E-Reg Consulting, LLC
Environmental Permitting

November 2025

Environmental Resource Permitting Document

Sunshine State Mine Phase III

Brevard County, Florida

Prepared for:
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INTRODUCTION

The Blue Goose Construction, LLC is proposing a northward expansion of the existing Sunshine State Mine authorized under St. Johns River Water Management District (SJR) Permit 154686-2, issued on December 18, 2019 and Permit 154686-3, issued August 28, 2023. Like the existing mine, the project consists of the excavation of sand pits within managed cattle grazing. The wetlands within the cattle pastures were delineated and construction activity is not proposed within 50 feet of any onsite wetlands to avoid direct and secondary impacts to jurisdictional areas. The project will result in alterations to three upland-cut ditches.

The existing Sunshine State Mine is located at the northwest intersection of Babcock Street and the C-54 Canal in southern Brevard County. A location map is provided in Exhibit A. The street address of the mine is 9550 Babcock Street, Fellsmere, FL 32948. The Phase III project boundaries include work in all or portions of Brevard County parcel account numbers is 3001181, 3020489, 3020488 and 3030338. The project is located within Sections 27 and 28 of Township 30 South and Range 37 East. The 186.75-acre Phase III sand mine project site is bordered by Centerlane Road to the north, Babcock Street SE to the east, Sunshine Mine Phase I and Sunshine Mine Phase II to the south and cattle grazing lands to the west. The proposed Phase III mining facility is located entirely within the Southern St. Johns Hydrologic Basin 20.

EXISTING CONDITIONS

Aerial photographs ranging from 1970 to 2025, soils maps, and National Wetlands Inventory (NWI) maps were reviewed to determine the approximate locations and boundaries of existing upland and wetland communities. An NWI map is provided in Exhibit B. The site consists primarily of upland pine flatwoods with a canopy

dominated by slash pine (*Pinus elliottii*) with ground cover dominated by saw palmetto (*Serenoa repens*) and galberry (*Ilex glabra*). The eastern portion of the site consists of improved pasture planted with Bahia grass (*Pasalum notatum*) and managed for cattle grazing. The Phase III project site has been designed to avoid all direct and adverse secondary impacts to onsite wetlands. The Phase III project will result in impacts to three upland cut ditches.

The Phase III project site contains twelve (12) freshwater herbaceous wetlands and one (1) forested wetland. The herbaceous wetlands range from freshwater marches with seasonal inundation to wet pasture. Most of the marshes are very shallow and are dominated by soft rush (*Juncus effusus*). Deeper portions of the marshes also contain sawgrass (*Cladium jamaicense*) and occasionally pickerelweed (*Pontedaria cordata*). The shallower outer edges of these wetlands include Bahia grass, pennywort (*Hydrocotyle umbellata*), bushy bluestem (Andropogon glomeratus), broomsedge (*Andropogon virginicus*), smartweed (*Polygonum* spp.) and spadeleaf (*Centella asiatica*). The forested wetland is dominated by a red maple (*Acer rubrum*). The upland cut ditches on the site have dry sandy bottoms and are dominated by Brazilian pepper (*Schinus terebinthifolia*) and dog fennel (*Eupatorium capillifolium*). The ditches were delineated by a top-of-bank area calculation. The ditch that runs through the central portion of the Phase III project site no longer receives water from the south as the portions of that ditch within the Phase II mine were authorized for impact under ERP 154686-3.

SOILS

Based upon the Natural Resource Conservation Service (NRCS) soil maps for Brevard County, there are three (3) soil types within the Phase III project site. An NRCS soil report is provided in Exhibit C. A majority of the site is mapped as EauGallie sand, 0 to 2 percent slopes. The wetlands within the Phase III project site are mapped as EauGallie, Winder, and Riviera soils, depressional.

Depressional soil map units area strongly associated with wetland communities. A small area mapped as Malabar sand, 0 to 2 percent slopes is located along the northern Phase III site boundary line within a buffer zone not proposed for alteration.

- **EauGallie sand. 0 to 2 percent slopes** – These soils are composed of sandy and loamy marine deposits, poorly drained and associated with flatwoods and marine terraces. These soils are expected to have a depth to water table between 6 and 18 inches.

- **EauGallie, Winder and Riviera soils, depressional** – These very poorly drained soils contain sandy and loamy marine deposits and are typically associated with flatwoods and drainage ways on marine terraces. These soils are expected to have a depth to water table at 0 inches which is the ground surface.

- **Malabar sand, 0 to 2 percent slopes** – These soils are composed of sandy and loamy marine deposits, poorly drained and associated with flats on marine terraces and drainageways on marine terraces. These soils are expected to have a depth to water table between 3 and 18 inches.

EXISTING LAND USE WITHIN THE PROJECT AREA

Existing land uses and habitats (land cover) within the project site were classified using the Florida Land Use, Cover and Forms Classification System (FLUCCS). A total of two (2) upland land classifications and three (3) wetland and surface water community types are located within the Phae III project site. A FLUCCS map depicting these existing land uses and community types is provided in Exhibit D.

Upland Land Use Classifications

The two (2) upland land use and habitat types found within the project boundaries are described below. Table 1 lists the upland land use as well as the FLUCCS

classification.

Table 1 Upland Land Classifications within the Project Site

Land Cover Classification	FLUCCS Code
Improved Pasture	211
Pine Flatwoods	411

Wetland Land Cover Classifications

The three (3) wetland and other surface water land cover classifications found within the project site are described below. Table 2 lists these wetland and surface water habitat types as well as the FLUCCS classifications.

Table 2 Wetland Land Use Classifications within the Project Site

Land Cover Classification	FLUCCS Code
Ditches	510
Wetland Hardwoods	610
Freshwater Marsh	641

Land Cover Descriptions

Historic aerial photos of project site confirm that it has been maintained for cattle grazing since the 1970s. The dominant land use on the site is upland pine flatwoods (411) utilized for cattle grazing. Improved Pastures (211) on the eastern side of the Phase III project site have been planted with Bahia grass (*Paspalum notatum*) maintained through mowing and grazing for decades. Improved pastures contain scattered clumps of saw palmetto and Brazilian pepper. Saw palmetto patches on the Sunshine Mine site have been transitioning to Brazilian pepper patches over

time. The central and western portion of the Phase III site dominated by slash pine canopy and a dominant ground cover of saw palmetto and galberry was classified as Pine Flatwoods (411). The northeast/southwest ditch system was previously fed by the free-flowing artesian well that was properly abandoned in association with the under the Sunshine Phase II ERP Permit 154686-3. All three upland-cut ditches proposed for alteration were classified at Ditches (510). The ditches proposed for alteration have dry sandy bottoms that show evidence of feral hog rooting. The ditches proposed for impact are dominated by dog fennel, Brazilian pepper and Bahia grass. All ditches proposed for impact have a connection to the Babcock Street roadside ditch.

LISTED SPECIES

The site was assessed for the presence of State and Federal listed species. Listed species surveys were conducted within the project site by ERC on July 9, 2025 and November 17, 2025. Surveys included pedestrian transects in a north/south direction and observations from stationary survey locations at the edge of open pastures between 7:00 AM and 6:00 PM. The site provides forage for deer and shows extensive feral hog rooting damage. Seasonal mowing keeps the improved pastures low and prevents overgrowth of dog fennel.

Bald eagle (*Haliaeetus leucocephalus*)

Bald Eagles prefer riparian habitats associated with coastal areas, lake shorelines, and riverbanks. Nests are often located near water bodies that provide dependable food sources. According to the Audubon EagleWatch Map, nest site BE093 is over 1,536 linear feet away to the northeast, on the east side of Babcock Street. This is the closest mapped Bald Eagle nest to the proposed Phase III mine facility. A Bald Eagle nest location map is provided in Exhibit E. Nest site BE093 is just over 1000 feet east of the active Brisben Coquina Pit/Mine authorized

under SJR permit 105413. A survey for Bald Eagle nests within and around the project site was conducted. Although the site has many mature slash pine, no evidence of Bald Eagle nests within or adjacent to the project site were observed. Bald Eagles were not observed utilizing or flying over the project site during the wildlife surveys. After the proposed mining activity is complete the resulting burrow ponds may provide suitable fish prey species to Bald Eagle. Since the project site is located outside of the 660-foot zone of any known nest site, the proposed project is not anticipated to adversely affect Bald Eagle.

Wood stork (*Mycteria americana*)

The wood stork is a tactile feeder that utilizes a variety of aquatic habitat types. They prefer to forage in open water with a permanent or seasonal water depth between 2 and 16 inches. The FWS has established Core Foraging Area (CFA) buffer radius of 15 miles for colonies located in central Florida counties (Brevard) and a Core Foraging Area radius of 18.6 miles for colonies located in south Florida counties (Indian River). According to the FWS wood stork colony website, last updated on May 15, 2019, there is one (1) Indian River County wood stork colony within 18.5 miles of the project site located and four (4) Brevard County wood stork colonies within 15 miles of the project site. All five (5) colonies are located to the east of the project site. All colonies are greater than 8 miles away from the project site. Wood stork are known to forage throughout Indian River and Brevard County and the probability of occurrence for this species is moderate. Wood Stork have not been observed utilizing the site. The three (3) ditches proposed for impact do not show evidence of seasonal inundation and do not appear be a source of aquatic prey items eaten by Wood Stork. The portions of the ditches outside of the improved pasture areas have dense coverage of Brazilian pepper and dog fennel. The dry ditches proposed for impact are dominated by thick vegetation, do not show evidence of seasonal inundation and do not meet the definition of Suitable Foraging Habitat (SFH) for Wood Stork.

When assessing SFH within the project boundaries, water depths, hydroperiod and accessibility were taken into consideration. The shallow marshes that are mowed on regular basis do not have hydroperiods long enough to support fish, the preferred prey item for Wood Stork. All of the herbaceous and forested wetlands within the Phase III project site that have the potential to provide SFH for woodstork will remain and are not proposed for impact. Therefore, the project is Not Likely to Adversely Affect (NLAA) Wood Stork.

Wading birds

State listed wading birds include the little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), white ibis (*Eudocimus albus*), and roseate spoonbill *(Ajaia ajaja)*. These wading birds are all listed as a *State-designated Threatened* by the FWC. Wildlife surveys did not result in observations of the aforementioned wading bird species. The probability of use of the marshes is moderate by these species. The proposed mine operation converts improved pastures and pine flatwoods to open surface waters in the form of burrow ponds and recharge ditches that will likely provide prey species for wading birds in time. When the mining operations are completed, the littoral zones of remaining burrow ponds will have a 5:1 slope. These littoral shelves between 0" and 24" in depth will likely provide foraging habitat for wading birds. In addition, the remaining recharge ditches will likely trap prey items during the dry season. The proposed project as whole will provide significantly more wading bird foraging habitat in the post-development condition. Therefore, the proposed mining operation is not anticipated to adversely affect listed wading birds.

Florida Sandhill Crane (*Grus canadensis pratensis*)

Florida sandhill cranes prefer shallow freshwater wetlands, pastures and open woods habitats for foraging. Some of these cranes have become urbanized

wildlife and have adapted to foraging within residential development areas. Foraging by sandhill cranes within the improved pastures and shallow marshes on the site is expected. Florida sandhill cranes prefer shallow marshes for nest sites. Nesting season typically runs from January through August. The shallow marshes within improved pastures were inspected to for Florida sandhill crane nests during the July 9, 2025 wildlife survey. None of the herbaceous wetlands within or adjacent to the project boundaries showed evidence of active nest sites or inactive nest sites. Therefore, no additional coordination with FWC concerning protective measures for nesting Florida sandhill cranes is warranted for the proposed sand mine expansion.

WETLAND IMPACTS

Direct Impacts

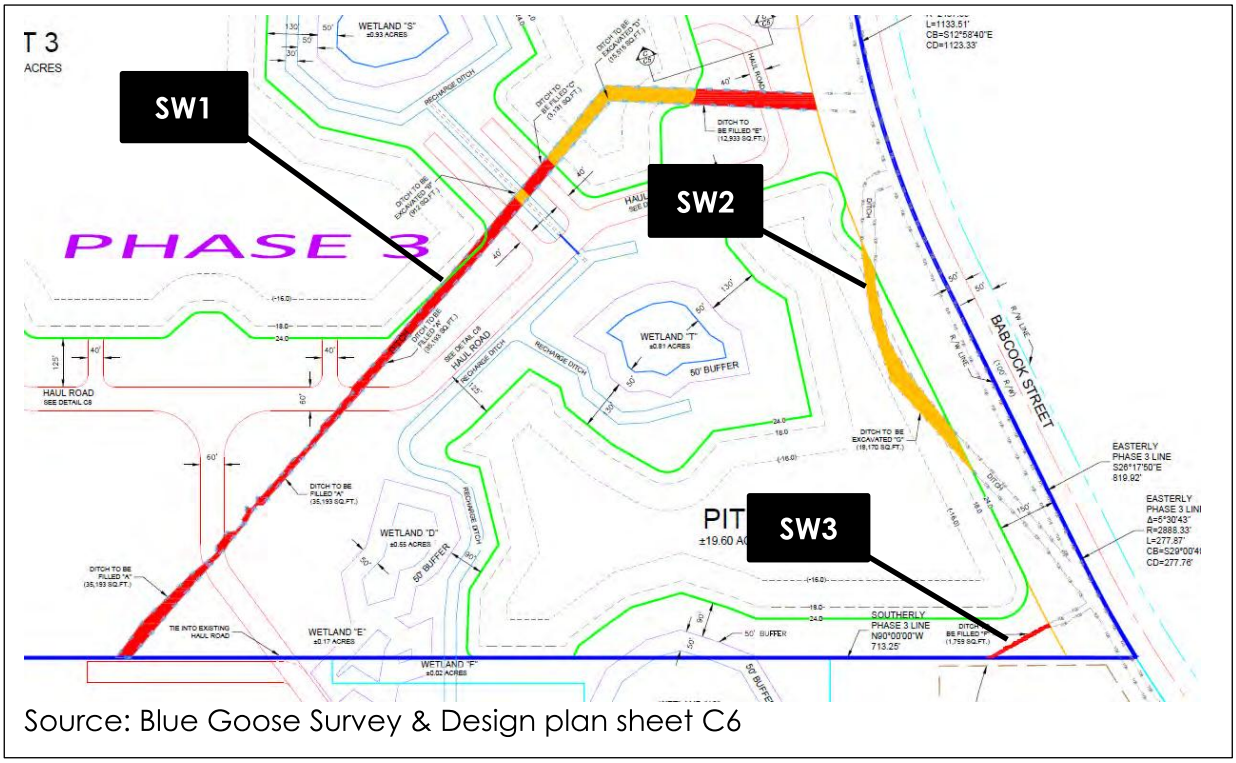
The project has been designed to avoid all impacts to onsite wetland communities. Onsite wetlands will be separated from the proposed construction activities by 50-foot upland buffers. Silt fencing along the 50-foot upland buffers will provide a physical barrier between construction activities the onsite wetlands. To prevent direct adverse hydrologic impacts to the onsite and offsite shallow marshes, the top-of-bank of all proposed mining pits are 250 feet from any wetland. To further ensure adverse hydrologic impacts will not occur to onsite or offsite wetlands, recharge ditches installed between mining areas and the 50-foot upland buffer zones.

The project will result in alterations to upland-cut ditches. The area of upland cut ditches was quantified by a top-of-bank to top-of-bank area calculation pursuant to Chapter 62-340.600(2)(d) F.A.C. The ditches are shown, labeled and quantified on Wetland & Surface Water Impact Plan sheet C8. Of the 5.51 acres of ditches within Phase III, alteration to 2.03 acres of ditches excavated from uplands is proposed. Draft 62-340 Data Sheets with site photos and a location map for each

ditch proposed for alteration is provided in Exhibit G. The upland-cut ditches proposed for alteration do not provide significant habitat to listed species and meet the provisions of section 10.2.2.2 A.H. Vol I. Mitigation for alterations to upland-cut ditches is not warranted or proposed.

Table 3 Direct Wetland and Surface Water Impacts

Wetland & Surface Water ID	Wetland & Surface Water FLUCCS Type	Wetland & Surface Water Size ac.	Wetland & Surface Water Not Impacted ac.	Wetland & Surface Water Impacts Ac.
SW1	510	1.57	0.0	1.57
SW2	510	0.42	0.0	0.42
SW3	510	0.04	0.0	0.04
SW4	510	3.48	3.48	0.00
Wetland 13	641	0.03	0.03	0.00
Wetland D	610	0.55	0.55	0.00
Wetland E	641	0.09	0.09	0.00
Wetland F	641	0.01	0.01	0.00
Wetland M	641	3.12	3.12	0.00
Wetland N	641	0.91	0.91	0.00
Wetland O	641	0.05	0.05	0.00
Wetland P	641	0.67	0.67	0.00
Wetland Q	641	0.39	0.39	0.00
Wetland R	641	0.02	0.02	0.00
Wetland S	641	0.93	0.93	0.00
Wetland T	641	0.81	0.81	0.00
Wetland U	641	0.64	0.64	0.00
Totals		13.73	11.7	2.03



Source: Blue Goose Survey & Design plan sheet C6

Secondary / Indirect Impacts

Secondary impacts refer to anticipated indirect effects on remaining on-site or off-site wetlands resulting from proposed changes in adjacent land uses. The project site contains regulated surface waters consisting of upland-cut ditches. Adverse secondary impacts were not assessed to the upland-cut ditches that meet the provisions of 10.2.2.2 A.H. Vol I. All onsite wetlands are provided with 50-foot upland buffers and silt fencing. Wetlands that are near proposed mining activities will be bordered by a recharge ditch located outside of the 50-foot upland buffer zone. All proposed mine excavation activities are at least 250 feet from all onsite and offsite wetlands. The recharge ditches will provide another physical barrier between onsite wetlands and daily construction activity. All off-site wetlands are sufficiently distant from the project boundaries as to provide reasonable assurance that adverse secondary impacts will not occur as a result of the proposed works.

ELIMINATION/REDUCTION OF IMPACTS

The project has been designed to eliminate all impacts wetlands. The proposed impacts to upland-cut ditches have been minimized to the greatest extent practicable for the mining operation which requires the excavation of large volumes of mineral material. No reduction in alterations to upland cut-ditches, that meet the provisions of section 10.2.2.2 A.H. Vol I, is proposed or warranted.

MITIGATION OF IMPACTS

The project has been designed to avoid all impacts to wetlands. With 50-foot upland buffers and silt fencing around all wetlands and the installation recharge ditches, no adverse secondary impacts to onsite or offsite wetlands are anticipated to result from the project. The project will result in alterations to the surface waters of upland-cut agricultural ditches. The ditches that are proposed for alteration were excavated from uplands and meet the provisions of 10.2.2.2 A.H. Vol I. Therefore, no mitigation for surface water impacts is proposed or warranted.

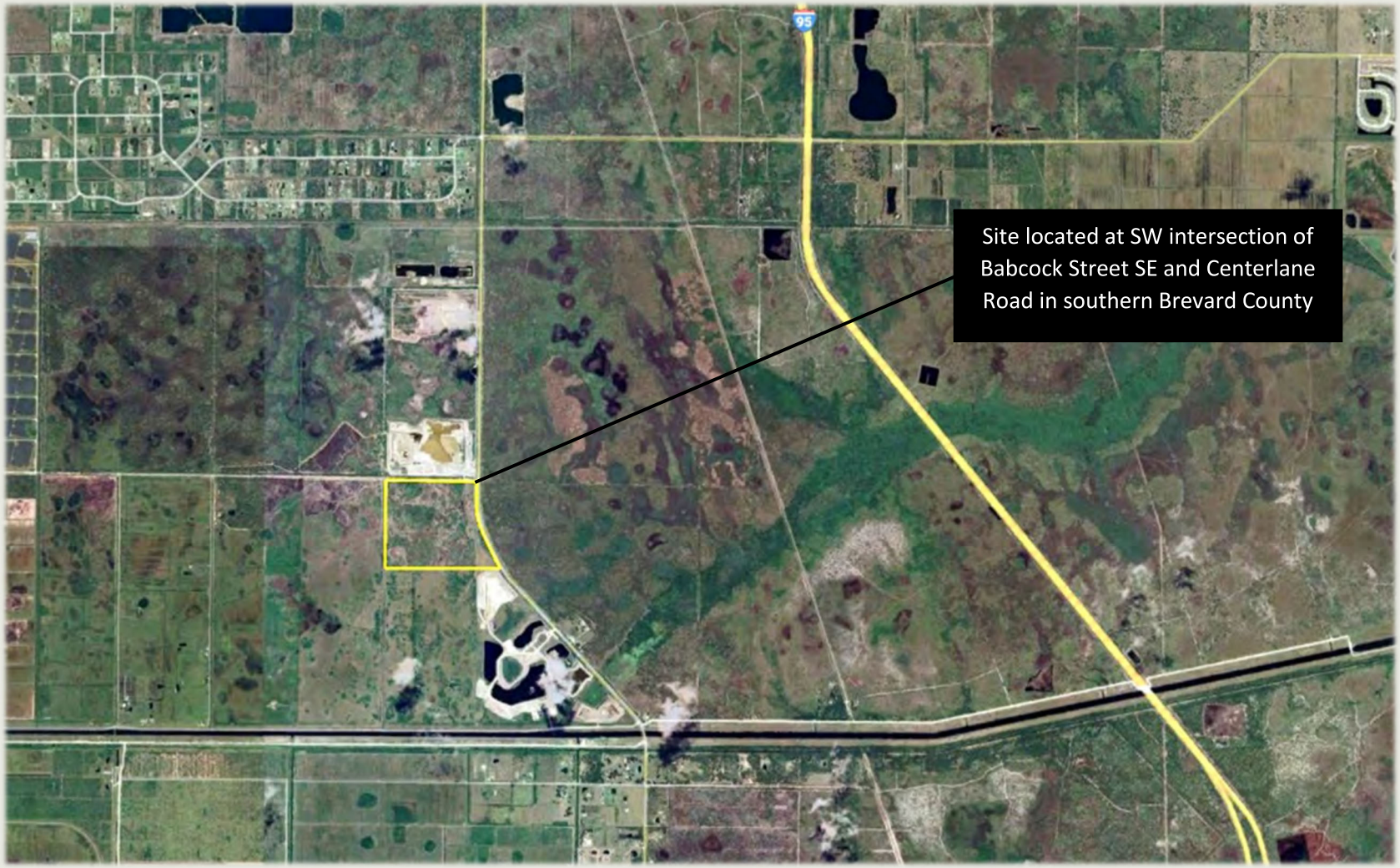
CUMULATIVE IMPACTS

The proposed sand mine expansion project will not result in adverse impacts to wetlands. The project will result in alterations to upland-cut ditches which meet the provisions of 10.2.2.2 A.H. Vol I. Therefore, the proposed alterations of upland-cut agricultural ditches are not anticipated to result in unacceptable adverse cumulative impacts to surface waters of the Southern St. Johns Hydrologic Basin in accordance section 10.2.8 A. H. Vol I.

HISTORIC RESOURCES

A search of the National Register of Historic Places April 2014 spatial data processed by the Cultural Resources GIS facility did not identify any historic properties within or abutting the project boundaries. The closest mapped historical property is the Marian Fell Library within City of Fellsmere, which is over 5 miles to the south of the project boundaries. This historic structure is located at 63 N. Cypress Street in Fellsmere and is documented under Property Identification Number 96001059. This historic property identified within the National Register of Historic Places is sufficiently distant from the project boundaries as to provide reasonable assurance that adverse impacts to historic properties will not occur as a result of the proposed works.

Exhibit A



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Sunshine Mine Expansion Phase III
Location Map
Source: Google Earth Pro, Image 4/30/2023

NTS

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Exhibit B

U.S. Fish and Wildlife Service
National Wetlands Inventory

Sunshine Mine Phase III

November 18, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Exhibit C

United States Department of Agriculture

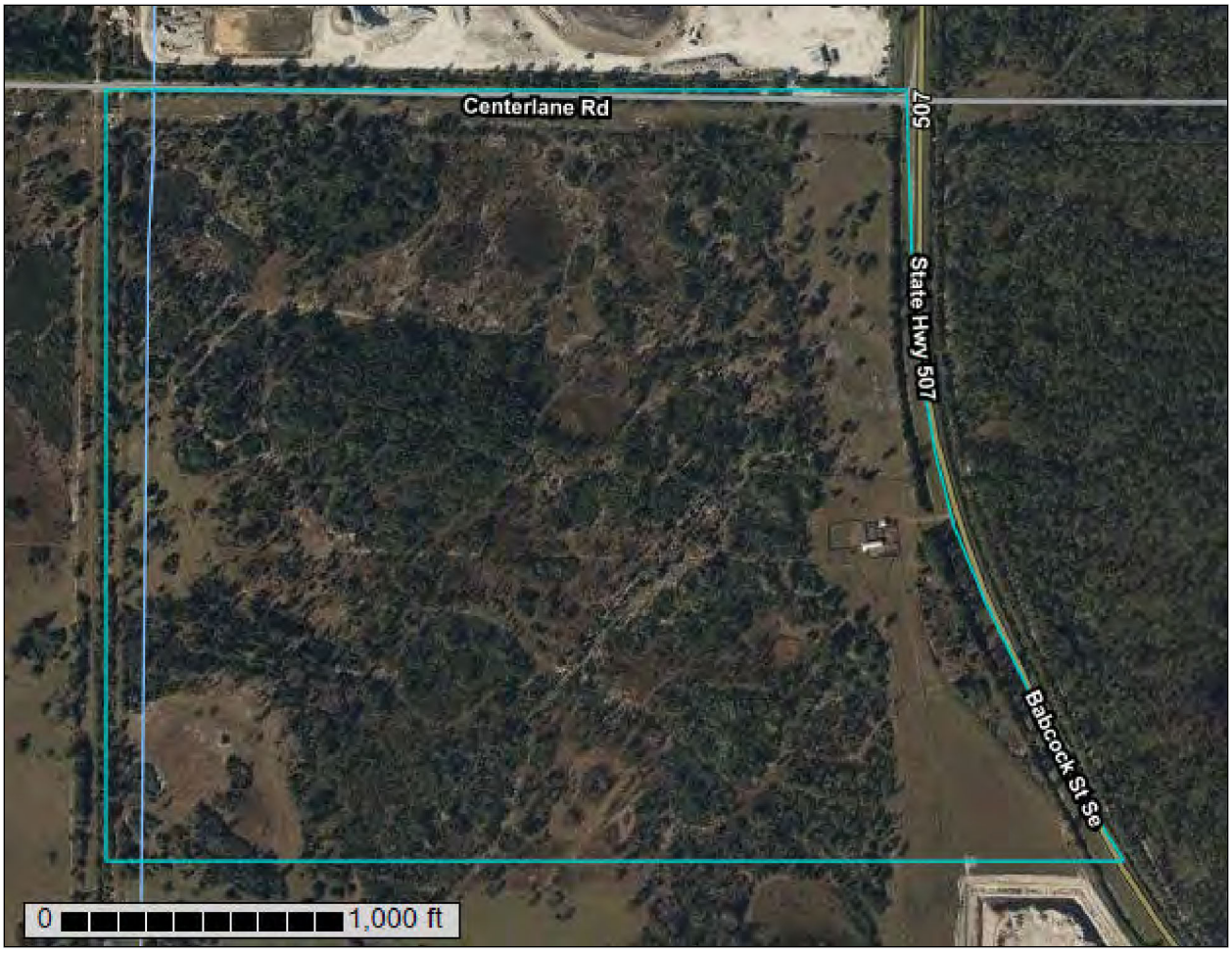
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Brevard County, Florida

Sunshine Mine Phase III



November 18, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:7,050 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Brevard County, Florida
Survey Area Data: Version 25, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 18, 2022—Jan 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
17	EauGallie sand, 0 to 2 percent slopes	124.2	64.5%
18	EauGallie, Winder, and Riviera soils, depressional	68.1	35.4%
30	Malabar sand, 0 to 2 percent slopes	0.3	0.2%
Totals for Area of Interest		**192.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Brevard County, Florida

17—EauGallie sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svz2
Elevation: 10 to 60 feet
Mean annual precipitation: 38 to 62 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Eaugallie and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: sand
E - 4 to 22 inches: sand
Bh - 22 to 27 inches: sand
Bw - 27 to 45 inches: sand
E' - 45 to 58 inches: sand
Btg - 58 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Malabar
Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Myakka
Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Oldsmar
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Wabasso
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

18—EauGallie, Winder, and Riviera soils, depressional

Map Unit Setting

National map unit symbol: 1lg2y
Elevation: 0 to 30 feet
Mean annual precipitation: 49 to 57 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Eaugallie, depressional, and similar soils: 40 percent
Winder, depressional, and similar soils: 25 percent
Riviera, depressional, and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie, Depressional

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: sand
E - 5 to 22 inches: sand
Bh - 22 to 35 inches: sand
E' - 35 to 55 inches: sand
Btg - 55 to 61 inches: sandy clay loam
Cg - 61 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G156BC145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G156BC145FL)
Hydric soil rating: Yes

Description of Winder, Depressional

Setting

Landform: Depressions, marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: loamy sand
E - 5 to 12 inches: loamy sand
B/E - 12 to 17 inches: sandy loam
Btg - 17 to 31 inches: sandy clay loam
Cg - 31 to 65 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G156BC345FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G156BC345FL)
Hydric soil rating: Yes

Description of Riviera, Depressional

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: sand
E - 5 to 30 inches: sand
Btg - 30 to 49 inches: sandy loam
Cg - 49 to 62 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G156BC245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G156BC245FL)
Hydric soil rating: Yes

Minor Components

Holopaw

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G156BC145FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G156BC245FL)
Hydric soil rating: Yes

Chobee

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G156BC345FL)
Hydric soil rating: Yes

30—Malabar sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2sm5k
Elevation: 0 to 40 feet
Mean annual precipitation: 46 to 57 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Malabar and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Malabar

Setting

Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear

Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: sand
E - 5 to 15 inches: sand
Bw - 15 to 35 inches: sand
E' - 35 to 45 inches: sand
Btg - 45 to 65 inches: sandy loam
Cg - 65 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Holopaw

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave

Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Oldsmar

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Cypress lake

Percent of map unit: 3 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Convex, linear
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

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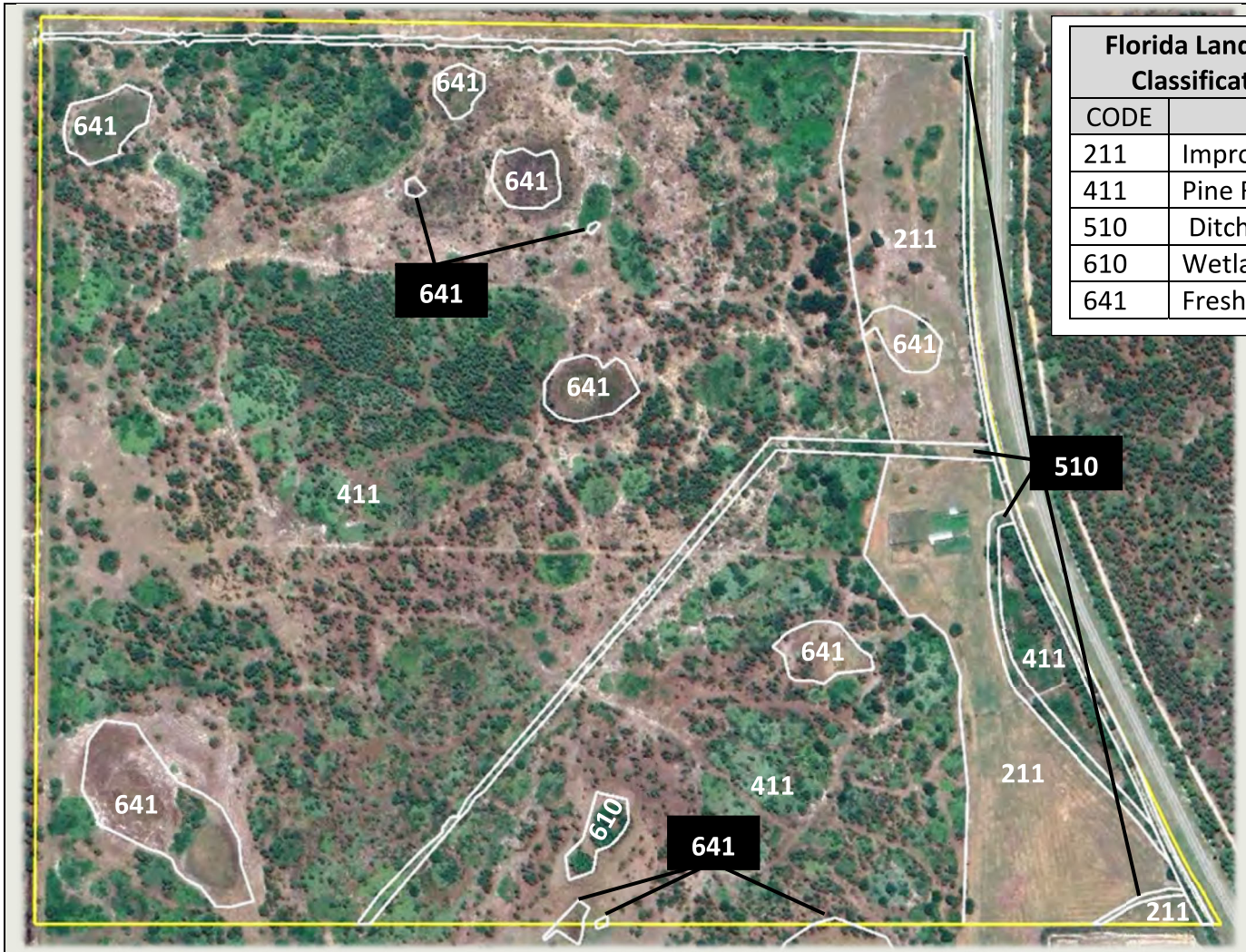
Exhibit D



Florida Land Use, Cover and Forms Classification System - FLUCCS	
CODE	CLASSIFICATION
211	Improved Pasture
411	Pine Flatwoods
510	Ditches
610	Wetland Hardwoods
641	Freshwater Marsh

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Expansion Phase III
Florida Land Use, Cover Forms Classification System (FLUCCS)
Source: Google Earth Pro, Image 4/30/2023

NTS

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

Exhibit E

EagleWatch Map, Nest BE093 +/- 1,536 Linear Feet to Phase III Boundary

11/19/2025, 1:06:56 PM

Bald Eagle Nest Locations

- Audubon

1:18,056

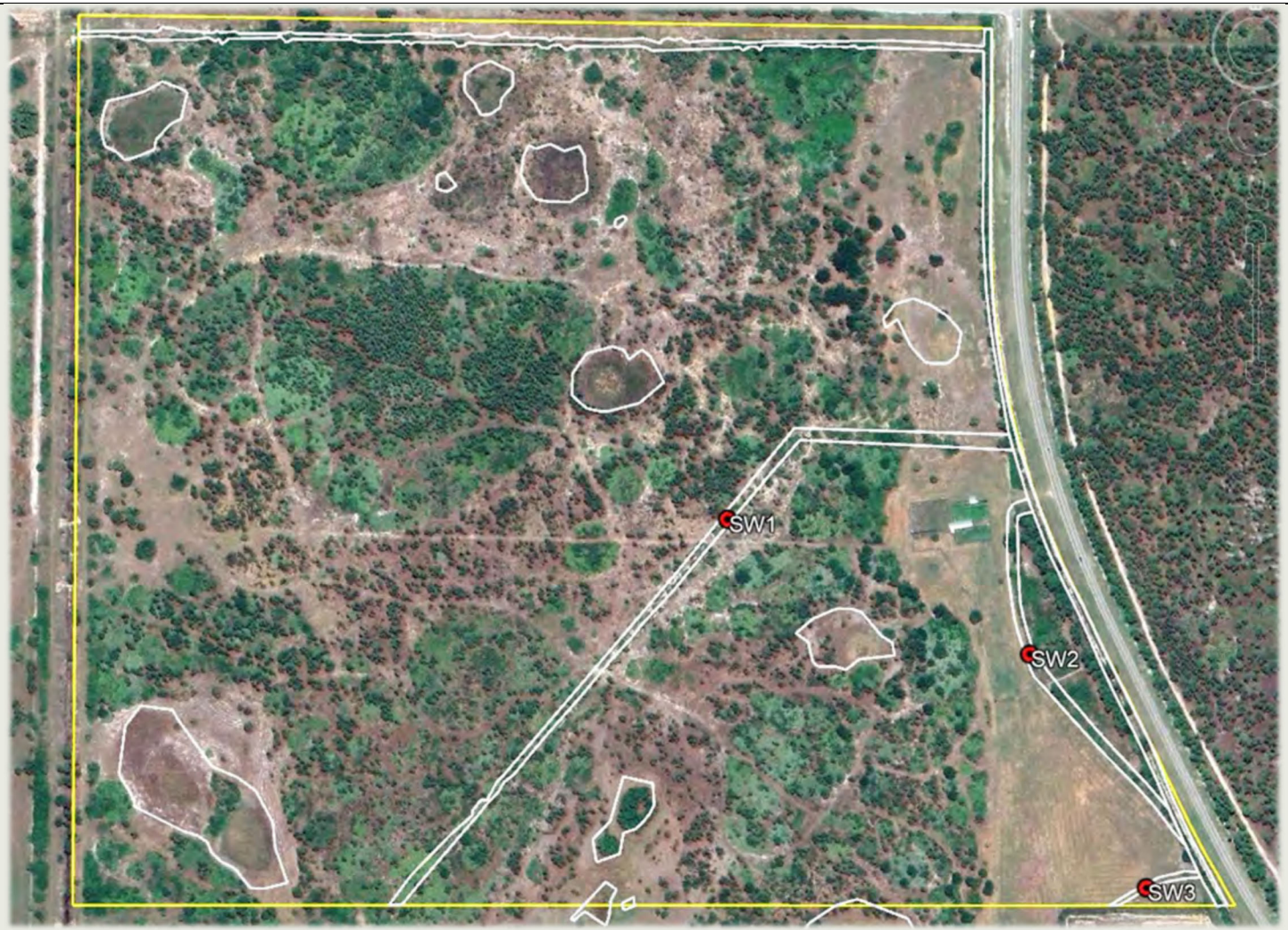
0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Google, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

ArcGIS Web AppBuilder

Exhibit F



E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Expansion Phase III
Chapter 62-340 Data Point Locations
Source: Google Earth Pro, Image 4/30/2023

NTS

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§ denotes the Rule, subsection, paragraph, or subparagraph referenced from Ch. 62-340, F.A.C.

FDEP SLERC August 2019

Chapter 62-340, F.A.C. Data Form

1. Date: Nov 17, 2025 2. Staff Present: 3. Form recorder(s):

4. County: Brevard (5) 5. Site Name: Sunshine Mine Phase III Tracking #:

6. Point ID: SW1 GPS Coordinates: Lat: 27.840783° Long:-80.625814°

7. Distances and bearings from fixed objects (if no GPS):

8. Current condition of described point: ◉ Authorized or legal condition ○ Unauthorized or illegal condition

9. Work type: ○ Identification ○ Delineation

Point status: ○ Wetland ◉ Non-Wetland Surface Water ○ Upland

10. Vegetative Stratum §62-340.400: Using §62-340.400, F.A.C. with reasonable scientific judgment, select the appropriate vegetative stratum. (Do not include FAC species when determining 10% minimum areal extent.)

○ Canopy (Min. 10% areal extent) ○ Subcanopy (Min. 10% areal extent) ◉ Groundcover (No min. areal extent)

○ Vegetation Absent *(skip to #14)* ○ Evaluation Impossible *(skip to #14)* **Why?**

11. Plant List §62-340.200(2),(6),(16), §62-340.400, §62-340.450, F.A.C.:

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

Areal extent estimator: 5'R

Select and identify plants in an area just large enough to represent and classify the plant community at the described point. Do not extend into different communities or hydrologic conditions.

1. Record the scientific name (binomial) and status of each plant species necessary to identify/delineate and classify the plant community in the selected area.
2. Record the percent areal extent in the canopy, subcanopy, and groundcover columns for each species.
3. For each species present in the **stratum selected in #10**, transfer the numbers from only that stratum's column into the appropriate status columns.

#	Binomial of Observed Species	Status	Canopy	Subcanopy	Groundcover	Upland	Facultative	Fac. Wet	Obligate
1.	Eupatorium capillifolium	F			70		70		
2.	Urena lobata	U			10	10			
3.	Rubus cuneifolius	F			10		10		
4.	Spermacoce verticillata	U			5	5			
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
Percent areal extent totals for the stratum selected in question 10						15	80	0	0

12. In the stratum selected in #10: What is the % areal extent of Obligate plants? 0

What is the % areal extent of Upland plants? 15

Is the areal extent of Obligate plants greater than that of Upland plants? ○ Yes ◉ No

13. In the stratum selected in #10: What is the total % areal extent of Obligate & Facultative Wet plants combined? 0

What is the total % areal extent of Obligate, Facultative Wet, & Upland plants combined? 15

What is the percentage of OBL + FACW in relation to all plants, excluding FAC? ($\frac{\text{OBL+FACW}}{\text{OBL+FACW+UPL}}$) 0.0%

Point ID/Location: Lat: 27.840783° Long:-80.625814° | Soil describer:

14. LRR/MLRA U | **Textures:** Peat, Mucky Peat, Muck, Mucky Mineral (S or F), Sand, Fine, Marl

15. Is a soil profile evaluation possible? ◉ Yes ○ No If no, why? *(**If No**, skip to #18)*

16. Soil Description: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Soil surface, or 0 inch depth for purposes of Chapter 62-340, F.A.C. is the muck or mineral surface (whether natural or fill)

Horizon	beginning to ending **Depth** (inches)	**Matrix Texture**	moist condition **Matrix Hue Value/ Chroma**	for sandy matrix horizons w/ value ≤ 3: **% Organic Coating**	- **Describe soil features: DA** (areas darker than matrix), **LA** (areas lighter than matrix), **RC** (redox concentrations): Record in moist condition **hue value/chroma; % volume in horizon; boundaries** (sharp/clear/diffuse); **shape** (rounded/linear/angular). - **OB** (organic bodies): Record **texture** (muck or mucky mineral), **% volume in horizon.** - **H_2S** (hydrogen sulfide odor): Indicate shallowest depth where detected - **Note** if horizon is **Physically Mixed (PM), Nonsoil** (any material not listed in "Textures" above), or **Fill** and describe.
1	0-9	S	10YR6/1		DA 10YR3/1, 40%, sandy with no mucky texture Hog rooting along bottom of swale
2	9-12	S	10YR6/1		DA 10YR3/1, 20%, sandy texture, distinct boundaries LA 10YR7/1, 20%, diffuse boundaries
3	12-14	S	10YR4/1		DA 10YR3/1, 10%, Sand texture, distinct boundaries LA 10YR6/1, 5%, distinct boundaries
4					
5					
6					

17. Hydric Soil Field Indicators: If present, check all Hydric Soil Field Indicators satisfied and specify their beginning and ending depths

☑ All Texture	☑ Sandy Texture	☑ Fine Texture
__(A1) Histosol*	__(S4) Sandy Gleyed Matrix*	__(F2) Loamy Gleyed Matrix*
__(A2) Histic Epipedon*	__(S5) Sandy Redox	__(F3) Depleted Matrix
__(A3) Black Histic*	__(S6) Stripped Matrix	__(F6) Redox Dark Surface
__(A4) Hydrogen Sulfide*	__(S7) Dark Surface	__(F7) Depleted Dark Surface
__(A5) Stratified Layers*	__(S8) Polyvalue Below Surface	__(F8) Redox Depression
__(A6) Organic Bodies	__(S9) Thin Dark Surface	__(F10) Marl
__(A7) 5cm Mucky Mineral*	__(S12) Barrier Islands 1cm Muck	__(F12) Iron-Manganese Masses
__(A8) Muck Presence*		__(F13) Umbric Surface
__(A9) 1cm Muck*		__(F22) Very Shallow Dark Surface
__(A11) Depleted Below Dark Surface		
__(A12) Thick Dark Surface		

Indicator Present	Begin Depth	End Depth
1.		
2.		
3.		
4.		
5.		
6.		

** = Stand-alone D Test - both hydric soil and hydrologic indicator*

To combine layers/indicators to meet thickness requirements, see NRCS Hydric Soils Technical Note 4.

18. Excluding organic horizons, is any nonsoil horizon present at or within the uppermost 12 inches of the ground surface?
○ Yes *(e.g. bedrock, rock outcrop, limestone fill, gravel, etc)* ◉ No ○ Soil profile or site inaccessible

19. Is one or more hydric soil field indicators present? ○ Yes ◉ No ○ Inconclusive *(e.g., evaluation to 12+ inches impeded by disturbance, water, nonsoil, no site access, etc.)*
If no or inconclusive, is the soil hydric as determined by other NRCS methods?
○ Yes ← Which method(s)? _____ ○ No ○ Inconclusive ← Why? _____
(e.g., hydric soil definition, HSTS[2], indicator present at drier elevation, indicator would be present but for disturbance)

20. Is the depth of the soil profile 20 inches or greater from the soil surface? ○ Yes ◉ No
If no, depth of soil profile is: 14 inches Why? Depth of spade, loose sandy soils
(e.g., root refusal, nonsoil, water table, loose sand, heavy texture, compaction, weather conditions, inspection interrupted)

21. **Observed** height or depth of standing water from **soil** surface: _____ inches ○ Above ○ Below ◉ Not Observed

Point ID/Location: Lat: 27.840783° Long:-80.625814° | Indicator evaluator: _____

22. Hydrologic Indicators: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Hydrologic Indicators per §62-340.500, F.A.C. (and as applied to §62-340.600, F.A.C.)	Present at or near point	Predicted during normal high water or wet season◆	Within 100 ft waterward of point (not for upland points)	1. Describe the type of all checked indicators. 2. Approximate the distance and compass direction of indicators within 100 ft of the point. 3. For water level indicators (potential indicators denoted by *) **note the height from ground surface** at the point as well as waterward (with distance from point). ◆Only for indicators not present due to dry season/drought
(1) Algal mats*				
(2) Aquatic mosses or liverworts*				
(3) Aquatic plants*				
(4) Aufwuchs*				
(5) Drift lines and rafted debris*				
(6) Elevated lichen lines*				
(7) Evidence of aquatic fauna				
(8) Hydrologic data*				
(9) Morphological plant adaptations*				
(10) Secondary flow channels				
(11) Sediment deposition*				
(12) Tussocks or hummocks*				
(13) Water marks*				

Highest water level indicator height at point: _____ inches ○ Above Ground Surface ◉ No Water Level Indicators ○ Above Soil Surface ○ N/A (described point is Upland)

23. Is one or more hydrologic indicator(s) listed in §62-340.500, F.A.C. present or predicted with normal high water or wet season conditions at the described point? ○ Yes ◉ No ○ Evaluation Impossible ← Why? _____

24. Delineation by Wetland Definition §62-340.300(1), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Has a wetland boundary been delineated at the described point? ○ Yes ◉ No *(**If No**, skip to #25)*

b) If yes to 24a, can the boundary be easily delineated using the definition of wetlands? ○ Yes ○ No

25. A & B Test Wetland Criteria §62-340.300(2)(a),(b), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the areal extent of Obligate plants in the stratum selected in #10 greater than the areal extent of all Upland plants in that stratum? (See #12) ○ Yes ◉ No ○ Vegetation Absent *(skip to #25f)* ○ Evaluation Impossible *(skip to #26a)*

b) Is the areal extent of Obligate and/or Facultative Wet plants in the stratum selected in #10 equal to or greater than 80% of all the plants in that stratum, excluding Facultative plants? (See #13) ○ Yes ◉ No

c) Is the soil hydric as identified using standard NRCS definitions and practices? (see #19) ○ Yes ◉ No ○ Indeterminable with current conditions ← Why? _____

d) Is the substrate composed of riverwash, nonsoil (see #18), rock outcrop-soil complex, or is the substrate located within an artificially created wetland area? ○ Yes ◉ No If yes, which condition is present? _____

e) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ○ Yes ◉ No

f) Are the A Test criteria met per §62-340.300(2)(a), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25a and yes to either 25c, 25d, or 25e, A Test criteria are met)

g) Are the B Test criteria met per §62-340.300(2)(b), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25b and yes to either 25c, 25d, or 25e, B Test criteria are met)

h) Are there any **alterations or conditions** affecting reliable application of the A or B Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

Point ID/Location: Lat: 27.840783° Long:-80.625814°

26. C Test Wetland Criteria §62-340.300(2)(c), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Per §62-340.300(2)(c), F.A.C. is the described point Pine Flatwoods or Improved Pasture, or does it have drained soils? ○ Yes ◉ No ***If yes**, select which of the following are met, then skip to #26d*

☐ Pine Flatwoods ☐ Improved Pasture ☐ Drained Soils

***Pine Flatwoods** must have flat terrain, a monotypic or mixed canopy of long leaf pine or slash pine, and a ground cover dominated by saw palmetto with other species that are NOT obligate or facultative wet. **Improved Pasture** means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are NOT obligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing. **Drained Soils** are those in which permanent alterations, excluding mechanical pumping, preclude the formation of hydric soils.*

b) Are the soils at the described point saline sands (salt flats-tidal flats), **or** have they been **field verified** by NRCS's Keys to Soil Taxonomy (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults? ○ Yes ◉ No

c) Do the soils at the described point have a NRCS hydric soil field indicator (see #17), **and** is the point located within a map unit named or designated by the NRCS as frequently flooded, depressional, or water?

Map Unit: EauGallie Sands 0 to 2% slopes ○ Yes ◉ No ○ Inconclusive ← Why? _____ *(skip to #27a)*

d) Are the C Test criteria met per §62-340.300(2)(c), F.A.C. at the described point? ○ Yes ◉ No

(Note: If no to 26a and yes to either 26b or 26c, C Test criteria are met)

e) Are there any **alterations or conditions** affecting reliable application of the C Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

27. D Test Wetland Criteria §62-340.300(2)(d), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the soil hydric as verified by a NRCS hydric soil field indicator? (See #17)

○ Yes ◉ No *(skip to #27d)* ○ Inconclusive ← Why? _____ *(skip to #28)*

b) Does any NRCS hydric soil field indicator begin **at the soil surface or** are any of the following indicators present: A1, A2, A3, A4, A5, A7, A8, A9, S4, F2? ○ Yes ○ No *(If yes, then hydrologic indicator §62-340.500(8) or (11) is met)*

c) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ○ Yes ○ No

d) Are the D Test criteria met per §62-340.300(2)(d), F.A.C. at the described point? ○ Yes ◉ No

(Note: If yes to 27a and yes to either 27b or 27c, D Test criteria may be met)

e) Are there any **alterations or conditions** affecting reliable application of the D Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

28. Altered Sites Tests §62-340.300(3), F.A.C. (Legal/Authorized or Illegal/Unauthorized)

*For purposes of Chapter 62-340, F.A.C. **altered** refers to any natural or man-induced condition(s) which **masks or eliminates reliable expression** of wetland indicators (i.e. hydrophytic vegetation, hydric soils, and hydrologic indicators). **Unaltered or normal does not require a natural condition**, only an expression of wetland indicators that is sufficient to **reliably** identify or delineate the wetland using the criteria in §62-340.300, F.A.C.*

Are alterations affecting normal wetland condition? ○ Yes ◉ No *(skip to #32)* ○ Evaluation Impossible *(skip to #32)*

29. Authorized or Legally Altered Vegetation and Soils Test Criteria §62-340.300(3)(a), F.A.C.

a) Are there **authorized** or **legal** alterations affecting reliable expression of vegetation at the described point? ○ Yes ◉ No If yes, how? _____

b) Are there **authorized** or **legal** alterations affecting reliable soil evaluation at the described point? ○ Yes ◉ No If yes, how? _____ *(**If no to both** 29a and 29b, skip to #30)*

c) If yes to 29a or 29b, which criteria tests are affected by the legal alterations?

☐ A Test ☐ B Test ☐ C Test ☐ D Test

d) Using the most reliable available information and reasonable scientific judgment, would the types of evidence and characteristics contemplated in §62-340.300, F.A.C. identify or delineate the described point as a wetland with cessation of the legal altering activities? ○ Yes ○ No If no, why? _____ *(**If no**, skip to #30)*

e) If yes to 29d, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of legal altering activities? ☐ Plants ☐ Soils ☐ Hydrologic indicators

f) If yes to 29d, which tests would be passed with cessation of legal altering activities?

☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test

Why? _____

Point ID/Location: Lat: 27.840783° Long:-80.625814°

30. Authorized or Legally Altered Hydrology Test Criteria §62-340.300(3)(b), F.A.C.

a) Has wetland hydrology of the area been **legally** drained or lowered? ○ Yes ◉ No *(**If no**, skip to #31)*
If yes, how? _____

b) Has wetland hydrology been **legally** eliminated at the described point? ○ Yes ○ No *(**If no**, skip to #31)*

c) If yes to 30b, using reasonable scientific judgment or §62-340.550, F.A.C., have dredging or filling activities authorized by **Part IV** of Chapter 373, F.S. **permanently eliminated** wetland hydrology at the described point such that the wetland definition cannot be met? ○ Yes (point is upland) ○ No *(**If yes**, skip to #31)*

*Chapter 373, F.S. Part II activities (e.g., water use permits) or other temporary hydrologic alterations (e.g., surface water pumps, drought) do **not** apply to this or any other Ch. 62-340, F.A.C. determinations.*

d) If no to 30c, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of temporary hydrologic drainage? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If no to 30c, Which tests would be passed with cessation of temporary hydrologic alterations?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

31. Unauthorized or Illegally Altered Sites Test Criteria §62-340.300(3)(c), F.A.C.

*If the altering activity is a violation of regulatory requirements, then application of §62-340.300(3)(c), F.A.C. and all provisions of Chapter 62-340, F.A.C. are utilized to identify or delineate the wetland in a forensic manner. **This identification or delineation reflects the condition immediately prior to the unauthorized alteration**.*

a) Have any **unauthorized** alterations affected the normal wetland condition at the described point? ○ Yes ◉ No
If yes, how? _____ *(**If no**, skip to #32)*

b) If yes to 31a, which criteria tests are affected by the unauthorized alterations?
☐ A Test ☐ B Test ☐ C Test ☐ D Test

c) With reasonable scientific judgment is the described point a wetland, or would it have been a wetland immediately prior to the unauthorized alteration? ○ Yes ○ No If no, why? _____ *(**If no**, skip to #32)*

d) If yes to 31c, what §62-340.300, F.A.C. evidence is present now and/or was present immediately prior to the unauthorized alteration? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If yes to 31c, which tests would be passed immediately prior to the unauthorized alteration?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

32. Wetland and Other Surface Water Summary §62-340.600(2)(a-e), F.A.C.:

Given **normal** expression, **cessation** of **authorized** alterations, or **immediately prior** to any **unauthorized** alterations:

a) With **reasonable scientific judgment** is the described point a wetland as defined in §62-340.200(19), F.A.C. and located by Ch. 62-340, F.A.C.? ○ Yes ◉ No If yes, which criteria identified or delineated the wetland?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
If summary answers differ from answers in 25f, 25g, 26d, or 27d, why? _____

b) Is the described point located at or within the Mean High Water Line of a tidal water body?
○ Yes ◉ No ○ MHWL Unknown

c) Is the described point located at or within the Ordinary High Water Line of a non-tidal natural water body or natural watercourse? ○ Yes ◉ No

d) Is the described point located at or within the top of the bank of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground? ◉ Yes ○ No

e) Is the described point located at or within the Seasonal High Water Line of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes flatter than 1 foot vertical to 4 feet horizontal or an artificial water body created by diking or impoundment above the ground? ○ Yes ◉ No

33. Connection or Isolation of Wetland per Applicant's Handbook Vol.1 Section 2.0

If the described point is a wetland, does it have a connection via wetlands or other surface waters, or is it wholly surrounded by uplands and therefore isolated? ○ Connected ○ Isolated ◉ N/A (Point is not wetland)

Point ID/Location: Lat: 27.840783° Long:-80.625814°

34. Photographs and/or videos: Soil profile with Data Form, Soil profile close-up, Cross section(s) at 6" depth for sandy textures and/or critical depths for fine textures, Hydric soil indicators, Water table or inundation depth, Four cardinal directions of plant strata present, Hydrologic indicators (with scale as necessary), Critical plant ID (optional)

#	Memory Card # / Metadata	Description, compass direction (if applicable)	Taken By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

Notes: See data point photo packet.

Helpful Definitions for Applying Ch 62-340, F.A.C.

[1]**RSJ** stands for Reasonable Scientific Judgment where used throughout this Data Form (See *The Florida Wetlands Delineation Manual* pg. 2 & 12*)*

[2]**HSTS** stands for Hydric Soils Technical Standard (See NRCS Hydric Soils Technical Note 11)

Definition from §62.340.200(19) Florida Administrative Code
"**Wetlands**," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Definition from §373.019(19) Florida Statutes
"**Surface water**" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

Definition from §373.019(14) Florida Statutes
"**Other watercourse**" means any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted.

Definition from §62.340.200(15) Florida Administrative Code
"**Seasonal High Water**" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

From The Florida Wetlands Delineation Manual pg. 37
Ordinary high water is that point on the slope or bank where the surface water from the water body ceases to exert a dominant influence on the character of the surrounding vegetation and soils. The OHWL frequently encompasses areas dominated by non-listed vegetation and non-hydric soils. When the OHWL is not at a wetland edge, the general view of the area may present an "upland" appearance.

Definition from §403.803(14) Florida Statutes
"Swale" means a manmade trench which:
(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;
(b) Contains contiguous areas of standing or flowing water only following a rainfall event;
(c) Is planted with or has stablized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and
(d) Is designed to take into acount the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW1 Wet
1 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

North

East

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW1 Wet
2 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

South

West

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW1 Wet
3 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

FDEP SLERC August 2019

Chapter 62-340, F.A.C. Data Form

§ denotes the Rule, subsection, paragraph, or subparagraph referenced from Ch. 62-340, F.A.C.

1. Date: Nov 17, 2025 2. Staff Present: 3. Form recorder(s):

4. County: Brevard (5) 5. Site Name: Sunshine Mine Phase III Tracking #:

6. Point ID: SW2 GPS Coordinates: Lat: 27.839653° Long:-80.622950°

7. Distances and bearings from fixed objects (if no GPS):

8. Current condition of described point: ◉ Authorized or legal condition ○ Unauthorized or illegal condition

9. Work type: ○ Identification ○ Delineation

Point status: ○ Wetland ◉ Non-Wetland Surface Water ○ Upland

10. Vegetative Stratum §62-340.400: Using §62-340.400, F.A.C. with reasonable scientific judgment, select the appropriate vegetative stratum. (Do not include FAC species when determining 10% minimum areal extent.)

○ Canopy (Min. 10% areal extent) ○ Subcanopy (Min. 10% areal extent) ◉ Groundcover (No min. areal extent)

○ Vegetation Absent *(skip to #14)* ○ Evaluation Impossible *(skip to #14)* **Why?**

11. Plant List §62-340.200(2),(6),(16), §62-340.400, §62-340.450, F.A.C.:

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

Areal extent estimator: 5'R

Select and identify plants in an area just large enough to represent and classify the plant community at the described point. Do not extend into different communities or hydrologic conditions.

1. Record the scientific name (binomial) and status of each plant species necessary to identify/delineate and classify the plant community in the selected area.
2. Record the percent areal extent in the canopy, subcanopy, and groundcover columns for each species.
3. For each species present in the **stratum selected in #10**, transfer the numbers from only that stratum's column into the appropriate status columns.

#	Binomial of Observed Species	Status	Canopy	Subcanopy	Groundcover	Upland	Facultative	Fac. Wet	Obligate
1.	Eupatorium capillifolium	F			70		70		
2.	Urena lobata	U			10	10			
3.	Rubus cuneifolius	F			5		5		
4.	Spermacoce verticillata	U			5	5			
5.	Paspalum urvillei	F			5		5		
6.	Conoclinium coelestinum	F			1		1		
7.	Hydrocotyle umbellata	FW			1			1	
8.	Schinus terebinthifolia	F			1		1		
9.	hackelia virginiana	U			1	1			
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
Percent areal extent totals for the stratum selected in question 10						16	82	1	0

12. In the stratum selected in #10: What is the % areal extent of Obligate plants? 0

What is the % areal extent of Upland plants? 16

Is the areal extent of Obligate plants greater than that of Upland plants? ○ Yes ◉ No

13. In the stratum selected in #10: What is the total % areal extent of Obligate & Facultative Wet plants combined? 1

What is the total % areal extent of Obligate, Facultative Wet, & Upland plants combined? 17

What is the percentage of OBL + FACW in relation to all plants, excluding FAC? ($\frac{\text{OBL+FACW}}{\text{OBL+FACW+UPL}}$) 5.9%

Point ID/Location: Lat: 27.839653° Long:-80.622950° | Soil describer:

14. LRR/MLRA U | **Textures:** Peat, Mucky Peat, Muck, Mucky Mineral (S or F), Sand, Fine, Marl

15. Is a soil profile evaluation possible? ◉ Yes ○ No If no, why? *(**If No**, skip to #18)*

16. Soil Description: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Soil surface, or 0 inch depth for purposes of Chapter 62-340, F.A.C. is the muck or mineral surface (whether natural or fill)

Horizon	beginning to ending **Depth** (inches)	**Matrix Texture**	moist condition **Matrix Hue Value/ Chroma**	for sandy matrix horizons w/ value ≤ 3: **% Organic Coating**	- **Describe soil features: DA** (areas darker than matrix), **LA** (areas lighter than matrix), **RC** (redox concentrations): Record in moist condition **hue value/chroma; % volume in horizon; boundaries** (sharp/clear/diffuse); **shape** (rounded/linear/angular). - **OB** (organic bodies): Record **texture** (muck or mucky mineral), **% volume in horizon.** - **H_2S** (hydrogen sulfide odor): Indicate shallowest depth where detected - **Note** if horizon is **Physically Mixed (PM), Nonsoil** (any material not listed in "Textures" above), or **Fill** and describe.
1	0-1	Sand	10YR5/1		DA 10YR4/1, 20%, sandy, distinct boundaries
2	1-15		10YR5/1		DA 10YR3/1, 10%, mucky mineral organic bodies = A6
3					
4					
5					
6					

17. Hydric Soil Field Indicators: If present, check all Hydric Soil Field Indicators satisfied and specify their beginning and ending depths

☑ All Texture	☑ Sandy Texture	☑ Fine Texture
__(A1) Histosol*	__(S4) Sandy Gleyed Matrix*	__(F2) Loamy Gleyed Matrix*
__(A2) Histic Epipedon*	__(S5) Sandy Redox	__(F3) Depleted Matrix
__(A3) Black Histic*	__(S6) Stripped Matrix	__(F6) Redox Dark Surface
__(A4) Hydrogen Sulfide*	__(S7) Dark Surface	__(F7) Depleted Dark Surface
__(A5) Stratified Layers*	__(S8) Polyvalue Below Surface	__(F8) Redox Depression
✓(A6) Organic Bodies	__(S9) Thin Dark Surface	__(F10) Marl
__(A7) 5cm Mucky Mineral*	__(S12) Barrier Islands 1cm Muck	__(F12) Iron-Manganese Masses
__(A8) Muck Presence*		__(F13) Umbric Surface
__(A9) 1cm Muck*		__(F22) Very Shallow Dark Surface
__(A11) Depleted Below Dark Surface		
__(A12) Thick Dark Surface		

	Indicator Present	Begin Depth	End Depth
1.	A6	1	15
2.			
3.			
4.			
5.			
6.			

** = Stand-alone D Test - both hydric soil and hydrologic indicator*

To combine layers/indicators to meet thickness requirements, see NRCS Hydric Soils Technical Note 4.

18. Excluding organic horizons, is any nonsoil horizon present at or within the uppermost 12 inches of the ground surface?
○ Yes *(e.g. bedrock, rock outcrop, limestone fill, gravel, etc)* ◉ No ○ Soil profile or site inaccessible

19. Is one or more hydric soil field indicators present? ◉ Yes ○ No ○ Inconclusive *(e.g., evaluation to 12+ inches impeded by disturbance, water, nonsoil, no site access, etc.)*
If no or inconclusive, is the soil hydric as determined by other NRCS methods?
○ Yes ← Which method(s)? _____ ○ No ○ Inconclusive ← Why? _____
(e.g., hydric soil definition, HSTS[2], indicator present at drier elevation, indicator would be present but for disturbance)

20. Is the depth of the soil profile 20 inches or greater from the soil surface? ○ Yes ◉ No
If no, depth of soil profile is: 15 inches Why? Depth of spade, loose sandy soils
(e.g., root refusal, nonsoil, water table, loose sand, heavy texture, compaction, weather conditions, inspection interrupted)

21. **Observed** height or depth of standing water from **soil** surface: _____ inches ○ Above ○ Below ◉ Not Observed

Point ID/Location: Lat: 27.839653° Long:-80.622950° | Indicator evaluator: _____

22. Hydrologic Indicators: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Hydrologic Indicators per §62-340.500, F.A.C. (and as applied to §62-340.600, F.A.C.)	Present at or near point	Predicted during normal high water or wet season◆	Within 100 ft waterward of point (not for upland points)	1. Describe the type of all checked indicators. 2. Approximate the distance and compass direction of indicators within 100 ft of the point. 3. For water level indicators (potential indicators denoted by *) **note the height from ground surface** at the point as well as waterward (with distance from point). ◆Only for indicators not present due to dry season/drought
(1) Algal mats*				
(2) Aquatic mosses or liverworts*				
(3) Aquatic plants*				
(4) Aufwuchs*				
(5) Drift lines and rafted debris*				
(6) Elevated lichen lines*				
(7) Evidence of aquatic fauna				
(8) Hydrologic data*				
(9) Morphological plant adaptations*				
(10) Secondary flow channels				
(11) Sediment deposition*				
(12) Tussocks or hummocks*				
(13) Water marks*				

Highest water level indicator height at point: _____ inches ○ Above Ground Surface ◉ No Water Level Indicators ○ Above Soil Surface ○ N/A (described point is Upland)

23. Is one or more hydrologic indicator(s) listed in §62-340.500, F.A.C. present or predicted with normal high water or wet season conditions at the described point? ○ Yes ○ No ○ Evaluation Impossible ← Why? _____

24. Delineation by Wetland Definition §62-340.300(1), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Has a wetland boundary been delineated at the described point? ○ Yes ◉ No *(**If No**, skip to #25)*

b) If yes to 24a, can the boundary be easily delineated using the definition of wetlands? ○ Yes ○ No

25. A & B Test Wetland Criteria §62-340.300(2)(a),(b), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the areal extent of Obligate plants in the stratum selected in #10 greater than the areal extent of all Upland plants in that stratum? (See #12) ○ Yes ◉ No ○ Vegetation Absent *(skip to #25f)* ○ Evaluation Impossible *(skip to #26a)*

b) Is the areal extent of Obligate and/or Facultative Wet plants in the stratum selected in #10 equal to or greater than 80% of all the plants in that stratum, excluding Facultative plants? (See #13) ○ Yes ◉ No

c) Is the soil hydric as identified using standard NRCS definitions and practices? (see #19) ◉ Yes ○ No ○ Indeterminable with current conditions ← Why? _____

d) Is the substrate composed of riverwash, nonsoil (see #18), rock outcrop-soil complex, or is the substrate located within an artificially created wetland area? ○ Yes ◉ No If yes, which condition is present? _____

e) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ◉ Yes ○ No

f) Are the A Test criteria met per §62-340.300(2)(a), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25a and yes to either 25c, 25d, or 25e, A Test criteria are met)

g) Are the B Test criteria met per §62-340.300(2)(b), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25b and yes to either 25c, 25d, or 25e, B Test criteria are met)

h) Are there any **alterations or conditions** affecting reliable application of the A or B Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

Point ID/Location: Lat: 27.839653° Long:-80.622950°

26. C Test Wetland Criteria §62-340.300(2)(c), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Per §62-340.300(2)(c), F.A.C. is the described point Pine Flatwoods or Improved Pasture, or does it have drained soils? ○ Yes ◉ No ***If yes**, select which of the following are met, then skip to #26d*

☐ Pine Flatwoods ☐ Improved Pasture ☐ Drained Soils

***Pine Flatwoods** must have flat terrain, a monotypic or mixed canopy of long leaf pine or slash pine, and a ground cover dominated by saw palmetto with other species that are NOT obligate or facultative wet. **Improved Pasture** means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are NOT obligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing. **Drained Soils** are those in which permanent alterations, excluding mechanical pumping, preclude the formation of hydric soils.*

b) Are the soils at the described point saline sands (salt flats-tidal flats), **or** have they been **field verified** by NRCS's Keys to Soil Taxonomy (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults? ○ Yes ◉ No

c) Do the soils at the described point have a NRCS hydric soil field indicator (see #17), **and** is the point located within a map unit named or designated by the NRCS as frequently flooded, depressional, or water?

Map Unit: EauGallie Sands 0 to 2% slopes ○ Yes ○ No ○ Inconclusive ← Why? _____ *(skip to #27a)*

d) Are the C Test criteria met per §62-340.300(2)(c), F.A.C. at the described point? ○ Yes ○ No

(Note: If no to 26a and yes to either 26b or 26c, C Test criteria are met)

e) Are there any **alterations or conditions** affecting reliable application of the C Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

27. D Test Wetland Criteria §62-340.300(2)(d), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the soil hydric as verified by a NRCS hydric soil field indicator? (See #17)

◉ Yes ○ No *(skip to #27d)* ○ Inconclusive ← Why? _____ *(skip to #28)*

b) Does any NRCS hydric soil field indicator begin **at the soil surface or** are any of the following indicators present: A1, A2, A3, A4, A5, A7, A8, A9, S4, F2? ○ Yes ◉ No *(If yes, then hydrologic indicator §62-340.500(8) or (11) is met)*

c) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ○ Yes ○ No

d) Are the D Test criteria met per §62-340.300(2)(d), F.A.C. at the described point? ○ Yes ◉ No

(Note: If yes to 27a and yes to either 27b or 27c, D Test criteria may be met)

e) Are there any **alterations or conditions** affecting reliable application of the D Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

28. Altered Sites Tests §62-340.300(3), F.A.C. (Legal/Authorized or Illegal/Unauthorized)

*For purposes of Chapter 62-340, F.A.C. **altered** refers to any natural or man-induced condition(s) which **masks or eliminates reliable expression** of wetland indicators (i.e. hydrophytic vegetation, hydric soils, and hydrologic indicators). **Unaltered or normal does not require a natural condition**, only an expression of wetland indicators that is sufficient to **reliably** identify or delineate the wetland using the criteria in §62-340.300, F.A.C.*

Are alterations affecting normal wetland condition? ○ Yes ◉ No *(skip to #32)* ○ Evaluation Impossible *(skip to #32)*

29. Authorized or Legally Altered Vegetation and Soils Test Criteria §62-340.300(3)(a), F.A.C.

a) Are there **authorized** or **legal** alterations affecting reliable expression of vegetation at the described point? ○ Yes ◉ No If yes, how? _____

b) Are there **authorized** or **legal** alterations affecting reliable soil evaluation at the described point? ○ Yes ◉ No If yes, how? _____ ***(If no to both** 29a and 29b, skip to #30)*

c) If yes to 29a or 29b, which criteria tests are affected by the legal alterations?

☐ A Test ☐ B Test ☐ C Test ☐ D Test

d) Using the most reliable available information and reasonable scientific judgment, would the types of evidence and characteristics contemplated in §62-340.300, F.A.C. identify or delineate the described point as a wetland with cessation of the legal altering activities? ○ Yes ○ No If no, why? _____ ***(If no**, skip to #30)*

e) If yes to 29d, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of legal altering activities? ☐ Plants ☐ Soils ☐ Hydrologic indicators

f) If yes to 29d, which tests would be passed with cessation of legal altering activities?

☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test

Why? _____

Point ID/Location: Lat: 27.839653° Long:-80.622950°

30. Authorized or Legally Altered Hydrology Test Criteria §62-340.300(3)(b), F.A.C.

a) Has wetland hydrology of the area been **legally** drained or lowered? ○ Yes ◉ No *(**If no**, skip to #31)*
If yes, how? _____

b) Has wetland hydrology been **legally** eliminated at the described point? ○ Yes ○ No *(**If no**, skip to #31)*

c) If yes to 30b, using reasonable scientific judgment or §62-340.550, F.A.C., have dredging or filling activities authorized by **Part IV** of Chapter 373, F.S. **permanently eliminated** wetland hydrology at the described point such that the wetland definition cannot be met? ○ Yes (point is upland) ○ No *(**If yes**, skip to #31)*

*Chapter 373, F.S. Part II activities (e.g., water use permits) or other temporary hydrologic alterations (e.g., surface water pumps, drought) do **not** apply to this or any other Ch. 62-340, F.A.C. determinations.*

d) If no to 30c, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of temporary hydrologic drainage? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If no to 30c, Which tests would be passed with cessation of temporary hydrologic alterations?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

31. Unauthorized or Illegally Altered Sites Test Criteria §62-340.300(3)(c), F.A.C.

*If the altering activity is a violation of regulatory requirements, then application of §62-340.300(3)(c), F.A.C. and all provisions of Chapter 62-340, F.A.C. are utilized to identify or delineate the wetland in a forensic manner. **This identification or delineation reflects the condition immediately prior to the unauthorized alteration**.*

a) Have any **unauthorized** alterations affected the normal wetland condition at the described point? ○ Yes ◉ No
If yes, how? _____ *(**If no**, skip to #32)*

b) If yes to 31a, which criteria tests are affected by the unauthorized alterations?
☐ A Test ☐ B Test ☐ C Test ☐ D Test

c) With reasonable scientific judgment is the described point a wetland, or would it have been a wetland immediately prior to the unauthorized alteration? ○ Yes ○ No If no, why? _____ *(**If no**, skip to #32)*

d) If yes to 31c, what §62-340.300, F.A.C. evidence is present now and/or was present immediately prior to the unauthorized alteration? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If yes to 31c, which tests would be passed immediately prior to the unauthorized alteration?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

32. Wetland and Other Surface Water Summary §62-340.600(2)(a-e), F.A.C.:

Given **normal** expression, **cessation** of **authorized** alterations, or **immediately prior** to any **unauthorized** alterations:

a) With **reasonable scientific judgment** is the described point a wetland as defined in §62-340.200(19), F.A.C. and located by Ch. 62-340, F.A.C.? ○ Yes ◉ No If yes, which criteria identified or delineated the wetland?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
If summary answers differ from answers in 25f, 25g, 26d, or 27d, why? _____

b) Is the described point located at or within the Mean High Water Line of a tidal water body?
○ Yes ◉ No ○ MHWL Unknown

c) Is the described point located at or within the Ordinary High Water Line of a non-tidal natural water body or natural watercourse? ○ Yes ◉ No

d) Is the described point located at or within the top of the bank of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground? ◉ Yes ○ No

e) Is the described point located at or within the Seasonal High Water Line of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes flatter than 1 foot vertical to 4 feet horizontal or an artificial water body created by diking or impoundment above the ground? ○ Yes ◉ No

33. Connection or Isolation of Wetland per Applicant's Handbook Vol.1 Section 2.0

If the described point is a wetland, does it have a connection via wetlands or other surface waters, or is it wholly surrounded by uplands and therefore isolated? ○ Connected ○ Isolated ◉ N/A (Point is not wetland)

Point ID/Location: Lat: 27.839653° Long:-80.622950°

34. Photographs and/or videos: Soil profile with Data Form, Soil profile close-up, Cross section(s) at 6" depth for sandy textures and/or critical depths for fine textures, Hydric soil indicators, Water table or inundation depth, Four cardinal directions of plant strata present, Hydrologic indicators (with scale as necessary), Critical plant ID (optional)

#	Memory Card # / Metadata	Description, compass direction (if applicable)	Taken By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

Notes: See data point photo packet.

Helpful Definitions for Applying Ch 62-340, F.A.C.

[1]**RSJ** stands for Reasonable Scientific Judgment where used throughout this Data Form (See *The Florida Wetlands Delineation Manual* pg. 2 & 12*)*

[2]**HSTS** stands for Hydric Soils Technical Standard (See NRCS Hydric Soils Technical Note 11)

Definition from §62.340.200(19) Florida Administrative Code
"**Wetlands**," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Definition from §373.019(19) Florida Statutes
"**Surface water**" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

Definition from §373.019(14) Florida Statutes
"**Other watercourse**" means any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted.

Definition from §62.340.200(15) Florida Administrative Code
"**Seasonal High Water**" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

From The Florida Wetlands Delineation Manual pg. 37
Ordinary high water is that point on the slope or bank where the surface water from the water body ceases to exert a dominant influence on the character of the surrounding vegetation and soils. The OHWL frequently encompasses areas dominated by non-listed vegetation and non-hydric soils. When the OHWL is not at a wetland edge, the general view of the area may present an "upland" appearance.

Definition from §403.803(14) Florida Statutes
"Swale" means a manmade trench which:
(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;
(b) Contains contiguous areas of standing or flowing water only following a rainfall event;
(c) Is planted with or has stablized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and
(d) Is designed to take into acount the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW2 Wet
1 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

North

East

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW2 Wet
2 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

South

West

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW2 Wet
3 of 3
Source: ERC

Phone: (321) 501-5135
Eric.Muldowney@E-RegConsulting.com

§ denotes the Rule, subsection, paragraph, or subparagraph referenced from Ch. 62-340, F.A.C.

FDEP SLERC August 2019

Chapter 62-340, F.A.C. Data Form

1. Date: Nov 17, 2025 2. Staff Present: 3. Form recorder(s):

4. County: Brevard (5) 5. Site Name: Sunshine Mine Phase III Tracking #:

6. Point ID: SW3 GPS Coordinates: Lat: 27.837695° Long:-80.621843°

7. Distances and bearings from fixed objects (if no GPS):

8. Current condition of described point: ◉ Authorized or legal condition ○ Unauthorized or illegal condition

9. Work type: ○ Identification ○ Delineation

Point status: ○ Wetland ◉ Non-Wetland Surface Water ○ Upland

10. Vegetative Stratum §62-340.400: Using §62-340.400, F.A.C. with reasonable scientific judgment, select the appropriate vegetative stratum. (Do not include FAC species when determining 10% minimum areal extent.)

○ Canopy (Min. 10% areal extent) ○ Subcanopy (Min. 10% areal extent) ◉ Groundcover (No min. areal extent)

○ Vegetation Absent *(skip to #14)* ○ Evaluation Impossible *(skip to #14)* **Why?**

11. Plant List §62-340.200(2),(6),(16), §62-340.400, §62-340.450, F.A.C.:

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

Areal extent estimator: 5'R

Select and identify plants in an area just large enough to represent and classify the plant community at the described point. Do not extend into different communities or hydrologic conditions.

1. Record the scientific name (binomial) and status of each plant species necessary to identify/delineate and classify the plant community in the selected area.
2. Record the percent areal extent in the canopy, subcanopy, and groundcover columns for each species.
3. For each species present in the **stratum selected in #10**, transfer the numbers from only that stratum's column into the appropriate status columns.

#	Binomial of Observed Species	Status	Canopy	Subcanopy	Groundcover	Upland	Facultative	Fac. Wet	Obligate
1.	Paspalum notatum	U			80	80			
2.	Euthamia caroliniana	F			10		10		
3.	Spermacoce verticillata	U			5	5			
4.	Paspalum urvillei	F			5		5		
5.	Rubus cuneifolius	F			5		5		
6.	Cladium jamaicense	O			1				1
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
Percent areal extent totals for the stratum selected in question 10						85	20	0	1

12. In the stratum selected in #10: What is the % areal extent of Obligate plants? 1

What is the % areal extent of Upland plants? 85

Is the areal extent of Obligate plants greater than that of Upland plants? ○ Yes ◉ No

13. In the stratum selected in #10: What is the total % areal extent of Obligate & Facultative Wet plants combined? 1

What is the total % areal extent of Obligate, Facultative Wet, & Upland plants combined? 86

What is the percentage of OBL + FACW in relation to all plants, excluding FAC? ($\frac{\text{OBL+FACW}}{\text{OBL+FACW+UPL}}$) 1.2%

Point ID/Location: Lat: 27.837695° Long:-80.621843° | Soil describer:

14. LRR/MLRA U | **Textures:** Peat, Mucky Peat, Muck, Mucky Mineral (S or F), Sand, Fine, Marl

15. Is a soil profile evaluation possible? ◉ Yes ○ No If no, why? *(**If No**, skip to #18)*

16. Soil Description: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Soil surface, or 0 inch depth for purposes of Chapter 62-340, F.A.C. is the muck or mineral surface (whether natural or fill)

Horizon	beginning to ending **Depth** (inches)	**Matrix Texture**	moist condition **Matrix Hue Value/ Chroma**	for sandy matrix horizons w/ value ≤ 3: **% Organic Coating**	- **Describe soil features: DA** (areas darker than matrix), **LA** (areas lighter than matrix), **RC** (redox concentrations): Record in moist condition **hue value/chroma; % volume in horizon; boundaries** (sharp/clear/diffuse); **shape** (rounded/linear/angular). - **OB** (organic bodies): Record **texture** (muck or mucky mineral), **% volume in horizon.** - **H_2S** (hydrogen sulfide odor): Indicate shallowest depth where detected - **Note** if horizon is **Physically Mixed (PM), Nonsoil** (any material not listed in "Textures" above), or **Fill** and describe.
1	0-6	Sand	10YR6/1		DA 10YR3/1, 25%, sandy, distinct boundaries
2	6-15		10YR6/1		LA 10YR7/1, 10%, diffuse boundaries
3					
4					
5					
6					

17. Hydric Soil Field Indicators: If present, check all Hydric Soil Field Indicators satisfied and specify their beginning and ending depths

☑ All Texture	☑ Sandy Texture	☑ Fine Texture
__(A1) Histosol*	__(S4) Sandy Gleyed Matrix*	__(F2) Loamy Gleyed Matrix*
__(A2) Histic Epipedon*	__(S5) Sandy Redox	__(F3) Depleted Matrix
__(A3) Black Histic*	__(S6) Stripped Matrix	__(F6) Redox Dark Surface
__(A4) Hydrogen Sulfide*	__(S7) Dark Surface	__(F7) Depleted Dark Surface
__(A5) Stratified Layers*	__(S8) Polyvalue Below Surface	__(F8) Redox Depression
__(A6) Organic Bodies	__(S9) Thin Dark Surface	__(F10) Marl
__(A7) 5cm Mucky Mineral*	__(S12) Barrier Islands 1cm Muck	__(F12) Iron-Manganese Masses
__(A8) Muck Presence*		__(F13) Umbric Surface
__(A9) 1cm Muck*		__(F22) Very Shallow Dark Surface
__(A11) Depleted Below Dark Surface		
__(A12) Thick Dark Surface		

Indicator Present	Begin Depth	End Depth
1.		
2.		
3.		
4.		
5.		
6.		

** = Stand-alone D Test - both hydric soil and hydrologic indicator*

To combine layers/indicators to meet thickness requirements, see NRCS Hydric Soils Technical Note 4.

18. Excluding organic horizons, is any nonsoil horizon present at or within the uppermost 12 inches of the ground surface?
○ Yes *(e.g. bedrock, rock outcrop, limestone fill, gravel, etc)* ◉ No ○ Soil profile or site inaccessible

19. Is one or more hydric soil field indicators present? ○ Yes ○ No ○ Inconclusive *(e.g., evaluation to 12+ inches impeded by disturbance, water, nonsoil, no site access, etc.)*
If no or inconclusive, is the soil hydric as determined by other NRCS methods?
○ Yes ← Which method(s)? _____ ○ No ○ Inconclusive ← Why? _____
(e.g., hydric soil definition, HSTS[2], indicator present at drier elevation, indicator would be present but for disturbance)

20. Is the depth of the soil profile 20 inches or greater from the soil surface? ○ Yes ◉ No
If no, depth of soil profile is: 15 inches Why? Depth of spade, loose sandy soils
(e.g., root refusal, nonsoil, water table, loose sand, heavy texture, compaction, weather conditions, inspection interrupted)

21. **Observed** height or depth of standing water from **soil** surface: _____ inches ○ Above ○ Below ◉ Not Observed

Point ID/Location: Lat: 27.837695° Long:-80.621843°	Indicator evaluator:

22. Hydrologic Indicators: ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Hydrologic Indicators per §62-340.500, F.A.C. (and as applied to §62-340.600, F.A.C.)	Present at or near point	Predicted during normal high water or wet season◆	Within 100 ft waterward of point (not for upland points)	1. Describe the type of all checked indicators. 2. Approximate the distance and compass direction of indicators within 100 ft of the point. 3. For water level indicators (potential indicators denoted by *) **note the height from ground surface** at the point as well as waterward (with distance from point). ◆Only for indicators not present due to dry season/drought
(1) Algal mats*				
(2) Aquatic mosses or liverworts*				
(3) Aquatic plants*				
(4) Aufwuchs*				
(5) Drift lines and rafted debris*				
(6) Elevated lichen lines*				
(7) Evidence of aquatic fauna				
(8) Hydrologic data*				
(9) Morphological plant adaptations*				
(10) Secondary flow channels				
(11) Sediment deposition*				
(12) Tussocks or hummocks*				
(13) Water marks*				

Highest water level indicator height at point: _____ inches ○ Above Ground Surface ◉ No Water Level Indicators ○ Above Soil Surface ○ N/A (described point is Upland)

23. Is one or more hydrologic indicator(s) listed in §62-340.500, F.A.C. present or predicted with normal high water or wet season conditions at the described point? ○ Yes ○ No ○ Evaluation Impossible ← Why? _____

24. Delineation by Wetland Definition §62-340.300(1), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Has a wetland boundary been delineated at the described point? ○ Yes ◉ No *(**If No**, skip to #25)*

b) If yes to 24a, can the boundary be easily delineated using the definition of wetlands? ○ Yes ○ No

25. A & B Test Wetland Criteria §62-340.300(2)(a),(b), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the areal extent of Obligate plants in the stratum selected in #10 greater than the areal extent of all Upland plants in that stratum? (See #12) ○ Yes ◉ No ○ Vegetation Absent *(skip to #25f)* ○ Evaluation Impossible *(skip to #26a)*

b) Is the areal extent of Obligate and/or Facultative Wet plants in the stratum selected in #10 equal to or greater than 80% of all the plants in that stratum, excluding Facultative plants? (See #13) ○ Yes ◉ No

c) Is the soil hydric as identified using standard NRCS definitions and practices? (see #19) ○ Yes ○ No ○ Indeterminable with current conditions ← Why? _____

d) Is the substrate composed of riverwash, nonsoil (see #18), rock outcrop-soil complex, or is the substrate located within an artificially created wetland area? ○ Yes ◉ No If yes, which condition is present? _____

e) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ◉ Yes ○ No

f) Are the A Test criteria met per §62-340.300(2)(a), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25a and yes to either 25c, 25d, or 25e, A Test criteria are met)

g) Are the B Test criteria met per §62-340.300(2)(b), F.A.C. at the described point? ○ Yes ◉ No
(Note: If yes to 25b and yes to either 25c, 25d, or 25e, B Test criteria are met)

h) Are there any **alterations or conditions** affecting reliable application of the A or B Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

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26. C Test Wetland Criteria §62-340.300(2)(c), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Per §62-340.300(2)(c), F.A.C. is the described point Pine Flatwoods or Improved Pasture, or does it have drained soils? ○ Yes ◉ No ***If yes**, select which of the following are met, then skip to #26d*

☐ Pine Flatwoods ☐ Improved Pasture ☐ Drained Soils

***Pine Flatwoods** must have flat terrain, a monotypic or mixed canopy of long leaf pine or slash pine, and a ground cover dominated by saw palmetto with other species that are NOT obligate or facultative wet. **Improved Pasture** means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are NOT obligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing. **Drained Soils** are those in which permanent alterations, excluding mechanical pumping, preclude the formation of hydric soils.*

b) Are the soils at the described point saline sands (salt flats-tidal flats), **or** have they been **field verified** by NRCS's Keys to Soil Taxonomy (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults? ○ Yes ◉ No

c) Do the soils at the described point have a NRCS hydric soil field indicator (see #17), **and** is the point located within a map unit named or designated by the NRCS as frequently flooded, depressional, or water?

Map Unit: EauGallie Sands 0 to 2% slopes ○ Yes ○ No ○ Inconclusive ← Why? _____ *(skip to #27a)*

d) Are the C Test criteria met per §62-340.300(2)(c), F.A.C. at the described point? ○ Yes ○ No

(Note: If no to 26a and yes to either 26b or 26c, C Test criteria are met)

e) Are there any **alterations or conditions** affecting reliable application of the C Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

27. D Test Wetland Criteria §62-340.300(2)(d), F.A.C.

As is under current conditions, without considering RSJ[1] or the legality of any alterations:

a) Is the soil hydric as verified by a NRCS hydric soil field indicator? (See #17)

○ Yes ○ No *(skip to #27d)* ○ Inconclusive ← Why? _____ *(skip to #28)*

b) Does any NRCS hydric soil field indicator begin **at the soil surface or** are any of the following indicators present: A1, A2, A3, A4, A5, A7, A8, A9, S4, F2? ○ Yes ◉ No *(If yes, then hydrologic indicator §62-340.500(8) or (11) is met)*

c) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ○ Yes ○ No

d) Are the D Test criteria met per §62-340.300(2)(d), F.A.C. at the described point? ○ Yes ○ No

(Note: If yes to 27a and yes to either 27b or 27c, D Test criteria may be met)

e) Are there any **alterations or conditions** affecting reliable application of the D Test such that the Altered Sites Test is more appropriate? ○ Yes ◉ No

28. Altered Sites Tests §62-340.300(3), F.A.C. (Legal/Authorized or Illegal/Unauthorized)

*For purposes of Chapter 62-340, F.A.C. **altered** refers to any natural or man-induced condition(s) which **masks or eliminates reliable expression** of wetland indicators (i.e. hydrophytic vegetation, hydric soils, and hydrologic indicators). **Unaltered or normal does not require a natural condition**, only an expression of wetland indicators that is sufficient to **reliably** identify or delineate the wetland using the criteria in §62-340.300, F.A.C.*

Are alterations affecting normal wetland condition? ○ Yes ◉ No *(skip to #32)* ○ Evaluation Impossible *(skip to #32)*

29. Authorized or Legally Altered Vegetation and Soils Test Criteria §62-340.300(3)(a), F.A.C.

a) Are there **authorized** or **legal** alterations affecting reliable expression of vegetation at the described point?

○ Yes ◉ No If yes, how? _____

b) Are there **authorized** or **legal** alterations affecting reliable soil evaluation at the described point? ○ Yes ◉ No

If yes, how? _____ ***(If no to both** 29a and 29b, skip to #30)*

c) If yes to 29a or 29b, which criteria tests are affected by the legal alterations?

☐ A Test ☐ B Test ☐ C Test ☐ D Test

d) Using the most reliable available information and reasonable scientific judgment, would the types of evidence and characteristics contemplated in §62-340.300, F.A.C. identify or delineate the described point as a wetland with cessation of the legal altering activities? ○ Yes ○ No If no, why? _____ ***(If no**, skip to #30)*

e) If yes to 29d, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of legal altering activities? ☐ Plants ☐ Soils ☐ Hydrologic indicators

f) If yes to 29d, which tests would be passed with cessation of legal altering activities?

☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test

Why? _____

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30. Authorized or Legally Altered Hydrology Test Criteria §62-340.300(3)(b), F.A.C.

a) Has wetland hydrology of the area been **legally** drained or lowered? ○ Yes ◉ No *(**If no**, skip to #31)*
If yes, how? _____

b) Has wetland hydrology been **legally** eliminated at the described point? ○ Yes ○ No *(**If no**, skip to #31)*

c) If yes to 30b, using reasonable scientific judgment or §62-340.550, F.A.C., have dredging or filling activities authorized by **Part IV** of Chapter 373, F.S. **permanently eliminated** wetland hydrology at the described point such that the wetland definition cannot be met? ○ Yes (point is upland) ○ No *(**If yes**, skip to #31)*

*Chapter 373, F.S. Part II activities (e.g., water use permits) or other temporary hydrologic alterations (e.g., surface water pumps, drought) do **not** apply to this or any other Ch. 62-340, F.A.C. determinations.*

d) If no to 30c, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of temporary hydrologic drainage? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If no to 30c, Which tests would be passed with cessation of temporary hydrologic alterations?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

31. Unauthorized or Illegally Altered Sites Test Criteria §62-340.300(3)(c), F.A.C.

*If the altering activity is a violation of regulatory requirements, then application of §62-340.300(3)(c), F.A.C. and all provisions of Chapter 62-340, F.A.C. are utilized to identify or delineate the wetland in a forensic manner. **This identification or delineation reflects the condition immediately prior to the unauthorized alteration**.*

a) Have any **unauthorized** alterations affected the normal wetland condition at the described point? ○ Yes ◉ No
If yes, how? _____ *(**If no**, skip to #32)*

b) If yes to 31a, which criteria tests are affected by the unauthorized alterations?
☐ A Test ☐ B Test ☐ C Test ☐ D Test

c) With reasonable scientific judgment is the described point a wetland, or would it have been a wetland immediately prior to the unauthorized alteration? ○ Yes ○ No If no, why? _____ *(**If no**, skip to #32)*

d) If yes to 31c, what §62-340.300, F.A.C. evidence is present now and/or was present immediately prior to the unauthorized alteration? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If yes to 31c, which tests would be passed immediately prior to the unauthorized alteration?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
Why? _____

32. Wetland and Other Surface Water Summary §62-340.600(2)(a-e), F.A.C.:

Given **normal** expression, **cessation** of **authorized** alterations, or **immediately prior** to any **unauthorized** alterations:

a) With **reasonable scientific judgment** is the described point a wetland as defined in §62-340.200(19), F.A.C. and located by Ch. 62-340, F.A.C.? ○ Yes ◉ No If yes, which criteria identified or delineated the wetland?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
If summary answers differ from answers in 25f, 25g, 26d, or 27d, why? _____

b) Is the described point located at or within the Mean High Water Line of a tidal water body?
○ Yes ◉ No ○ MHWL Unknown

c) Is the described point located at or within the Ordinary High Water Line of a non-tidal natural water body or natural watercourse? ○ Yes ◉ No

d) Is the described point located at or within the top of the bank of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground? ◉ Yes ○ No

e) Is the described point located at or within the Seasonal High Water Line of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes flatter than 1 foot vertical to 4 feet horizontal or an artificial water body created by diking or impoundment above the ground? ○ Yes ◉ No

33. Connection or Isolation of Wetland per Applicant's Handbook Vol.1 Section 2.0

If the described point is a wetland, does it have a connection via wetlands or other surface waters, or is it wholly surrounded by uplands and therefore isolated? ○ Connected ○ Isolated ◉ N/A (Point is not wetland)

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34. Photographs and/or videos: Soil profile with Data Form, Soil profile close-up, Cross section(s) at 6" depth for sandy textures and/or critical depths for fine textures, Hydric soil indicators, Water table or inundation depth, Four cardinal directions of plant strata present, Hydrologic indicators (with scale as necessary), Critical plant ID (optional)

#	Memory Card # / Metadata	Description, compass direction (if applicable)	Taken By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

Notes: See data point photo packet.

Helpful Definitions for Applying Ch 62-340, F.A.C.

[1]**RSJ** stands for Reasonable Scientific Judgment where used throughout this Data Form (See *The Florida Wetlands Delineation Manual* pg. 2 & 12*)*

[2]**HSTS** stands for Hydric Soils Technical Standard (See NRCS Hydric Soils Technical Note 11)

Definition from §62.340.200(19) Florida Administrative Code
"**Wetlands**," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Definition from §373.019(19) Florida Statutes
"**Surface water**" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

Definition from §373.019(14) Florida Statutes
"**Other watercourse**" means any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted.

Definition from §62.340.200(15) Florida Administrative Code
"**Seasonal High Water**" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

From The Florida Wetlands Delineation Manual pg. 37
Ordinary high water is that point on the slope or bank where the surface water from the water body ceases to exert a dominant influence on the character of the surrounding vegetation and soils. The OHWL frequently encompasses areas dominated by non-listed vegetation and non-hydric soils. When the OHWL is not at a wetland edge, the general view of the area may present an "upland" appearance.

Definition from §403.803(14) Florida Statutes
"Swale" means a manmade trench which:
(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;
(b) Contains contiguous areas of standing or flowing water only following a rainfall event;
(c) Is planted with or has stablized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and
(d) Is designed to take into acount the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW3 Wet
1 of 3
Source: ERC

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North

East

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW3 Wet
2 of 3
Source: ERC

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South

West

E-Reg Consulting, LLC
Environmental Permitting

Sunshine Mine Phase III
62-340 F.A.C. Data Point
SW3 Wet
3 of 3
Source: ERC

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