In addition, monthly progress reports submitted to DEQ through January 2011 provided interim summaries of fill quantities and sources. DEQ discontinued the monthly progress report requirement after the January 2011 submittal.

Reclamation will continue at the project site until the reclamation goals have been achieved. Future fill sources and volumes will continue to be documented in annual monitoring reports.

2.3 PREVIOUS INVESTIGATIONS AND FEASIBILITY STUDY

Numerous investigations have been completed at the project site since 1998 and are discussed in detail in the RI/RA report (Landau, 2002b) and the FS (GeoDesign, 2005c), which are on file at DEQ's Northwest Region office. A summary of these investigations is as follows:

- Investigation of the breached CAD cell in 1998
- Baseline characterization investigation of "clear zones" in the lagoon and uplands area in 1999
- Turbidity study of the lagoon and the Willamette River in 1999
- Biological assessment of the lagoon and uplands in 1999 and 2000
- Investigation of the material previously dredged from the Port of Portland shipyards and contained in the CAD cells in 1999 and 2000
- Phase I and Phase II RIs between 1999 and 2001

The above investigations evaluated:

1. the effectiveness of the CAD cells in isolating contaminants from the aquatic environment (buried sediment deemed unsuitable for unconfined open water disposal).
2. the contaminants present in other fill material and in surface sediments in the southern portion of the lagoon, particularly in the vicinity of the CAD Cell No. 5 breach.
3. the extent of contamination in the uplands areas.

Results of these investigations indicated the following contaminants present at the project site:

- Metals (lead, arsenic, copper, chromium, nickel, and zinc)
- PAHs
- TBTs
- PCBs
- Pesticides
- Petroleum hydrocarbons

Identified likely sources of this contamination included imported dredged material from the Port of Portland shipyards at Swan Island and Terminal 4 facilities and other dredge projects, legacy contaminants present in sediment deposited at the project site through natural processes, and on-site operation and maintenance of gravel processing equipment. In addition, elevated pH was detected at various locations along the southern shoreline of the lagoon, believed to result from historical disposal of concrete truck cleanout residues.

In August 2005, GeoDesign completed an FS for the project site (GeoDesign, 2005c), which identified areas warranting remedial actions and evaluated various remedial action alternatives to address the contaminants of concern. The identified remedial action areas included five upland areas identified as Remedial Action Area A1, Remedial Action Area A2 (comprised of three sub-areas), and Remedial Action Area C and three in-water areas identified as Remedial Action Areas D, E, and F. Subsequent to the FS, DEQ's ROD (DEQ, 2005) established the remedial action requirements based on the results of previous investigations and the FS. The remedial action areas are shown on Figure 2. Section 4.0 of this report summarizes the selected remedies for each remedial action area.

In 2007, the final design reports and addendums for the upland remedial action areas (GeoDesign, 2007b, 2007d) and the in-water remedial action areas (GeoDesign, 2007c, 2007e, and 2007f) were submitted to and approved by DEQ. Upland remedial actions were implemented and completed in 2007 with the exception of Sub-Area A2-2, as documented in the Construction Completion Report for Remedial Action Areas A1, A2, and C (GeoDesign, 2007g). The remedial action for upland Sub-Area A2-2 was implemented in the fall of 2007 and completed in early 2008. The in-water remedial actions have essentially been on-going since the 2002 reclamation goals were established. The in-water remedial actions were substantially completed in December 2009. In-water filling in Remedial Action Areas D, E, and F continued in 2010. Completion of Remedial Action Areas D, E, and F and Upland Remedial Action Sub-Area A2-2 are documented in the Construction Completion Report for Remedial Action Areas A2-2, D, E, and F (GeoDesign, 2010a) and Addendum Nos. 1 and 2 (GeoDesign, 2010c and 2010d).

3.0 PURPOSE AND OBJECTIVES

The purpose of this annual report is to document monitoring and maintenance of the remedial action areas over the past year.

The objectives of the monitoring are to ensure the remedial actions are effective and remain effective in achieving the RAOs and to identify areas needing maintenance. Maintenance would

be performed in identified areas as necessary to restore the protectiveness of the selected remedial action. Periodic review of all the monitoring requirements will be conducted to evaluate their adequacy and necessity over time.

4.0 REMEDIAL ACTION AREAS

The following provides a summary of the remedial action areas, the contaminated media, and the remedy that are monitored and maintained (as necessary). Locations of the remedial action areas are shown on Figure 2.

Area	Contaminated Media	Remedial Action
A1	Arsenic and zinc in surface soil	Excavated soil and contained in Area B; backfilled with clean soil
A2-1	Soil along access road impacted with PAHs	Drainage berms and erosion BMPs manage surface water to help prevent erosion to the lagoon
A2-2	Soil along dike between settling pond and lagoon impacted with PAHs	Slope stabilization with ecology blocks and fill to prevent erosion to the lagoon
A2-3	Soil along gravel road with PAHs	Erosion control BMPs to control surface water runoff and erosion to the lagoon
B	Former settling pond containing TBT-impacted soil from CAD Cell No. 5 breach and arsenic- and zinc-impacted soil from Area A1	Containment cell capped with 3 feet of clean soil
C	Groundwater impacted with benzo(a)pyrene, manganese, and elevated pH	Groundwater monitoring confirmed no unacceptable risk
D	Sediment impacted with metals, TBT, PCBs, and PAHs as a result of CAD Cell No. 5 breach	Constructed a minimum 3-foot-thick sediment cap
E	Southern lagoon shoreline areas with elevated pH	Constructed a 3-foot-thick sediment cap
F	CAD Cell Nos. 1 through 5	Contained and stabilized slopes adjacent to CAD cells

Monitoring is not required for Remedial Action Areas A1 and C.

5.0 LONG-TERM MONITORING AND MAINTENANCE

5.1 GENERAL

Between July 1, 2011 and June 30, 2012, RISG completed the long-term monitoring and maintenance of applicable remedial action area as described in the LTMMCP. The upland monitoring areas and requirements include the following:

- Annual monitoring of BMPs (Upland Remedial Action Sub-Areas A2-1 and A2-3)
- Annual monitoring of stabilized slopes (Remedial Action Sub-Area A2-2)
- Annual monitoring of upland capped area (Remedial Action Area B)

In addition, Remedial Action Sub-Areas A2-1, A2-2, and A2-3 require monitoring following a rain event of 0.5 inch in 24 hours or greater.

In-water monitoring areas and requirements include the following:

- Annual bathymetric surveys to evaluate cap thickness and slope stability (Remedial Action Areas D, E, and F)
- Annual pH monitoring (Zones 1 through 4, Remedial Action Area E)

Lastly, the LTMMCP specified additional monitoring after one or more of the following significant events:

- Rainfall of greater than 3.4 inches in a 24-hour period (COP, 2008) will warrant monitoring of established BMPs and stabilized slopes.
- A seismic event of 6.0 or greater on the Richter scale will warrant a site-wide assessment of the sediment cap, side slopes adjacent to the CAD cells, soil caps, and stabilized slopes adjacent to the lagoon.
- A river flood stage of 18 feet, RID (NOAA, 2011a) that inundates any portion of the upland remedial actions will warrant an assessment of these areas once water levels subside.
- A river flood stage of 24 feet, RID (NOAA, 2011b) will warrant a site-wide assessment of the in-water remedial actions and the upland remedial actions impacted by the flood waters. The assessment will be completed after water levels subside.

Significant events did not occur during this reporting period.

The following sections describe the monitoring that occurred for this reporting period.

5.2 UPLAND

Routine monitoring of the upland remedial action areas was completed in general accordance with the LTMMCP. The monitoring and associated documentation is described below. Completed monitoring forms are included in Appendix A. Project site photographs are included in Appendix B.

5.2.1 Remedial Action Area B

Remedial Action Area B is the soil cap over the former settling pond. On March 21, 2012, RISG, GeoDesign, and DEQ conducted the annual monitoring event. The soil cap was monitored for signs of erosion, holes, ruts, rills, vandalism, and rodent burrowing. In addition, the condition of the vegetation over the soil cap was observed for signs of stress or dead spots. Vegetation was not distressed, with the exception of some felled trees that appeared to be the result of beaver activity. Deer tracks were also observed on top of the soil cap during the annual monitoring event. Based on visual observations, the soil cap was intact and appeared to be in good condition, indicating that maintenance or contingency measures are not warranted at this time.

5.2.2 Remedial Action Sub-Areas A2-1 and A2-3

Remedial Action Sub-Area A2-1 includes drainage berms and trenches to manage surface water runoff. The drainage berms slow and redirect runoff toward an existing vegetated area to the east and a series of biofilter bags to the west. In addition, this area was covered with gravel. Remedial Action Sub-Area A2-3 includes gravel placed on the road and a filter trench to reduce and detain soil entrained in surface runoff.

On March 21, 2012, RISG, GeoDesign, and DEQ conducted the annual monitoring event. The remedial action sub-areas were monitored for evidence of rills, ruts, sediment accumulation, sloughing, or damage. The monitoring for Remedial Action Sub-Area A2-1 also included observing the ecology blocks, biofilter bags, and vegetated area.

The annual monitoring event for Remedial Action Sub-Area A2-1 indicated the selected BMPs were helping reduce and/or prevent erosion. Additional action was not warranted based on site observations.

During the annual monitoring event for Remedial Action Sub-Area A2-3, field personnel (RISG, GeoDesign, and DEQ) observed runoff along the filtration trench as a result of recent rains. The runoff contained sediment, but site observations indicated that the sediment did not reach the lagoon. Hay bales had been placed in the filtration trench with the intent of improving sediment control. However, site observations indicated limited effectiveness. In addition, DEQ indicated during the site visit and later confirmed that hay bales were not an ideal BMP for this application. RISG subsequently removed the hay bales as discussed with DEQ.

The LTMMCP prescribed monitoring of these sub-areas following rain events of 0.5 inch in 24 hours. RISG tracked 24-hour rainfall amounts using the Multnomah Rain Gage located approximately 1.8 miles from the project site (http://or.water.usgs.gov/non-usgs/bes). During this reporting period, the threshold rain event was exceeded on 29 occasions. Raw data are included in Appendix A. Project site photographs are included in Appendix B. Generally, RISG performed the requisite monitoring and the documentation indicates the BMPs were effectively achieving the objectives for the remedial action sub-areas with the noted exceptions.

On November 23, 2011, precipitation data indicated 0.70 inch of rain in 24 hours. The following day was Thanksgiving, and RISG did not have personnel on site to perform the monitoring. Recorded rainfall amounts for the prior two days were 0.74 inch and 1.83 inches, respectively. RISG completed the monitoring for these two days and did not observe sediment runoff during each monitoring event. Based on this, the monitoring performed prior to the November 23 rain event adequately documented the BMPs were performing as intended.

Between January 17 and 20, 2012, 24-hour rainfall totals for each day were 0.77 inch, 1.4 inches, 2.4 inches, and 0.85 inch, respectively. RISG completed one monitoring event following the 2.4-inch rain event, which was greatest amount of these sequential events. Signs of erosion were not observed after this event. The last rain event of the series occurred on a Friday, and RISG typically does not have monitoring personnel on site on the weekends. Monitoring performed

during these events indicated the BMPs were performing as intended. Based on this, the monitoring completed during this series of rain events was sufficient to evaluate the BMPs in our professional opinion.

Lastly, rain events greater than 0.5 inch occurred on January 24, January 29, February 25, May 26, and June 4, 2012. Available documentation indicates that monitoring was not completed following these dates, which can be attributed to the events occurring on the weekend or RISG monitoring staff absences. Based on observations completed during more significant rain events, it is our professional opinion that the BMPs most likely prevented erosion from the remedial action sub-areas.

Since implementation, maintenance of Remedial Action Sub-Area A2-1 included placing additional gravel over the road. Monitoring of Remedial Action Sub-Area A2-3 in March 2012 identified rutting in the road required maintenance upon completion of the activities in the area. RISG subsequently smoothed the road and plans to re-rock the road prior to wet weather conditions in October 2012.

5.2.3 Remedial Action Sub-Area A2-2

Routine monitoring of the stabilized slope at Remedial Action Sub-Area A2-2 occurred annually and following a rain event of 0.5 inch in 24 hours. Monitoring included visual observations for signs of erosion such as minor rills and sloughing. On December 5, 2011, monitoring was completed during low water conditions to observe the ecology blocks and associated fill material. Photographs are included in Appendix B. Project site observations indicated that the slope remains stable with no obvious indications of erosion or instability. As noted on the monitoring forms (Appendix A), the ecology blocks were submerged during most of the monitoring events completed as a result of rain events.

Project site observations indicated that routine maintenance was not warranted during this monitoring period.

5.3 LAGOON

The effectiveness of the lagoon remedial action elements is dependent upon limiting/preventing aquatic receptor contact with contaminated sediments. This has been accomplished by stabilizing the slopes adjacent to the CAD cells and constructing a minimum 3-foot-thick sediment cap over the identified contaminated areas.

Annual monitoring completed for Remedial Action Areas D, E, and F is described below.

5.3.1 Sediment Cap Thickness Monitoring

As described in the LTMMCP, sediment cap thickness will be monitored through bathymetric surveys completed on an annual basis. The annual bathymetry will be compared to the 2001 bathymetry (pre-remedial action) and 2010 bathymetry (post-remedial action).

A bathymetric survey was completed in March 2012. An analysis of the sediment cap thickness compared to 2001 was performed using ArcGIS software as shown on Figure 3. The analysis indicates that approximately 143,244 square yards of the total area of approximately

147,500 square yards is covered by at least 3 feet of sediment cap material, which constitutes approximately 97 percent of the total in-water area. The analysis provided in Addendum No. 2 Construction Completion Report (GeoDesign, 2010d) indicated 96 percent coverage based on the 2010 bathymetry. The extent of the analysis area was defined by the submerged portion of the sediment cap and the shallow water limits of the bathymetric survey. The areas identified with less than 3 feet of sediment cap are limited to isolated areas along the perimeter of the bathymetric survey and along the buttressing slope. As described in Addendum No. 2 Construction Completion Report, these apparent deficient areas can be attributed to limitations of the bathymetric data and interpretation anomalies by the modeling software.

Results of the 2012 to 2010 analysis are presented on Figure 4. As shown, the analysis indicates apparent elevation decreases across the sediment cap area. However, the analysis shows a definite striping pattern that parallels the 2010 bathymetric data points and indicates material losses of 3 feet or greater in areas that contradict the 2012 to 2001 analysis. Considering the 2012 to 2001 analysis and the striping pattern, it is our professional opinion that the 2012 to 2010 analysis is not representative of sediment cap changes since the post-remedial action bathymetric survey in 2010 will not be used for performance monitoring purposes in this report.

Based on the 2012 to 2001 analysis, the sediment cap thickness is 3 feet or greater across 97 percent of the in-water area of the remedial action area. The areas identified with less than 3 feet of fill are attributed to modeling limitations and/or data anomalies. The areal extent of the sediment cap with 3 feet or more of fill increased by approximately 1 percent since the last bathymetric survey. Based on this, the sediment cap continues to meet the RAOs, and maintenance or contingency measures are not warranted at this time.

5.3.2 Slope Stability

An analysis of the slopes adjacent to the CAD cells was completed using ArcGIS. Contours generated from the 2012 bathymetry are shown on Figures 3 and 4. Based on the 2012 bathymetry, slopes adjacent to the CAD cells range from approximately 2H:1V to 4H:1V. The final slopes will be at least 3H:1V according to previous slope stability studies. Until reclamation is complete, slopes no steeper than approximately 2H:1V will be maintained. Based on this, slopes adjacent to the CAD cells are buttressed through the remedial actions and reclamation completed to date. Additional measures or monitoring are not warranted at this time. Annual monitoring of the slopes will continue as described in the LTMMCP. Events requiring additional monitoring (i.e., a flood stage of 24 feet RID or a seismic event of magnitude 6 on Richter scale) did not occur during this reporting period.

5.3.3 Remedial Action Area E - pH Monitoring and Maintenance

On April 12, 2012, pH monitoring was completed in Zones 1 through 4 as part of the long-term monitoring and maintenance. In Zone 1, 10 surface grab samples were collected using a Ponar grab sampler. The pH results in this zone ranged between 6.96 and 9.83. In Zone 2, pH data was collected from two locations (HP-3d and HP-6) using the Henry probe. These monitoring locations were co-located with monitoring points from previous events. At location HP-3d, pH measurements were collected at depths of 4 inches below the mud line and 36 inches below the mud line with results of 7.06 and 6.57, respectively. At location HP-6, a pH measurement was collected at a depth of 4 inches below the mud line with a result of 7.20. The Henry probe met

refusal at approximately 12 inches below the mud line and sampling was discontinued at this location. The areal extent of Zone 3 is predominantly upland and pH data was not collected. In Zone 4, five surface grab samples were collected using a Ponar grab sampler. The pH results in Zone 4 ranged between 6.30 and 6.55. Samples were located using GPS. Locations are shown on Figure 5 and tabulated results are shown in Tables 1 and 2. The completed Sediment Sampling and pH Monitoring Form is included in Appendix A.

With the exception of Zone 1, the annual monitoring indicated pH measurements were less than 8.5. Zone 1 sampling indicated pH greater than 8.5 at six locations. Generally, elevated pH measurements were observed in the north and northwest portion of Zone 1, which appears consistent with previous monitoring data in this zone. As shown on Figure 6, the data from 2001 indicated pH ranged between 9.87 and 11.1 in Zone 1. In 2004, measurements within the same zone ranged from 7.51 to 11.08. The recent data indicates pH measurements between 6.96 and 9.83. The data presented on Figure 6 indicates recent pH measurements in Zone 1 are more neutral (i.e., pH is closer to 7.0) than the historical data and does not fluctuate as significantly. This would indicate improved and more stable conditions. Lastly, the 2012 bathymetry indicates a decrease in elevation compared to previous bathymetric data in this area. Prop wash from boat activities in this area may have caused the decrease in elevation, possibly contributing to the observed pH readings. As a proactive measure to help mitigate the pH in Zone 1, RISG began placing additional fill material in Zone 1 after July 1 when the fish window allowed placement at the depths present in Zone 1. After placing fill, the pH in Zone 1 will be evaluated according to the procedures in the LTMMCP. If elevated pH is observed in Zone 1, additional measures as discussed in the LTMMCP will be discussed with DEQ and implemented as necessary.

6.0 SUMMARY

RISG completed the first year of monitoring of the remedial action areas as required by Consent Order (DEQ No. LQVC-NWR-11-01) and as described in the LTMMCP. The monitoring completed for this first year indicates that the remedial action areas are meeting the RAOs and are protective of human health and the environment.

The pH monitoring completed in Zone 1 indicated that pH greater than 8.5 was observed in the north and northwest portion of Zone 1. RISG is placing additional fill material over these areas to mitigate the observed elevated pH. Following fill placement, the elevated pH areas will be monitored to evaluate the effectiveness of the mitigation measures. The results of this evaluation will be provided to DEQ under separate cover.

RISG will continue monitoring, maintenance, and reporting in accordance with LTMMCP. The next annual report will be submitted in July 2013.

♦ ♦ ♦

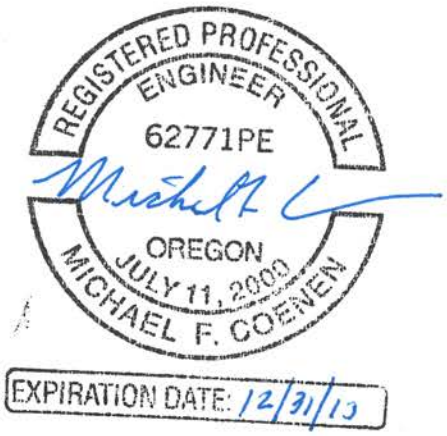
We appreciate your continued support on this project. Please call if you have questions concerning this plan.

Sincerely,

GeoDesign, Inc.

Mike F. Coenen, P.E.
Associate Engineer

Craig W. Ware, R.G.
Principal Geologist



REFERENCES

COP, 2008, *Stormwater Management Manual Revision 4*, City of Portland, dated August 1, 2008.

DEQ, 2005. *Record of Decision; Remedial Action for Ross Island Sand & Gravel; Portland, Oregon*, prepared in December 2005.

GeoDesign, 2005a. *Revised 2003 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated October 14, 2005.

GeoDesign, 2005b. *Revised 2004 Annual Monitoring Report;, Ross Island Sand & Gravel; Portland, Oregon*, dated October 14, 2005.

GeoDesign, 2005c. *Feasibility Study; Ross Island Sand & Gravel; Portland, Oregon*, dated August 2, 2005.

GeoDesign, 2006b. *2005 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated September 25, 2006.

GeoDesign, 2007a. *Draft 2006 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated February 15, 2007.

GeoDesign, 2007b. *Final Design Report; Remedial Action Areas A1, A2, and C; Ross Island Sand & Gravel; 4315 SE McLoughlin Boulevard; Portland, Oregon*, dated February 28, 2007.

GeoDesign, 2007c. *Final Design Report; Remedial Action Areas D, E, and F; Ross Island Sand & Gravel; 4315 SE McLoughlin Boulevard; Portland, Oregon*, dated May 25, 2007.

GeoDesign, 2007d. *Addendum; Final Design Report; Remedial Action Area A1; Ross Island Sand & Gravel; Portland, Oregon*, dated June 4, 2007.

GeoDesign, 2007e. *Addendum 1; Final Design Report; Remedial Action Areas D, E. and F; Ross Island Sand & Gravel; Portland, Oregon*, dated August 10, 2007.

GeoDesign, 2007f. *Addendum 2; Final Design Report; Remedial Action Areas D, E, and F; Ross Island Sand & Gravel; Portland, Oregon*, dated October 15, 2007.

GeoDesign, 2007g. *Construction Completion Report; Remedial Action Areas A1, A2, and C; Ross Island Sand & Gravel; Portland, Oregon*, dated October 15, 2007.

GeoDesign, 2008. *Draft 2007 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated February 15, 2008.

GeoDesign, 2009. *2008 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated February 16, 2009.

GeoDesign, 2010a. *Construction Completion Report; Remedial Action Upland Area A2-2 and In-Water Areas D, E, and F; Ross Island Sand & Gravel; Portland, Oregon,* dated January 29, 2010.

GeoDesign, 2010b. *2009 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated February 15, 2010.

GeoDesign, 2010c. *Addendum 1; Construction Completion Report; Remedial Action Upland Area A2-2 and In-Water Areas D, E, and F; Ross Island Sand & Gravel; Portland, Oregon*, dated July 23, 2010.

GeoDesign, 2010d. *Addendum 2; Construction Completion Report; Remedial Action Upland Area A2-2 and In-Water Areas D, E, and F; Ross Island Sand & Gravel; Portland, Oregon*, dated December 6, 2010.

GeoDesign, 2011a. *2011 Annual Monitoring Report; Ross Island Sand & Gravel; Portland, Oregon*, dated February 15, 2011.

GeoDesign, 2011b. *Long-Term Monitoring, Maintenance, and Contingency Plan, Ross Island Sand & Gravel, 4315 SE McLoughlin Boulevard, Portland, Oregon*, dated April 29, 2011.

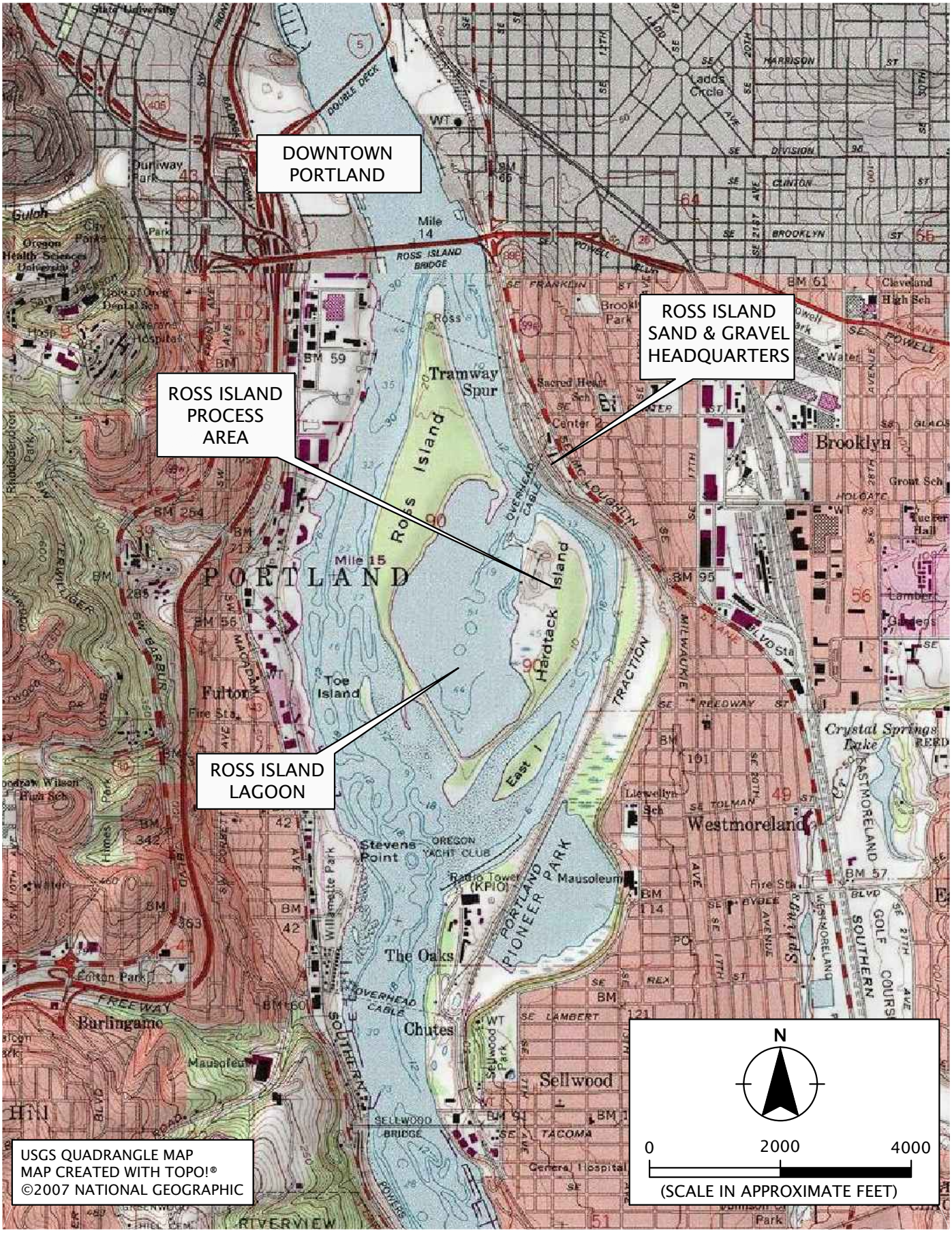
Landau, 2002a. *Ross Island Reclamation Plan; Ross Island Sand & Gravel Co.; Portland, Oregon,* dated September 30, 2002.

Landau, 2002b. *Remedial Investigation/Risk Assessment; Ross Island Sand & Gravel Co.; Portland, Oregon,* dated October 21, 2002.

NOAA, 2011a, *http://water.weather.gov, Advanced Hydrologic Prediction Service,* Morrison Bridge Gauge, Flood Stage

NOAA, 2011b, *http://water.weather.gov, Advanced Hydrologic Prediction Service,* Morrison Bridge Gauge, Moderate Flood Stage

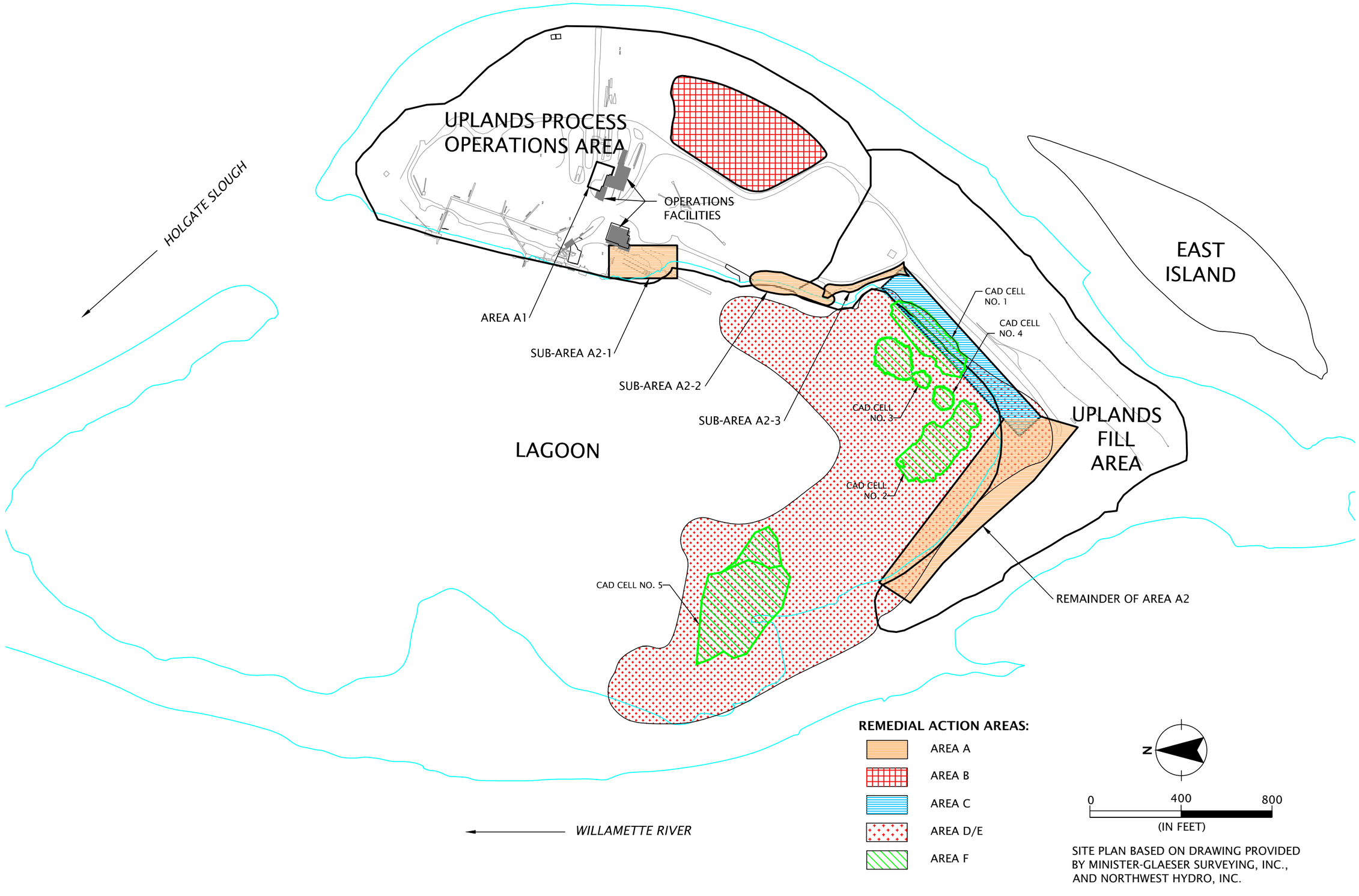
FIGURES



GeoDesign Inc
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01	**VICINITY MAP**	
JULY 2012	ROSS ISLAND SAND & GRAVEL PORTLAND, OR	**FIGURE 1**

Printed By: aday | Print Date: 7/30/2012 8:29:07 AM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-VM01.dwg | Layout: FIGURE 1



SITE PLAN BASED ON DRAWING PROVIDED BY MINISTER-GLAESER SURVEYING, INC., AND NORTHWEST HYDRO, INC.

SITE PLAN

FIGURE 2

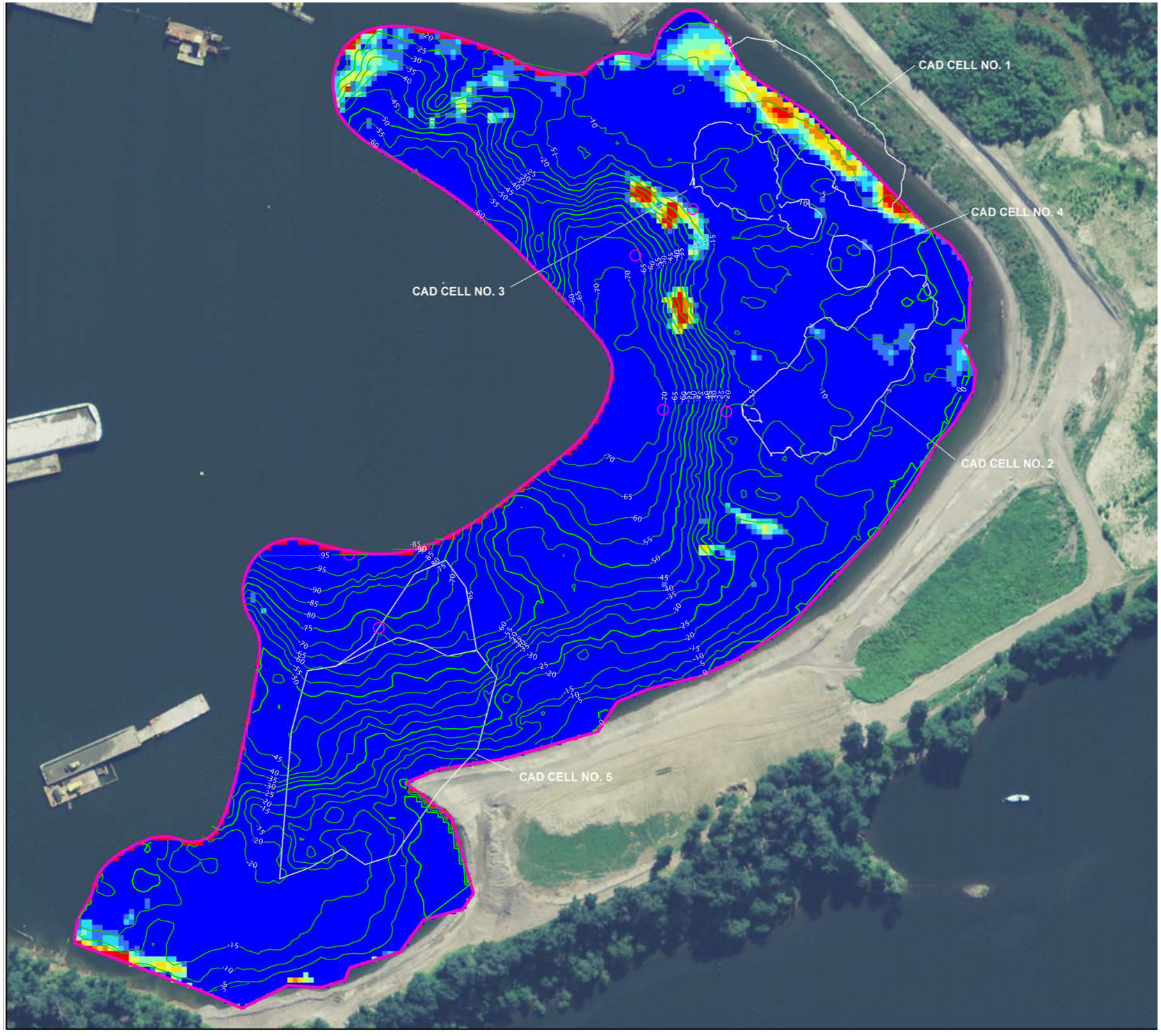
ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

ROSSISLAND-2-05-01

JULY 2012

GeoDesign Inc
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

Printed By: aday | Print Date: 7/30/2012 8:07:20 AM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-SP01.dwg | Layout: FIGURE 2



ROSS ISLAND LAGOON BATHYMETRY ANALYSIS

LEGEND

- CAD CELLS
- 5-FOOT CONTOUR (2012 DATA)
- SEDIMENT CAP BOUNDARY

2012 - 2001 BATHYMETRY DATA

SEDIMENT CAP AREA = 147,500 yd2

- Loss of 3 feet or more
- Loss of 2 to 3 feet
- Loss of 1 to 2 feet
- Loss of less than 1 foot
- Gain of less than 1 foot
- Gain of 1 to 2 feet
- Gain of 2 to 3 feet
- Gain of 3 feet or more (143,244 yd2)

N

0 200 400

(SCALE IN FEET)

SITE PLAN BASED ON IMAGE OBTAINED FROM ARC GIS, JUNE 15, 2009

2012 - 2001 SEDIMENT CAP ANALYSIS

ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

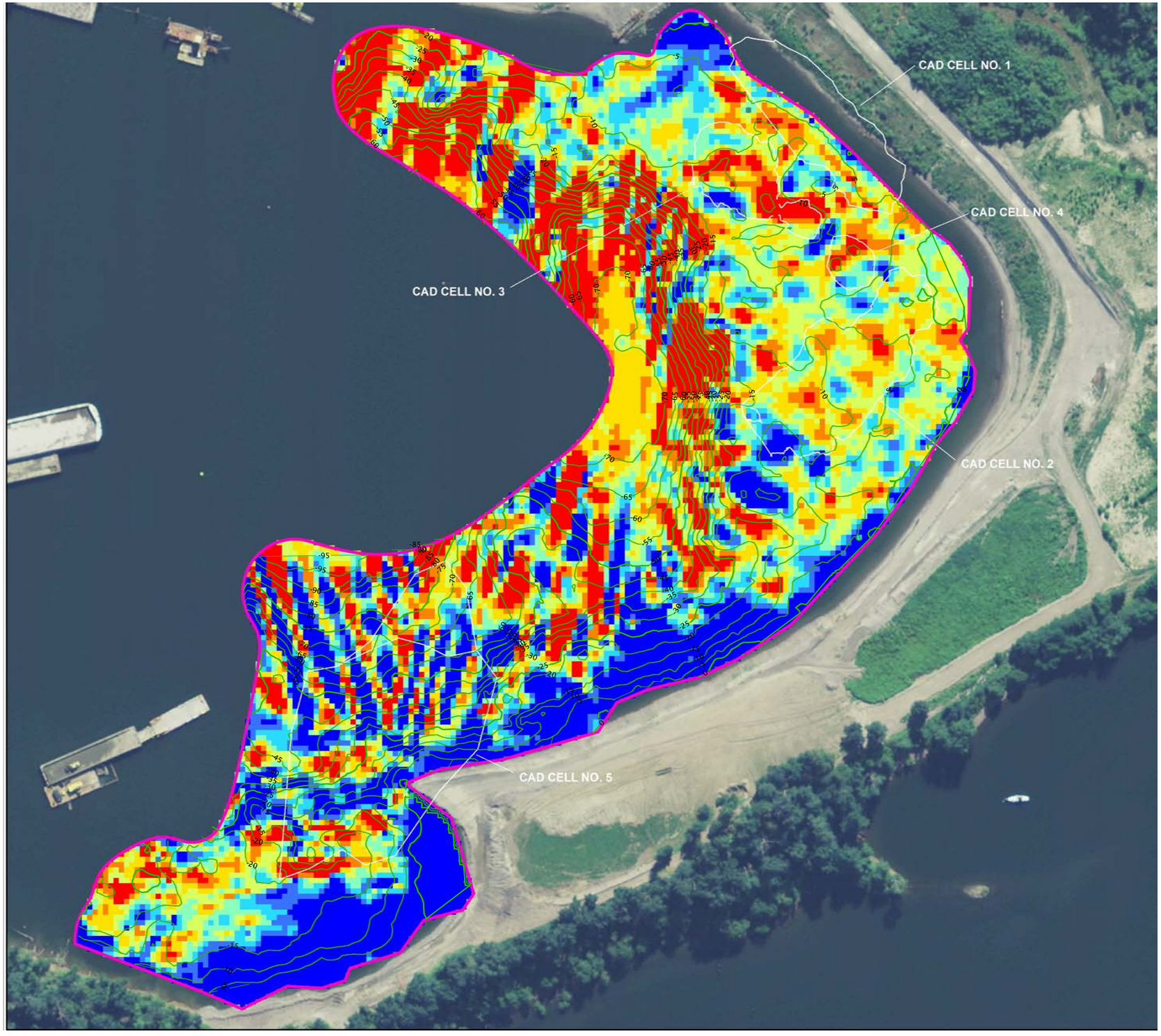
FIGURE 3

ROSSISLAND-2-05-01

JULY 2012

GeoDesign NW
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

Printed By: aday | Print Date: 7/30/2012 8:32:24 AM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-SCA01.dwg | Layout: FIGURE 3



ROSS ISLAND LAGOON BATHYMETRY ANALYSIS

LEGEND

- CAD CELLS
- 5-FOOT CONTOUR (2012 DATA)
- SEDIMENT CAP BOUNDARY

2012 - 2010 BATHYMETRY DATA

SEDIMENT CAP AREA = 147,500 yd2

- Loss of 3 feet or more
- Loss of 2 to 3 feet
- Loss of 1 to 2 feet
- Loss of less than 1 foot
- Gain of less than 1 foot
- Gain of 1 to 2 feet
- Gain of 2 to 3 feet
- Gain of 3 feet or more (69,767 yd2)

N

0 200 400

(SCALE IN FEET)

SITE PLAN BASED ON IMAGE OBTAINED FROM ARC GIS, JUNE 15, 2009

2012 - 2010 SEDIMENT CAP ANALYSIS

ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

FIGURE 4

ROSSISLAND-2-05-01

JULY 2012

GeoDesign
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

Printed By: aday | Print Date: 7/30/2012 8:34:01 AM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-SCA02.dwg | Layout: FIGURE 4

UPLANDS PROCESS OPERATIONS AREA

OPERATIONS FACILITIES

EAST ISLAND

LAGOON

UPLANDS FILL AREA

ZONE 1

ZONE 2

ZONE 3

ZONE 4

CAD CELL NO. 1

CAD CELL NO. 2

CAD CELL NO. 3

CAD CELL NO. 4

CAD CELL NO. 5

APPROXIMATE 1998 BREACH REPAIR

PH–100 8.61

PH–101 6.96

PH–98 8.10

PH–102 7.73

PH–97 9.83

PH–103 6.97

PH–99 9.55

PH–104 8.98

PH–96 9.32

PH–95 9.53

PH–94 6.40

PH–90 6.55

PH–93 6.42

PH–91 6.30

PH–92 6.54

HP–6 7.20(@4")

HP–3 7.06(@4") 6.57(@36")

LEGEND:

- AREA F (CAD CELLS)
- PREVIOUSLY IDENTIFIED ZONES OF ELEVATED pH
- SUB-AREA A2-2
- APPROXIMATE SHORELINE DURING 2007 SURVEY
- ⊙ PH–90 6.55 — PONAR GRAB SAMPLE LOCATION WITH pH RESULTS
- ⊙ HP–3 7.06(@4") 6.57(@36") — HENRY PROBE SAMPLE LOCATION WITH pH RESULT AND SAMPLE DEPTH

N

0 300 600

(SCALE IN FEET)

SITE PLAN BASED ON DRAWING PROVIDED BY MINISTER-GLAESER SURVEYING, INC., AND NORTHWEST HYDRO, INC.

PH SAMPLE LOCATIONS

ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

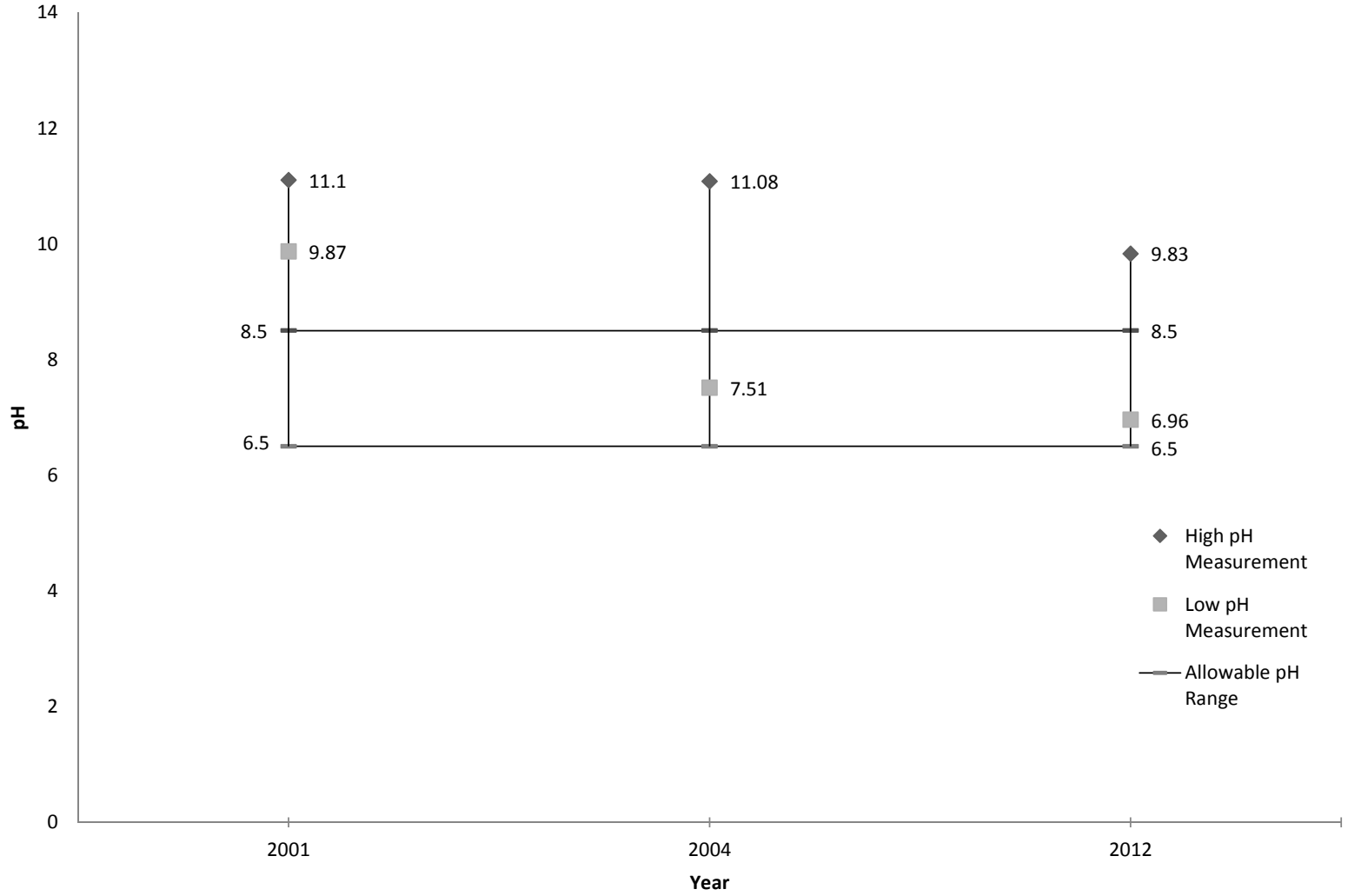
FIGURE 5

ROSSISLAND-2-05-01

JULY 2012

GeoDesign
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

Printed By: aday | Print Date: 7/30/2012 9:28:31 AM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-SP01-for-ASB-field.dwg | Layout: FIGURE 5



GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01

JULY 2012

ZONE 1 – HISTORICAL pH RANGE COMPARISON

ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

FIGURE 6

TABLES

TABLE 1
Summary of pH Measurements - Zone 1 and Zone 4
2012 Annual Monitoring and Maintenance
Ross Island Sand & Gravel
Portland, Oregon

Sample I.D.	Approximate Location		Date	Time	Water Level (USGS)[1]	Water Level (RID)[2]	Lagoon Depth at Sample Location (feet)	Sample Depth (feet below sediment surface)	Sample Elevation (RID)	pH	Lagoon pH	Zone
	Oregon State Plane											
	Northing	Easting										
PH-90	670666.37	7646670.47	04/12/12	9:05	9.91	9.91	33.5	0 - 0.5	-23.6	6.55	7.03	4
PH-91	670644.63	7646568.89	04/12/12	9:25	10.04	10.04	27	0 - 0.5	-17.0	6.30	6.49	
PH-92	670724.70	7646563.90	04/12/12	9:35	10.04	10.04	21	0 - 0.5	-11.0	6.54	6.43	
PH-93	670753.56	7646648.61	04/12/12	9:45	10.07	10.07	29.5	0 - 0.5	-19.4	6.42	6.45	
PH-94	670690.77	7646640.79	04/12/12	9:55	10.06	10.06	31.5	0 - 0.5	-21.4	6.40	6.49	
PH-95	669709.00	7648202.00	04/12/12	12:45	9.92	9.92	13.5	0 - 0.5	-3.6	**9.53**	7.67	1
PH-96	669638.21	7648199.00	04/12/12	13:04	9.89	9.89	16.5	0 - 0.5	-6.6	**9.32**	6.98	
PH-97	669656.65	7648268.48	04/12/12	13:25	9.81	9.81	12.5	0 - 0.5	-2.7	**9.83**	7.01	
PH-98	669643.12	7648316.40	04/12/12	13:30	9.81	9.81	11.5	0 - 0.5	-1.7	8.10	7.22	
PH-99	669710.51	7648280.41	04/12/12	13:45	9.79	9.79	12	0 - 0.5	-2.2	**9.55**	7.05	
PH-100	669701.67	7648340.30	04/12/12	13:50	9.79	9.79	8.5	0 - 0.5	1.3	**8.61**	6.96	
PH-101	669612.31	7648342.29	04/12/12	14:05	9.77	9.77	2	0 - 0.5	7.8	6.96	6.98	
PH-102	669589.17	7648268.42	04/12/12	14:15	9.73	9.73	11.5	0 - 0.5	-1.8	7.73	6.91	
PH-103	669585.15	7648199.83	04/12/12	14:20	9.73	9.73	16.5	0 - 0.5	-6.8	6.96	7.06	
PH-104	669668.48	7648221.71	04/12/12	14:25	9.72	9.72	12	0 - 0.5	-2.3	**8.98**	7.36	

Notes:
1. USGS Tide measurement from Morrison Bridge gage.
2. RID = Morrison Bridge Gage

Bolding Indicates pH level above 8.5

TABLE 2
Summary of pH Measurements - Zone 2
2012 Annual Monitoring and Maintenance
Ross Island Sand & Gravel
Portland, Oregon

Sample I.D.	Approximate Location		Date	Time	Water Level (USGS)	Water Level (RID)[1]	Lagoon Depth at Sample Location	Lagoon pH	Sample Depth (inches below sediment surface)	Sample Elevation (RID)	pH	Note(s)
	Oregon State Plane											
	Northing	Easting										
HP-3	669090.03	7647715.49	04/12/12	11:35	10.03	10.03	12 inches	6.61	4	8.7	7.06	No differential hydraulic head observed
				12:10	9.96	9.96			36	6.0	6.57	
HP-6	669668.99	7647079.70	04/12/12	11:10	10.03	10.03	12 inches	6.66	4	8.7	7.20	Refusal at 12 inches

Notes:
1. USGS Tide measurement from Morrison Bridge gage.
2. RID = Morrison Bridge Gage

APPENDIX A

APPENDIX A

LONG-TERM MONITORING AND MAINTENANCE FORMS

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: July 18th, 2011 12:30 Weather: Partial cloudy

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine / Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.81" Rain

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☒ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Good	Yes ☐ No ☒
	Biofilter Bags	Good	Yes ☐ No ☒
	Gravel	Good	Yes ☐ No ☒
	Ditches	Good	Yes ☐ No ☒
	Vegetation	None	Yes ☐ No ☒
	Ecology Block	Good	Yes ☐ No ☒
A2-3	Gravel	Good	Yes ☐ No ☒
	Filter Trench	Good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Good Shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☒
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: Oct 12th, 2011 12:15 Weather: cloudy, breeze

Name: Tony W Signature: T Wall

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.69

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: good shape

Cracks, Settlement? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Good	Yes ☐ No ☒
	Biofilter Bags	Good	Yes ☐ No ☒
	Gravel	Good	Yes ☐ No ☒
	Ditches	Good	Yes ☐ No ☒
	Vegetation	N/a	Yes ☐ No ☒
	Ecology Block	Good	Yes ☐ No ☒
A2-3	Gravel	Good	Yes ☐ No ☒
	Filter Trench	Good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe:

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Good Shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☑
If yes, provide description:

Are the ecology blocks intact and aligned? YES ☐ NO ☑
If no, provide description:

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☑
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe:

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: NOV 3, 2011 11:30 Weather: misting / Windy

Name: Tony W Signature TyW

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.68" Rain

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Good shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Good	Yes ☐ No ☒
	Biofilter Bags	Good	Yes ☐ No ☒
	Gravel	Good	Yes ☐ No ☒
	Ditches	Good	Yes ☐ No ☒
	Vegetation	None	Yes ☐ No ☒
	Ecology Block	Good	Yes ☐ No ☒
A2-3	Gravel	Good	Yes ☐ No ☒
	Filter Trench	Good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Good shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☒
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: Nov 17th, 2011 14:30 Weather: Rain / wind

Name: Tony W. Signature

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine (Significant Event)
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.59" Rain

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Very good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: good shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑

Location: _____

_____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑

Location: _____

_____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑

Location: _____

_____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☒

If yes, describe: _____

_____

_____

Are contingency measures necessary? YES ☐ NO ☑

If yes, describe: _____

_____

_____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: Nov 17th, 2011 14:50 Weather: Rain / wind

Name: Tony W Signature

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.54" Rain

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	good	Yes ☐ No ☒
	Biofilter Bags	Good	Yes ☐ No ☒
	Gravel	Good	Yes ☐ No ☒
	Ditches	Good	Yes ☐ No ☒
	Vegetation	None	Yes ☐ No ☒
	Ecology Block	Good	Yes ☐ No ☒
A2-3	Gravel	Good	Yes ☐ No ☒
	Filter Trench	Good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Good shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☒
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 11-22-11 13:00 Weather: Raining / windy

Name: Tony Weeks Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine (Significant Event)
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.71" Rain

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Very good shape

_____

_____

Cracks, Settlement? YES ☐ NO ☒
Location: _____

_____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

_____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

_____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

_____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: No visual Problems

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Great Shape	Yes ☐ No ☒
	Biofilter Bags	Great Shape	Yes ☐ No ☒
	Gravel	Great Shape	Yes ☐ No ☒
	Ditches	Great shape	Yes ☐ No ☒
	Vegetation	NONE	Yes ☐ No ☒
	Ecology Block	Great Shape	Yes ☐ No ☒
A2-3	Gravel	Great Shape	Yes ☐ No ☒
	Filter Trench	Great Shape	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Visual Look great Great shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☒
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 11-23-11 10:00 Am. Weather: Overcast / Rain

Name: Tony Weeler Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine / Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): _____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: In good Shape. A couple Rain Puddles. Needs A Little maintenance.

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☒ NO ☐
Location: Small Puddles front of Area. Just need a Little bit of Gravel to fill in Small Puddles. (Filled in Puddles with gravel 15:00 11/23/11)
Maintenance required? YES ☒ NO ☐ finished maintenance 11/23/11

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Very good shape. No issues in visual view

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 11-23-11 10:15 Am. Weather: Cloudy / Raining

Name: Tony Wecker Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 2.5" Rain in 24 hrs

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	great shape	Yes ☐ No ☒
	Biofilter Bags	great shape	Yes ☐ No ☒
	Gravel	great shape	Yes ☐ No ☒
	Ditches	great shape	Yes ☐ No ☒
	Vegetation	NONE	Yes ☐ No ☐
	Ecology Block	great shape	Yes ☐ No ☒
A2-3	Gravel	great shape	Yes ☐ No ☒
	Filter Trench	great shape	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope ~~Great Sh~~ Great shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: Dec 5th, 2011 8:30Am. Weather: Foggy, Partial Sunny, Tide Level 1.5'

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): Annual Low Water inspection
Tide Level was At 1.5' for inspection

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms		Yes ☐ No ☐
	Biofilter Bags		Yes ☐ No ☐
	Gravel		Yes ☐ No ☐
	Ditches		Yes ☐ No ☐
	Vegetation	N/a	Yes ☐ No ☐
	Ecology Block		Yes ☐ No ☐
A2-3	Gravel		Yes ☐ No ☐
	Filter Trench		Yes ☐ No ☐

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Visual inspection of Slope shows Slope is in good Condition.

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description:

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description:

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 12-28-11 Weather: Partial Cloudy

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.82" Rainfall 24 hours

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Visual Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope great Shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Great Shape	Yes ☐ No ☒
	Biofilter Bags	"	Yes ☐ No ☒
	Gravel	"	Yes ☐ No ☒
	Ditches	"	Yes ☐ No ☒
	Vegetation	N/a	Yes ☐ No ☐
	Ecology Block	Great Shape	Yes ☐ No ☒
A2-3	Gravel	"	Yes ☐ No ☒
	Filter Trench	"	Yes ☐ No ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 12-29-11 11:30 Weather: Raining / windy

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.76 Rainfall in Past 24 hours

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

*General condition of soil cap:*_____

_____

_____

Cracks, Settlement? YES ☐ NO ☐
Location:_____

_____

Maintenance required? YES ☐ NO☐

Holes, Penetrations? YES ☐ NO ☐
Location:_____

_____

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☐ NO ☐
Location:_____

_____

Maintenance required? YES ☐ NO☐

Erosion, rills? YES ☐ NO ☐
Location:_____

_____

Maintenance required? YES ☐ NO☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time:_____ Weather:_____

Name:_____ Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID):_____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Good Condition	Yes ☐ No ☒
	Biofilter Bags	"	Yes ☐ No ☒
	Gravel	"	Yes ☐ No ☒
	Ditches	"	Yes ☐ No ☒
	Vegetation	N/a	Yes ☐ No ☐
	Ecology Block	Good Condition	Yes ☐ No ☒
A2-3	Gravel	"	Yes ☐ No ☒
	Filter Trench	"	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Great Condition

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☑
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☑ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☑
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 12-30-11 13:00 Weather: Cloudy Drizzle

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): Rainfall Last 24 hours 0.62

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: In Very Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: In great Shape No visual Problems

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 12-30-11 13:30 Weather: Cloudy

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): _____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Great Shape	Yes ☐ No ☒
	Biofilter Bags	Great Shape	Yes ☐ No ☒
	Gravel	Great Shape	Yes ☐ No ☒
	Ditches	Great Shape	Yes ☐ No ☒
	Vegetation	N/A	Yes ☐ No ☒
	Ecology Block	Great Shape	Yes ☐ No ☒
A2-3	Gravel	Great Shape	Yes ☐ No ☒
	Filter Trench	Great Shape	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Good shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description:

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description:

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-13-12 10:15 A.m. Weather: Cold, Windy, Raining

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 1.21" Rain

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☒ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: good condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-13-12 10:30 A.m. Weather: Cold, Windy, Raining/Snow

Name: Tony D. Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): _____

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Good	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Good Excavation	Yes ☒ No ☒
	Filter Trench	Good Excellent	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☒ NO ☐
If yes, describe: There is A few ruts in the area that need to be filled over with gravel. Work is being done in this area. issue is known And Attention will be given to correct.

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope EXCELLENT

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-15-12 Weather: Windy, Raining

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.70" Rain (3-14-12)

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Good Condition

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-15-12 Weather: Windy, Raining

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.70" Rain 3-14-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Excellent	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Excellent	Yes ☐ No ☒
	Filter Trench	Excellent	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☒ NO ☐
If yes, describe: Due to working in this area Vehicles have made small wheel ditches that need to be corrected. This situation is known and will be fixed when work is done. Not a serious Problem

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Excellent

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 1-20-12 Weather: Cloudy

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 2.40 inches of Rain 24 hr. Period.

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap (3 photos)

General condition of soil cap: Visual Inspection Shows Area in Good Shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap (2 phases) (Semi soil)

General condition of soil cap: Visual inspection Area in great shape

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 1-20-12 Weather: Raining

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 2.40 inches of Rain 24 hr Period

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Good Condition	Yes ☐ No ☒
	Biofilter Bags	11	Yes ☐ No ☒
	Gravel	Prior to inspection--- New gravel was Paved over Existing Area	Yes ☐ No ☒
	Ditches	11	Yes ☐ No ☒
	Vegetation	11	Yes ☐ No ☒
	Ecology Block	11	Yes ☐ No ☒
A2-3	Gravel	Good Condition	Yes ☐ No ☒
	Filter Trench	11	Yes ☐ No ☒

A2-1 New Gravel was Poured over Existing gravel for more Secure Area And better maintance. This was done befor inspection.

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Visual inspection very good shape

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☐
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
PHOTODOCUMENTATION LOG

(Please print out all photos as 3X5 or larger and attach to form)

Photo I.D.	Direction	Date and Time	Location and Description

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-16-12 08:30 Am Weather: Sunny

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 1.06" Rain 3-15-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: Very good

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ruts from vehicles? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-16-12 3:00 P.m. Weather: Partial cloudy

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 1.06" Rain 3-15-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Excellent	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Good A few areas need to be smoothed	Yes ☒ No ☒
	Filter Trench	Excellent	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☒ NO ☒
If yes, describe: Work is being done in this area. Equipment Running Over Area. Once Work is Done the Situation will be Corrected. Some maintenance work was done today to shore up Area.

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Excellent

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: High Water Covering blocks

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-21-12 14:00 Weather: Raining

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: DEQ + Geo Design, Craig Jacobs

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): Annual Inspection + Rain event (.70" 3-20-12)

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

As of 3-21-12, Area A-1 is no longer needed to be observed as an Action Area.

General condition of soil cap:

Cracks, Settlement? YES ☐ NO ☐
Location:

Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location:

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☐ NO ☐
Location:

Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location:

Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

* A suggestion was made that more grass-like vegetation would like to be seen growing in this area. Later in year we might seed this area by hand. *

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-21-12 14:30 Weather: Raining

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: DEQ, GeoDesign, Craig Jacobs

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): Annual inspection + Rain event (.70" Rainfall 3-20-12)

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Well maintained	Yes ☐ No ☒
	Vegetation	Very good	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Well maintained	Yes ☐ No ☒
	Filter Trench	Great shape	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☒ NO ☐
If yes, describe: On North Side of Area Near hill slope, Running water Down slope Needs to be better control by Laying Rock down to Control Water. Not a major issue minor Suggestion

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Very good. Suggestion was made to Lay Another Layer of gravel Near hillside Next to Ramp 1 to Reinforce Hillside slope. minor detail

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: Under Water Assuming they Are

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-30-12 10:30 Weather: Drizzle / windy

Name: Tony W Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): Ramton 24 hrs. 1.36" 3-29-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: _____

Cracks, Settlement? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☑ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Very good

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-30-12 10:40 Weather: Drizzle/ windy

Name: Tony Weeks Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., ~~0.5 inches of rain in 24 hours~~, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 1.36" RainFall 3-29-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Very good ~~Alert~~	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Very good	Yes ☐ No ☒
	Filter Trench	Very good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Due to high water Large Portion of this Area is under water. Area above water is in Excellent Condition

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description:

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: "Under Water"

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 3-30-12 14:00 Weather: Cloudy / Windy

Name: Tony Weeks Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.63" of Rain Fall 3-30-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: _____

Cracks, Settlement? YES ☐ NO ☐
Location: _____
Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location: _____
Maintenance required? YES ☐ NO ☑

Animal intrusion, burrowing? YES ☑ NO ☐
Location: _____
Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location: _____
Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: EXCELLENT

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Ponding? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Dead/dying vegetation? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 3-30-12 Weather: Cloudy / Windy

Name: Tony Weeber Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.62" of Rain on 3-30-12

_____

_____

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Very good	Yes ☐ No ☒
	Ecology Block	Excellent	Yes ☐ No ☒
A2-3	Gravel	Very good	Yes ☐ No ☒
	Filter Trench	Very good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Due to high water this Area is mostly Under water

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: Under ~~Blocks~~ Water

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 4-2-12 Weather: Partly cloudy

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: N/a

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.69 Rainfall on 3-31-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: _____

Cracks, Settlement? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 4-2-12 Weather: Partly cloudy

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: n/a

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.69 Ranfan 3-31-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	Excellent	Yes ☐ No ☒
	Gravel	Excellent	Yes ☐ No ☒
	Ditches	Excellent	Yes ☐ No ☒
	Vegetation	Very good	Yes ☐ No ☒
	Ecology Block	Very good	Yes ☐ No ☒
A2-3	Gravel	Excellent	Yes ☐ No ☒
	Filter Trench	Excellent	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Time of visual inspection, Tide level is too high to see condition of slope

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: High Water, blocks underwater

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 4-20-12 9:00 Am. Weather: Cloudy misting

Name: Tony O. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: N/a

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.55 Rainfall 4-19-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: _____

Cracks, Settlement? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Holes, Penetrations? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Animal intrusion, burrowing? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Erosion, rills? YES ☐ NO ☒
Location: _____

Maintenance required? YES ☐ NO ☒

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 4-20-12 9:30 Am. Weather: Cloudy

Name: Tony D. Signature _____

Other Parties Present During Monitoring Event: _____

_____

Date DEQ notified: n/a

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.55 Rainfall 4-19-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Very good	Yes ☐ No ☒
	Biofilter Bags	Very good	Yes ☐ No ☒
	Gravel	Very good	Yes ☐ No ☒
	Ditches	Very good	Yes ☐ No ☒
	Vegetation	Very good	Yes ☐ No ☒
	Ecology Block	Very good	Yes ☐ No ☒
A2-3	Gravel	Very good	Yes ☐ No ☒
	Filter Trench	Very good	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Due to high tide, slope is Currently Under water

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description:

Are the ecology blocks intact and aligned? YES ☐ NO ☐
If no, provide description: Under water due to high tide

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe:

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe:

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Areas A-1 and B

Date and Time: 5-4-12 13:15 Weather: Raining

Name: Tony D. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: n/a

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.95 Rainfall 5-3-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

Remedial Action Area A-1 Soil Cap

General condition of soil cap: _____

Cracks, Settlement? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Holes, Penetrations? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Animal intrusion, burrowing? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Erosion, rills? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Subsurface soil (>3-feet) exposed? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Ruts from vehicles? YES ☐ NO ☐
Location: _____

Maintenance required? YES ☐ NO ☐

Do any observations warrant urgent attention? YES ☐ NO ☐
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☐
If yes, describe: _____

Remedial Action Area B Soil Cap

General condition of soil cap: Excellent

Cracks, Settlement? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Holes, Penetrations? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Animal intrusion, burrowing? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Erosion, rills? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Subsurface soil (>3-feet) exposed? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Ponding? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Dead/dying vegetation? YES ☐ NO ☑
Location: _____

Maintenance required? YES ☐ NO ☑

Do any observations warrant urgent attention? YES ☐ NO ☑
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☑
If yes, describe: _____

DRAFT

UPLAND MONITORING AND MAINTENANCE FORM
Remedial Action Sub-areas A2-1, A2-2 and A2-3

Date and Time: 5-4-12 13:30 Weather: Cloudy

Name: Tony W. Signature _____

Other Parties Present During Monitoring Event: _____

Date DEQ notified: N/A

Reason for Monitoring Event: Routine/Significant Event
Describe significant event (e.g., 0.5 inches of rain in 24 hours, Seismic event 6.0 or greater, Flood stage of 24-feet RID): 0.95 Rainfall 5-3-12

This form documents field observations of the remedial actions. Areas of concern and sample locations, if collected, are identified on the attached site maps. Photodocumentation of each remedial action area is also attached.

REMEDIAL ACTION SUB-AREAS A2-1 and A2-3 - EROSION CONTROL BMPS

Remedial Action Sub-area	BMP	Describe Condition of BMP	Maintenance/Action Needed
A2-1	Drainage Berms	Excellent	Yes ☐ No ☒
	Biofilter Bags	"	Yes ☐ No ☒
	Gravel	"	Yes ☐ No ☒
	Ditches	"	Yes ☐ No ☒
	Vegetation	"	Yes ☐ No ☒
	Ecology Block	"	Yes ☐ No ☒
A2-3	Gravel	"	Yes ☐ No ☒
	Filter Trench	"	Yes ☐ No ☒

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

REMEDIAL ACTION SUB-AREA A2-2

General condition of slope Very good

Are there signs of erosion on the slope (e.g., sloughing, rivelets, or rills)? YES ☐ NO ☒
If yes, provide description: _____

Are the ecology blocks intact and aligned? YES ☒ NO ☐
If no, provide description: _____

Are there signs of erosion adjacent to the ecology blocks? YES ☐ NO ☒
If yes, provide description: _____

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, describe: _____

Are contingency measures necessary? YES ☐ NO ☒
If yes, describe: _____

RAINFALL RAW DATA

Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
27-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Jul-11	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Jul-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
21-Jul-11	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Jul-11	7	0	0	0	0	0	1	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
18-Jul-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
✓ 17-Jul-11	82	0	0	0	0	2	14	13	0	1	8	28	12	2	1	0	1	0	0	0	0	0	0	0	0
16-Jul-11	13	0	2	6	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-11	29	0	1	6	14	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	29																								

Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
23-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Sep-11	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Sep-11	13	0	0	0	0	0	3	0	0	0	2	0	0	0	0	8	0	0	0	0	0	0	0	0	0
17-Sep-11	9	0	0	0	0	0	0	0	0	3	2	0	0	1	0	0	0	1	0	2	0	0	0	0	0
16-Sep-11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Sep-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
14-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Aug-11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	1
21-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Jul-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	20-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	19-Nov-11	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	18-Nov-11	16	0	3	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0
	17-Nov-11	44	0	0	0	0	0	2	0	2	0	0	1	1	2	0	2	4	2	5	4	1	1	5	5	7
✓	16-Nov-11	59	0	0	0	0	0	0	0	8	11	4	5	1	0	1	1	3	3	0	1	0	0	1	15	5
	15-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14-Nov-11	14	0	0	0	0	2	0	0	0	0	1	7	0	1	0	0	0	2	0	1	0	0	0	0	0
	13-Nov-11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
	12-Nov-11	27	0	2	0	1	0	0	0	0	0	0	0	1	0	0	1	3	10	4	0	0	0	3	1	1
	11-Nov-11	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	5	0	0	0	0	0	0
	10-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9-Nov-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	8-Nov-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5-Nov-11	15	0	0	0	1	3	3	2	1	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	4-Nov-11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
	3-Nov-11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
✓	2-Nov-11	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	18	24	12	4	0
	1-Nov-11	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	31-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30-Oct-11	17	0	1	0	0	0	0	6	3	1	1	0	0	2	1	0	0	1	1	0	0	0	0	0	0
	29-Oct-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	28-Oct-11	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	1	3	0	2	1	0	0	0
	27-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	26-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	24-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	23-Oct-11	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	22-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	21-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	19-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	18-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	17-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	16-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	15-Oct-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14-Oct-11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
	13-Oct-11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	2	0	0	0	0	0	0	0
	12-Oct-11	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
✓	11-Oct-11	55	2	2	6	0	6	0	0	1	0	0	0	10	1	0	0	0	15	0	6	6	0	0	0	0
	10-Oct-11	38	0	0	1	0	8	12	0	0	4	1	1	1	1	0	0	0	0	0	2	3	4	0	0	0
	9-Oct-11	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8-Oct-11	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7-Oct-11	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Oct-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	5-Oct-11	13	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	7	0	1	0	0	0	0
	4-Oct-11	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	6	9	6	4	1	0	1	0
	3-Oct-11	18	2	1	0	1	1	3	1	1	0	0	0	0	0	0	0	0	0	4	3	1	0	0	0	0
	2-Oct-11	12	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1	2	0	2	3	0
	1-Oct-11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	2	0
	30-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	29-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	28-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	27-Sep-11	12	0	0	3	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	26-Sep-11	15	0	0	0	0	1	0	3	2	0	0	0	0	0	0	1	0	0	0	0	1	6	0	1	0
	25-Sep-11	24	0	0	4	2	1	0	0	0	0	0	7	9	0	0	0	0	1	0	0	0	0	0	0	0
	24-Sep-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

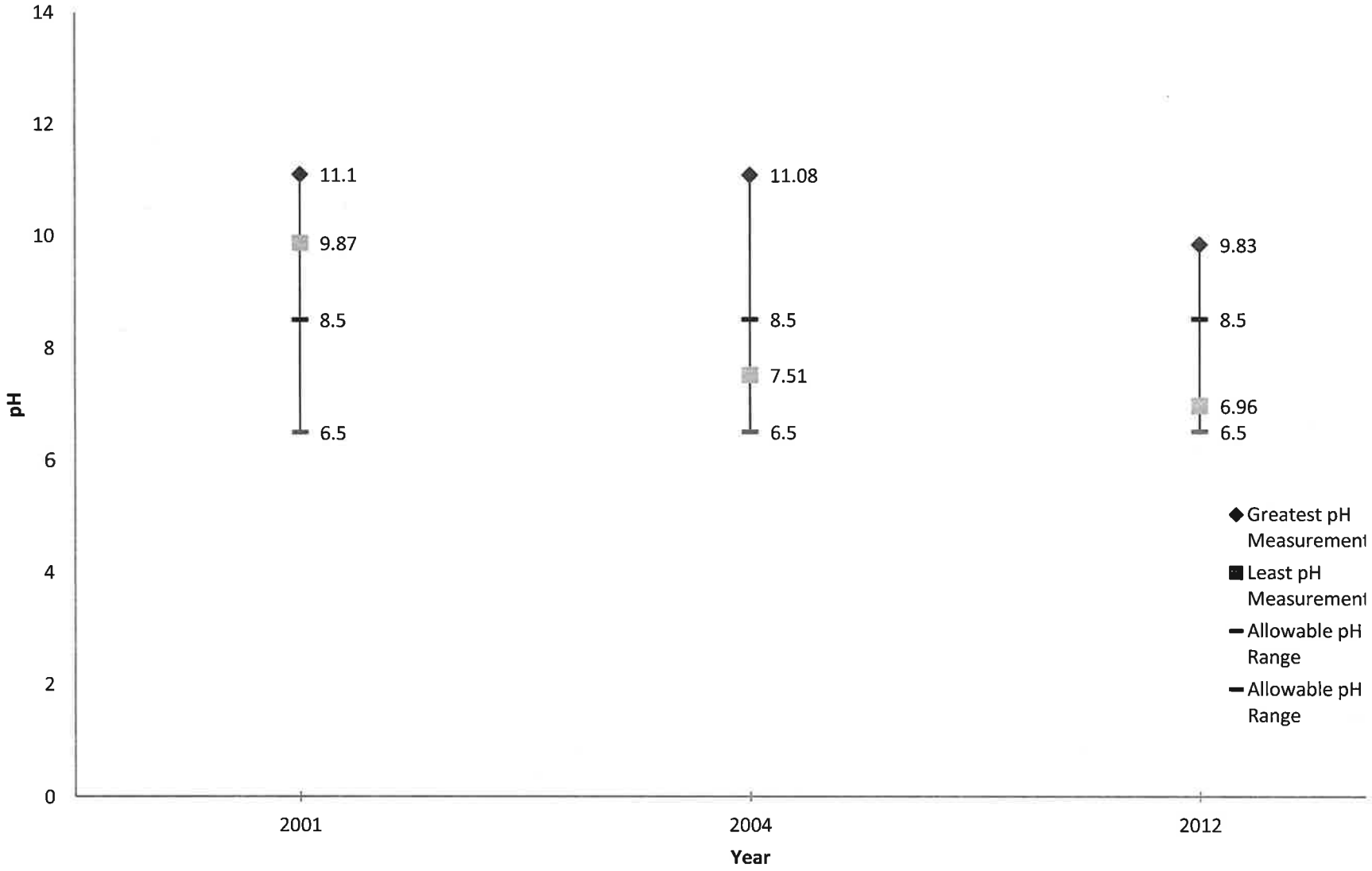
	Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	17-Jan-12	77	0	0	2	6	3	6	4	4	8	2	0	6	0	6	8	6	0	3	1	1	9	1	0	1
	16-Jan-12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	2	0	0	0	0	0	2
	15-Jan-12	7	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	1	1	0	0	0	0	0	0	0
	14-Jan-12	15	0	0	0	0	0	0	0	0	0	0	0	0	7	7	1	0	0	0	0	0	0	0	0	0
	13-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10-Jan-12	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9-Jan-12	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	10	10	10	6
	8-Jan-12	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Jan-12	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	5	2	1	1	0	0	0
	5-Jan-12	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4-Jan-12	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	3	2	1	0	1	0	0
	3-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2-Jan-12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	1-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	31-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
✓	30-Dec-11	69	10	10	14	12	0	0	0	3	13	0	0	5	1	0	0	1	0	0	0	0	0	0	0	0
✓	29-Dec-11	76	0	0	0	0	0	0	0	0	0	0	0	1	6	6	1	1	6	6	2	4	14	6	9	14
✓	28-Dec-11	82	3	1	0	0	1	1	2	0	6	11	6	3	3	6	5	6	10	11	6	1	0	0	0	0
	27-Dec-11	47	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2	2	3	3	8	10	10	4	2
	26-Dec-11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0
	25-Dec-11	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	24-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	23-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	21-Dec-11	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	19-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	18-Dec-11	4	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	17-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	16-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	15-Dec-11	3	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14-Dec-11	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	1	1	2
	13-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10-Dec-11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	9-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1-Dec-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30-Nov-11	4	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	29-Nov-11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
	28-Nov-11	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	27-Nov-11	44	0	0	0	0	0	0	0	0	0	0	0	0	8	7	7	8	8	6	0	0	0	0	0	0
	26-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25-Nov-11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	24-Nov-11	22	0	0	0	0	0	0	0	0	0	0	1	4	0	3	3	0	1	5	0	2	2	0	0	1
	23-Nov-11	70	1	2	2	3	6	2	2	4	4	3	3	5	3	2	2	14	11	1	0	0	0	0	0	0
✓	22-Nov-11	183	4	4	8	0	0	6	19	21	20	26	25	16	2	4	2	0	2	2	6	5	3	3	3	2
✓	21-Nov-11	74	0	0	0	0	0	4	3	9	8	1	1	0	0	0	0	3	7	4	5	6	4	7	8	4

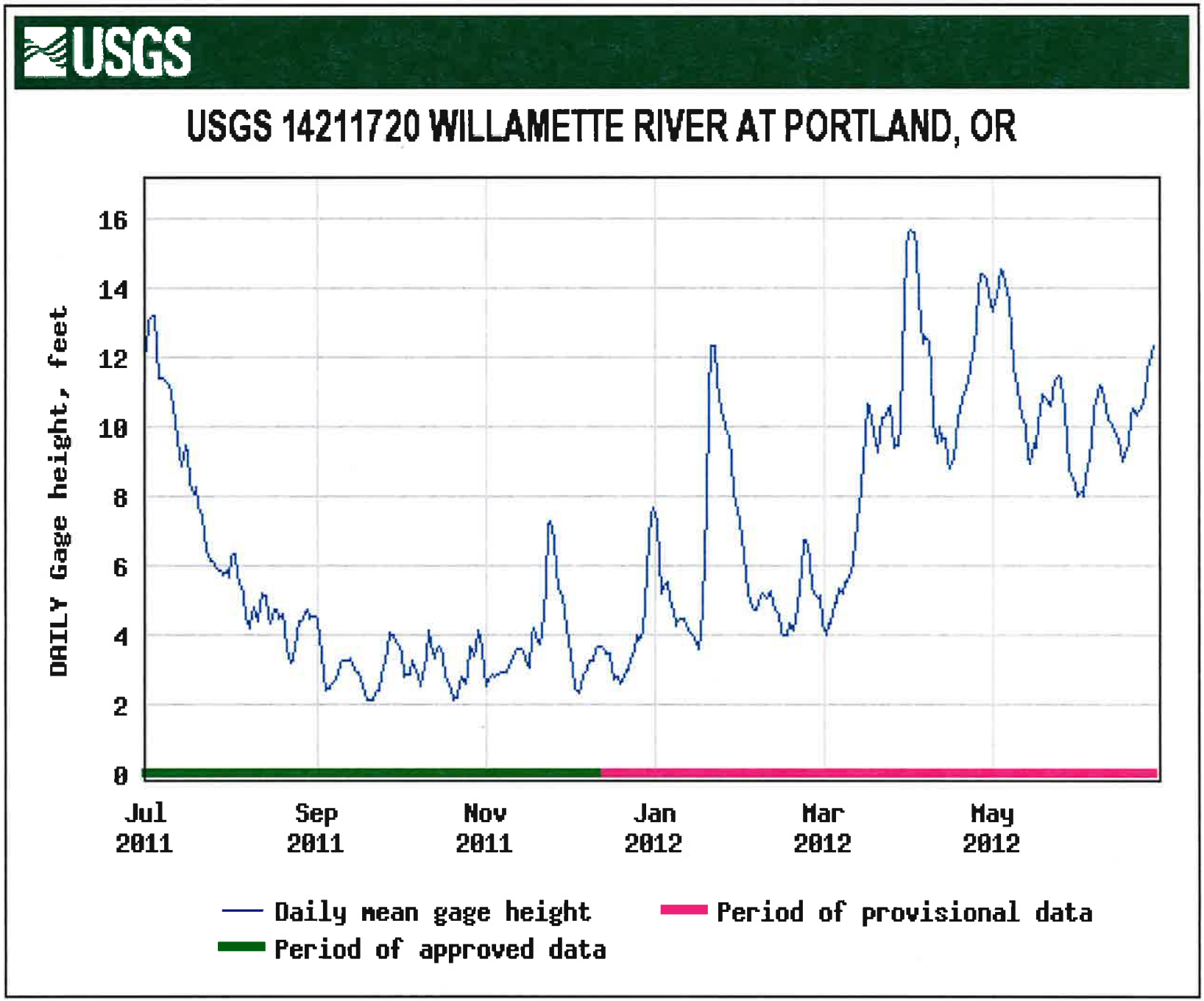
	Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
✓	15-Mar-12	106	7	4	5	6	1	13	15	9	4	10	2	1	0	0	0	0	2	2	7	7	10	1	0	0
✓	14-Mar-12	70	0	0	1	2	1	0	1	2	2	8	8	2	0	1	1	3	2	4	7	7	4	4	4	6
	13-Mar-12	31	5	2	5	5	2	0	0	3	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0
✓	12-Mar-12	129	0	0	0	0	0	0	1	0	0	0	0	0	1	3	7	14	17	15	11	12	20	10	10	8
	11-Mar-12	44	3	1	0	0	4	5	4	4	4	4	8	7	0	0	0	0	0	0	0	0	0	0	0	0
	10-Mar-12	30	0	0	0	0	0	0	0	0	0	0	0	2	1	0	5	0	0	0	0	0	2	10	7	3
	9-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Mar-12	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5-Mar-12	33	0	0	0	0	0	0	0	0	0	2	5	8	13	4	0	0	1	0	0	0	0	0	0	0
	4-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1-Mar-12	20	7	1	0	2	3	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	29-Feb-12	47	0	0	0	5	1	3	1	1	2	6	2	6	8	4	0	0	2	1	0	0	0	0	0	5
	28-Feb-12	41	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	12	9	2	5	7	1	0	1
	27-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	26-Feb-12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
	25-Feb-12	SAT 52	3	4	3	4	8	4	8	5	4	1	2	1	2	1	0	0	0	0	0	0	0	0	0	2
	24-Feb-12	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	12	13	0	2	0	0	3
	23-Feb-12	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22-Feb-12	26	0	0	0	0	7	5	2	1	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	21-Feb-12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0
	20-Feb-12	35	0	0	0	0	1	3	1	0	0	0	0	0	0	1	4	4	7	5	4	0	2	2	1	0
	19-Feb-12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1
	18-Feb-12	14	1	0	4	1	1	2	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	17-Feb-12	29	0	1	1	1	1	0	0	2	2	2	1	0	0	4	0	7	2	4	0	0	0	1	0	0
	16-Feb-12	15	0	0	0	0	0	0	0	0	1	0	1	3	2	1	1	0	0	0	0	1	2	1	1	1
	15-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14-Feb-12	19	0	0	0	0	0	0	0	0	3	4	0	0	2	0	1	0	9	0	0	0	0	0	0	0
	13-Feb-12	6	1	2	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12-Feb-12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0
	11-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10-Feb-12	29	0	0	0	0	1	7	1	0	1	0	0	0	1	3	4	2	2	2	5	0	0	0	0	0
	9-Feb-12	16	0	2	0	1	4	2	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8-Feb-12	18	0	0	0	0	0	0	0	8	2	3	2	0	0	0	0	0	0	0	0	0	2	1	0	0
	7-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2-Feb-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1-Feb-12	4	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	31-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	29-Jan-12	SUN 69	0	0	0	0	0	0	0	0	5	1	2	4	4	2	9	6	4	1	3	5	6	15	0	2
	28-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	27-Jan-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	26-Jan-12	8	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25-Jan-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	24-Jan-12	TUES 92	0	0	0	0	5	3	6	10	11	15	7	1	1	9	11	5	1	7	0	0	0	0	0	0
	23-Jan-12	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22-Jan-12	40	0	0	0	0	0	0	0	0	0	3	6	6	4	1	6	13	0	0	1	0	0	0	0	0
	21-Jan-12	10	6	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
o	20-Jan-12	85	2	0	0	0	0	0	0	1	1	2	4	5	8	11	7	3	0	4	1	10	13	5	2	6
✓	19-Jan-12	240	0	0	7	9	13	19	19	24	26	27	25	28	26	3	0	0	0	1	1	0	0	6	0	6
o	18-Jan-12	140	0	4	12	11	39	27	18	15	6	6	1	0	0	0	0	0	0	0	0	0	1	0	0	0

	Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	12-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6-May-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
	5-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4-May-12	21	0	0	1	0	0	0	0	0	0	3	1	0	6	7	0	1	2	0	0	0	0	0	0	0	
✓	3-May-12	95	8	8	6	12	7	5	3	7	7	10	20	1	1	0	0	0	0	0	0	0	0	0	0	0	
	2-May-12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	5	
	1-May-12	10	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	
	30-Apr-12	14	8	4	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
	29-Apr-12	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	10	
	28-Apr-12	3	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	27-Apr-12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	
	26-Apr-12	29	2	5	5	7	3	1	0	0	0	0	0	0	0	2	1	2	0	0	1	0	0	0	0	0	
	25-Apr-12	17	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	1	2	1	3	6	
	24-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	23-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	22-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	21-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20-Apr-12	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
✓	19-Apr-12	55	0	0	0	0	0	0	0	6	7	7	7	1	4	8	14	1	0	0	0	0	0	0	0	0	
	18-Apr-12	23	1	2	1	1	6	5	0	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	
	17-Apr-12	14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	3	3	4	
	16-Apr-12	36	8	2	7	4	1	3	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	15-Apr-12	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	8	
	14-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	13-Apr-12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
	12-Apr-12	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11-Apr-12	32	0	0	0	0	1	0	5	3	7	1	1	2	0	0	0	1	0	7	0	0	0	1	3	0	
	10-Apr-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
	9-Apr-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	8-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6-Apr-12	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
	5-Apr-12	43	0	0	0	8	5	2	1	1	0	0	0	0	6	0	1	0	0	0	0	5	9	5	0	0	
	4-Apr-12	8	1	0	0	0	0	0	0	0	0	1	2	1	1	0	0	1	0	0	0	0	0	1	0	0	
	3-Apr-12	27	0	0	0	0	0	0	6	6	3	3	2	4	1	0	0	0	0	0	0	0	2	0	0	0	
	2-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1-Apr-12	6	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	
✓	31-Mar-12	69	4	4	4	2	0	2	12	14	6	4	1	0	0	0	0	0	0	1	4	1	1	8	1	0	
✓	30-Mar-12	63	7	17	5	9	10	5	1	2	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	
✓	29-Mar-12	136	2	2	4	3	1	3	2	4	1	0	4	7	8	7	12	12	4	1	3	22	8	9	12	5	
	28-Mar-12	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	4	1	0	1	1	
	27-Mar-12	22	3	1	1	1	0	1	1	0	3	0	0	0	3	0	0	1	1	1	0	2	0	3	0	0	
	26-Mar-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	25-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	24-Mar-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	23-Mar-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
	22-Mar-12	28	3	1	4	4	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
●	21-Mar-12	69	1	0	0	0	2	2	1	0	0	0	1	4	4	7	7	8	5	7	5	6	7	2	0	0	Annual on 5/21/12
✓	20-Mar-12	77	2	0	0	3	3	1	2	0	0	0	0	0	0	0	1	14	13	9	12	6	4	2	2	3	
	19-Mar-12	13	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	2	1	6	
	18-Mar-12	12	0	0	0	0	0	0	0	0	1	0	0	0	4	0	7	0	0	0	0	0	0	0	0	0	
	17-Mar-12	20	9	3	0	1	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	16-Mar-12	33	0	6	9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3	3	1	2	7	

Date	Total	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
9-Jul-12	0	0	0	0	0	0	0	0	0	0															
8-Jul-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-Jul-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Jul-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Jul-12	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Jul-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1-Jul-12	14	2	8	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Jun-12	23	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	0	5	0	3	7	2
29-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Jun-12	10	0	1	1	2	1	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0
25-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24-Jun-12	18	0	0	4	4	6	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23-Jun-12	36	10	1	1	0	0	3	2	3	6	3	1	0	0	6	0	0	0	0	0	0	0	0	0	0
22-Jun-12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	0	0	0	0
21-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Jun-12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
18-Jun-12	4	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jun-12	5	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jun-12	31	0	0	0	1	0	1	0	0	0	0	0	2	10	0	5	3	0	0	0	4	3	0	2	0
7-Jun-12	45	0	0	2	6	8	6	11	5	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
6-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Jun-12	14	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4-Jun-12 M	86	4	5	4	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	26	9	8	14	9
3-Jun-12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2-Jun-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-Jun-12	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	4
31-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-May-12 Sat	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	23	61	0	0	0	0
25-May-12	15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	12	0	0	0	0
24-May-12	41	0	0	0	0	0	4	16	2	2	0	0	1	0	0	0	0	0	0	16	0	0	0	0	0
23-May-12	11	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	1	0	0	0	0	0	0	0	0
22-May-12	40	0	0	0	0	0	0	0	1	7	8	4	1	4	15	0	0	0	0	0	0	0	0	0	0
21-May-12	45	0	0	0	2	1	0	2	7	12	4	1	0	2	2	1	0	10	0	1	0	0	0	0	0
20-May-12	7	0	0	0	0	0	0	0	0	0	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0
19-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-May-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone 1
Historical pH Range Comparison




USGS
USGS 14211720 WILLAMETTE RIVER AT PORTLAND, OR
DAILY Gage height, feet
16
14
12
10
8
6
4
2
0
Jul 2011
Sep 2011
Nov 2011
Jan 2012
Mar 2012
May 2012
Daily mean gage height
Period of approved data
Period of provisional data

SEDIMENT SAMPLING AND pH MONITORING FORM

Date and Time: 4/12/12 9:00-15:00 Weather: Partly Cloudy, 50s

Name: Andrew Blake, GSI Signature

Other Parties Present During Monitoring Event: Frank Taeger, RTSS

6.30
6.55

Date DEQ notified: _____

Reason for Monitoring Event: Routine/Significant Event

Describe significant event (e.g., 3.4 inches of rain in 24 hours, Flood stage of 18 feet RID, Flood stage of 24 feet, RID, Seismic event 6.0 or greater): Routine

Equipment Used and Calibration Method: WTW 340i (2-point calibration)
Trimble GeoXH GPS
Power drill used to add weed mixer to create a slurry prior to collecting pH data.

Sampling should be completed in accordance with Appendix B – Field Procedures and Protocols for Sampling in Water.

Sample I.D.	Sample Location (northing/easting) **	Date	Time	Depth Sounding (feet)	Sampling Method (Ponar/Vibracore)	* Field Measurement
pH-90	670666.37 7646670.47	4/12/12	9:05	33.5'	Ponar (Sand) Sample →	6.55 / 7.03 ← Lowest Ambient
pH-91	670644.63 7646668.89	4/12/12	9:25	27'	Ponar (Sand)	6.30 / 6.49
pH-92	670724.70 7646563.9	4/12/12	9:35	21'	Ponar Sand & Gravel	6.54 / 6.43
pH-93	670753.56 7646648.61	4/12/12	9:45	29.5'	(Ponar) Sand	6.42 / 6.45
pH-94	670690.77 7646640.79	4/12/12	9:55	31.5	(Ponar) Sand	6.40 / 6.49

Zone 1

* WTW 340i calibrated

** Trimble GeoXH differential GPS

Sample I.D.	Sample Location (northing/easting)	Date	Time	Depth Sounding (feet)	Sampling Method (Ponar/Vibracore)	Field Measurement
HP-6	669668.99 764709.7	4/12/12	11:10	1' H2O 4" Dep(Soft)	Heavy Probe Refusal @12"	7.20 6.66
HP-3d	669090.03 764715.47	4/12/12	11:35	1' H2O 4" Dep	Heavy Probe ~~Refusal @12"~~	7.06 6.61
"	"	"	12:10	1' H2O 36" Dep	Refusal @40"	6.57
pH-95	669709 764820.2	4/12/12	12:45	13.5'	Ponar (Silty Sand)	9.53 *** 7.67
pH-96	669638.21 764819.99	4/12/12	13:04	16.5'	Ponar (Silty Sand)	9.32 6.98
pH-97	669656.65 764826.48	4/12/12	13:25	12.5	(Ponar) Silty Sand	9.83 7.01
pH-98	669643.12 764831.40	4/12/12	13:30	11.5	Ponar Silty Sand	8.10 7.22
pH-99	669710.51 764828.041	4/12/12	13:45	12'	Ponar Silty Sand	9.55 7.05
pH-100	669701.67 764834.3	4/12/12	13:50	6.5'	Ponar Sand & Silt	8.61 6.96
pH-101	669612.31 764834.29	4/12/12	14:05	2'	Ponar Sand & Gravel	6.96 6.98
pH-102	669589.17 764826.42	4/12/12	14:15	11.5'	Sand & Silt	7.73 6.91
pH-103	669565.15 764816.83	4/12/12	14:20	16.5	Sand & Gravel	6.96 7.06
pH-104	669668.48 764822.71	4/12/12	14:25	12'	Silty Sand	8.98 7.36

Zone 2

Zone 1

Sample

Lagoon

Zone 1

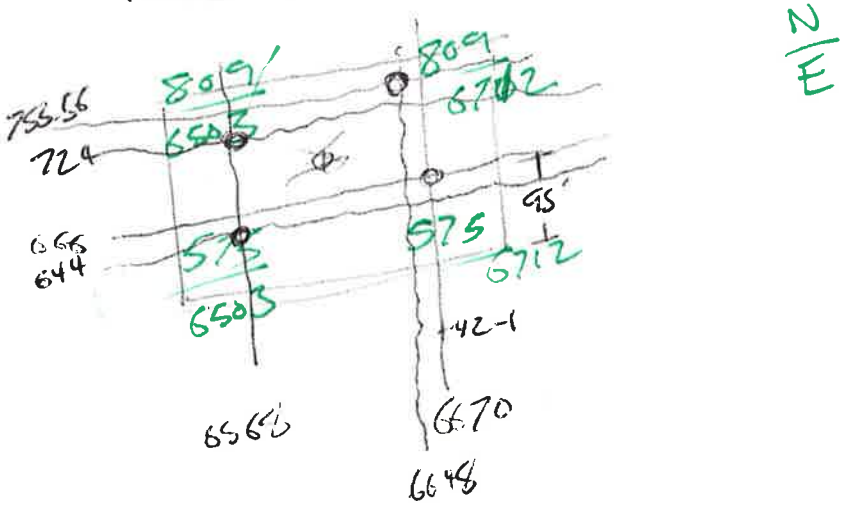
*** - pH probe recalibrated & Functions correctly - NFC & Cindy Jacobs (RTS6) notified

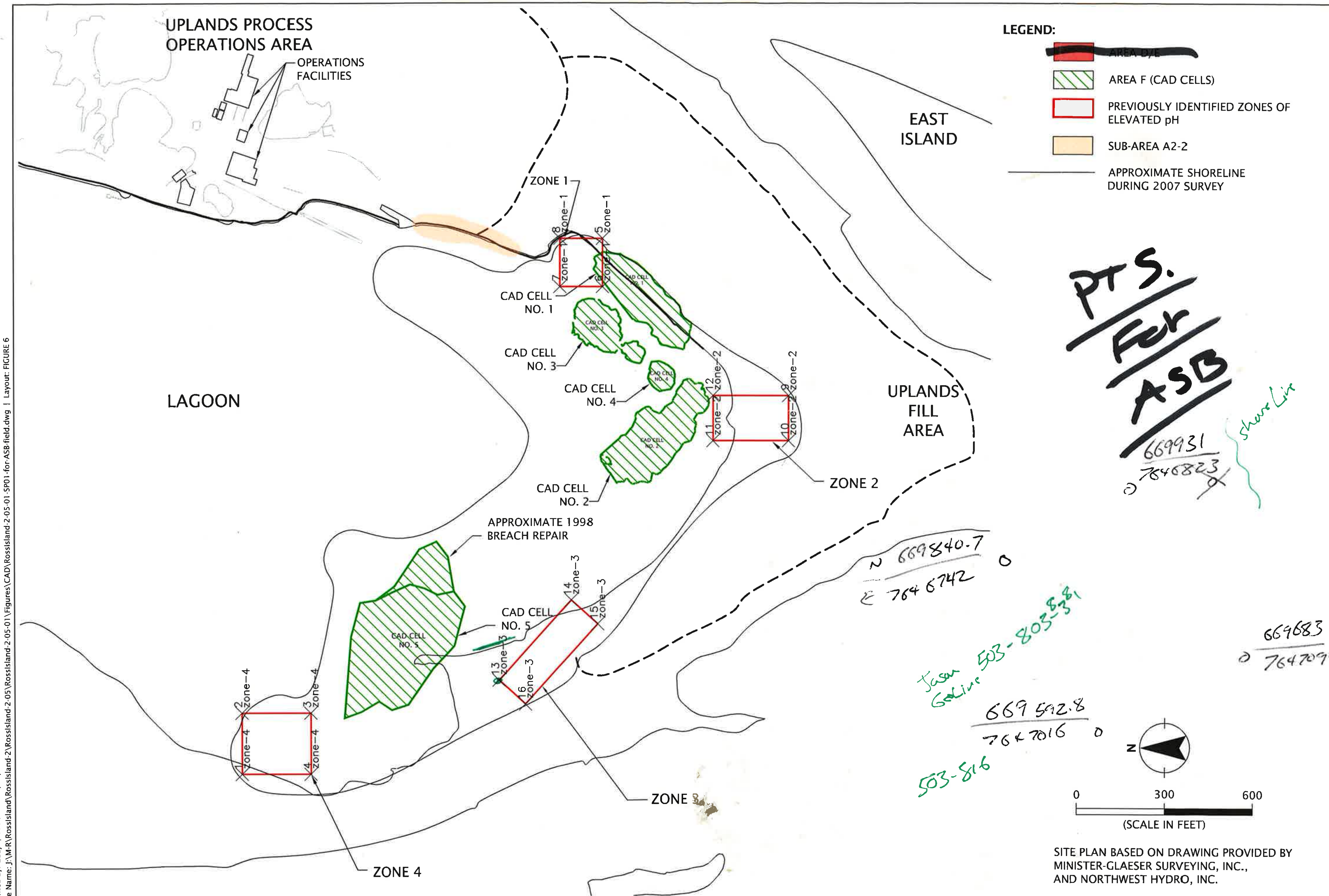
Done by ISCO

1	670809.3	7646503	-99999	zone-4
2	670809.3	7646712	-99999	zone-4
3	670575.7	7646712	-99999	zone-4
4	670575.7	7646503	-99999	zone-4
5	669576.8	7648337	-99999	zone-1
6	669576.8	7648171	-99999	zone-1
7	669722.1	7648171	-99999	zone-1
8	669722.1	7648337	-99999	zone-1
9	668939.5	7647797	-99999	zone-2
10	668939.5	7647643	-99999	zone-2
11	669197.9	7647643	-99999	zone-2
12	669197.9	7647797	-99999	zone-2
13	669931.3	7646823	-99999	zone-3
14	669683.3	7647098	-99999	zone-3
15	669592.8	7647016	-99999	zone-3
16	669840.7	7646742	-99999	zone-3

Excel file Saved in

RossIsland-2-05-01





UPLANDS PROCESS OPERATIONS AREA
OPERATIONS FACILITIES
LEGEND:
[redacted]
AREA F (CAD CELLS)
PREVIOUSLY IDENTIFIED ZONES OF ELEVATED pH
SUB-AREA A2-2
APPROXIMATE SHORELINE DURING 2007 SURVEY
EAST ISLAND
ZONE 1
CAD CELL NO. 1
CAD CELL NO. 3
CAD CELL NO. 4
CAD CELL NO. 2
LAGOON
UPLANDS FILL AREA
ZONE 2
APPROXIMATE 1998 BREACH REPAIR
CAD CELL NO. 5
ZONE 3
ZONE 4
PTS. For ASB
669931
7646823
shore Line
N 669840.7
E 7646742
669683
7647098
669592.8
7647016
503-816
0
300
600
(SCALE IN FEET)
N
SITE PLAN BASED ON DRAWING PROVIDED BY MINISTER-GLAESER SURVEYING, INC., AND NORTHWEST HYDRO, INC.

LAGOON REMEDIAL ACTION SUB-AREA A2-2 AND AREAS D, E, AND F

FIGURE 6

ROSS ISLAND SAND & GRAVEL
PORTLAND, OR

ROSSISLAND-2-04-04

APRIL 2011

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

Printed By: aday | Print Date: 4/11/2012 3:12:25 PM
File Name: J:\M-R\RossIsland\RossIsland-2\RossIsland-2-05\RossIsland-2-05-01\Figures\CAD\RossIsland-2-05-01-SP01-for-ASB-field.dwg | Layout: FIGURE 6

BATHYMETRY REVIEW FORM

Survey completed by: NW Hydro
Equipment used:

Review Date: June 26, 2012
Reviewer(s) Mike Coenen, GeoDesign
Signature:

The lagoon bathymetry data has been reviewed. Lagoon bathymetric elevations have been summarized on the attached figure.

Lagoon Bathymetry

General Condition of Sediment Cap: Bathymetry data indicates sediment cap is intact and in condition. Current sediment cap thickness is comparable to the previous analysis (based on the 2010 bathymetry).

General Condition of slopes: Slopes appear stable. Cross sections generated from the 2012 bathymetry indicates general stability with slopes ranging from XH:1V to XH:1V.

Are there any signs of erosion or thinning of sediment cap? YES ☒ NO ☐
If yes, provide description: Evidence of thinning is attributed to artifact or anomalous data in the software interpretation of the data as discussed in the Construction Completion Report Addendum No.2 dated December 6, 2010. Further action is not warranted.

Are there any signs of slope failure? YES ☐ NO ☒
If yes, provide description:

Do any observations warrant urgent attention? YES ☐ NO ☒
If yes, provide description:

Are contingency measures necessary based on review? YES ☐ NO ☒
If yes, provide description:

Maintenance performed since last reporting period: RISG started placing fill in pH Zone 1.

APPENDIX B

APPENDIX B

PROJECT SITE PHOTOGRAPHS

REMEDIAL ACTION SUB-AREA A2-1. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING NORTH.

REMEDIAL ACTION SUB-AREA A2-1. ECOLOGY BLOCK AND BIOFILTER BAGS. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING NORTH.

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01	**PROJECT SITE PHOTOGRAPHS**	
JULY 2012	ROSS ISLAND SAND & GRAVEL PORTLAND, OR	**FIGURE B-1**

REMEDIAL ACTION SUB-AREA A2-2. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING NORTH.

REMEDIAL ACTION SUB-AREA A2-2, DURING LOW WATER. PHOTOGRAPH TAKEN DECEMBER 5, 2011 FACING EAST.

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01	**PROJECT SITE PHOTOGRAPHS**	
JULY 2012	ROSS ISLAND SAND & GRAVEL PORTLAND, OR	**FIGURE B-2**

REMEDIAL ACTION SUB-AREA A2-3. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING SOUTHEAST.

REMEDIAL ACTION SUB-AREA A2-3 WITH HAY BALES REMOVED. PHOTOGRAPH TAKEN APRIL , 2012 FACING NORTHWEST.

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01	**PROJECT SITE PHOTOGRAPHS**	
JULY 2012	ROSS ISLAND SAND & GRAVEL PORTLAND, OR	**FIGURE B-3**

REMEDIAL ACTION SUB-AREA B. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING SOUTHWEST.

REMEDIAL ACTION SUB-AREA B. PHOTOGRAPH TAKEN MARCH 21, 2012 FACING SOUTHWEST.

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ROSSISLAND-2-05-01	**PROJECT SITE PHOTOGRAPHS**	
JULY 2012	ROSS ISLAND SAND & GRAVEL PORTLAND, OR	**FIGURE B-4**

ACRONYMS

ACRONYMS

BMP	Best Management Practice
CAD	Confined Aquatic Disposal
COP	City of Portland
DEQ	Oregon Department of Environmental Quality
DSL	Department of State Lands
FS	Feasibility Study
GPS	global positioning system
H:V	horizontal to vertical
I.D.	identification
LTMMCP	Long-Term Monitoring/Maintenance Contingency Plan
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
RA	risk assessment
RAO	remedial action objective
RI	remedial investigation
RID	Ross Island Datum
RISG	Ross Island Sand & Gravel Company
ROD	Record of Decision
TBT	tributyltin
USGS	U.S. Geological Survey