



TECHNICAL MEMORANDUM:

To: Stewart Tate

From: Stephen Bailey, PWS and Emily Davis

Date: April 29, 2026

RE: Natural Resources Study Results – Glynn County Parcel 02-01744

Longleaf Consulting (Longleaf) completed field delineations of aquatic resources on a portion of Glynn County Parcel 02-01744 in April, 2026. The Project Area totals approximately 230 acres and is located along Buckswamp Road in west Glynn County, Georgia. During field studies, Longleaf scientists delineated onsite aquatic resources, evaluated state and federal jurisdiction of each delineated aquatic resource, and surveyed the Project Area for protected species habitats. Please see below for discussion of each onsite resource, jurisdictional and permitting considerations, and species habitat survey results. Refer to Attachment 1 for an Aquatic Resources Delineation Map. Refer to Attachment 2 for Resource Photographs.

Wetlands and Waters

Wetlands and waters were field delineated using US Army Corps of Engineers (USACE) and state procedures. Sub-meter GPS points were taken along wetland boundaries and the top of banks or line of wretched vegetation of relatively permanent waters (RPW) and non-jurisdictional ditches. Wetlands and waters were analyzed for USACE jurisdiction and were deemed jurisdictional (JD), or non-jurisdictional (NJD) based on the presence or absence of a continuous surface hydrological connection (CSC) to jurisdictional Waters of the US (WOTUS). Wetlands and waters with tidal indicators were further evaluated using Georgia Department of Natural Resources – Coastal Resources Division (GADNR-CRD) field methods. RPWs with a line of wretched vegetation were evaluated for buffer requirements under the Georgia stream buffer program. Descriptions and state and federal jurisdictional rationales for each onsite aquatic resource are provided below. Quantities of each resource were measured inside the Project Area boundaries.

RPW 1 - JD

RPW 1, Laurel Grove Creek, is a perennial, tidal stream that is channelized throughout the Project Area. RPW 1 runs along the northern border of the Project Area for approximately 4,150 linear feet and 1.24 acres. The stream is approximately 10-20 feet wide at the top of channel (TOC) and 10-15 feet wide at the ordinary high-water mark (OHWM)/line of wreted vegetation with bank heights of four to 10 feet in areas and a mud and silt substrate. Tidal flow in both directions was observed in the channel during field studies. RPW 1 has a CSC to downstream waters and is a jurisdictional tidal water regulated by USACE and GADNR-CRD. It is tidal and has a line of wreted vegetation and is subject to the state 25-foot buffer.

Wetland 2 - JD

Wetland 2 is approximately 0.62-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C) and consists of meander bends of the former stream profile prior to channelization. Dominant vegetation includes bald cypress (*Taxodium distichum*), red maple (*Acer rubrum*), and switch cane (*Arundinaria gigantea*). Wetland 2 is located adjacent and abutting RPW 1. Wetland 2 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 3 - JD

Wetland 3 is approximately 0.03-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a meander bend of the former stream profile prior to channelization. Dominant vegetation includes bald cypress and cabbage palm (*Sabal palmetto*). Wetland 3 is located adjacent and abutting RPW 1. Wetland 3 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 4 - JD

Wetland 4 is approximately 0.82-acre and classified as a seasonally saturated forested/emergent freshwater wetland (PFO/PEM1B). Dominant vegetation includes red maple and laurel oak (*Quercus laurifolia*) in the forested areas and soft rush (*Juncus effusus*) in the emergent area. Wetland 4 continues to the south outside of the Project Area where it is named Big Branch and is connected to Buck Swamp, which drains to Laurel Grove Creek (RPW 1). Wetland 4 has a CSC to offsite WOTUS and is jurisdictional by USACE.

Wetland 5 - NJD

Wetland 5 is approximately 0.96-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes swamp tupelo (*Nyssa biflora*), red maple, and cinnamon fern (*Osmundastrum cinnamomeum*). Wetland 5 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 5 is likely non-jurisdictional by USACE.

OW 6 - JD

OW 6 is an approximately 0.21-acre relict channel area of RPW 1 that receives tidal inundation. OW 6 has a CSC to RPW 1 and is a jurisdictional tidal water regulated by USACE and GADNR-CRD. It has a line of wretched vegetation and is subject to the state 25-foot buffer.

Wetland 7 - JD

Wetland 7 is approximately 0.009-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a portion of relict stream channel. Dominant vegetation includes bald cypress. Wetland 7 is located adjacent and abutting OW 6. Wetland 7 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 8 - JD

Wetland 8 is approximately 0.14-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a portion of relict stream channel. Dominant vegetation includes bald cypress. Wetland 8 is located adjacent and abutting RPW 1. Wetland 8 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 9 - NJD

Wetland 9 is approximately 0.05-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a portion of relict stream channel. Dominant vegetation includes bald cypress. Wetland 9 is separated from RPW 1 by an upland area of historic fill and does not have a CSC to RPW 1.

OW 10 - JD

OW 10 is an approximately 0.06-acre relict channel area of RPW 1 that was inundated during field studies. OW 10 has a CSC to RPW 1 and is a jurisdictional water regulated by USACE. It is not subject to the state 25-foot buffer due to lack of a line of wretched vegetation.

Wetland 11 - JD

Wetland 11 is approximately 0.009-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a portion of relict stream channel. Dominant vegetation includes bald cypress. Wetland 11 is located adjacent and abutting RPW 1. Wetland 11 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 12 - JD

Wetland 12 is approximately 0.14-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of several relict meander bends of the former stream profile prior to channelization. Dominant vegetation includes bald cypress and cabbage palm. Wetland 12 is

located adjacent and abutting RPW 1. Flow into RPW 1 was observed during field studies. Wetland 12 has a CSC to RPW 1 and is jurisdictional by USACE.

Wetland 13 - NJD

Wetland 13 is approximately 2.39 acres and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, soft rush, briers, and Carolina redroot (*Lachnanthes carolina*). Wetland 13 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 13 is likely non-jurisdictional by USACE.

Wetland 14 - NJD

Wetland 14 is approximately 0.32-acre and is classified as a seasonally saturated or flooded freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, and sedges. Wetland 14 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 14 is likely non-jurisdictional by USACE.

Wetland 15 - NJD

Wetland 15 is approximately 1.00-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, and sedges. Wetland 15 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 15 is likely non-jurisdictional by USACE.

Wetland 16 - NJD

Wetland 16 is approximately 1.91 acres and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, and sedges. Wetland 16 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 16 is likely non-jurisdictional by USACE.

Wetland 17 - JD

Wetland 11 is approximately 0.019-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO2B/C) and consists of a portion of relict stream channel. Dominant vegetation includes bald cypress. Wetland 17 is located adjacent and abutting RPW 1. Wetland 17 has a CSC to RPW 1 and is jurisdictional by USACE.

Ditch 18 - NJD

Ditch 18 is approximately 2,125 feet long and 0.33-acre within the Project Area and is a historically excavated drainage ditch that is six to eight feet wide and two to four feet deep. Standing or flowing water was not observed during field studies and soils samples were dry. Ditch 18 does not have an OHWM or exhibit other indicators of relatively permanent or perennial flow. It does not have a CSC or serve as a CSC

to downstream WOTUS and is likely non-jurisdictional by USACE. Ditch 18 does not have a line of wretched vegetation and is not subject to the 25-foot state buffer.

Ditch 19 – NJD

Ditch 19 is approximately 1,440 feet long and 0.44-acre within the Project Area and is a historically excavated drainage ditch that is four to eight feet wide and one to three feet deep. Standing or flowing water was not observed during field studies and soils samples were dry during field studies. Ditch 19 does not have an OHWM or exhibit other indicators of relatively permanent or perennial flow. It does not have a CSC or serve as a CSC to downstream WOTUS and is likely non-jurisdictional by USACE. Ditch 19 lacks a line of wretched vegetation and is not subject to the 25-foot state buffer.

Wetland 20 - NJD

Wetland 20 is approximately 0.90-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple and cinnamon fern. Wetland 20 is adjacent to and drains to Ditch 19; however, no flow or surface hydrology in Ditch 19 or the wetland were observed. Wetland 20 does not have a CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 20 is likely non-jurisdictional by USACE.

Ditch 21 – NJD

Ditch 21 is approximately 440 feet long and 0.04-acre within the Project Area and is a historically excavated drainage ditch that is three to seven feet wide and one to three feet deep. Standing or flowing water was not observed during field studies and soils samples were dry during field studies. Ditch 21 does not have an OHWM or exhibit other indicators of relatively permanent or perennial flow. It does not have a CSC or serve as a CSC to downstream WOTUS and is likely non-jurisdictional by USACE. Ditch 21 lacks a line of wretched vegetation and is not subject to the 25-foot state buffer

Wetland 22 - NJD

Wetland 22 is approximately 0.09-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple and cinnamon fern. Wetland 22 is adjacent to and drains to Ditch 19; however, no flow or surface hydrology in Ditch 19 or the wetland were observed. Wetland 22 does not have a CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 22 is likely non-jurisdictional by USACE.

Wetland 23 – NJD

Wetland 23 is approximately 0.69-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 23 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 23 is likely non-jurisdictional by USACE.

Wetland 24 – NJD

Wetland 24 is approximately 0.45-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 24 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 24 is likely non-jurisdictional by USACE.

Wetland 25 – NJD

Wetland 25 is approximately 0.74-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 25 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 25 is likely non-jurisdictional by USACE.

Wetland 26 – NJD

Wetland 26 is approximately 1.74 acres and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 26 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 26 is likely non-jurisdictional by USACE.

Wetland 27 – NJD

Wetland 27 is approximately 2.38 acres classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes fetterbush (*Lyonia lucida*), bald cypress, sweetgum (*Liquidambar styraciflua*), and red maple. Wetland 27 is adjacent to and drains to Ditch 18; however, no flow or surface hydrology in Ditch 18 or the wetland were observed. Wetland 27 does not have a CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 27 is likely non-jurisdictional by USACE.

Wetland 28 – NJD

Wetland 28 is approximately 0.57-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, laurel oak, and fetterbush. Wetland 28 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 28 is likely non-jurisdictional by USACE.

Wetland 29 - NJD

Wetland 29 is approximately 1.85 acres and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, and cinnamon fern. Wetland 29 is adjacent to and drains to Ditch 21; however, no flow or surface hydrology in Ditch 21 or the wetland were observed. Wetland 29 does not have a CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 29 is likely non-jurisdictional by USACE.

Wetland 30 – NJD

Wetland 30 is approximately 0.83-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 30 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 30 is likely non-jurisdictional by USACE.

Wetland 31 – NJD

Wetland 31 is approximately 0.008-acre and is classified as a seasonally saturated or flooded forested freshwater wetland (PFO1B/C). Dominant vegetation includes red maple, Carolina redroot, cinnamon fern, and sedges. Wetland 31 occurs within an isolated depression within uplands, with no outlet or CSC to tidal resources or freshwater WOTUS. Due to its lack of a CSC, Wetland 31 is likely non-jurisdictional by USACE.

Permitting Considerations

Fill impacts to jurisdictional waters and wetlands would require USACE permitting. Impacts to RPW 1 or OW 6 would require USACE and GADNR-CRD permitting. Non-exempt encroachment of the state regulated 25-foot buffer of RPW 1 or OW 6 would require a buffer variance. Permitting processes are detailed below should permitting be unavoidable.

USACE

Should the project design require impacts to jurisdictional resources, the project may qualify for coverage under a USACE NWP and/or a Section 10 (tidal) permit. Fill impacts greater than 0.50- acre would require a Standard (Individual) Permit (IP). Impacts of up to 0.10 acre are allowable without mitigation requirements. Upon receipt of a complete permit application, USACE will complete an interagency review which includes review of cultural resources and protected species effects. The permit package will need to include the project description, engineering drawings and exhibits, protected species and cultural resources study results, proposed jurisdictional impacts, existing conditions, applicant contact information, a mitigation plan, if required, and a delineation of affected wetlands along with wetland and upland data forms. The USACE will request a review of the PCN by other resource agencies such as the USFWS, Georgia DNR, U.S. Environmental Protection Agency, and the State Historic Preservation Office. This process can take up to 100 days or more from USACE receipt and acknowledgement of a complete application for the NWP and up to six months or more for an IP.

GADNR-CRD

RPW 1 (Laurel Grove Creek) is a tidal stream regulated by GADNR-CRD. Impacts to the stream and/or tidal wetlands would require permitting under the Coastal Marshlands Protection Act and/or the Revocable License Authority. This process involves a public comment period and a bimonthly public committee meeting after receipt of a complete application and design drawings and internal CRD staff review. The permitting process generally takes three to six months depending on project complexity and public participation.

Georgia EPD

Should non-exempt impacts to 25-foot state buffers be required, submittal of a buffer variance request to the Georgia EPD or the local issuing authority will likely be required. The variance process usually takes three to four months and includes 30-day online publication and public comment period. The buffer variance application package will need to include the following:

- a) Site map of locations of all state waters, wetlands, floodplain boundaries and other natural features, as determined by field survey.
- b) Description of the shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.
- c) Dated and numbered detailed site plan that shows the locations of all structures, impervious surfaces, and the boundaries of the area of soil disturbance, both inside and outside of the buffer. The exact area of the buffer to be impacted shall be accurately and clearly indicated.
- d) Description of the project, with details of the buffer disturbance, including estimated length of time for the disturbance and justification for why the disturbance is necessary.
- e) Calculation of the total area and length of the buffer disturbance.
- f) Letter from the issuing authority (if other than the Division and as applicable) stating that the issuing authority has visited the site and determined the presence of state waters that require a buffer and that a stream buffer variance is required as per the local erosion and sedimentation control ordinance.
- g) Erosion, sedimentation and pollution control plan.
- h) Re-vegetation plan as described in the most recent publication of the Division's guidance book, "Streambank and Shoreline Stabilization" and/or a plan for permanent vegetation as per the "Manual for Erosion and Sedimentation Control in Georgia."
- i) For projects within the buffer of or upstream and within one linear mile of impaired stream segments on Georgia's "305(b)/303(d) List Documents (Final)," documentation that the project will have no adverse impacts relative to the pollutants of concern and if applicable, documentation that the project will be in compliance with the TMDL Implementation Plan(s).

Protected Species Habitats

Prior to field studies, lists of state and federal protected species with known occurrences in the vicinity of the Project Area were compiled using the US Fish and Wildlife Service Information for Planning and Consultation database and the Georgia DNR Biodiversity Portal. The site was surveyed for the potential presence of protected species and their habitats. No populations of protected species were observed.

Multiple transects were made through the cleared and semi-open areas of the site. No gopher tortoise (*Gopherus polyphemus*) burrows, preferred indigo snake den sites, were observed. Soils throughout the Project Area are generally poorly drained and do not qualify as suitable for gopher tortoise burrows. No observations were made of indigo snakes. Forested wetlands may provide foraging habitat for indigo

snakes. Habitat for tri-colored bat exists within forested areas of the Project Area. Habitat for monarch butterfly includes open and edge areas that could support milkweed populations. No habitats for southern hognose snake or eastern black rail were observed.

Should the tri-colored bat be listed by USFWS as endangered, special studies, conditions, and coordination with USFWS could be required to develop forested areas. Monarch butterfly is currently a federal candidate species. Voluntary conservation measures are encouraged by USFWS for candidate species, but they do not have statutory protection under the Endangered Species Act. Refer to Table 1 below for the list of species and their habitats.

Table 1: Protected Species

Scientific Name	Common Name	Federal Listing Status	Habitat	Habitat Observations
<i>Danaus plexippus</i>	monarch butterfly	C	open habitats, emergent/scrub wetlands, relies heavily on a variety of native milkweed species and nectar-producing plants	yes, emergent/scrub wetland areas of the site qualify as habitat
<i>Drymarchon couperi</i>	eastern indigo snake	T	sandhill regions dominated by mature longleaf pines, turkey oaks, and wiregrass; flatwoods; most types of hammocks; coastal scrub; dry glades; palmetto flats; prairie; brushy riparian and canal corridors; and wet fields	yes, flatwoods and scrub areas of the site qualify as habitat
<i>Laterallus jamaicensis</i> spp. <i>Jamaicensis</i>	eastern black rail	T	salt, brackish or freshwater marshes with high stem densities and dense overhead cover	no habitat observed
<i>Perimyotis subflavus</i>	tricolored bat	PE	tricolored bats use both shallow and deep caves, in summer, tricolored bats roost in Spanish moss and dead tree leaves; deciduous and mixed forests in areas with trees of various heights	yes, forested areas of the site qualify as habitat
<i>Heterodon couperi</i>	southern hognose snake	PT	dry, sandy upland environments, primarily favoring longleaf pine-turkey oak sandhills, scrub, pine flatwoods, and coastal dunes	no habitat observed

E=endangered, T=threatened, PE= proposed endangered, PT= proposed threatened, C= candidate, EXPN= experimental population, non-essential

Attachment 1: Aquatic Resources Delineation Map

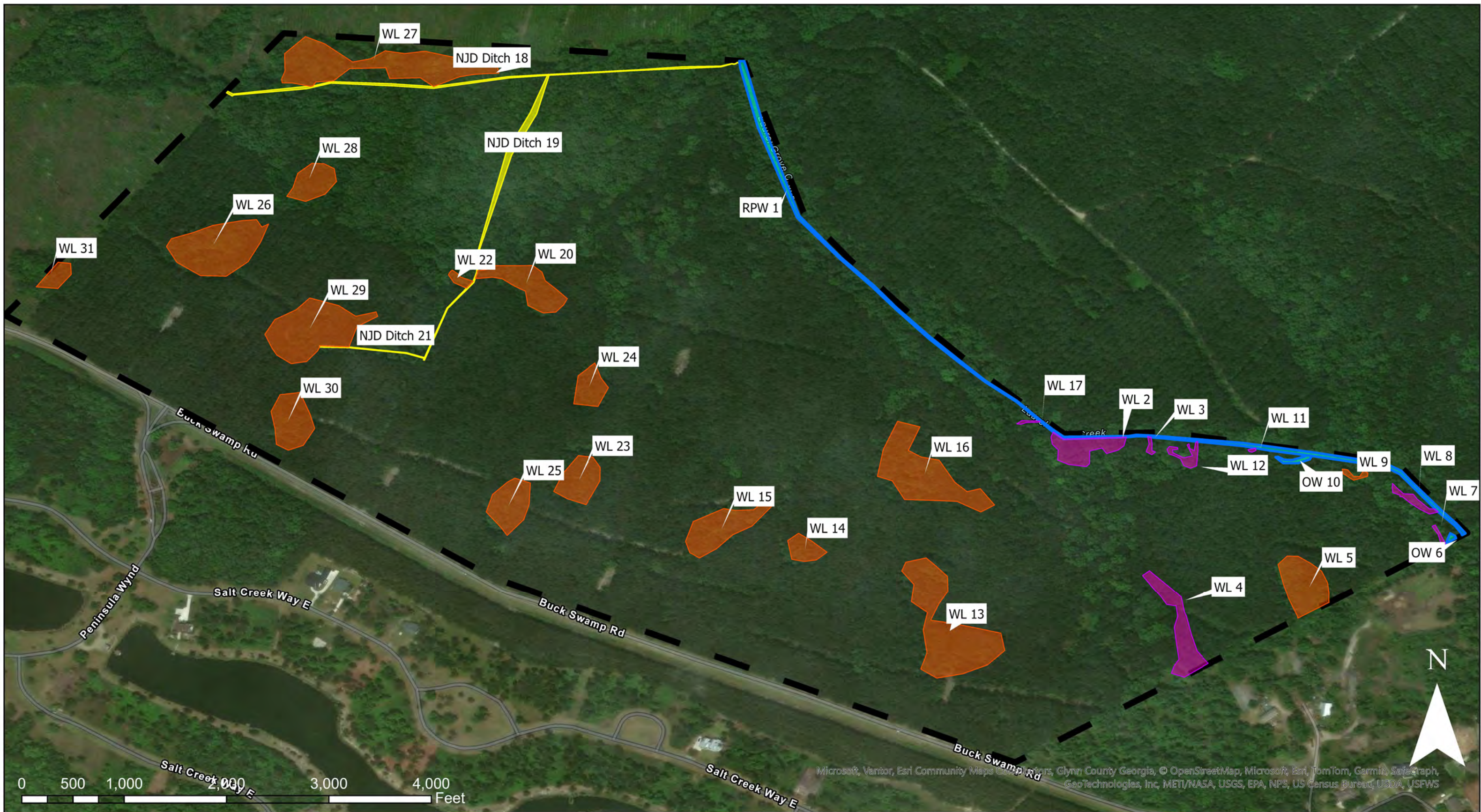
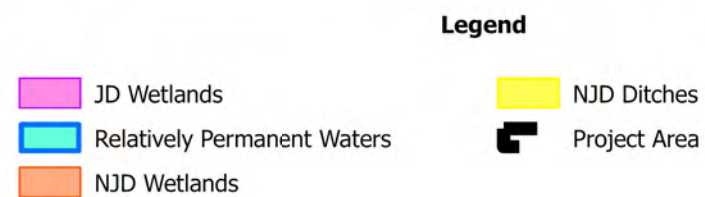


Figure 1: Aquatic Resources Delineation Map
Parcel 02-01744
Glynn County, Georgia



Created by: SB
QAQC by: ED
04/28/2026
*Resources depicted on this map were
field delineated using USACE procedures in April 2026



Attachment 2: Resource Photographs

Resource Photographs April 2026



RPW 1 – Laurel Grove Creek



Wetland 2



Wetland 3



Wetland 4



Wetland 5



OW 6



Wetland 7



Wetland 8



Wetland 9



OW 10



Wetland 12



Wetland 13



Wetland 14



Wetland 15



Wetland 16



NJD Ditch 18



NJD Ditch 19



Wetland 20 and 22



Wetland 23



Wetland 27



Wetland 28



Wetland 29



Wetland 30



Wetland 31