GSE Engineering & Consulting, Inc.

PRELIMINARY GEOLOGICAL AND GEOTECHNICAL SITE EVALUATION

PLUM CREEK PROPERTY
ALACHUA COUNTY, FLORIDA

GSE PROJECT No. 12371

Prepared For:

CHW PROFESSIONAL CONSULTANTS

June 2015

Certificate of Authorization No. 27430

GSE Engineering & Consulting, Inc.

June 2, 2015

Rory P. Causseaux, P.E., CEO
CHW Professional Consultants
132 W 76th Drive
Gainesville, Florida 32607

Subject: Summary Report of a Preliminary Geological and Geotechnical Site Exploration
Plum Creek Property
Alachua County, Florida
GSE Project No. 12371

Dear Mr. Causseaux:

GSE Engineering & Consulting, Inc. (GSE) is pleased to submit this preliminary geological site exploration report for the above referenced project.

Presented herein are the findings of our exploration.

We appreciate this opportunity to have assisted you on this project. If you have any questions or comments concerning this report, please contact us.

Sincerely,

GSE Engineering & Consulting, Inc.

Kenneth L. Hill, P.E.
Principal Engineer - GSE
Florida Registration Number 40146

Michael J. Wightman, P.G.
Principal Geologist - GeoView
Florida Registration Number 1423

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Michael J. Wightman, P.G. (1)
File (1)

GSE Engineering & Consulting, Inc.
5590 SW 64th Street, Suite B
Gainesville, Florida 32608
(352) 377-3233 Phone ◆ (352) 377-0335 Fax
www.gseengineering.com
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TABLE OF CONTENTS

LIST OF FIGURES

Figure

1.0 INTRODUCTION

1.1 General

GSE Engineering & Consulting, Inc. (GSE) has completed this preliminary geological and geotechnical site exploration of the Plum Creek property in Alachua County, Florida. Our exploration was performed in general accordance with GSE Proposal Nos. 2014-271A dated January 5, 2015 and 2015-053 dated February 25, 2015. CHW Professional Consultants (CHW) authorized our services on February 18, 2015 and March 6, 2015.

1.2 Project Description

We understand Plum Creek proposes to develop their property for residential, mixed-use and industrial use. CHW is currently conducting pre-development, due diligence work in regards to some of the soil, groundwater and environmental conditions at the site. The Plum Creek property is located in eastern Alachua County along the north and south sides of State Road (SR) 20, and generally east of County Road (CR) 234 and west of the City of Hawthorne.

Plum Creek is considering developing two parcels (Tract A and B). Tract A is located on the east side of CR 234 and north of SR 20. Tract A contains approximately 3,000 acres of land. Tract B is located west of Hawthorne, both north and south of SR 20. Tract B contains approximately 1,000 acres of land. Figure 1 indicates the approximate locations and boundaries of Tracts A and B.

The Plum Creek property is located in eastern Alachua County within the Northern Highlands geological region. This region is characterized by flat pinewoods, wetlands and very gently rolling hills. The limestone formation is typically deep (i.e. in excess of 100 feet) in this area of the County, and is overlain by the Hawthorne formation. The Hawthorne typically is a confining unit that results in slow recharge into the underlying Floridan Aquifer, and results in a perched water table in the overlying sandy soils.

Stormwater management facilities will likely be located in areas that transition from uplands to lowlands. It is anticipated that stormwater management facilities will be wet detention basins due to the predominantly high groundwater table that is common in this area. Stormwater basins are expected to be excavated less than 12 feet in depth. We understand there is a concern that the Hawthorne formation outcrops or is near land surface in some areas of the property. The Hawthorne formation can potentially contain phosphates, and the potential of excavation into phosphate-rich soils is desired to be evaluated as a result of development and the construction of stormwater management facilities.

1.3 Purpose

The purpose of this preliminary geological and geotechnical exploration was to determine the general subsurface conditions at the site in order to assess the suitability of the site for urban development. Specifically, this preliminary exploration is intended to determine the presence/absence of phosphate-rich soils, the depths to these soils and the approximate thickness of the Hawthorne formation.

2.0 FIELD AND LABORATORY TESTS

2.1 General Description

The procedures used for field sampling and testing are in general accordance with industry standards of care and established geotechnical engineering practices for this geographic region. Our exploration consisted of performing thirty-two (32) direct push soil borings to 13.25 to 30 feet below land surface (bls) and six (6) Standard Penetration Test (SPT) soil borings to depths of 40 to 100 feet bls.

The soil borings were performed at the approximate locations as shown on Figures 2A and 2B. The soil boring locations were selected by Pegasus Engineering, LLC and we located the borings at the site using aerial photographs, hand-held GPS equipment and other obvious site features as reference. You should consider the locations approximate. The soil boring locations were later surveyed by CHW, and the coordinates and ground elevations at the soil boring locations are indicated on Figures 2A and 2B. The soil borings were performed in March 2015.

2.2 Direct Push Borings

The direct push borings were advanced using Geoprobe® which incorporates a dual tube sampling system. This system allows for continuous soil sampling. Dual tube sampling uses two sets of probe rods to collect continuous soil cores.

One set of rods is driven into the ground as an outer casing. These rods receive the driving force from the equipment hammer and provide a sealed hole from which soil samples may be recovered. The second, smaller set of rods is placed inside the outer casing. The smaller rods hold a sample liner in place as the outer casing is driven one sampling interval. The small rods are then retracted to retrieve the filled liner. Results from the direct push borings are provided in Section 5.1.

2.3 Standard Penetration Test Borings

The soil borings were performed with a drill rig employing mud rotary drilling techniques and Standard Penetration Testing (SPT) in accordance with ASTM D 1586. The SPTs were performed continuously to ten feet and at five-foot intervals thereafter. Soil samples were obtained at the depths where the SPTs were performed. The soil samples were classified in the field, placed in sealed containers, and returned to our laboratory for further evaluation.

After drilling to the sampling depth and flushing the borehole, the standard two-inch O.D. split-barrel sampler was seated by driving it six inches into the undisturbed soil. Then the sampler was driven an additional 12 inches by blows of a 140-pound hammer falling 30 inches. The number of blows required to produce the next 12 inches of penetration were recorded as the penetration resistance (N-value). These values and the complete SPT boring logs are provided in Section 5.1.

Upon completion of the sampling, the boreholes were abandoned in accordance with Water Management District guidelines.

2.4 Soil Laboratory Tests

The soil samples recovered from the soil borings were returned to our laboratory, and examined to confirm the field descriptions. Representative samples were then selected for laboratory testing. The laboratory tests consisted of twelve (12) percent passing the No. 200 sieve determinations with natural moisture content tests. These tests were performed in order to aid in classifying the soils and to further evaluate their engineering properties. The laboratory tests results are provided in Section 6.3.

In addition to the soil index classification tests, 130 soil samples were selected for total phosphorous content tests and eight of these samples were further tested for leachability. These tests were performed by our subconsultant, Advanced Environmental Laboratories, Inc. The results of these tests are included in Section 6.4.

3.0 REVIEW OF PUBLISHED INFORMATION

3.1 Regional Geology

Alachua County straddles two physiographic provinces: Northern Highlands and Coastal Lowlands[1]. A broad karst escarpment known as the Cody Scarp separates these two provinces.

The Northern Highlands, which lie north and east of the Cody Scarp, are underlain by a thick sequence of relatively impermeable Miocene to Pleistocene sediments. Because of this thick sequence of sediments, the Northern Highlands Province contains few karst features. This upland plateau is nearly level, sloping gently to the west, north and east. Elevation ranges from about 150 to 200 feet above sea level. The plateau, which originally extended completely across the county, has many swamps. Sinkholes are not common within the plateau, but a few are found near its margin.

The Plum Creek property is located within the eastern portion of Alachua County within the region of the Northern Highlands. This area of Alachua County maps as the Hawthorne Group, Coosawhatchie Formation and Undifferentiated Tertiary-Quaternary Sediments[2] that are common to the Northern Highlands geological region. The following descriptions of these geological units are from the Florida Geological Survey.

Ocala Group, Coosawhatchie Formation – The Coosawhatchie Formation is sediments of the Miocene Series that is exposed or lies beneath a thin overburden on the eastern flank of the Ocala Platform from southern Columbia County to southern Marion County. Within the outcrop region, the Coosawhatchie Formation varies from a light gray to olive gray, poorly consolidated, variable clayey and phosphatic sand with few fossils, to an olive gray, poorly to moderately consolidated, slightly sandy, silty clay with few to no fossils. Occasionally, the sands will contain a dolomite component and, rarely, the dominant lithology will be dolostone or limestone. Silicified nodules are often present in the Coosawhatchie Formation sediments in the outcrop region. The sediment may contain 20 percent or more phosphate (Scott, 1988). Permeability of the Coosawhatchie Formation is generally low, forming part of the intermediate confining unit/ aquifer system.

Undifferentiated Tertiary-Quaternary Sediments – These sediments are siliciclastics that are separated from undifferentiated Quaternary sediments solely on the basis of elevation. Based on the suggestion that the Pleistocene sea levels reached a maximum of approximately 100 feet (30 meters) msl (Colquhoun, 1969), these sediments, which occur above 100 feet (30 meters) msl, are predominantly older than Pleistocene but contain some sediments reworked during the Pleistocene. This unit may include fluvial and aeolian deposits. The undifferentiated Tertiary-Quaternary sediments occur in a band extending from the Georgia-Florida state line in Baker and Columbia Counties southward to Alachua County.

These sediments are gray to blue green, unconsolidated to poorly consolidated, fine to coarse grained, clean to clayey, unfossiliferous sands, sandy clays and clays. Organic debris and disseminated organics are present in these sediments.

[1] White, W.A., 1970. The Geomorphology of the Florida Peninsula. Florida Geological Survey, Bulletin 51.

[2] Open-File Report 80, Thomas M. Scott, P.G. No. 99, Text to Accompany the Geological Map of Florida, Florida Geological Survey, 2001.

Additional published data indicates the elevation of the Ocala Group limestone in the area of Plum Creek ranges from -40 to -80 feet mean sea level[3]. With site elevations that range from 85 to 145 feet, this corresponds to depths of 125 to 225 feet below land surface.

3.2 Alachua County Soil Survey

The Natural Resources Conservation Service (NRCS) Soil Survey for Alachua County[4] maps multiple soil series at the Plum Creek property. The most prominent soil series include Pomona sand, Sparr fine sand, Monteocha loamy sand, Lochloosa fine sand and Newnan sand. The following soil descriptions are from the Soil Survey.

Pomona sand - This nearly level, poorly drained soil is in small and large areas in the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. The areas are irregular in shape and range from about 10 to 350 acres.

Typically, the surface layer is very dark gray sand about 5 inches thick. The subsurface layer is sand to a depth of 16 inches. The upper 4 inches is gray, and the lower 7 inches is light gray. The upper 4 inches of the subsoil is very dark gray sand in which many sand grains are coated with organic material, and the next 4 inches is dark reddish brown sand. The next 8 inches is pale brown sand that has mottles, and the lower 11 inches is very pale brown sand. Below this a loamy subsoil extends to a depth of 69 inches. The upper 4 inches is light gray fine sandy loam, and the lower 22 inches is gray, mottled sandy clay loam. Between depths of 69 and 84 inches, the underlying material is light gray, mottled fine sandy loam.

In this Pomona soil, the water table is within 10 inches of the surface for 1 to 3 months during most years. During dry seasons, the water table recedes to a depth of more than 40 inches. Surface runoff is slow.

Sparr fine sand – This nearly level, somewhat poorly drained soil is in relatively small areas on slight rises of the flatwoods and on nearly smooth to slightly convex slopes of the gently rolling uplands. Slope ranges from 0 to 2 percent. The areas are irregular in shape and range from about 10 to 75 acres.

Typically, the surface layer is fine sand about 8 inches thick. The upper 4 inches is dark gray, and the lower 4 inches is dark grayish brown. The subsurface layer is about 40 inches thick. The upper 17 inches is pale brown sand; the next 7 inches is very pale brown fine sand that has light yellowish brown and light gray mottles; and the lower 16 inches is light gray fine sand that has yellowish brown mottles. The subsoil extends to a depth of 84 inches or more and is light gray. The upper 8 inches is loamy sand, and the lower 28 inches is fine sandy loam.

This Sparr soil has a water table that is at a depth of 20 to 30 inches for about 1 to 2 months and at a depth of 30 to 40 inches for about 2 to 3 months during most years. During dry seasons it recedes to a depth of more than 40 inches.

[3] Report of Investigations No. 35, Clark, Musgrove, Menke and Cagle, Jr., Water Resources of Alachua, Bradford, Clay, and Union Counties, Florida, Florida Geological Survey, 1964.

[4] Web Soil Survey, United States Department of Agriculture, Natural Resources Conservation Service.

***Monteocha loamy sand*. –** This nearly level, very poorly drained soil is in wet ponds and shallow depressional areas in the flatwoods. Slopes are less than 2 percent. It is in relatively small areas that range from about 8 to 35 acres.

Typically, the surface layer is black loamy sand about 12 inches thick. The subsurface layer is light brownish gray sand to a depth of 18 inches. The upper part of the subsoil is brown sand to a depth of 48 inches. Below this a subsoil of fine sandy loam extends to a depth of 85 inches. The upper 11 inches is grayish brown, and the lower 26 inches is light brownish gray. Between 85 and 94 inches the underlying material is light gray sand.

This Monteocha soil has a water table that is within 10 inches of the surface for more than 6 months during most years. Most areas are covered with water for more than 4 months.

***Lochloosa fine sand, 0 to 2 percent slopes* -** This nearly level, somewhat poorly drained soil is in relatively small to large areas in the broad flatwoods and the gentle, rolling uplands that border the flatwoods. Slopes are nearly smooth to slightly convex. The areas are irregular in shape and range from about 10 to 200 acres.

Typically, the surface layer is very dark gray fine sand about 7 inches thick. The subsurface layer is fine sand to a depth of 34 inches. The upper 7 inches is brown, and the lower 20 inches is very pale brown and has grayish and yellowish mottles. The subsoil extends to a depth of 80 inches or more. The upper 10 inches is pale brown, mottled very fine sandy loam; the next 13 inches is light brownish gray, mottled very fine sandy loam; and the lower 23 inches is gray, mottled sandy clay loam.

This Lochloosa soil has a water table that is 30 to 40 inches below the surface for 2 to 4 month during most years. It rises to 15 to 30 inches for 2 to 4 weeks during most years.

Newnan sand – This nearly level, somewhat poorly drained soil is in small to relatively large areas in the flatwoods. Slopes are nearly level to slightly convex and range from 0 to 2 percent. The areas generally range from about 10 to 250 acres.

Typically, the surface layer is dark gray sand about 5 inches thick. The subsurface layer is light brownish gray sand to a depth of 12 inches. The upper part of the subsoil is 4 inches of dark brown sand, in which the sand grains are well coated with organic material, and 4 inches of dark brown sand that is mottled. Below this is a leached layer of light gray to white sand to a depth of 56 inches. The lower part of the subsoil is loamy, light gray, and mottled. The upper 3 inches is loamy sand, the next 16 inches is fine sandy loam, and the lower 7 inches is sandy clay loam.

This Newnan soil has a water table that is at a depth of 18 to 30 inches for 1 to 2 months during most years and at a depth of 30 to 60 inches for 2 to 5 months. During drier periods, it is at a depth of more than 60 inches.

4.0 FINDINGS

4.1 Site Conditions

The Plum Creek property is generally undeveloped land. The property contains uplands that are generally in timber (pine) production and hardwood wetlands. Graded roads/trails provide access throughout the property, but the majority of the property is not accessible outside of the trail roads. At the time of our site exploration, standing water was present in most of the wetlands and on some of the trail roads, limiting access or making access to some areas difficult.

Ground elevations at the soil boring locations ranged from about 85 feet to 145 feet. Tract A has overall lower elevations that range from about 85 to 110 feet, and Tract B is at higher elevations of about 116 to 145 feet. There is a ridge that generally runs in a north/south direction through the approximate center of Tract A. Ground elevations fall to the west and east from the approximate center of Tract A. Tract B has an overall downward slope to the west.

4.2 Subsurface Conditions

The locations of the direct push and SPT borings are provided on Figures 2A and 2B. Complete logs for the borings are provided in Sections 5.1 and 5.2. Descriptions for the soils encountered are accompanied by the Unified Soil Classification System symbol (SM, SP-SM, etc.) and are based on visual examination of the recovered soil samples and the laboratory tests performed. Stratification boundaries between the soil types should be considered approximate, as the actual transition between soil types may be gradual.

The direct push and SPT borings indicate that soil conditions across the sites are relatively consistent. The soil borings generally encountered 3.5 to 11 feet of sandy soil (SP, SP/SM, SP/SC, SM) followed by clay-rich soils (SC, CL/CH) to the boring termination depths. Organic-rich soils were encountered at land surface in some of the borings. Sandy soils were interbedded within the clay-rich soils below depths of 10 feet at some locations. Clayey limestone was interbedded in some of the borings generally below a depth of 25 feet, and clay-rich soils containing visible phosphate fragments was present in some of the soil borings, also generally below a depth of 25 feet.

The groundwater table was encountered in the direct push borings at depths ranging from 6 inches to about 25 feet below land surface at the time of our exploration. The groundwater depth was measured in the direct push borings directly upon completion of the drilling, and may not represent a stabilized groundwater level. Groundwater was not measured in the SPT borings due to the mud rotary drilling method that was used to advance the borehole.

The SPT sampling indicates the upper sandy soils are generally in loose to dense conditions with N-values that range from 4 to 32 blows per foot. The deeper clay-rich soils are in very loose to medium dense conditions (clayey sands) and soft to very hard conditions (sandy clays and clays) with N-values that range from 3 blows per foot to 50 blows for no penetration (refusal – 100+ blows per foot). The SPT borings were terminated due to drilling refusal in clay-rich soils. The SPT soil borings did not reach the limestone formation.

4.3 Laboratory Soil Analysis

Selected soil samples recovered from the soil borings were analyzed for natural moisture content, the percent fines passing the No. 200 sieve, and Atterberg limit tests. Selected soil samples were collected from depths ranging from 2.5 to 70 feet bls. These tests were performed to confirm visual soil classification and evaluate their engineering properties. The complete laboratory report is provided in Section 6.3.

The laboratory tests indicate the tested near-surface soils generally consist of sand (SP), sand with silt, sand with clay (SP-SC) and silty sand (SM) having 4 to 15 percent soil fines passing the No. 200 sieve. The tested deeper clayey to very clayey sand (SC) has 16 to 43 percent soil fines passing the No. 200 sieve and the sandy clay to clay soils (CL/CH) have 82 to 98 percent soil fines passing the No. 200 sieve. Natural moisture contents ranged from 12 to 67 percent.

4.4 Phosphorus Laboratory Analysis

Representative soil samples recovered from the soil borings were selected for total phosphorus content and leachability testing. The testing was performed by Advanced Environmental Laboratories, Inc. as a subconsultant to GSE. The phosphorous laboratory test results are provided in Section 6.4. In addition, a summary table with the laboratory reported percent total phosphorous converted to milligrams per kilogram (mg/kg) is included with the laboratory test results.

One hundred thirty (130) samples were selected for total phosphorus (EPA Test Method EPA 365.4) testing. The laboratory testing indicates the soils have total phosphorus contents that range from undetected (less than the detection limit of 0.0013 percent) to 6.8 percent. The test results relate to total phosphorus contents of less than 13 mg/kg to 68,000 mg/kg. The majority of the test results are less than 0.1 percent total phosphorus (less than 1,000 mg/kg).

Eight of the samples were selected for leachability testing using the Synthetic Precipitation Leachate Procedure (SPLP). The test results ranged from undetected (less than the detection limit of 0.046 mg/L) to 7.9 mg/L of phosphorous.

5.0 EVALUATION

5.1 General

The soil conditions at the Plum Creek property are generally similar to the mappings of the Soil Survey, with sand covering a deep clay-rich layer. The surficial sand layer (SP, SP/SC, SP/SM, SM) ranges from about 3.5 to 11 feet in depth. The clay-rich soils typically begin as clayey sands (SC) and transition to sandy clay/clay (CL/CH) at depths of 15 to 20 feet below land surface.

5.2 Groundwater

Groundwater was encountered in the borings at depths of 6 inches to about 25 feet at the time of our exploration. The normal seasonal high water table is expected to be perched on top of the clayey sands and generally range from land surface to a few feet below land surface.

5.3 Discussion of Phosphorus Test Results

The total phosphorus content testing was performed on near surface soils that would be expected to potentially be excavated as part of the master stormwater management design. Testing was mostly performed on soils ranging from near land surface to 20 feet below land surface, as it is anticipated that the stormwater management areas will be less than this depth. Two additional samples at 25 and 30 feet below land surface were also tested to characterize the deeper soil conditions.

The total phosphorus content testing indicates the soils from land surface to up to 15 feet below land surface typically have phosphorus contents ranging from undetected to less than 0.1 percent. Some of the soils below depths of 13 to 15 feet below land surface have higher phosphorus contents (above 1 percent), with the highest values being obtained in clay-rich soils typically at a depth of 20 feet below land surface (2.1 to 6.8 percent).

The intent of the SPLP leachate procedure testing was to evaluate the potential for the identified phosphorous to leach into the groundwater or stormwater management areas. The SPLP method is intended to predict the ability of the phosphorous within the soils to mobilize as a result of rainwater percolating through the soils. Phosphorus leachability ranged from undetected to 7.9 mg/L. Tested soil samples in the upper 15 feet had leachability values ranging between 0.046 (undetected) and 2.3 mg/L. The samples with the highest leachability (6.2 to 7.9 mg/L) were clay-rich soils collected from depths of 15 to 20 feet below land surface.

5.4 Discussion of Potential for Phosphorous Leaching

There are generally three primary potential pathways for phosphorous to leach and reach natural receiving surface water bodies (i.e. wetlands, creeks, rivers, lakes), which are briefly discussed below.

Erosion and sediment transport directly into a water body could result in the phosphorus within the sediment to leach. To address this potential, if clay-rich soils are used as fill in non-structural areas, they should be covered with a sand fill and surface cover to act as a protective layer that reduces the potential for soil erosion of the underlying clay.

Direct percolation of stormwater through the clay-rich soils represents another potential leaching mechanism. The resulting leachate would then move laterally through the groundwater largely dependent on the area groundwater gradient and velocity. However, these clay rich soils have low permeability characteristics (i.e. less than 0.1 feet per day hydraulic conductivity) that generally act as a confining unit, resulting in limited water penetration and potential for leaching of phosphate through these soils. As a result, the potential for leaching through these soils due to exposure to stormwater is limited, as groundwater that percolates through overlying sandy soils will tend to perch on top of the clay rich soil and move laterally through the sandy soil, not vertically through the clay-rich fill.

A third potential pathway for the phosphorus to leach could be if clay rich soils are exposed within the sides and/or bottoms of the stormwater management areas, there is some potential that leaching could occur from the exposed soils into stormwater being stored in management areas. It is anticipated that the existing groundwater is generally at equilibrium as it relates to the phosphorous soil and groundwater in-situ pre-development natural site condition, as these soils consistently remain saturated through the presence of a persistent shallow groundwater table.

The actual potential for stormwater management facilities to be constructed on-site to result in appreciable changes in concentrations of dissolved phosphorus concentrations that could represent potential concern to the receiving water bodies should be considered and further evaluated as part of design. However, the findings of this preliminary evaluation indicate that it does not appear that overall an appreciable potential for post development phosphorus leaching from the soils exists as compared to the current pre-development condition of the site.

Groundwater concentrations of phosphorus were not evaluated as part of this preliminary investigation. It has not been established if there is a difference in the concentration of phosphorus in the surficial perched water table within the sand layer (i.e. SP, SP/SM, SP/SC, SM) and the underlying clayey sand (SC). Furthermore, phosphorus concentrations of near surface soils within the on-site wetland areas and other surface water bodies have not been evaluated as part of this preliminary site characterization. These factors should be considered as the design progresses to further refine and characterize the actual potential for post development changes in phosphorus levels in surface water receiving bodies as compared to existing pre-development conditions.

5.5 Hawthorne Formation

The Hawthorn Group, Coosawhatchie Formation[5] varies from a light gray to olive gray, poorly consolidated, variable clayey and phosphatic sand with few fossils, to an olive gray, poorly to moderately consolidated, slightly sandy, silty clay with few to no fossils. Applying this description to the clay-rich soils encountered by the soil borings performed at the Plum Creek property indicates the top of the Hawthorne Formation begins about 15 to 20+ feet below land surface. The blue-green clay-rich soils are interpreted as the beginning of the Hawthorne formation.

[5] Open-File Report 80, Thomas M. Scott, P.G. No. 99, Text to Accompany the Geological Map of Florida, Florida Geological Survey, 2001.

The phosphorus testing also indicates the Hawthorne soils begin about 15 to 20 feet bls (phosphate-rich soils are associated with the Hawthorne soils). Phosphorus contents were generally higher in the blue-green clays than the overlying soils, including the overlying gray clay-rich soils. This indicates the overburden sands and gray clay-rich soils are not part of the Hawthorne formation, and are Pleistocene Terrace Deposits[6].

Our deepest SPT boring did not encounter limestone within the 100 feet depth explored. This suggests the Hawthorn Formation is at least 90 feet thick. Published data from the Florida Geological Survey[7] suggests the top of the Ocala Group limestone (bottom of the Hawthorne Formation) is at least 125 feet below land surface. This suggests the Hawthorne Formation is at least 115 feet thick.

5.6 Discussion of Site Development Considerations

The Plum Creek development will include residential and commercial/industrial development. Site development infrastructure will include roadway and utility construction and stormwater management facilities.

The soil conditions encountered by our soil borings are typical of the Northern Highlands geology, with a sand cover overlying clay-rich soils. Groundwater is typically relatively shallow, perched on the clay-rich soils. Because of the great depth to limestone and continuity and thickness of the confining soils overlying the limestone formation, the perched groundwater table is typically permanently present.

Site development considerations at the Plum Creek property are no different than what has been considered at existing developed areas within the Northern Highlands regional geology. The largest driving consideration is the depth to groundwater, and more specifically, the estimated seasonal high groundwater table. The depth of the seasonal high groundwater table commonly dictates roadway and finished site elevations. Florida Department of Transportation and Alachua County requires a minimum separation of 2 feet between the bottom of the roadway base course and the seasonal high groundwater table. If this separation is not present, underdrains are necessary to artificially lower the groundwater table to provide this separation and are typically required on both sides of the roadway.

Based upon the preliminary groundwater data collected from the soil borings, it is likely that roadways constructed in native soils will require underdrains to artificially lower the seasonal high groundwater table, as groundwater was typically encountered within 3 feet of land surface. Roadways can be constructed on filled sections to raise the roadway bed to more than 2 feet above the seasonal high groundwater table, but this typically requires that the surrounding development also be raised with fill, as building pads, recreation areas/green spaces, etc. have grades set higher than the roadways to provide adequate drainage from the sites.

[6] Report of Investigations No. 35, Clark, Musgrove, Menke and Cagle, Jr., Water Resources of Alachua, Bradford, Clay, and Union Counties, Florida, Florida Geological Survey, 1964.

[7] Report of Investigations No. 35, Clark, Musgrove, Menke and Cagle, Jr., Water Resources of Alachua, Bradford, Clay, and Union Counties, Florida, Florida Geological Survey, 1964.

Utility construction for water and stormwater utilities typically occurs at depths of 3 to 6 feet below grade. At these depths, it is likely that most utility excavations will penetrate the groundwater table. Dewatering consisting of well points or underdrains connected to a vacuum pump may be necessary for much of the utility construction in order to perform construction/fill placement in a dry condition.

Sanitary sewer construction commonly occurs at greater depths, depending upon the length of the utility. Sanitary sewer construction commonly occurs to depths of 8 to 12+ feet. Again, dewatering will likely be necessary to construct sanitary sewers. Also, it may be necessary to "bench" the deeper excavations to provide a safe working environment, or to use a trench box to brace the excavation.

It is unlikely that roadway and water/stormwater utility infrastructure construction will occur deep enough to encounter the phosphorus-rich soils. The vast majority of the phosphorus-rich soils were encountered deeper than 15 to 20 feet below land surface. One location encountered phosphorus-rich soils at a depth of 13 feet. The construction of sanitary sewers and lift stations will have a higher potential for encountering phosphorus-rich soils, but again, this potential is greatest where excavations are more than 15 to 20+ feet deep.

It is our understanding that soils excavated from the site are intended to be reused as fill materials if suitable. The upper sandy soils encountered by the soil borings are materials that are typically suitable for use as structural fill materials on building and roadway sites and in utility trenches. These soils would have to be stockpiled and dried if they are excavated from below the groundwater table before they can be used as fill materials.

Clay-rich soils are typically less desirable and unsuitable for use as structural fill, especially when excavated from below the water table, because they are moisture sensitive making them difficult to work and compact. Efforts to achieve and maintain optimum moisture within these soils to allow compaction require significant mechanical effort and are often affected by prevailing weather conditions at the time of construction. Soils having more than 10 to 15 percent soil fines passing the No. 200 sieve begin this category, and the higher the amount of soil fines the more difficult the soils are to dry, work and compact. These soils are more suited for areas of mass filling where heavy compaction equipment is used. These soils are not recommended for trench backfill where light, manually operated compaction equipment is used, as they are too difficult to compact with this type of equipment.

Soils with more than 30 percent soil fines are typically considered unsuitable for use as structural fill materials, as they become too difficult to dry, work and compact. Soils with more than 40 percent soil fines passing the No. 200 sieve typically begin to exhibit expansive behavior, making them unsuitable for use as structural fill. Expansive soils shrink and swell with changes in moisture content. In a native condition, the clay-rich soils at this site are nearly always below the groundwater table and should maintain a relative consistent moisture content. When below the groundwater table, these soils are not likely to affect the long-term performance of roadways or building foundations.

Clay-rich soils are commonly used in non-structural areas such as in berms or deep fills in green areas where there are typically no compaction requirements. Clay-rich fills are commonly covered by a few feet of sandy soils to reduce the potential for stormwater saturation keeping the soils in a wet or soggy condition that often results in the green areas susceptible to rutting, rendering them as non-usable or requiring high maintenance.

The total phosphorus content testing indicates that the sandy soils that will be excavated from the site have phosphorus contents that are mostly less than 0.1 percent. Using these soils as fill material does not appreciably increase the potential for phosphate leaching, as the surficial sandy soils throughout all of the Plum Creek property are expected to be similar and have comparable total phosphorus characteristics. Adding native sand fill to other areas of the site increases the thickness of the sand that covers the deeper clay-rich soils that potentially have higher phosphorus content.

The clay-rich soils that may be excavated as part of the stormwater management facility or deep sanitary sewer construction may be characterized as having a higher potential for leaching phosphorus, solely considering that these soils have the potential to contain higher concentrations of phosphorus. However, actual potential for leaching to occur needs to consider the potential mechanism and pathways for phosphorous to leach out of the soil and affect natural system receiving bodies of surface water. The potential for phosphorus leaching should be considered when using clay-rich soils as fill materials, and we recommend a soil management plan be implemented to address how these soils are used on site to reduce the potential for phosphorus leaching.

6.0 FIELD AND LABORATORY DATA

6.1 Direct Push Boring Logs

GSE Engineering & Consulting, Inc.
5590 SW 64 th Street
Gainesville, Fl 32608
Telephone: 352-377-3233

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

BORING NUMBER B-B01

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 3.8 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SP/PT) Gray to black silty SAND with organics
		AU 1	3.0
			(SM) Gray to brown sitly SAND
			4.0
5			(SM) Light gray silty SAND
		AU 2	5.0
			(SM-SC) Dark gray silty to clayey SAND with iron staining
			At 5 ft, P = 0.0098 %
			9.0
10			(SC) Gray clayey SAND
		AU 3	At 10 ft, P = 0.054 %
			11.0
			(SM) Light gray silty SAND
			12.0
15			(SC) Light gray clayey SAND
		AU 4	At 15 ft, P = 0.0096 %
20			At 20 ft, P = 0.0088 % 20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-B02

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING NE
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Gray to dark gray silty SAND (fill)
		AU 1	2.0
			(SM/PT) Black silty SAND with organics/topsoil
			2.5
5			(SM) Light gray silty SAND
		AU 2	At 5 ft, P = 0.0013 %
			7.5
			(SC) Gray to light gray clayey SAND
10			At 10 ft, P = 0.0066 % 10.0
		AU 3	(SM) Light gray to white silty SAND
			11.5
			(SC) Light gray clayey SAND
			12.5
			(SP) Light gray SAND
			13.5
15			(SC) Light gray to gray clayey SAND
		AU 4	At 15 ft, P = 0.011 % 15.0
20			(SC) Dark gray to gray clayey SAND
			At 20 ft, P = 0.013 % 20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-B03

DATE PERFORMED 3/10/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.5 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	▼
			3.5
5			(SC) Gray clayey SAND At 4 ft, P = 0.0035 %
		AU 2	
			At 9 ft, P = 0.0023 % 9.5
10			(SC) Gray clayey SAND with red/orange mottling
		AU 3	
			13.5
15			(CL/CH) Light gray sandy CLAY
		AU 4	At 15 ft, P = 0.0014 %
			18.5
20			(SC) Light gray to orange clayey SAND At 19 ft, P = 0.0023 % 20.0
			(SC) White clayey SAND at 20 feet Bottom of borehole at 20.0 feet.

BORING NUMBER B-B04

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING NE
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	4.5
5			(SC) Light gray to dark gray clayey SAND At 5 ft, P = 0.048 %
		AU 2	
10			At 10 ft, P = 0.29 % At 10 ft, P_L = 2.3 mg/L
		AU 3	13.0
15			(CL/CH) Light gray to dark gray sandy CLAY At 15 ft, P = 1.9 %
		AU 4	16.0
20			(CL/CH) Light gray sandy CLAY (coarse) At 19 ft, P = 4.4 % 20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

BORING NUMBER B-B05

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 13.0 inches
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	3.0
			(SC) Light gray to orange sandy CLAY
5			At 5 ft, P = 0.0084 %
		AU 2	8.5
			(CL/CH) Light gray to orange sandy CLAY
10			At 10 ft, P = 0.045 %
		AU 3	▼
15			At 15 ft, P = 0.014 % 15.0
			(SC) Light gray clayey SAND
		AU 4	
20			At 20 ft, P = 0.0039 % 20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-B06

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 22.0 inches
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	
5			At 5 ft, P = 0.12 % At 5 ft, P_L = 0.046 mg/L 5.0
		AU 2	(SM) Light gray silty SAND
			9.0
10			(SC) Gray clayey SAND
		AU 3	At 10 ft, P = 0.0039 %
15			At 15 ft, P = 0.0062 %
		AU 4	
20			At 20 ft, P = 0.0089 % 20.0
			Bottom of borehole at 20.0 feet.
			▼

(Continued Next Page)

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CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-B07

DATE PERFORMED 3/10/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 1.2 feet
ESTIMATED SEASONAL HIGH _____
LOGGED BY JL
CHECKED BY KLH
NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
		AU 1	(SM) Dark gray to light gray silty SAND
4.5			
5		AU 2	(SC) Light brown clayey SAND At 5 ft, P = 0.53 %
6.0			
			(SC) Light gray clayey SAND
7.5			
			(CL/CH) Light gray sandy CLAY with red mottling
10			At 10 ft, P_L = 0.031 % At 10 ft, P_L = 0.085 mg/L
11.0		AU 3	(CL/CH) Light gray sandy CLAY
14.0			
15		AU 4	(SP-SC) Light gray SAND with silt At 15 ft, P = 0.0013 %
20			At 20 ft, P = 0.0013 %
20.0			Bottom of borehole at 20.0 feet.

BORING NUMBER B-B08

DATE PERFORMED 3/10/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 3.6 feet
ESTIMATED SEASONAL HIGH _____
LOGGED BY JL
CHECKED BY KLH
NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
			LIMESTONE
1.0			(PT) Black organic SAND
2.0		AU 1	(PT) Wood debris with gray silty SAND
4.5			
5		AU 2	(SC) Gray clayey SAND At 5 ft, P = 0.0050 %
9.5			
10			(SP) Light gray to white SAND At 10 ft, P = 0.0013 %
13.5		AU 3	(SC) Gray clayey SAND
15		AU 4	At 15 ft, P = 0.0063 %
20			At 20 ft, P = 0.011 %
20.0			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

BORING NUMBER B-B09

DATE PERFORMED 3/9/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.0 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM/PT) Black silty SAND with organics (topsoil)
			2.0
		AU 1	(SM) Dark brown silty SAND
			3.0
			(SM) Light gray to gray silty SAND
5		AU 2	At 5 ft, P = 0.012 %
			8.5
			(SC) Gray to light gray clayey SAND
10		AU 3	At 10 ft, P = 0.035 %
			Iron staining at 12 feet.
15		AU 4	At 15 ft, P = 0.015 %
20			At 20 ft, P = 0.014 % 20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-B10

DATE PERFORMED 3/10/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING NE
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray silty SAND
			2.0
		AU 1	(SP) Light yellowish tan SAND
			4.5
5		AU 2	(SC) Gray to orange clayey SAND At 5 ft, P = 0.0064 %
			At 10 ft, P = 0.0049 % 10.0
10		AU 3	(SC) Light gray clayey SAND
			At 15 ft, P = 0.0052 %
15		AU 4	At 19 ft, P = 0.058 % 19.0
			Bottom of borehole at 19.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE PERFORMED 3/11/2015 **BORING NUMBER B-A11**

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS: LOGGED BY JL

AT TIME OF DRILLING 13.3 feet CHECKED BY KLH

ESTIMATED SEASONAL HIGH

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray to light gray silty SAND
			At 5 ft, P = 0.049 %
5			5.0
		AU 2	(CL/CH) Gray to orange sandy CLAY
			At 7 ft, P = 0.096 %
			9.0
10		AU 3	(CL/CH) Green with orange sandy CLAY
			At 13 ft, P = 2.5 %
			13.3
			Bottom of borehole at 13.3 feet.
			Boring terminated at 13'3" due to auger refusal.

DATE PERFORMED 3/12/2015 **BORING NUMBER B-A12**

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS: LOGGED BY JL

AT TIME OF DRILLING 2.0 feet CHECKED BY KLH

ESTIMATED SEASONAL HIGH

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark brown to light gray silty SAND
			4.5
5		AU 2	(SC) Gray clayey SAND
			At 5 ft, P = 0.017 %
			At 9 ft, P = 0.016 %
			9.5
10		AU 3	(SC) Dark gray clayey SAND
			11.5
			(CL/CH) Reddish gray sandy CLAY
			13.0
			(SC) Gray clayey SAND
			14.5
15		AU 4	(SC) Dark gray clayey SAND
			At 15 ft, P = 0.011 %
			At 20 ft, P = 0.011 %
20			20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.

PROJECT NAME Plum Creek Property

PROJECT NUMBER 12371

PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A13

DATE PERFORMED 3/12/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 2.9 feet

ESTIMATED SEASONAL HIGH

LOGGED BY JL

CHECKED BY KLH

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
		AU 1	(SM) Dark gray to light gray silty SAND
5			At 5 ft, P = 0.014 %
			7.0
		AU 2	(SC) Gray clayey SAND
			At 8 ft, P = 0.033 %
10			10.0
		AU 3	(SC) Light gray to dark gray clayey SAND
15			At 14 ft, P = 0.20 %
		AU 4	
20			At 20 ft, P = 0.019 %
			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A14

DATE PERFORMED 3/12/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 0.8 feet

ESTIMATED SEASONAL HIGH

LOGGED BY JL

CHECKED BY KLH

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
		AU 1	(SM) Dark gray to light gray silty SAND
5			At 5 ft, P = 0.0025 %
			6.5
		AU 2	(SC) Gray clayey SAND
			At 8 ft, P = 0.092 %
10			12.5
		AU 3	(CL/CH) Gray sandy CLAY
15			At 14 ft, P = 0.013 %
		AU 4	
			At 20 ft, P = 0.0013 %
			19.0
20			(SC) Gray clayey SAND
			20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A15

DATE PERFORMED 3/13/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.0 feet
ESTIMATED SEASONAL HIGH _____
NOTES _____
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
		AU 1	(SM) Dark gray silty SAND
			At 5 ft, P = 0.0038 %
			At 5 ft, P_L = 0.38 mg/L
5			5.0
		AU 2	(SC) Gray to brown clayey SAND with roots
			7.5
			(SC) Light gray clayey SAND
			At 8.5 ft, P = 0.053 %
10			
		AU 3	
15			
		AU 4	At 15 ft, P = 0.017 %
			At 18 ft, P = 0.0069 %
20			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A16

DATE PERFORMED 3/13/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 25.0 feet
ESTIMATED SEASONAL HIGH _____
NOTES _____
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			
		AU 1	(SM) Dark gray to light gray silty SAND
5			At 5 ft, P = 0.0013 % 5.0
		AU 2	(SC) Gray with orange clayey SAND
			At 9 ft, P = 0.014 %
10			
		AU 3	
			14.0
15			(CL/CH) Green to light gray sandy CLAY
			At 15 ft, P = 1.2 % 15.5
		AU 4	(SC) Light to dark gray clayey SAND
			18.0
20			(CL/CH) Green to light gray sandy CLAY
		AU 5	At 20 ft, P = 1.2 %
25			At 25 ft, P = 0.83 %
		AU 6	
30			At 30 ft, P = 1.6 % 30.0
			Bottom of borehole at 30.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

BORING NUMBER B-A17

DATE PERFORMED 3/13/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 0.6 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	At 3 ft, P = 0.018 %
			4.5
5			(SC) Gray clayey SAND
			6.5
		AU 2	(CL/CH) Gray sandy CLAY
			At 7.5 ft, P = 0.032 %
10			
		AU 3	
15			At 15 ft, P = 2.0 %
		AU 4	At 15 ft, P_L = 7.9 mg/L
			18.0
			(CH) Gray to orange mottled CLAY
20			At 20 ft, P = 2.1 % 20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A18

DATE PERFORMED 3/17/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 3.5 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Gray to dark gray silty SAND
		AU 1	
5			At 5 ft, P = 0.0082 %
		AU 2	8.5
			(SP-SC) Light gray SAND with clay
10			At 10 ft, P = 0.0014 %
			11.0
		AU 3	(CL/CH) Gray CLAY
			At 12 ft, P = 0.069 % 12.5
15			(SC) Light gray clayey SAND
			At 20 ft, P = 3.2 %
			16.0
			NO RECOVERY
20			24.0
			Bottom of borehole at 24.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

BORING NUMBER B-A19

DATE PERFORMED 3/17/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 20.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray to light gray silty SAND
			4.0
5			(CL/CH) Orangish gray sandy CLAY
		AU 2	At 5 ft, P = 0.011 %
			6.0
			(SC) Gray to orange mottled clayey SAND
10		AU 3	At 10 ft, P = 0.0061 %
15		AU 4	At 15 ft, P = 0.017 %
			16.0
			(SC) Light gray clayey SAND
20			At 20 ft, P = 0.021 %
			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A20

DATE PERFORMED 3/13/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 2.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Light gray to dark gray silty SAND
5			At 5 ft, P = 0.0013 %
			6.0
		AU 2	(CL/CH) Orange to gray sandy CLAY
			9.5
10		AU 3	(SC) Gray clayey SAND At 10 ft, P = 0.029 %
15			At 15 ft, P = 0.0047 %
		AU 4	18.0
			(CH) Blue to green CLAY
20			At 20 ft, P = 2.2 %
			20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.

PROJECT NAME Plum Creek Property

PROJECT NUMBER 12371

PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A21

DATE PERFORMED 3/11/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 25.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray to light gray silty SAND
4.5			
5		AU 2	(CL/CH) Gray to orange sandy CLAY At 5 ft, P = 0.061 %
10		AU 3	At 10 ft, P = 0.038 %
13.0			
15		AU 4	(CL/CH) Blue to green to orange sandy CLAY At 14 ft, P = 0.087 %
20		AU 5	At 20 ft, P = 0.20 % At 21 ft, P = 0.27 %
25			▼
25.0			Bottom of borehole at 25.0 feet.

BORING NUMBER B-A22

DATE PERFORMED 3/11/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 2.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray to light gray silty SAND ▼
4.5			
5		AU 2	(SC) Light clayey SAND At 5 ft, P = 0.073 %
8.0			
10		AU 3	(CL/CH) Light gray sandy CLAY At 10 ft, P = 0.023 %
15		AU 4	At 15 ft, P = 0.023 %
20			At 20 ft, P = 6.8 % At 20 ft, P_L = 1.8 mg/L
20.0			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.

PROJECT NAME Plum Creek Property

PROJECT NUMBER 12371

PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A23

DATE PERFORMED 3/11/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 2.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	
5			At 5 ft, P = 0.035 % 5.0
		AU 2	(SC) Light gray clayey SAND
10			
		AU 3	At 10 ft, P = 0.019 %
15			
		AU 4	At 15 ft, P = 0.038 %
20			At 20 ft, P = 0.0095 % 20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A24

DATE PERFORMED 3/11/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 0.8 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark and light gray silty SAND
		AU 1	4.0
5			(CL/CH) Gray sandy CLAY
		AU 2	At 5 ft, P = 0.38 % At 5 ft, P_L = 0.34 mg/L
10			At 9 ft, P = 0.040 %
		AU 3	
15			At 15 ft, P = 2.7 %
		AU 4	18.0
20			(CH) Light green CLAY
			At 20 ft, P = 3.2 % 20.0
		AU 5	Bottom of borehole at 20.0 feet.

(Continued Next Page)

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Gainesville, Fl 32608
Telephone: 352-377-3233

CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A25

DATE PERFORMED 3/10/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.0 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Gray to light gray silty SAND
4.5			(SC) Light gray clayey SAND At 5 ft, P = 0.020 %
5		AU 2	
10		AU 3	At 10 ft, P = 0.070 %
11.0			(SC) Light gray with orange clayey SAND
15		AU 4	At 15 ft, P = 0.0067 %
20			At 20 ft, P = 0.0039 %
20.0			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A26

DATE PERFORMED 3/12/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 1.0 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark to light gray silty SAND
4.5			(SC) Light gray to clayey SAND At 5 ft, P = 0.025 %
5		AU 2	
7.0			(CL/CH) Light gray to sandy CLAY with red mottling
10		AU 3	At 9 ft, P = 0.031 %
10.0			(CL/CH) Light gray sandy CLAY
15		AU 4	At 15 ft, P = 0.015 %
19.5			At 19 ft, P = 0.015 %
20			(SC) Light gray to orange clayey SAND
20.0			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A27

DATE PERFORMED 3/17/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 3.5 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray to light gray silty SAND
			4.5
5		AU 2	(CL/CH) Orange to light red sandy CLAY At 5 ft, P = 0.018 %
			At 10 ft, P = 0.011 %
10		AU 3	10.5 (SC) Orange to light red clayey SAND
			14.0
15		AU 4	(SC) Light gray clayey SAND At 15 ft, P = 0.040 %
			At 20 ft, P = 3.3 %
			19.0
20			(CH) Orangish gray CLAY
			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A28

DATE PERFORMED 3/17/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 4.0 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Dark gray to light gray SAND with silt
			At 5 ft, P = 0.0019 %
5		AU 2	7.0 (SC) Gray to orange mottled clayey SAND
			At 8 ft, P = 0.096 %
10		AU 3	13.0 (CH) Gray to orange mottled CLAY with phosphate
			At 15 ft, P = 0.65 %
15		AU 4	At 18 ft, P = 1.7 %
			20.0
20			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A29

DATE PERFORMED 3/17/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 1.0 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SP-SM) Dark gray to light gray SAND with silt
		AU 1	
5			At 5 ft, P = 0.0032 %
		AU 2	8.0
			(CL/CH) Gray sandy CLAY
10			At 10 ft, P = 0.0087 %
		AU 3	13.0
			(CL/CH) Blue to green CLAY
15			At 15 ft, P = 0.25 %
		AU 4	At 20 ft, P = 4.7 % At 20 ft, P_L = 6.2 mg/L
			18.0
			(CL/CH) Blue to green CLAY with limestone
20			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A30

DATE PERFORMED 3/13/2015
DRILLING CONTRACTOR Probe Domain
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.3 feet
ESTIMATED SEASONAL HIGH
NOTES
LOGGED BY JL
CHECKED BY KLH

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark gray to light gray silty SAND
		AU 1	
5			At 5 ft, P = 0.0013 %
		AU 2	8.5
			(SC) Gray clayey SAND
10			At 10 ft, P = 0.11 %
		AU 3	
15			At 15 ft, P = 0.034 %
		AU 4	
20			At 20 ft, P = 0.021 % 20.0
			Bottom of borehole at 20.0 feet.

(Continued Next Page)

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CLIENT CHW, Inc.

PROJECT NAME Plum Creek Property

PROJECT NUMBER 12371

PROJECT LOCATION Alachua, Alachua County, Florida

BORING NUMBER B-A31

DATE PERFORMED 3/12/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 2.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SM) Dark to light gray silty SAND
		AU 1	
5			At 5 ft, P = 0.010 %
			6.0
		AU 2	(CL/CH) Gray sandy CLAY
			At 8 ft, P = 0.034 %
10			9.5
		AU 3	(SP-SC) Light gray SAND with clay
			12.0
15			(SC) Gray clayey SAND
		AU 4	At 15 ft, P = 0.0075 %
20			At 20 ft, P = 0.031 %
			20.0
			Bottom of borehole at 20.0 feet.

BORING NUMBER B-A32

DATE PERFORMED 3/13/2015

DRILLING CONTRACTOR Probe Domain

GROUND WATER LEVELS:

AT TIME OF DRILLING 13.0 feet

ESTIMATED SEASONAL HIGH _____

LOGGED BY JL

CHECKED BY KLH

NOTES _____

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0			(SP-SM) Light to dark gray SAND with silt
		AU 1	
5			4.5
			(SC) Orange to gray clayey SAND
		AU 2	At 5 ft, P = 0.019 %
10			At 10 ft, P = 0.0071 %
			12.5
		AU 3	(SC) Gray clayey SAND
15			At 15 ft, P = 0.0041 %
		AU 4	
			18.5
			(CL/CH) Gray sandy CLAY
20			At 20 ft, P = 0.011 %
			20.0
			Bottom of borehole at 20.0 feet.

6.2 Standard Penetration Test Soil Boring Logs

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BORING NUMBER B-B04-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/23/15 **COMPLETED** 3/23/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
0		(SP-SM) Loose to medium dense tan SAND with silt		SPT 1	2-3-7 (10)						
				SPT 2	2-7-4 (11)						
5			5	SPT 3	2-8-3 (11)						
		(SM) Loose light tan silty SAND		SPT 4	3-5-5 (10)						
			7								
		(SM) Loose to medium dense gray silty SAND		SPT 5	5-5-13 (18)						
10				SPT 6	2-3-5 (8)						
			13.5								
		(SC) Loose to medium dense gray very clayey SAND		SPT 7	7-9-10 (19)						
15											
20				SPT 8	7-4-6 (10)						
			23.5								
		(CL/CH) Stiff blue-green CLAY with orange mottling		SPT 9	5-5-6 (11)						
25											
30				SPT 10	6-8-9 (17)						

(Continued Next Page)

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BORING NUMBER B-B04-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Stiff blue-green CLAY with orange mottling *(continued)*									
			33.5								
		(CL/CH) Soft light gray sandy CLAY		SPT 11	3-2-2 (4)						
35											
			38.5								
		(CL/CH) Hard to very hard blue-green CLAY with some orange mottling		SPT 12	16-12-20 (32)						
40											
				SPT 13	24-36-50 (86)						
45											
				SPT 14	30-50/6" 50/6"						>>
50											
				SPT 15	27-42-50 (92)						
55											
			58.5								
		(CL/CH) Very hard blue-green CLAY with phosphate		SPT 16	50/6"						>>
60											
			63.5								
		(CL/CH) Very hard blue-green CLAY		SPT 17	50/6"						>>
65											

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BORING NUMBER B-B04-SPT

CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Very hard blue-green CLAY *(continued)*									
			68.5								
70		(CL/CH) Very hard greenish gray CLAY with phosphate		SPT 18	22-35-36 (71)						
			73.5								>>
		Bottom of borehole at 73.5 feet.		SPT 19	50/0"						
		Boring terminated at 73.5 feet due to drilling refusal in very hard clay.									

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BORING NUMBER B-B08-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/24/15 **COMPLETED** 3/24/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ (20 40 60 80)
0	(SM) Medium dense black, light tan, and gray silty SAND (fill)	2.5	SPT 1	29-12-17 (29)						
	(SP-SM) Dense light gray SAND with silt	4	SPT 2	22-15-17 (32)				8.8		
5	(SM) Medium dense reddish brown silty SAND	5.5	SPT 3	23-9-7 (16)				15		
	(SC) Medium dense light brown clayey SAND	7	SPT 4	5-5-6 (11)						
	(CL/CH) Stiff to hard light gray sandy CLAY with orange mottling and limestone		SPT 5	6-12-26 (38)						
10			SPT 6	5-5-10 (15)						
		13.5								
	(SC) Medium dense gray clayey to very clayey SAND		SPT 7	8-10-11 (21)				19		
15										
20			SPT 8	8-6-8 (14)						
		23.5								
	(CL/CH) Firm blue-green CLAY with orange mottling		SPT 9	5-3-3 (6)				98		
25		28.5								
	Soft tan weathered clayey LIMESTOME		SPT 10	3-2-4 (6)						
30										

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BORING NUMBER B-B08-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		Soft tan weathered clayey LIMESTOME *(continued)*									
35				SPT 11	5-3-3 (6)						
			38.5								
		(CL/CH) Hard light tan CLAY with phosphate		SPT 12	6-13-23 (36)						
40			43.5								
		(CL/CH) Very stiff to very hard blue-green CLAY with sand, limestone, and phosphate		SPT 13	50/3"						>>
45											
				SPT 14	7-9-12 (21)						
50											
				SPT 15	6-10-16 (26)						
55											
				SPT 16	10-10-15 (25)						
60											
				SPT 17	9-11-14 (25)						
65											

(Continued Next Page)

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BORING NUMBER B-B08-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Very stiff to very hard blue-green CLAY with sand, limestone, and phosphate *(continued)*	68.5								
70		(SC) Medium dense blue-green clayey SAND		SPT 18	9-12-17 (29)				28		
			73.5								
75		(CL/CH) Hard to very hard blue-green CLAY with sand, limestone, and phosphate		SPT 19	14-17-27 (44)						
80				SPT 20	18-23-31 (54)						
85				SPT 21	14-17-16 (33)						
90				SPT 22	11-20-32 (52)						
95				SPT 23	50/6"						>>
100			100	SPT 24	50/0"						>>
		Bottom of borehole at 100.0 feet. *Boring terminated at 100 feet due to drilling refusal in very hard clay.*									

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BORING NUMBER B-A13-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/26/15 **COMPLETED** 3/27/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT ▼ **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH ▽ **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0	(SM) Loose light gray to yellow brown silty SAND		SPT 1	6-5-5 (10)						20 40 60 80
		4	SPT 2	3-4-4 (8)						
5	(SC) Very loose to loose gray clayey SAND		SPT 3	4-4-3 (7)				16		
			SPT 4	1-1-2 (3)						
			SPT 5	1-2-2 (4)						
10			SPT 6	2-3-4 (7)						
		13.5								
15	(SM) Loose dark gray silty SAND		SPT 7	4-4-6 (10)						
		18.5								
20	(SP-SC) Medium dense brown SAND with clay		SPT 8	11-12-15 (27)				6.7		
		23.5								
25	(CL/CH) Stiff to very hard blue-green CLAY with some orange or brown mottling		SPT 9	10-8-6 (14)				82		
30			SPT 10	5-7-8 (15)						

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BORING NUMBER B-A13-SPT

CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Stiff to very hard blue-green CLAY with some orange or brown mottling *(continued)*									
35				SPT 11	9-6-7 (13)						
40				SPT 12	6-6-7 (13)						
45				SPT 13	11-13-19 (32)						
50				SPT 14	13-18-20 (38)						
55		*Phosphate at 55 feet.*		SPT 15	11-14-23 (37)						
60				SPT 16	50/3"						>>
			62.5								
		Bottom of borehole at 62.5 feet. *Boring terminated at 62.5 feet due to drilling refusal in very hard clay.*		SPT 17	50/0"						>>

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BORING NUMBER B-A18-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/26/15 **COMPLETED** 3/26/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT ▼ **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH ▽ **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ (20 40 60 80)
0		(SM) Loose to medium dense dark gray silty SAND		SPT 1	8-7-7 (14)						
			4	SPT 2	4-3-3 (6)						
5		(SP) Medium dense tan SAND		SPT 3	6-5-10 (15)				4		
			7	SPT 4	8-13-12 (25)						
		(SM) Medium dense gray silty SAND	8.5	SPT 5	10-11-9 (20)						
10		(CL/CH) Stiff tan and orange sandy CLAY		SPT 6	3-5-4 (9)						
			13.5								
		(CL/CH) Soft blue-green to gray sandy CLAY		SPT 7	2-2-2 (4)						
15		◀ *80% Loss of Circulation at 17.4 feet*									
			18.5								
		Very hard clayey LIMESTONE		SPT 8	50/2"						>>
20											
		No recovery at 23.5 feet	23.5								
		Very dense tan clayey LIMESTONE with shell fragments		SPT 9	50/2"						>>
25											
			28.5								
		(CL/CH) Stiff to very hard blue-green CLAY		SPT 10	7-6-7 (13)						
30											

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BORING NUMBER B-A18-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ (20 40 60 80)
	(CL/CH) Stiff to very hard blue-green CLAY *(continued)*									
35			SPT 11	10-13-23 (36)						
40			SPT 12	32-50/5" 50/5"						>>
45			SPT 13	50/5"						>>
		48.5								
50	(CL/CH) Firm greenish tan CLAY		SPT 14	3-1-4 (5)						
		53.5								
55	(CL/CH) Very hard blue-green CLAY *Chert at 55 feet*		SPT 15	50/3"						>>
60			SPT 16	23-20-21 (41)						
65			SPT 17	19-22-25 (47)						

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5590 SW 64 th Street
Gainesville, Fl 32608
Telephone: 352-377-3233

BORING NUMBER B-A18-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Very hard blue-green CLAY *(continued)*									
				SPT 18	50/1"						>>
70		*Limestone fragments at 70 feet*									
				SPT 19	50/1"						>>
75											
			78.5								
		(SC) Very dense dark gray clayey SAND		SPT 20	33-38-50/5" 88/11"						>>
80											
			83.5								
		Bottom of borehole at 83.5 feet.		SPT 21	50/0"						>>
		No recovery at 83.5 feet. Boring terminated due to drilling refusal in hard clay materials.									

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5590 SW 64 th Street
Gainesville, Fl 32608
Telephone: 352-377-3233

BORING NUMBER B-A21-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/25/15 **COMPLETED** 3/25/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT ▼ **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH ▽ **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SM) Loose dark reddish brown silty SAND									20 40 60 80
			2.5	SPT 1	7-4-5 (9)						
		(SC) Loose to dense gray very clayey SAND with layers of sandy clay		SPT 2	8-3-3 (6)				43		
5				SPT 3	3-5-13 (18)						
				SPT 4	10-17-20 (37)						
				SPT 5	16-12-15 (27)						
10				SPT 6	6-10-15 (25)						
			13.5								
		(CL/CH) Stiff to very hard blue-green CLAY with orange mottling		SPT 7	6-9-10 (19)						
15											
				SPT 8	4-4-3 (7)						
20											
				SPT 9	11-6-5 (11)						
25											
				SPT 10	9-11-12 (23)						
30											

SPT BORINGS - GINT STD US.GDT - 4/27/15 10:52 - O:\PROJECTS\12371 PLUM CREEK PROPERTY\12371 BORINGS\12371 BORINGS.GPJ

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5590 SW 64 th Street
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BORING NUMBER B-A21-SPT

CLIENT CHW, Inc.
PROJECT NAME Plum Creek Property
PROJECT NUMBER 12371
PROJECT LOCATION Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Stiff to very hard blue-green CLAY with orange mottling *(continued)*									
35				SPT 11	5-16-13 (29)						
40			40	SPT 12	11-13-50/3" 63/9"						>>
		Bottom of borehole at 40.0 feet. *Boring terminated at 40 feet due to drilling refusal.*									

GSE Engineering & Consulting, Inc.
5590 SW 64 th Street
Gainesville, Fl 32608
Telephone: 352-377-3233

BORING NUMBER B-A26-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DATE STARTED 3/25/15 **COMPLETED** 3/25/15 **GROUND ELEVATION** _____ **HOLE SIZE** _____

DRILLING CONTRACTOR Whitaker Drilling, Inc. **GROUND WATER LEVELS:**

DRILLING METHOD SPT ▼ **AT TIME OF DRILLING** _____

LOGGED BY WDI **CHECKED BY** KLH ▽ **ESTIMATED SEASONAL HIGH** _____

NOTES _____

DEPTH (ft)	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0	(SP-SM) Loose dark gray to tan SAND with silt		SPT 1	3-2-2 (4)						
			SPT 2	4-4-7 (11)						
		4								
5	(CL/CH) Stiff to very hard gray and orange sandy CLAY with layers of clayey sand		SPT 3	7-4-6 (10)				34		
			SPT 4	11-17-20 (37)						
			SPT 5	18-23-25 (48)						
10			SPT 6	24-29-31 (60)						
15			SPT 7	11-16-13 (29)						
		18.5								
20	(CL/CH) Stiff greenish gray sandy CLAY with orange mottling		SPT 8	10-6-7 (13)						
		23.5								
25	(CL/CH) Firm to stiff greenish gray CLAY with orange mottling		SPT 9	5-4-4 (8)						
30			SPT 10	3-3-2 (5)						

(Continued Next Page)

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5590 SW 64 th Street
Gainesville, Fl 32608
Telephone: 352-377-3233

BORING NUMBER B-A26-SPT

CLIENT CHW, Inc. **PROJECT NAME** Plum Creek Property

PROJECT NUMBER 12371 **PROJECT LOCATION** Alachua, Alachua County, Florida

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲ 20 40 60 80
		(CL/CH) Firm to stiff greenish gray CLAY with orange mottling *(continued)*									
35				SPT 11	2-2-2 (4)						
40				SPT 12	2-2-1 (3)						
			43.5								
45		(CL/CH) Very hard greenish gray CLAY with orange mottling		SPT 13	12-22-24 (46)						
50				SPT 14	14-15-24 (39)						
			53.5								
		Bottom of borehole at 53.5 feet.		SPT 15	50/2"						>>
		Boring terminated at 53.5 feet due to drilling refusal in hard clay.									

6.3 Laboratory Results

GSE Engineering & Consulting, Inc.

SUMMARY REPORT OF LABORATORY TEST RESULTS

Project Number: 12371

Project Name: Plum Creek Property

Boring Number	Depth (ft)	Soil Description	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Passing No. 200 Sieve	Organic Content (%)	Unified Soil Classification
B04	4-5.5	Tan SAND with Silt	12				10		SP-SM
A18	4-5.5	Tan SAND	17				4.0		SP
A21	2.5-4	Gray Very Clayey SAND	27				43		SC
A13	5.5-7	Gray Clayey SAND	19				16		SC
A13	18.5-20	Brown SAND with Clay	15				6.7		SP-SC
A13	23.5-25	Blue-Green CLAY with Sand	57				82		CL/CH
B08	2.5-4	Light Gray SAND with Silt	13				8.8		SP-SM
B08	4-5.5	Reddish Brown Silty SAND	15				15		SM
B08	13.5-15	Gray Clayey SAND	15				19		SC
B08	23.5-25	Blue-Green CLAY with Orange Mottles	67				98		CL/CH
B08	68.5-70	Blue, Green, and Gray Clayey SAND	33				28		SC
A26	4-5.5	Gray and Orange Very Clayey SAND	13				34		SC

6.4 Phosphorus Laboratory Test Results

Summary of Total Phosphorous Soil Test Results (Percent to Mg/Kg Conversion)

Plum Creek Property

Alachua County, Florida

GSE Project No. 12371

Sample	Analyte	Result (%)	Qualifier	DL (%)	Result (mg/kg)	DL (mg/kg)	Qualifier
A22-20 CLAY	Total Phosphorus (as P)	6.8		0.14	68000	1400	
A29-20 CLAY	Total Phosphorus (as P)	4.7		0.17	47000	1700	
B04-19 CLAY	Total Phosphorus (as P)	4.4		0.072	44000	720	
A27-20 CLAY	Total Phosphorus (as P)	3.3		0.053	33000	530	
A18-15 CLAY SAND	Total Phosphorus (as P)	3.2		0.035	32000	350	
A24-20 CLAY	Total Phosphorus (as P)	3.2		0.04	32000	400	
A24-15 CLAY	Total Phosphorus (as P)	2.7		0.038	27000	380	
A11-13 CLAY	Total Phosphorus (as P)	2.5		0.035	25000	350	
A20-20 CLAY	Total Phosphorus (as P)	2.2		0.032	22000	320	
A17-20 CLAY	Total Phosphorus (as P)	2.1		0.034	21000	340	
A17-15 CLAY SAND	Total Phosphorus (as P)	2		0.027	20000	270	
B04-15 CLAY	Total Phosphorus (as P)	1.9		0.033	19000	330	
A28-18 CLAY	Total Phosphorus (as P)	1.7		0.017	17000	170	
A16-30 CLAY	Total Phosphorus (as P)	1.6		0.044	16000	440	
A16-15 CLAY	Total Phosphorus (as P)	1.2		0.031	12000	310	
A16-20 CLAY	Total Phosphorus (as P)	1.2		0.041	12000	410	
A16-25 CLAY	Total Phosphorus (as P)	0.83		0.034	8300	340	
A28-15 CLAY	Total Phosphorus (as P)	0.65		0.0076	6500	76	
B07-5 CLAY SAND	Total Phosphorus (as P)	0.53		0.015	5300	150	
A24-5 CLAY	Total Phosphorus (as P)	0.38		0.007	3800	70	
B04-10 CLAY SAND	Total Phosphorus (as P)	0.29		0.0067	2900	67	
A21-25 CLAY	Total Phosphorus (as P)	0.27		0.0098	2700	98	
A29-15 CLAY	Total Phosphorus (as P)	0.25		0.0073	2500	73	
A13-14 CLAY SAND	Total Phosphorus (as P)	0.2		0.0068	2000	68	
A21-20 CLAY	Total Phosphorus (as P)	0.2		0.01	2000	100	
B06-5 SAND	Total Phosphorus (as P)	0.12		0.0013	1200	13	
A30-10 CLAY SAND	Total Phosphorus (as P)	0.11		0.0014	1100	14	
A11-7 CLAY SAND	Total Phosphorus (as P)	0.096		0.0026	960	26	
A28-8 CLAY SAND	Total Phosphorus (as P)	0.096		0.0013	960	13	
A14-8 SAND	Total Phosphorus (as P)	0.092		0.0013	920	13	
A21-14 CLAY SAND	Total Phosphorus (as P)	0.087		0.0014	870	14	
A22-5 CLAY SAND	Total Phosphorus (as P)	0.073		0.0014	730	14	
A18-12 CLAY SAND	Total Phosphorus (as P)	0.069		0.0013	690	13	
A21-5 CLAY SAND	Total Phosphorus (as P)	0.061		0.0015	610	15	
B10-19 CLAY SAND	Total Phosphorus (as P)	0.058		0.0013	580	13	
B01-10 CLAY SAND	Total Phosphorus (as P)	0.054		0.0014	540	14	
A15-8.5 CLAY	Total Phosphorus (as P)	0.053		0.0013	530	13	
A11-5 SAND	Total Phosphorus (as P)	0.049		0.0012	490	12	
B04-5 SAND	Total Phosphorus (as P)	0.048		0.0013	480	13	
B05-10 CLAY	Total Phosphorus (as P)	0.045		0.0014	450	14	
A27-15 CLAY SAND	Total Phosphorus (as P)	0.04		0.0013	400	13	
A24-9 CLAY SAND	Total Phosphorus (as P)	0.04		0.0013	400	13	
A23-15 CLAY SAND	Total Phosphorus (as P)	0.038		0.0014	380	14	
A15-5 SAND	Total Phosphorus (as P)	0.038		0.0014	380	14	
A21-10 CLAY SAND	Total Phosphorus (as P)	0.038		0.0013	380	13	
B09-10 CLAY SAND	Total Phosphorus (as P)	0.035		0.0013	350	13	
A23-5 CLAY SAND	Total Phosphorus (as P)	0.035		0.0013	350	13	
A31-8 CLAY	Total Phosphorus (as P)	0.034		0.0013	340	13	
A30-15 CLAY SAND	Total Phosphorus (as P)	0.034		0.0013	340	13	

Qualifiers:

U: Compound was analyzed, not detected

I: Reported value between laboratory method detection limit/laboratory practical quantitation limit

Summary of Total Phosphorous Soil Test Results (Percent to Mg/Kg Conversion)

Plum Creek Property

Alachua County, Florida

GSE Project No. 12371

Sample	Analyte	Result (%)	Qualifier	DL (%)	Result (mg/kg)	DL (mg/kg)	Qualifier
A13-8 CLAY SAND	Total Phosphorus (as P)	0.033		0.0013	330	13	
A17-7.5 CLAY SAND	Total Phosphorus (as P)	0.032		0.0013	320	13	
A31-20 CLAY	Total Phosphorus (as P)	0.031		0.0013	310	13	
B07-10 CLAY	Total Phosphorus (as P)	0.031		0.0015	310	15	
A26-9 CLAY	Total Phosphorus (as P)	0.031		0.0014	310	14	
A20-10 CLAY	Total Phosphorus (as P)	0.029		0.0015	290	15	
A26-5 CLAY SAND	Total Phosphorus (as P)	0.025		0.0013	250	13	
A22-10 CLAY SAND	Total Phosphorus (as P)	0.023		0.0013	230	13	
A22-15 CLAY SAND	Total Phosphorus (as P)	0.023		0.0013	230	13	
A19-20 CLAY SAND	Total Phosphorus (as P)	0.021		0.0012	210	12	
A30-20 CLAY SAND	Total Phosphorus (as P)	0.021		0.0013	210	13	
A25-5 CLAY	Total Phosphorus (as P)	0.02		0.0013	200	13	
A32-5 CLAY SAND	Total Phosphorus (as P)	0.019		0.0013	190	13	
A13-20 CLAY SAND	Total Phosphorus (as P)	0.019		0.0013	190	13	
A23-10 CLAY SAND	Total Phosphorus (as P)	0.019		0.0013	190	13	
A27-5 CLAY SAND	Total Phosphorus (as P)	0.018		0.0014	180	14	
A17-3 SAND	Total Phosphorus (as P)	0.018		0.0013	180	13	
A19-15 CLAY	Total Phosphorus (as P)	0.017		0.0014	170	14	
A15-15 CLAY SAND	Total Phosphorus (as P)	0.017		0.0013	170	13	
A12-5 CLAY SAND	Total Phosphorus (as P)	0.017		0.0013	170	13	
A12-9 CLAY SAND	Total Phosphorus (as P)	0.016		0.0013	160	13	
B09-15 CLAY SAND	Total Phosphorus (as P)	0.015		0.0013	150	13	
A26-15 CLAY	Total Phosphorus (as P)	0.015		0.0013	150	13	
A26-19 CLAY SAND	Total Phosphorus (as P)	0.015		0.0013	150	13	
A13-5 SAND	Total Phosphorus (as P)	0.014		0.0013	140	13	
B09-20 CLAY SAND	Total Phosphorus (as P)	0.014		0.0013	140	13	
B05-15 CLAY	Total Phosphorus (as P)	0.014		0.0015	140	15	
A16-9 CLAY SAND	Total Phosphorus (as P)	0.014		0.0013	140	13	
B02-20 CLAY	Total Phosphorus (as P)	0.013		0.0013	130	13	
A14-14 CLAY SAND	Total Phosphorus (as P)	0.013		0.0014	130	14	
B09-5 CLAY SAND	Total Phosphorus (as P)	0.012		0.0013	120	13	
A32-20 CLAY	Total Phosphorus (as P)	0.011		0.0013	110	13	
A27-10 CLAY SAND	Total Phosphorus (as P)	0.011		0.0013	110	13	
A19-5 CLAY	Total Phosphorus (as P)	0.011		0.0015	110	15	
B08-20 CLAY SAND	Total Phosphorus (as P)	0.011		0.0013	110	13	
B02-15 CLAY SAND	Total Phosphorus (as P)	0.011		0.0013	110	13	
A12-15 CLAY SAND	Total Phosphorus (as P)	0.011		0.0013	110	13	
A12-20 CLAY SAND	Total Phosphorus (as P)	0.011		0.0013	110	13	
A31-5 SAND	Total Phosphorus (as P)	0.01		0.0013	100	13	
B01-5 SAND	Total Phosphorus (as P)	0.0098		0.0013	98	13	
B01-15 CLAY SAND	Total Phosphorus (as P)	0.0096		0.0013	96	13	
A23-20 CLAY SAND	Total Phosphorus (as P)	0.0095		0.0013	95	13	
B06-20 CLAY	Total Phosphorus (as P)	0.0089		0.0013	89	13	
B01-20 CLAY SAND	Total Phosphorus (as P)	0.0088		0.0013	88	13	
A29-10 CLAY SAND	Total Phosphorus (as P)	0.0087		0.0013	87	13	
B05-5 CLAY SAND	Total Phosphorus (as P)	0.0084		0.0013	84	13	
A18-5 SAND	Total Phosphorus (as P)	0.0082		0.0014	82	14	
A31-15 CLAY	Total Phosphorus (as P)	0.0075		0.0013	75	13	
A32-10 CLAY SAND	Total Phosphorus (as P)	0.0071		0.0013	71	13	

Qualifiers:

U: Compound was analyzed, not detected

I: Reported value between laboratory method detection limit/laboratory practical quantitation limit

Summary of Total Phosphorous Soil Test Results (Percent to Mg/Kg Conversion)

Plum Creek Property

Alachua County, Florida

GSE Project No. 12371

Sample	Analyte	Result (%)	Qualifier	DL (%)	Result (mg/kg)	DL (mg/kg)	Qualifier
A25-10 CLAY SAND	Total Phosphorus (as P)	0.007		0.0013	70	13	
A15-18 CLAY	Total Phosphorus (as P)	0.0069		0.0013	69	13	
A25-15 CLAY SAND	Total Phosphorus (as P)	0.0067		0.0013	67	13	
B02-10 CLAY SAND	Total Phosphorus (as P)	0.0066		0.0013	66	13	
B10-5 CLAY SAND	Total Phosphorus (as P)	0.0064		0.0013	64	13	
B08-15 CLAY	Total Phosphorus (as P)	0.0063		0.0013	63	13	
B06-15 CLAY SAND	Total Phosphorus (as P)	0.0062		0.0013	62	13	
A19-10 CLAY SAND	Total Phosphorus (as P)	0.0061		0.0014	61	14	
B10-15 CLAY SAND	Total Phosphorus (as P)	0.0052		0.0013	52	13	
B08-5 CLAY SAND	Total Phosphorus (as P)	0.005		0.0013	50	13	
B10-10 CLAY SAND	Total Phosphorus (as P)	0.0049		0.0014	49	14	
A20-15 CLAY SAND	Total Phosphorus (as P)	0.0047		0.0013	47	13	
A32-15 CLAY	Total Phosphorus (as P)	0.0041		0.0013	41	13	
B06-10 CLAY SAND	Total Phosphorus (as P)	0.0039		0.0013	39	13	
B05-20 CLAY	Total Phosphorus (as P)	0.0039		0.0014	39	14	
A25-20 CLAY SAND	Total Phosphorus (as P)	0.0039		0.0013	39	13	
B03-4 CLAY SAND	Total Phosphorus (as P)	0.0035		0.0013	35	13	
A29-5 SAND	Total Phosphorus (as P)	0.0032	I	0.0026	32	26	I
A14-5 SAND	Total Phosphorus (as P)	0.0025	I	0.0013	25	13	I
B03-9 CLAY SAND	Total Phosphorus (as P)	0.0023	I	0.0013	23	13	I
B03-19 CLAY SAND	Total Phosphorus (as P)	0.0023	I	0.0013	23	13	I
A28-5 SAND	Total Phosphorus (as P)	0.0019	I	0.0013	19	13	I
A18-10 SAND	Total Phosphorus (as P)	0.0014	U	0.0014	14	14	U
B03-15 CLAY SAND	Total Phosphorus (as P)	0.0014	I	0.0013	14	13	I
B08-10 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
B02-5 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
B07-15 CLAY SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
B07-20 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
A30-5 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
A14-20 CLAY SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
A20-5 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U
A16-5 SAND	Total Phosphorus (as P)	0.0013	U	0.0013	13	13	U

Qualifiers:

U: Compound was analyzed, not detected

I: Reported value between laboratory method detection limit/laboratory practical quantitation limit

Advanced Environmental Laboratories, Inc.
4965 SW 41st Bl Gainesville, FL32608
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502585 PLUM CREEK

Lab ID: **G1502585001** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **A29-20 CLAY** Date Collected: 03/18/15 11:47

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**6.2**		**mg/L**	**5**	0.50	0.23	4/13/2015 11:56	T

Lab ID: **G1502585002** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **A17-15 CLAY SAND** Date Collected: 03/18/15 12:06

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**7.9**		**mg/L**	**5**	0.50	0.23	4/13/2015 11:56	T

Lab ID: **G1502585003** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **B06-5 SAND** Date Collected: 03/18/15 15:17

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.046**	**U**	**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
4965 SW 41st Bl Gainesville, FL32608
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502585 PLUM CREEK

Lab ID: **G1502585004** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **B04-10 CLAY SAND** Date Collected: 03/18/15 15:40

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.3**		**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

Lab ID: **G1502585005** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **A24-5 CLAY** Date Collected: 03/18/15 13:53

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.34**		**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

Lab ID: **G1502585006** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **B07-8 CLAY SAND** Date Collected: 03/18/15 14:05

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.085**	**I**	**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

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ANALYTICAL RESULTS

Workorder: G1502585 PLUM CREEK

Lab ID: **G1502585007** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **A22-20 CLAY** Date Collected: 03/18/15 14:35

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.8**		**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

Lab ID: **G1502585008** Date Received: 03/20/15 15:45 Matrix: Water
Sample ID: **A15-5 SAND** Date Collected: 03/18/15 13:41

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.38**		**mg/L**	**1**	0.10	0.046	4/13/2015 11:56	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: G1502585 PLUM CREEK

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

T	DOH Certification #E84589(AEL-T)(FL NELAC Certification)

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131001** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A28-15 CLAY** Date Collected: 03/18/15 11:34
Results for sample G1502131001 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.65**	**J4**	**%**	**5**	0.017	0.0076	3/26/2015 14:28	T

Lab ID: **G1502131002** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A28-18 CLAY** Date Collected: 03/18/15 11:37
Results for sample G1502131002 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.7**		**%**	**10**	0.037	0.017	3/26/2015 14:28	T

Lab ID: **G1502131003** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A29-5 SAND** Date Collected: 03/18/15 11:39
Results for sample G1502131003 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0032**	**I**	**%**	**2**	0.0056	0.0026	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131004** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A29-10 CLAY SAND** Date Collected: 03/18/15 11:42
Results for sample G1502131004 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0087**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131005** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A29-15 CLAY** Date Collected: 03/18/15 11:44
Results for sample G1502131005 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.25**		**%**	**5**	0.016	0.0073	3/26/2015 14:28	T

Lab ID: **G1502131006** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A29-20 CLAY** Date Collected: 03/18/15 11:47
Results for sample G1502131006 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**4.7**		**%**	**100**	0.37	0.17	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131007** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A32-5 CLAY SAND** Date Collected: 03/18/15 11:50
Results for sample G1502131007 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.019**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131008** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A32-10 CLAY SAND** Date Collected: 03/18/15 11:52
Results for sample G1502131008 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0071**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131009** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A32-15 CLAY** Date Collected: 03/18/15 11:55
Results for sample G1502131009 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0041**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131010** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A32-20 CLAY** Date Collected: 03/18/15 11:58
Results for sample G1502131010 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131011** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A27-5 CLAY SAND** Date Collected: 03/18/15 10:44
Results for sample G1502131011 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.018**		**%**	**1**	0.0030	0.0014	3/26/2015 14:28	T

Lab ID: **G1502131012** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A27-10 CLAY SAND** Date Collected: 03/18/15 10:48
Results for sample G1502131012 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131013** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A27-15 CLAY SAND** Date Collected: 03/18/15 10:51
Results for sample G1502131013 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.040**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131014** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A27-20 CLAY** Date Collected: 03/18/15 10:55
Results for sample G1502131014 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**3.3**		**%**	**25**	0.12	0.053	3/26/2015 14:28	T

Lab ID: **G1502131015** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A19-5 CLAY** Date Collected: 03/18/15 10:59
Results for sample G1502131015 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0032	0.0015	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131016** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A19-10 CLAY SAND** Date Collected: 03/18/15 11:01
Results for sample G1502131016 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0061**		**%**	**1**	0.0031	0.0014	3/26/2015 14:28	T

Lab ID: **G1502131017** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A19-15 CLAY** Date Collected: 03/18/15 11:04
Results for sample G1502131017 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.017**		**%**	**1**	0.0032	0.0014	3/26/2015 14:28	T

Lab ID: **G1502131018** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A19-20 CLAY SAND** Date Collected: 03/18/15 11:07
Results for sample G1502131018 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.021**		**%**	**1**	0.0027	0.0012	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131019** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A11-5 SAND** Date Collected: 03/18/15 14:53
Results for sample G1502131019 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.049**		**%**	**1**	0.0026	0.0012	3/26/2015 14:28	T

Lab ID: **G1502131020** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A11-7 CLAY SAND** Date Collected: 03/18/15 14:54
Results for sample G1502131020 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.096**		**%**	**2**	0.0057	0.0026	3/26/2015 14:28	T

Lab ID: **G1502131021** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A31-5 SAND** Date Collected: 03/18/15 11:10
Results for sample G1502131021 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.010**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131022** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A31-8 CLAY** Date Collected: 03/18/15 11:13
Results for sample G1502131022 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.034**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131023** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A31-15 CLAY** Date Collected: 03/18/15 11:15
Results for sample G1502131023 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0075**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131024** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A31-20 CLAY** Date Collected: 03/18/15 11:18
Results for sample G1502131024 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.031**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131025** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A13-5 SAND** Date Collected: 03/18/15 11:20
Results for sample G1502131025 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.014**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131026** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A13-8 CLAY SAND** Date Collected: 03/18/15 11:23
Results for sample G1502131026 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.033**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131027** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A13-14 CLAY SAND** Date Collected: 03/18/15 11:25
Results for sample G1502131027 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.20**		**%**	**5**	0.015	0.0068	3/26/2015 14:28	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131028** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A13-20 CLAY SAND** Date Collected: 03/18/15 11:27
Results for sample G1502131028 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.019**		**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131029** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A28-5 SAND** Date Collected: 03/18/15 11:30
Results for sample G1502131029 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0019**	**I**	**%**	**1**	0.0028	0.0013	3/26/2015 14:28	T

Lab ID: **G1502131030** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A28-8 CLAY SAND** Date Collected: 03/18/15 11:32
Results for sample G1502131030 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.096**		**%**	**1**	0.0029	0.0013	3/26/2015 14:28	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131031** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A11-13 CLAY** Date Collected: 03/18/15 14:56
Results for sample G1502131031 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.5**		**%**	**20**	0.077	0.035	3/27/2015 12:30	T

Lab ID: **G1502131032** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B08-5 CLAY SAND** Date Collected: 03/18/15 15:01
Results for sample G1502131032 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0050**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131033** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B08-10 SAND** Date Collected: 03/18/15 15:04
Results for sample G1502131033 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131034** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B08-15 CLAY** Date Collected: 03/18/15 15:06
Results for sample G1502131034 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0063**		**%**	**1**	0.0028	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131035** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B08-20 CLAY SAND** Date Collected: 03/18/15 15:07
Results for sample G1502131035 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131036** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B10-5 CLAY SAND** Date Collected: 03/18/15 15:11
Results for sample G1502131036 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0064**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131037** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B10-10 CLAY SAND** Date Collected: 03/18/15 15:12
Results for sample G1502131037 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0049**		**%**	**1**	0.0030	0.0014	3/27/2015 12:30	T

Lab ID: **G1502131038** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B10-15 CLAY SAND** Date Collected: 03/18/15 15:14
Results for sample G1502131038 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0052**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131039** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B10-19 CLAY SAND** Date Collected: 03/18/15 15:15
Results for sample G1502131039 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.058**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131040** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A17-3 SAND** Date Collected: 03/18/15 12:02
Results for sample G1502131040 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.018**		**%**	**1**	0.0028	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131041** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A17-7.5 CLAY SAND** Date Collected: 03/18/15 12:03
Results for sample G1502131041 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.032**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131042** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A17-15 CLAY SAND** Date Collected: 03/18/15 12:06
Results for sample G1502131042 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.0**		**%**	**20**	0.060	0.027	3/27/2015 12:30	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131043** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A17-20 CLAY** Date Collected: 03/18/15 12:09
Results for sample G1502131043 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.1**		**%**	**20**	0.075	0.034	3/27/2015 12:30	T

Lab ID: **G1502131044** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B01-5 SAND** Date Collected: 03/18/15 08:29
Results for sample G1502131044 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0098**		**%**	**1**	0.0028	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131045** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B01-10 CLAY SAND** Date Collected: 03/18/15 08:41
Results for sample G1502131045 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.054**		**%**	**1**	0.0031	0.0014	3/27/2015 12:30	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131046** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B01-15 CLAY SAND** Date Collected: 03/18/15 09:41
Results for sample G1502131046 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0096**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131047** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B01-20 CLAY SAND** Date Collected: 03/18/15 09:50
Results for sample G1502131047 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0088**		**%**	**1**	0.0030	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131048** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B02-5 SAND** Date Collected: 03/18/15 09:55
Results for sample G1502131048 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131049** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B02-10 CLAY SAND** Date Collected: 03/18/15 09:59
Results for sample G1502131049 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0066**		**%**	**1**	0.0028	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131050** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B02-15 CLAY SAND** Date Collected: 03/18/15 10:05
Results for sample G1502131050 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131051** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B02-20 CLAY** Date Collected: 03/18/15 10:08
Results for sample G1502131051 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.013**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131052** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B09-5 CLAY SAND** Date Collected: 03/18/15 10:17
Results for sample G1502131052 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.012**		**%**	**1**	0.0028	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131053** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B09-10 CLAY SAND** Date Collected: 03/18/15 10:22
Results for sample G1502131053 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.035**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131054** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B09-15 CLAY SAND** Date Collected: 03/18/15 10:22
Results for sample G1502131054 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.015**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131055** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B09-20 CLAY SAND** Date Collected: 03/18/15 10:28
Results for sample G1502131055 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.014**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131056** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A18-5 SAND** Date Collected: 03/18/15 10:32
Results for sample G1502131056 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0082**		**%**	**1**	0.0030	0.0014	3/27/2015 12:30	T

Lab ID: **G1502131057** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A18-10 SAND** Date Collected: 03/18/15 10:36
Results for sample G1502131057 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0014**	**U**	**%**	**1**	0.0030	0.0014	3/27/2015 12:30	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131058** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A18-12 CLAY SAND** Date Collected: 03/18/15 10:40
Results for sample G1502131058 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.069**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

Lab ID: **G1502131059** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A18-15 CLAY SAND** Date Collected: 03/18/15 10:46
Results for sample G1502131059 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**3.2**		**%**	**25**	0.077	0.035	3/27/2015 12:30	T

Lab ID: **G1502131060** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B06-5 SAND** Date Collected: 03/18/15 15:17
Results for sample G1502131060 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.12**		**%**	**1**	0.0029	0.0013	3/27/2015 12:30	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131061** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B06-10 CLAY SAND** Date Collected: 03/18/15 15:18
Results for sample G1502131061 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0039**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131062** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B06-15 CLAY SAND** Date Collected: 03/18/15 15:23
Results for sample G1502131062 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0062**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131063** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B06-20 CLAY** Date Collected: 03/18/15 15:25
Results for sample G1502131063 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0089**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131064** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B05-5 CLAY SAND** Date Collected: 03/18/15 15:28
Results for sample G1502131064 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0084**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131065** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B05-10 CLAY** Date Collected: 03/18/15 15:30
Results for sample G1502131065 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.045**		**%**	**1**	0.0030	0.0014	3/30/2015 13:41	T

Lab ID: **G1502131066** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B05-15 CLAY** Date Collected: 03/18/15 15:32
Results for sample G1502131066 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.014**		**%**	**1**	0.0034	0.0015	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131067** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B05-20 CLAY** Date Collected: 03/18/15 15:35
Results for sample G1502131067 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0039**		**%**	**1**	0.0030	0.0014	3/30/2015 13:41	T

Lab ID: **G1502131068** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B04-5 SAND** Date Collected: 03/18/15 15:39
Results for sample G1502131068 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.048**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131069** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B04-10 CLAY SAND** Date Collected: 03/18/15 15:40
Results for sample G1502131069 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.29**		**%**	**5**	0.015	0.0067	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131070** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B04-15 CLAY** Date Collected: 03/18/15 15:42
Results for sample G1502131070 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.9**		**%**	**25**	0.073	0.033	3/30/2015 13:41	T

Lab ID: **G1502131071** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B04-19 CLAY** Date Collected: 03/18/15 15:45
Results for sample G1502131071 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**4.4**	**J4**	**%**	**50**	0.16	0.072	3/30/2015 13:41	T

Lab ID: **G1502131072** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A24-5 CLAY** Date Collected: 03/18/15 13:53
Results for sample G1502131072 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.38**		**%**	**5**	0.015	0.0070	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131073** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A24-9 CLAY SAND** Date Collected: 03/18/15 13:55
Results for sample G1502131073 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.040**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131074** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A24-15 CLAY** Date Collected: 03/18/15 13:57
Results for sample G1502131074 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.7**		**%**	**25**	0.083	0.038	3/30/2015 13:41	T

Lab ID: **G1502131075** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A24-20 CLAY** Date Collected: 03/18/15 14:01
Results for sample G1502131075 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**3.2**		**%**	**25**	0.088	0.040	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131076** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B07-5 CLAY SAND** Date Collected: 03/18/15 14:05
Results for sample G1502131076 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.53**		**%**	**10**	0.032	0.015	3/30/2015 13:41	T

Lab ID: **G1502131077** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B07-10 CLAY** Date Collected: 03/18/15 14:06
Results for sample G1502131077 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.031**		**%**	**1**	0.0032	0.0015	3/30/2015 13:41	T

Lab ID: **G1502131078** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B07-15 CLAY SAND** Date Collected: 03/18/15 14:09
Results for sample G1502131078 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131079** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B07-20 SAND** Date Collected: 03/18/15 14:10
Results for sample G1502131079 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131080** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A26-5 CLAY SAND** Date Collected: 03/18/15 14:13
Results for sample G1502131080 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.025**		**%**	**1**	0.0030	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131081** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A26-9 CLAY** Date Collected: 03/18/15 14:16
Results for sample G1502131081 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.031**		**%**	**1**	0.0030	0.0014	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131082** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A26-15 CLAY** Date Collected: 03/18/15 14:18
Results for sample G1502131082 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.015**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131083** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A26-19 CLAY SAND** Date Collected: 03/18/15 14:19
Results for sample G1502131083 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.015**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131084** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A25-5 CLAY** Date Collected: 03/18/15 14:23
Results for sample G1502131084 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.020**		**%**	**1**	0.0029	0.0013	3/30/2015 13:41	T

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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131085** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A25-10 CLAY SAND** Date Collected: 03/18/15 14:25
Results for sample G1502131085 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0070**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131086** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A25-15 CLAY SAND** Date Collected: 03/18/15 14:28
Results for sample G1502131086 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0067**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131087** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A25-20 CLAY SAND** Date Collected: 03/18/15 14:29
Results for sample G1502131087 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0039**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131088** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A23-5 CLAY SAND** Date Collected: 03/18/15 14:32
Results for sample G1502131088 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.035**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131089** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A23-10 CLAY SAND** Date Collected: 03/18/15 14:34
Results for sample G1502131089 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.019**		**%**	**1**	0.0028	0.0013	3/30/2015 13:41	T

Lab ID: **G1502131090** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A23-15 CLAY SAND** Date Collected: 03/18/15 14:36
Results for sample G1502131090 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.038**		**%**	**1**	0.0030	0.0014	3/30/2015 13:41	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131091** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A23-20 CLAY SAND** Date Collected: 03/18/15 14:39
Results for sample G1502131091 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0095**		**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131092** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A22-5 CLAY SAND** Date Collected: 03/18/15 14:43
Results for sample G1502131092 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.073**		**%**	**1**	0.0030	0.0014	3/31/2015 13:25	T

Lab ID: **G1502131093** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A22-10 CLAY SAND** Date Collected: 03/18/15 14:44
Results for sample G1502131093 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.023**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131094** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A22-15 CLAY SAND** Date Collected: 03/18/15 14:47
Results for sample G1502131094 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.023**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131095** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A22-20 CLAY** Date Collected: 03/18/15 14:35
Results for sample G1502131095 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**6.8**		**%**	**100**	0.32	0.14	3/31/2015 13:25	T

Lab ID: **G1502131096** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A15-5 SAND** Date Collected: 03/18/15 13:41
Results for sample G1502131096 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.038**		**%**	**1**	0.0032	0.0014	3/31/2015 13:25	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131097** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A15-8.5 CLAY** Date Collected: 03/18/15 13:44
Results for sample G1502131097 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.053**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131098** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A15-15 CLAY SAND** Date Collected: 03/18/15 13:47
Results for sample G1502131098 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.017**		**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131099** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A15-18 CLAY** Date Collected: 03/18/15 13:50
Results for sample G1502131099 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0069**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131100** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A30-5 SAND** Date Collected: 03/18/15 13:33
Results for sample G1502131100 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131101** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A30-10 CLAY SAND** Date Collected: 03/18/15 13:34
Results for sample G1502131101 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.11**		**%**	**1**	0.0030	0.0014	3/31/2015 13:25	T

Lab ID: **G1502131102** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A30-15 CLAY SAND** Date Collected: 03/18/15 13:36
Results for sample G1502131102 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.034**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

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Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131103** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A30-20 CLAY SAND** Date Collected: 03/18/15 13:38
Results for sample G1502131103 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.021**		**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131104** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B03-4 CLAY SAND** Date Collected: 03/18/15 13:21
Results for sample G1502131104 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0035**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131105** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B03-9 CLAY SAND** Date Collected: 03/18/15 13:23
Results for sample G1502131105 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0023**	**I**	**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131106** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B03-15 CLAY SAND** Date Collected: 03/18/15 13:25
Results for sample G1502131106 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0014**	**I**	**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131107** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **B03-19 CLAY SAND** Date Collected: 03/18/15 13:30
Results for sample G1502131107 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0023**	**I**	**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131108** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A14-5 SAND** Date Collected: 03/18/15 13:12
Results for sample G1502131108 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0025**	**I**	**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131109** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A14-8 SAND** Date Collected: 03/18/15 13:13
Results for sample G1502131109 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.092**		**%**	**1**	0.0030	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131110** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A14-14 CLAY SAND** Date Collected: 03/18/15 13:16
Results for sample G1502131110 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.013**		**%**	**1**	0.0031	0.0014	3/31/2015 13:25	T

Lab ID: **G1502131111** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A14-20 CLAY SAND** Date Collected: 03/18/15 13:18
Results for sample G1502131111 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131112** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A20-5 SAND** Date Collected: 03/18/15 13:00
Results for sample G1502131112 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131113** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A20-10 CLAY** Date Collected: 03/18/15 13:04
Results for sample G1502131113 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.029**		**%**	**1**	0.0034	0.0015	3/31/2015 13:25	T

Lab ID: **G1502131114** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A20-15 CLAY SAND** Date Collected: 03/18/15 13:06
Results for sample G1502131114 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0047**		**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
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ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131115** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A20-20 CLAY** Date Collected: 03/18/15 13:10
Results for sample G1502131115 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**2.2**		**%**	**25**	0.070	0.032	3/31/2015 13:25	T

Lab ID: **G1502131116** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A12-5 CLAY SAND** Date Collected: 03/18/15 12:45
Results for sample G1502131116 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.017**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131117** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A12-9 CLAY SAND** Date Collected: 03/18/15 12:51
Results for sample G1502131117 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.016**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131118** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A12-15 CLAY SAND** Date Collected: 03/18/15 12:53
Results for sample G1502131118 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0029	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131119** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A12-20 CLAY SAND** Date Collected: 03/18/15 12:58
Results for sample G1502131119 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.011**		**%**	**1**	0.0030	0.0013	3/31/2015 13:25	T

Lab ID: **G1502131120** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-5 SAND** Date Collected: 03/18/15 15:50
Results for sample G1502131120 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.0013**	**U**	**%**	**1**	0.0028	0.0013	3/31/2015 13:25	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131121** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-9 CLAY SAND** Date Collected: 03/18/15 15:51
Results for sample G1502131121 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.014**		**%**	**1**	0.0029	0.0013	4/1/2015 12:14	T

Lab ID: **G1502131122** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-15 CLAY** Date Collected: 03/18/15 15:53
Results for sample G1502131122 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.2**		**%**	**20**	0.068	0.031	4/1/2015 12:14	T

Lab ID: **G1502131123** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-20 CLAY** Date Collected: 03/18/15 15:58
Results for sample G1502131123 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.2**		**%**	**20**	0.091	0.041	4/1/2015 12:14	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131124** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-25 CLAY** Date Collected: 03/18/15 15:58
Results for sample G1502131124 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.83**		**%**	**20**	0.076	0.034	4/1/2015 12:14	T

Lab ID: **G1502131125** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A16-30 CLAY** Date Collected: 03/18/15 16:02
Results for sample G1502131125 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**1.6**		**%**	**20**	0.097	0.044	4/1/2015 12:14	T

Lab ID: **G1502131126** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A21-5 CLAY SAND** Date Collected: 03/18/15 16:03
Results for sample G1502131126 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.061**		**%**	**1**	0.0032	0.0015	4/1/2015 12:14	T

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Phone: (352) 377-2349
Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131127** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A21-10 CLAY SAND** Date Collected: 03/18/15 16:05
Results for sample G1502131127 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.038**		**%**	**1**	0.0029	0.0013	4/1/2015 12:14	T

Lab ID: **G1502131128** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A21-14 CLAY SAND** Date Collected: 03/18/15 16:06
Results for sample G1502131128 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.087**		**%**	**1**	0.0030	0.0014	4/1/2015 12:14	T

Lab ID: **G1502131129** Date Received: 03/20/15 15:45 Matrix: Soil
Sample ID: **A21-20 CLAY** Date Collected: 03/18/15 16:08
Results for sample G1502131129 are reported on a dry weight basis.
Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.20**		**%**	**5**	0.022	0.010	4/1/2015 12:14	T

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Fax: (352) 395-6639

ANALYTICAL RESULTS

Workorder: G1502131 PLUM CREEK

Lab ID: **G1502131130** Date Received: 03/20/15 15:45 Matrix: Soil

Sample ID: **A21-25 CLAY** Date Collected: 03/18/15 16:10

Results for sample G1502131130 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: Total Phosphorus,E365.4,Analysis	Preparation Method: Copper Sulfate Digestion Solid Analytical Method: EPA 365.4							
Total Phosphorus (as P)	**0.27**		**%**	**5**	0.022	0.0098	4/1/2015 12:14	T

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6.5 Key to Soil Classification

KEY TO SOIL CLASSIFICATION CHART

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests				SYMBOLS		GROUP NAME
				GRAPHIC	LETTER	
COARSE-GRAINED SOILS	Gravels	Clean Gravels	Cu ≥ 4 and 1 ≤ Cc ≤ 3		**GW**	Well graded GRAVEL
More than 50% retained on No. 200 sieve	More than 50% of coarse fraction retained on No. 4 sieve	Less than 5% fines	Cu < 4 and/or 1 > Cc > 3		**GP**	Poorly graded GRAVEL
		Gravels with fines	Fines classify as ML or MH		**GM**	Silty GRAVEL
		More than 12% fines	Fines classify as CL or CH		**GC**	Clayey GRAVEL
	Sands	Clean Sands	Cu ≥ 6 and 1 ≤ Cc ≤ 3		**SW**	Well graded SAND
	50% or more of coarse fraction passes No. 4 sieve	Less than 5% fines	Cu < 6 and/or 1 > Cc > 3		**SP**	Poorly graded SAND
		Sand with fines	Fines classify as ML or MH		**SP-SM**	SAND with silt
		5% ≤ fines < 12%	Fines classify as CL or CH		**SP-SC**	SAND with clay
		Sand with fines	Fines classify as ML or MH		**SM**	Silty SAND
		12% ≤ fines < 30%	Fines classify as CL or CH		**SC**	Clayey SAND
		Sand with fines	Fines classify as ML or MH		**SM**	Very silty SAND
		30% fines or more	Fines classify as CL or CH		**SC**	Very clayey SAND
FINE-GRAINED SOILS	Clays	inorganic	50% ≤ fines < 70%		**CL/CH**	Sandy CLAY
50% or more passes the No. 200 sieve			70% ≤ fines < 85%		**CL/CH**	CLAY with sand
			fines ≥ 85%		**CL/CH**	CLAY
	Silts and Clays	inorganic	PI > 7 and plots on/above "A" line		**CL**	Lean CLAY
	Liquid Limit less than 50		PI < 4 or plots below "A" line		**ML**	SILT
		organic	Liquid Limit - oven dried / Liquid Limit - not dried < 0.75		**OL**	Organic clay / Organic silt
	Silts and Clays	inorganic	PI plots on or above "A" line		**CH**	Fat CLAY
	Liquid Limit 50 or more		PI plots below "A" line		**MH**	Elastic SILT
		organic	Liquid Limit - oven dried / Liquid Limit - not dried < 0.75		**OH**	Organic clay / Organic silt
HIGHLY ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor				**PT**	PEAT

CORRELATION OF PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY

	No. OF BLOWS, N	RELATIVE DENSITY
	0 - 4	Very Loose
	5 - 10	Loose
SANDS:	11 - 30	Medium dense
	31 - 50	Dense
	OVER 50	Very Dense

	No. OF BLOWS, N	CONSISTENCY
	0 - 2	Very Soft
SILTS	3 - 4	Soft
&	5 - 8	Firm
CLAYS:	9 - 15	Stiff
	16 - 30	Very Stiff
	31 - 50	Hard
	OVER 50	Very Hard

	No. OF BLOWS, N	RELATIVE DENSITY
	0 - 8	Very Soft
	9 - 18	Soft
LIMESTONE:	19 - 32	Moderately Hard
	33 - 50	Hard
	OVER 50	Very Hard

SAMPLE GRAPHIC TYPE LEGEND

Location of SPT Sample

Location of Auger Sample

PARTICLE SIZE IDENTIFICATION

BOULDERS:		Greater than 300 mm
COBBLES:		75 mm to 300 mm
GRAVEL:	Coarse -	19.0 mm to 75 mm
	Fine -	4.75 mm to 19.0 mm
SANDS:	Coarse -	2.00 mm to 4.75 mm
	Medium -	0.425 mm to 2.00 mm
	Fine -	0.075 mm to 0.425 mm
SILTS & CLAYS:		Less than 0.075 mm

LABORATORY TEST LEGEND

LL	=	Liquid Limit, %
PL	=	Plastic Limit, %
PI	=	Plasticity Index, %
% PASS - 200	=	Percent Passing the No. 200 Sieve
MC	=	Moisture Content, %
ORG	=	Organic Content, %
k_v	=	Vertical Permeability, ft/day

7.0 LIMITATIONS

7.1 Warranty

This report has been prepared for our client for his exclusive use, in accordance with generally accepted geological and geotechnical engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

7.2 Direct Push and Standard Penetration Test Borings

The determination of soil type and conditions was performed from the ground surface to the maximum depth of the borings, only. Any changes in subsurface conditions that occur between or below the borings would not have been detected or reflected in this report.

Soil classifications that were made in the field are based upon identifiable textural changes, color changes, changes in composition or changes in resistance to penetration in the intervals from which the samples were collected. Abrupt changes in soil type, as reflected in boring logs and/or cross sections may not actually occur, but instead, be transitional.

Depth to the water table is based upon observations made during the performance of the direct push and SPT borings. This depth is an estimate and does not reflect the annual variations that would be expected in this area due to fluctuations in rainfall and rates of evapotranspiration.

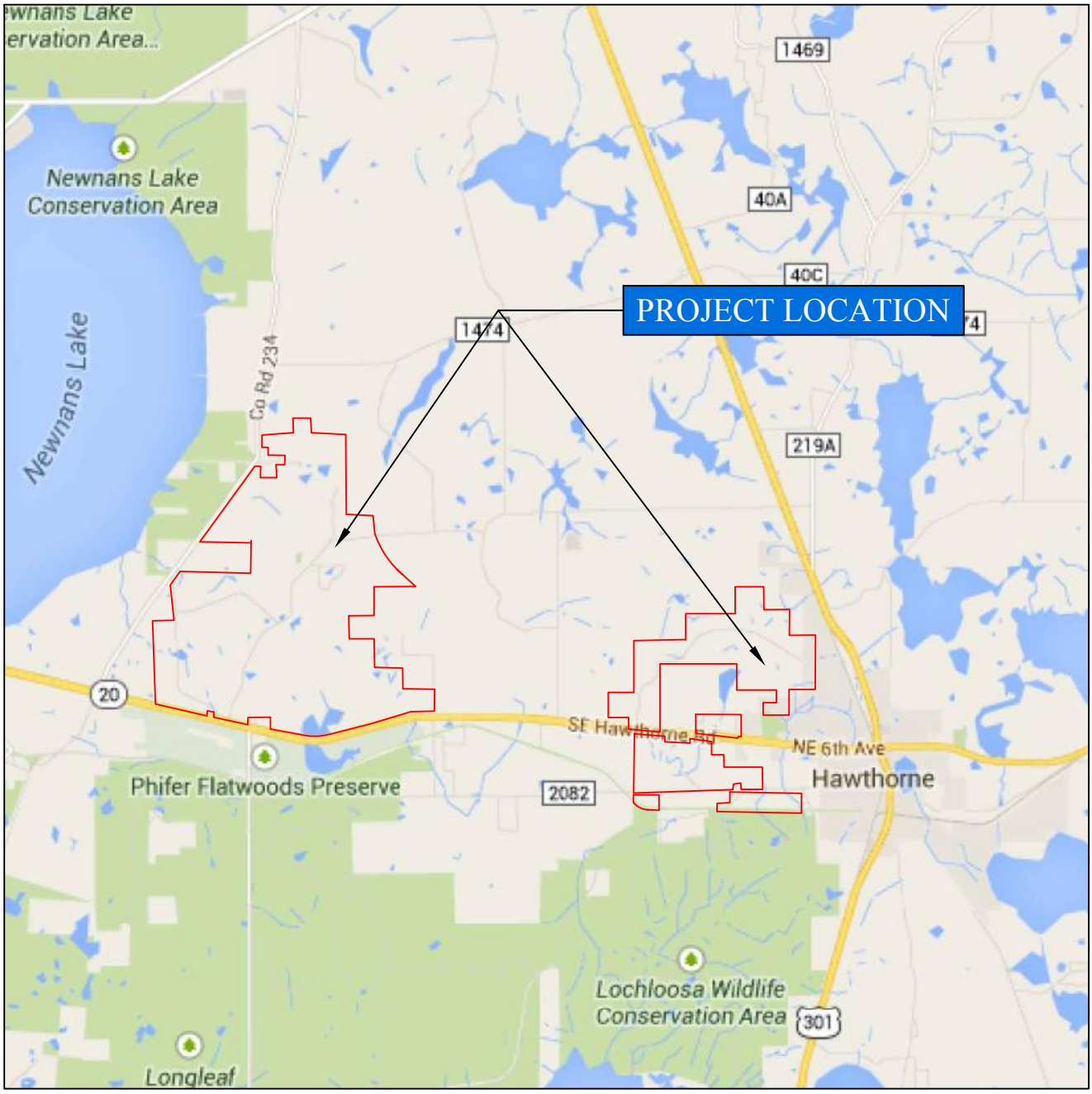
7.3 Site Figures

Figures in this report were not prepared by a licensed land surveyor and should not be interpreted as such.

7.4 Misinterpretation of Soil Engineering Report

GSE Engineering & Consulting, Inc. is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If others make the conclusions or recommendations based upon the data presented, those conclusions or recommendations are not the responsibility of GSE.

FIGURES



NORTH

NOT TO SCALE

PROJECT SITE LOCATION MAP

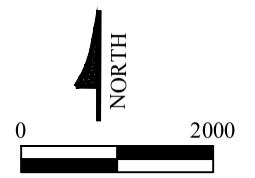
PLUM CREEK PROPERTY
ALACHUA COUNTY, FLORIDA
GSE PROJECT No. 12371

DESIGNED BY : KLH
CHECKED BY : JBN
DRAWN BY : SEH

GSE Engineering & Consulting, Inc.

FIGURE
1

PLUM CREEK - TRACT A
SOIL BORING LOCATIONS



SCALE: 1" = 2000' APPROX.

COORDINATE TABLE

POINT	NORTHING	EASTING	ELEVATION
B-A11	227883.90	2701808.86	102.4'
B-A12	228983.19	2699135.48	94.4'
B-A13	231241.36	2699361.21	92.5'
B-A14	231245.48	2701673.86	97.0'
B-A15	232057.98	2703097.00	100.2'
B-A16	234068.29	2704748.03	102.6'
B-A17	236012.23	2700902.87	84.4'
B-A18	237569.68	2703123.69	87.0'
B-A19	239159.46	2707282.03	112.9'
B-A20	236669.70	2705077.02	103.4'
B-A21	226441.73	2707871.37	97.9'
B-A22	225866.27	2704374.11	102.4'
B-A23	228459.29	2708115.79	106.1'
B-A24	227946.41	2704839.85	103.4'
B-A25	227303.62	2710601.66	93.4'
B-A26	231288.86	2706039.06	107.3'
B-A27	232480.10	2708802.46	100.6'
B-A28	233183.51	2710637.23	94.1'
B-A29	235906.80	2708255.22	94.8'
B-A30	235259.05	2706681.62	104.3'
B-A31	232920.13	2698764.84	87.8'
B-A32	238895.39	2704263.65	109.8'

NOTE: COORDINATE TABLE PROVIDED BY CHW PROFESSIONAL CONSULTANTS

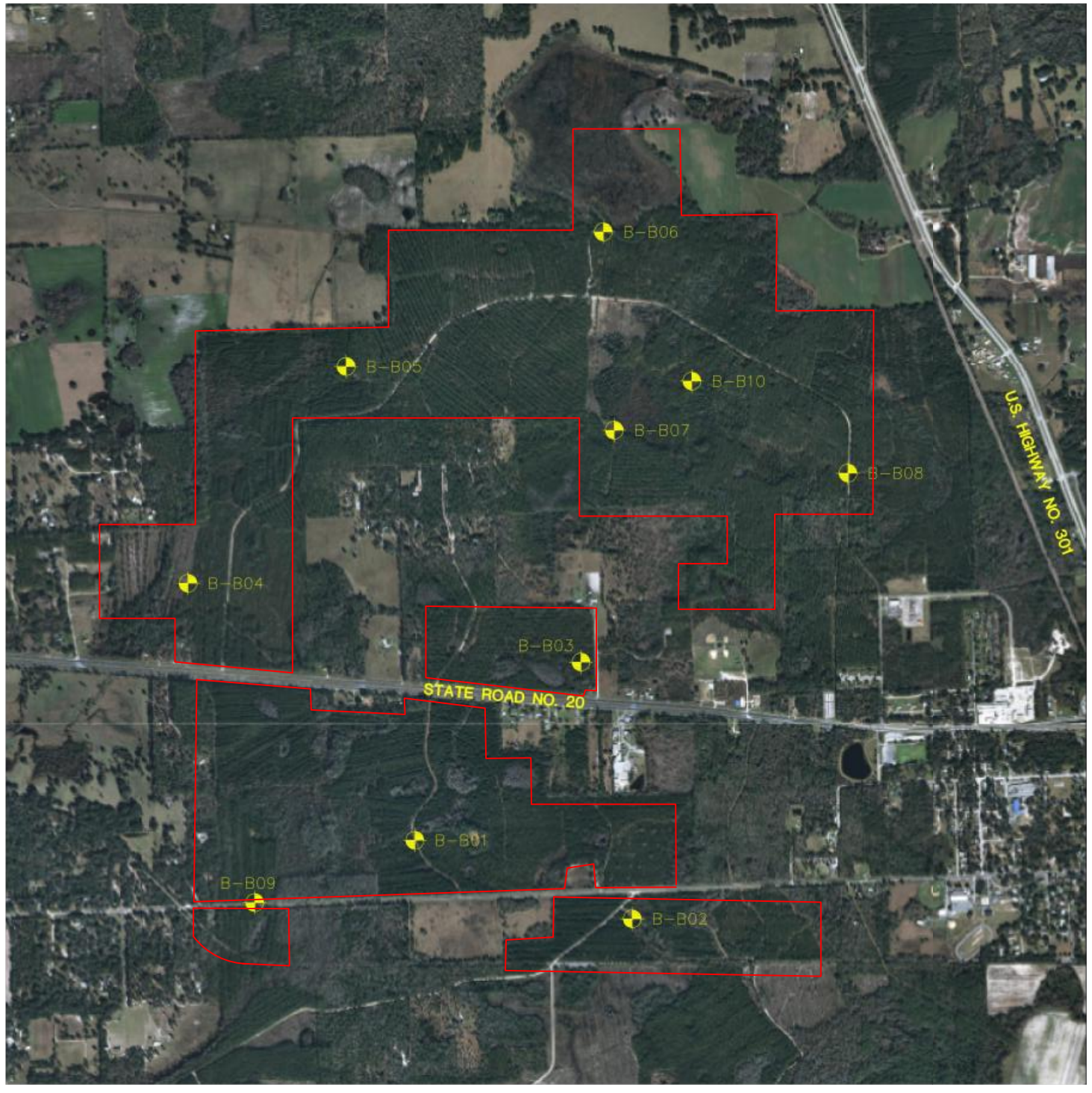
SITE PLAN SHOWING APPROXIMATE LOCATIONS OF FIELD TESTS

FIGURE 2A

DESIGNED BY : KLH
CHECKED BY : JBN
DRAWN BY : SEH

PLUM CREEK PROPERTY
ALACHUA COUNTY, FLORIDA
GSE PROJECT No. 12371

PLUM CREEK - TRACT B
SOIL BORING LOCATIONS



NORTH

0 2000

SCALE: 1" = 2000' APPROX.

COORDINATE TABLE			
POINT	NORTHING	EASTING	ELEVATION
B-B01	223393.80	2725672.15	123.5'
B-B02	222305.28	2728679.98	119.5'
B-B03	225862.91	2727971.11	136.6'
B-B04	226954.50	2722533.14	116.4'
B-B05	229957.03	2724721.16	126.5'
B-B06	231823.65	2728280.61	143.9'
B-B07	229075.78	2728431.81	143.2'
B-B08	228480.83	2731665.86	145.2'
B-B09	222529.89	2723455.93	118.8'
B-B10	229755.44	2729504.94	142.9

NOTE: COORDINATE TABLE PROVIDED BY CHW PROFESSIONAL CONSULTANTS

SITE PLAN SHOWING APPROXIMATE LOCATIONS OF FIELD TESTS

FIGURE 2B

DESIGNED BY : KLH
CHECKED BY : JBN
DRAWN BY : SEH

PLUM CREEK PROPERTY
ALACHUA COUNTY, FLORIDA
GSE PROJECT No. 12371