US Army Corps of Engineers

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): August 4, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Cocoa Regulatory Office, Northeast District Phase 1, SAJ 2016-01807

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: FL County/parish/borough: Osceola County City:
Center coordinates of site (lat/long in degree decimal format): Lat. 28.329862° N, Long. 81.180817° W.
Universal Transverse Mercator: 17R 482276E 3133757N
Name of nearest waterbody: Lake Myrtle
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Myrtle; Lake Myrtle - Mary Jane Canal
Name of watershed or Hydrologic Unit Code (HUC): HUC 12 – East Lake Toho – 030901010401
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: April 21 – 28, 2016
☒ Field Determination. Date(s): June-July 2017

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: Lake Myrtle, Lake Mary Jane and Lake Myrtle – Mary Jane Canal are identified as a Section 10 Water by Jacksonville District Navigable Waters Lists.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): [1]

☒ TNWs, including territorial seas
☒ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: Lake Myrtle/Mary Jane Canal and other ditches: linear feet: 6,200 width (ft): 50 and/or 17.55 acres.
And other ditches: Linear feet 5000; width 20 feet and/or acres: 2.5
Wetlands: 780 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):[3]

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: The isolated wetlands and surface waters within the project boundaries are non-jurisdictional by rule. The wetlands have no wetland vegetative connection or surface hydrologic connection to other waters or wetlands. There

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

are no known hydrologic data indicating a sub-surface water connection between the on-site isolated wetlands and any surface water or other nearby wetland systems. The on-site isolated wetlands do not have a substantial nexus either alone or in combination with each other or with the TNW and do not appear to have a substantial effect on the chemical, physical, or biological integrity of the downstream TNW. (Wetlands: 2,6,7,8,10,11,12, 14,15,15A,16,17,18,19,20,21,25,32,33,41, SW3,SW4)

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: **Lake Myrtle – Mary Jane Canal**

Summarize rationale supporting determination: **Lake Myrtle – Mary Jane Canal are identified as a Section 10 Water by the Jacksonville District Navigable Waters Lists**.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": **A majority of the large wetland strands (Estimated 780 acres in total) within the project site lie within the lower limits of the Lake Myrtle watershed and contribute flow directly or indirectly to the TNW via natural and man-made flow-ways and culverted conveyances beneath field roads.**

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **32,429 square miles**
Drainage area: **1000 Acres**
Average annual rainfall: **60** inches
Average annual snowfall: **0** inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **0** tributaries before entering TNW.

Project waters are < 1 river miles from TNW.
Project waters are river miles from RPW.
Project waters are < 1 aerial (straight) miles from TNW.
Project waters are 0 aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **No**.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: **Direct flow to TNW - Lake Myrtle-Lake Mary Jane Canal**
Tributary stream order, if known: 1

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☒ Artificial (man-made). Explain: Most appear to be excavated ditches through uplands and wetlands.
- ☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width:5-10 feet
Average depth: 2-3 feet
Average side slopes: **1:2**

Primary tributary substrate composition (check all that apply):
- ☐ Silts
- ☐ Cobbles
- ☐ Bedrock
- ☐ Other. Explain:
- ☒ Sands
- ☐ Gravel
- ☒ Vegetation. Type/% cover:
- ☐ Concrete
- ☒ Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: **Straight**
Tributary gradient (approximate average slope): **1 %**

(c) Flow:
Tributary provides for: **Seasonal Flow**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime:
Other information on duration and volume:

Surface flow is: **Confined.** Characteristics:

Subsurface flow: **unknown**. Explain findings:
- ☐ Dye (or other) test performed:

Tributary has (check all that apply):
- ☒ Bed and banks
- ☒ OHWM[6] (check all indicators that apply):
  - ☒ clear, natural line impressed on the bank
  - ☒ changes in the character of soil
  - ☐ shelving
  - ☒ vegetation matted down, bent, or absent
  - ☒ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☒ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☒ abrupt change in plant community
- ☐ Discontinuous OHWM.[7] Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☐ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:**Water color is clear.**
Identify specific pollutants, if known: **None known**

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[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): Varies
☒ Wetland fringe. Yes Characteristics: Forested and herbaceous
☒ Habitat for:
☒ Federally Listed species. Explain findings: Possible for Wood Stork and Indigo Snake
☐ Fish/spawn areas. Explain findings: .
☒ Other environmentally-sensitive species. Ferns Explain findings:
☐ Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: **approximately 700** acres
Wetland type. **Palusterine forested and herbaceous**
Wetland quality: **Water appears clean and no obvious pollutants**
Project wetlands cross or serve as state boundaries. Explain:. **NO**

(b) General Flow Relationship with Non-TNW:
Flow is: **perennial flow**. Explain: **Water present during site inspection and is visible on most aerials from 2004-2017**

Surface flow varies. **RPW is a discrete and confined ditch where it passes through uplands and then receives sheet from wetlands where it is abutting adjacent wetland systems**
Characteristics: .

Subsurface flow **unknown.** Explain findings:**NO**
☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain:
☐ Ecological connection. Explain:
☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW
Project wetlands are river < **1miles from TNW.**
Project waters are **less than 1 aerial (straight) miles from TNW.**
Flow is from: **Wetlands into RPW and into TNW**
Estimate approximate location of wetland as within the 5-10 year floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **Waters is clear**
Identify specific pollutants, if known

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. **A forested buffer exist which helps shade and partially protect the stream from the impact of adjacent land uses.** Characteristics (type, average width): **There is no adjacent urban land uses and the site appears to have limited free range cattle and minor silvculture. There is low density rural residential that varies from a quarter a mile to 1.5 miles away.**
☒ Vegetation type/percent cover. **Forested and herbaceous cover appears as near or at 100 % cover** :
☒ Habitat for:
☐ Federally Listed species. Potential for **Indigo Snake, Wood Stork.** Explain findings**: based on USFWS Consultation and habitat present**
☒ Fish/spawn areas. Explain findings: **Portions of RPW appear wide (20') and ponded with water for extended time frames and appear suitable for some fish species**
☒ Other environmentally-sensitive species. **Various ferns such as but not limited to Osmunda sp., Thelypteris sp., Woodwardia sp., Blechnum sp.**
Explain findings: Onsite observation .
☒ Aquatic/wildlife diversity. Explain findings: **Reptiles, amphibians, wading birds and mammals**

3. Characteristics of all wetlands adjacent to the tributary (if any) (All wetlands in Review Area)

All wetland(s) being considered in the cumulative analysis: 162
Approximately (3000) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:
Type Size (in acres)

attribute	system_name	class_name	acres

PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.38
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.39
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.28
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.66
PUBHx	PALUSTRINE:	UNCONSOLIDATED BOTTOM:	0.37
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.13
PFO1C	PALUSTRINE:	FORESTED: BROAD-LEAVED DECIDUOUS	0.63
PSS3B	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	34.96
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	103.49
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.30
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	2.55
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	5.34
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	2.45
PSS7B	PALUSTRINE:	SCRUB-SHRUB: EVERGREEN	4.14
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	2.35
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	2.67
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	2.92
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	0.82
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.70
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.31
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.57
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	8.39
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.54
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.28
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.14
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.25
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.36
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	6.01
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	0.59
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.87
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.57
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.70
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	6.42
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.07
PFO2F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	14.61
PFO2/3F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	20.27
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	0.00
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	0.31
PSS3C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	9.67
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	0.36
R2UBHx	RIVERINE: LOWER PEREN*	UNCONSOLIDATED BOTTOM:	23.44
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	2.00
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	7.53
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.70
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	3.28
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.04
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.45
PFO7A	PALUSTRINE:	FORESTED: EVERGREEN	1.86
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	45.09
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	47.38
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.46
PFO1C	PALUSTRINE:	FORESTED: BROAD-LEAVED DECIDUOUS	3.31
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	1.65
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	150.84
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	281.80
PUBHx	PALUSTRINE:	UNCONSOLIDATED BOTTOM:	0.24
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	24.55
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.30
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	1.92
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	2.88
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.45
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	2.42
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	13.30
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.61
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	14.27
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	3.78

PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	35.74
PFO1C	PALUSTRINE:	FORESTED: BROAD-LEAVED DECIDUOUS	0.44
PFO7B	PALUSTRINE:	FORESTED: EVERGREEN	7.38
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.95
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.19
PFO2F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	4.45
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	1.76
PSS7C	PALUSTRINE:	SCRUB-SHRUB: EVERGREEN	3.65
PUBH	PALUSTRINE:	UNCONSOLIDATED BOTTOM:	1.79
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	10.23
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.73
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.37
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	3.50
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	7.29
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	2.60
PEM1A	PALUSTRINE:	EMERGENT: PERSISTENT	1.42
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.73
PFO3B	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	27.55
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	2.16
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.41
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.63
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.54
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	0.79
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.75
PSS7C	PALUSTRINE:	SCRUB-SHRUB: EVERGREEN	1.79
PSS3C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	1.03
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	4.38
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	3.12
PFO6C	PALUSTRINE:	FORESTED: DECIDUOUS	28.23
PFO2F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	6.45
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	0.36
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	2.19
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	57.13
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.56
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	9.47
PEM1A	PALUSTRINE:	EMERGENT: PERSISTENT	4.03
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.23
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.51
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	11.07
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.27
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	0.16
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	1.55
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	29.29
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	102.94
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	1.02
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	20.52
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	1.78
L1UBH	LACUSTRINE: LIMNETIC	UNCONSOLIDATED BOTTOM:	1.36
PEM1G	PALUSTRINE:	EMERGENT: PERSISTENT	2.95
PEM1G	PALUSTRINE:	EMERGENT: PERSISTENT	5.34
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	2.57
PFO2/3F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	1.15
PSS3C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	5.34
PFO2F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	20.24
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	1.08
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	0.23
PFO2/3F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	0.54
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.93
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.93
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	1.30
PFO2/3F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	0.72
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	57.95
PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	22.63
PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	0.35
PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	0.30
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	2.29

PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	0.23
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	6.30
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.28
PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	0.28
PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	25.81
PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	8.37
PFO1C	PALUSTRINE:	FORESTED: BROAD-LEAVED DECIDUOUS	4.49

20	PFO3C	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	17.56
8	PEM1C	PALUSTRINE:	EMERGENT: PERSISTENT	265.98
1	PSS7B	PALUSTRINE:	SCRUB-SHRUB: EVERGREEN	4.14
2	PEM1A	PALUSTRINE:	EMERGENT: PERSISTENT	5.45
1	PFO6C	PALUSTRINE:	FORESTED: DECIDUOUS	28.23
1	PUBH	PALUSTRINE:	UNCONSOLIDATED BOTTOM:	1.79
29	PFO6F	PALUSTRINE:	FORESTED: DECIDUOUS	141.71
9	PSS1C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED DECIDUOUS	25.63
4	PFO2F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	45.74
2	PEM1G	PALUSTRINE:	EMERGENT: PERSISTENT	8.33
3	PSS3C	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	16.03
1	PFO3B	PALUSTRINE:	FORESTED: BROAD-LEAVED EVERGREEN	27.55
4	PFO1C	PALUSTRINE:	FORESTED: BROAD-LEAVED DECIDUOUS	8.86
35	PEM1F	PALUSTRINE:	EMERGENT: PERSISTENT	689.35
1	R2UBHx	RIVERINE: LOWER PEREN*	UNCONSOLIDATED BOTTOM:	23.43
1	L1UBH	LACUSTRINE: LIMNETIC	UNCONSOLIDATED BOTTOM:	1.40
1	PFO7B	PALUSTRINE:	FORESTED: EVERGREEN	7.38
1	PSS3B	PALUSTRINE:	SCRUB-SHRUB: BROAD-LEAVED EVERGREEN	34.96
6	PFO7C	PALUSTRINE:	FORESTED: EVERGREEN	71.38
4	PFO2/3F	PALUSTRINE:	FORESTED: NEEDLE-LEAVED DECIDUOUS	22.68
2	PSS7C	PALUSTRINE:	SCRUB-SHRUB: EVERGREEN	5.44
1	PFO7A	PALUSTRINE:	FORESTED: EVERGREEN	1.86
2	PUBHx	PALUSTRINE:	UNCONSOLIDATED BOTTOM:	0.6

Summarize overall biological, chemical and physical functions being performed: Wetlands are among the most productive ecosystems in the world, comparable to rain forests and coral reefs. An immense variety of species of microbes, plants, insects, amphibians, reptiles, birds, fish, and mammals can be part of a wetland ecosystem. Physical and chemical features such as climate, landscape shape (topology), geology, and the movement and abundance of water help to determine the plants and animals that inhabit each wetland. The complex, dynamic relationships among the organisms inhabiting the wetland environment are referred to as food webs.

Wetlands provide great volumes of food that attract many animal species. These animals use wetlands for part of or all of their life-cycle. Dead plant leaves and stems break down in the water to form small particles of organic material called "detritus." This enriched material feeds many small aquatic insects, shellfish, and small fish that are food for larger predatory fish, reptiles, amphibians, birds, and mammals.

The biological, chemical, and physical operations and attributes of a wetland are known as wetland functions. Some typical wetland functions include: wildlife habitat and food chain support, surface water retention or detention, groundwater recharge, and nutrient transformation. Distinct from these intrinsic natural functions are human uses of and interaction with wetlands. Society's utilization and appraisal of wetland resources is referred to as wetland values, which include: support for commercially valuable fish and wildlife, flood control, supply of drinking water, enhancement of water quality, and recreational opportunities.

A watershed is a geographic area in which water, sediments, and dissolved materials drain from higher elevations to a common low-lying outlet, basin, or point on a larger stream, lake, underlying aquifer, or estuary. Wetlands play an integral role in the ecology and hydrology of the watershed. The combination of shallow water, high levels of nutrients, and high primary productivity is ideal for the growth of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish, and insects. Many species of birds and mammals rely on wetlands for food, water, and shelter, especially during migration and breeding. Wetlands' microbes, plants, and wildlife are part of global cycles for water, nitrogen, and sulfur. Furthermore, scientists are beginning to realize that atmospheric maintenance may be an additional wetlands function. Wetlands store carbon within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide. Thus wetlands help to moderate global climate conditions.

Water Quality

Wetlands have important filtering capabilities for intercepting surface water runoff from higher dry land before the runoff reaches open water. As the runoff water passes through, the wetlands retain excess nutrients and some pollutants, and reduce sediment that would clog waterways and affect fish and amphibian egg development. In addition to improving water quality through filtering, some wetlands maintain stream flow during dry periods, and many replenish groundwater.

Flood Protection

Wetlands function as natural sponges that trap and slowly release surface water, rain, snowmelt, groundwater, and flood waters. Trees, root mats, and other wetland vegetation also slow the speed of flood waters and distribute them more slowly over the floodplain. This combined water storage and braking action lowers downstream flood heights and reduces erosion. Wetlands within and downstream of urban areas are particularly valuable, counteracting the greatly increased rate and volume of surface water runoff from pavement and buildings. The holding capacity of wetlands helps control floods. Preserving and restoring wetlands can often provide the level of flood control otherwise provided by expensive dredge operations and levees.

Fish and Wildlife Habitat

Threatened and endangered species live only in wetlands, and nearly half require wetlands at some point in their lives. Many other animals and plants depend on wetlands for survival. For many animals and plants,inland wetlands are the only places they can live. Many of the U.S. breeding bird populations--including ducks, geese, woodpeckers, hawks, wading birds, and many song-birds--feed, nest, and raise their young in wetlands. Migratory waterfowl d inland wetlands as resting, feeding, breeding, or nesting grounds for at least part of the year.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

4. **Significant nexus findings for wetlands directly abutting an RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its abutting wetlands, then go to Section III.D: **The connected wetlands in the review area in conjunction with other similar situated wetlands provide a variety of functions typically associated with wetlands such as but not limited to climatic stability by buffering changes in air temperatures; storm water storage and flow attenuation; nutrient cycling and reductions in nitrogen, phosphorus and other man induces pollutants and turbidity reduction. The wetlands also provide habitat for wetland and non-wetland dependent wading birds, migrating and local passerine birds, reptiles, amphibians, large and small mammals and insects.**

5. **Significant nexus findings for an RPW (perennial or seasonal).** Explain findings of presence or absence of significant nexus below, based on the tributary, then go to Section III.D: **The surface water/ditch in conjunction with its adjacent wetlands provide a variety of functions typically associated with creeks and wetlands such as but not limited to climatic stability by buffering changes in air temperatures; storm water storage and flow attenuation; nutrient cycling and organic carbon that supports downstream foodwebs and reductions in nitrogen, phosphorus and other man or agricultural induces pollutants and turbidity reduction. The surface water/wetlands also provide habitat for wading birds, migrating and local passerine birds, amphibians, reptiles, small and large mammals, insects, a variety of fish species and wetland dependent and non-wetland dependent species.**

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☒ TNWs: **6000** linear feet **50** width (ft), Or, **7** acres. **Lake Myrtle – Lake Mary Jane Canal (TNW) is located in the project site; Lake Myrtle (TNW) is located within the Review Area, but is not included in the project site acreage subject to this jurisdictional review.**
   - ☒ Wetlands adjacent to TNWs: estimated **50** acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: **On site observation and Aerial Photos.**

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☒ Tributary waters: **7500** linear feet, **5 and 20** width (ft).
   - ☐ Other non-wetland waters: acres:
     Identify type(s) of waters:

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Based on site review of vegetation and hydrologic connection between the wetland and the RPW**
     - ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Field observations and aerial photographs.**

   Provide acreage estimates for jurisdictional wetlands in the review area: **700+** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

[8]See Footnote # 3.

7. **Impoundments of jurisdictional waters.**[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain:
☐ Other factors. Explain:

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters:
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
☐ Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☒ Other non-wetland waters: **2.10** acres. List type of aquatic resource: **Reservoir (530), Surface Water 3 and 4.**
☒ Wetlands: Estimated- **17.22** acres. **Wetlands: 2,6,7,8,10,11,12, 14,15,15A,16,17,18,19,20,21,25,32,33,41**

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource:
☐ Wetlands: acres.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for** review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

SECTION IV: DATA SOURCES.

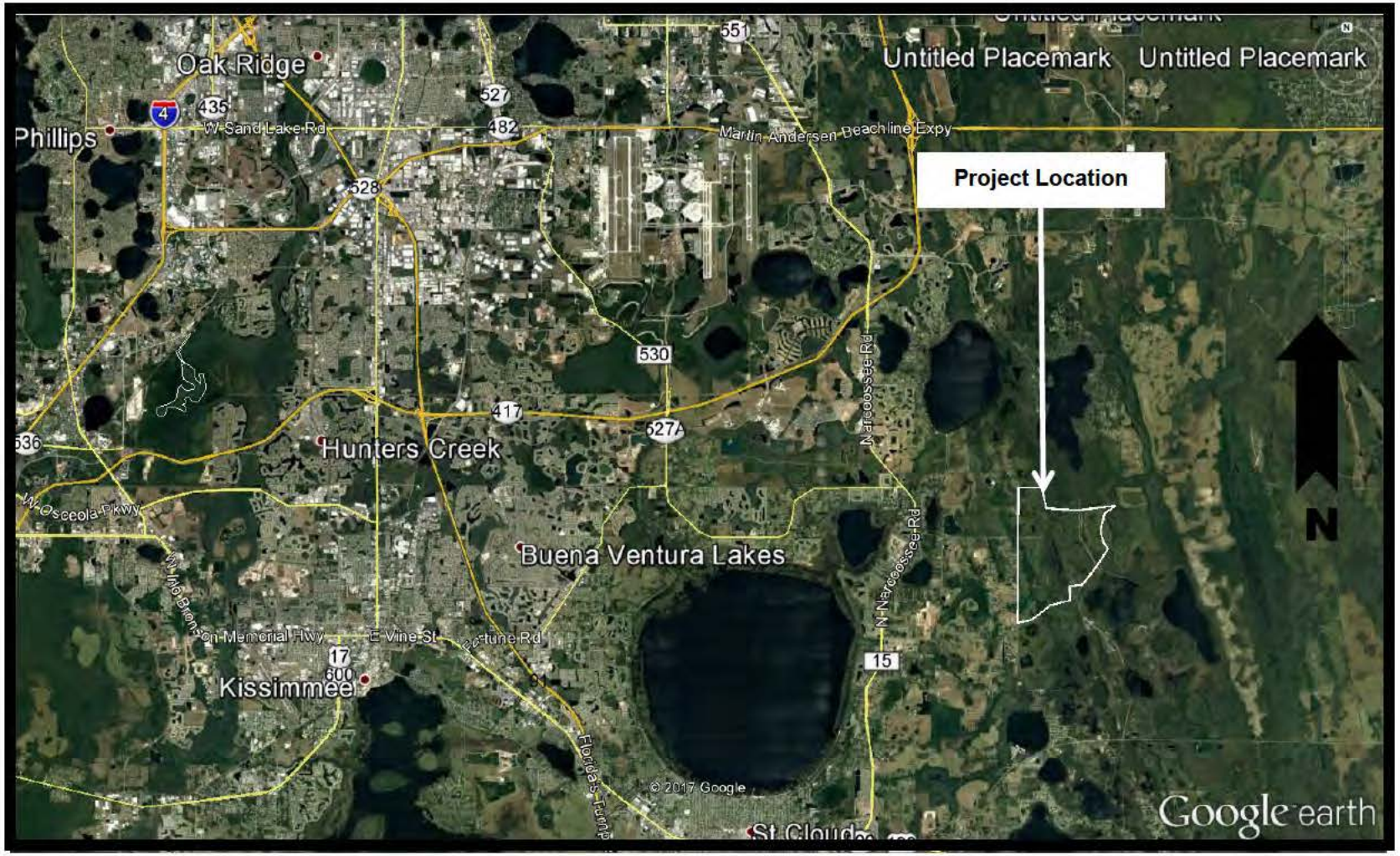
A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
  Figure 8: Verified wetland limits (10 pages)

- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☒ Office does not concur with data sheets/delineation report.
    Data Sheets missing hydrologic indicators, plot size, incomplete soil data.
- ☐ Data sheets prepared by the Corps:
- ☒ Corps navigable waters' study:
  In Project Files: Navigable Waters, Jacksonville District (6 Pages).
- ☒ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.

  Figure 6: Huc 12 Map .
- ☒ U.S. Geological Survey map(s). Cite scale & quad name:
  Figure 3: USGS Quad of the Northeast District Phase 1, Osceola County, Florida.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation:
  Figure 4: Natural Resources Conservation Service Soils Map of the Northeast District Phase 1, Osceola County, Florida.
- ☒ National wetlands inventory map(s). Cite name:
  Figure 5: National Wetlands Inventory Map w flow lines of the Northeast District Phase 1, Osceola County, Florida.
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):
  Figure 2: Aerial Photograph of the Northeast District Phase 1, Osceola County, Florida.
  or ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☒ Other information (please specify):
  Vicinity Map prepared by Corps (Figure 1)
  Relevant Reach Map prepared by Corps (Figure 7)

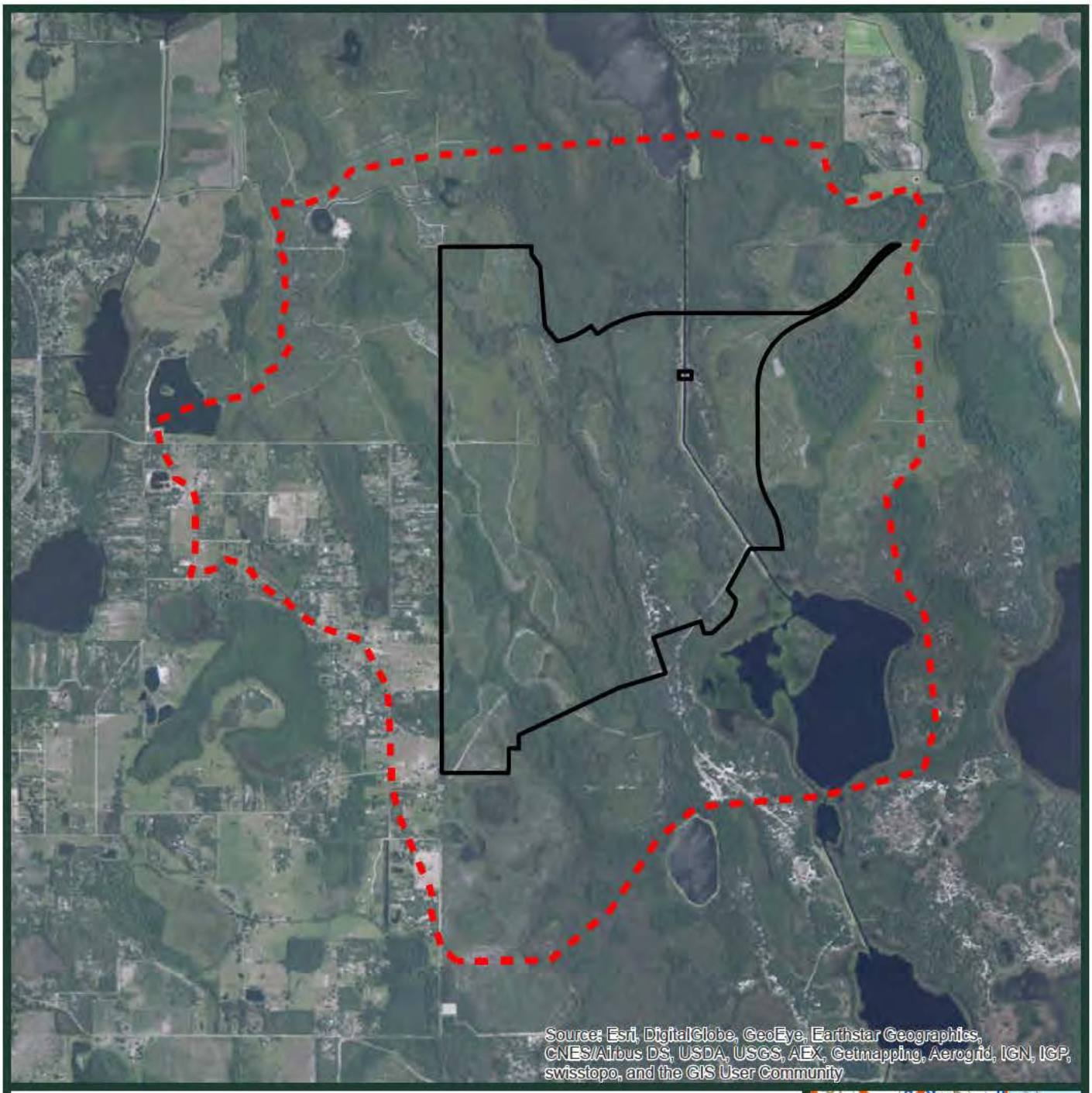
B. ADDITIONAL COMMENTS TO SUPPORT JD:



SAJ-2016-01807 NE District Phase 1

Not to scale

FIGURE 1 - Vicinity Map



Legend

- Surveyed Boundary
- JD Review Area

0 2,000 4,000 ft.

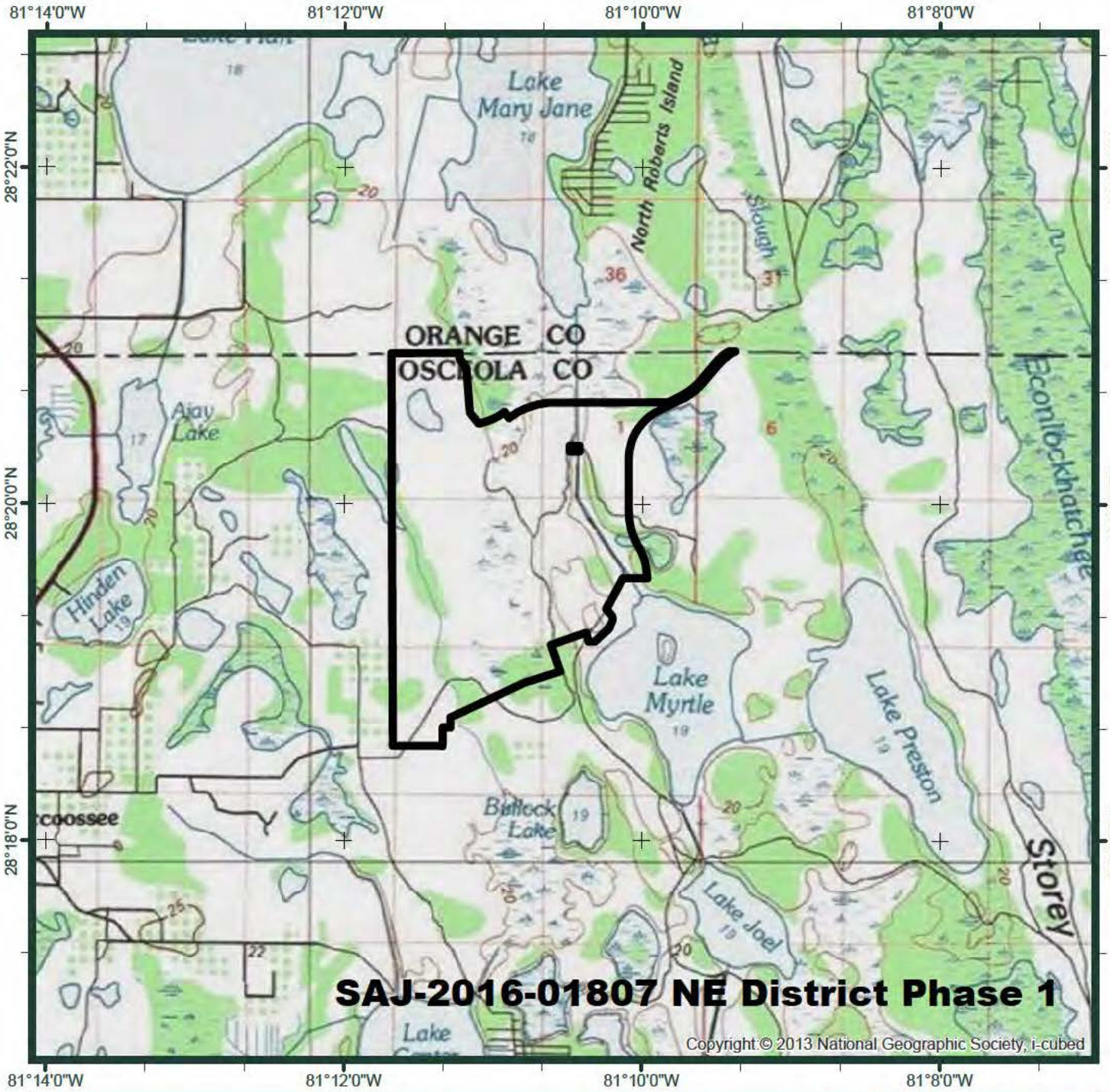
1 inch = 4,000 feet

SAJ-2016-01807 NE District Phase 1

Figure 2 Aerial Photo

BDA BREEDLOVE, DENNIS & ASSOCIATES, INC.
Environmental Consultants
330 W. Canton Ave., Winter Park, FL 32789 • 407-677-1882

CBT • 5/6/2016 • P:\ATG\2015077\Permit_Use\JD_201602\ARCGIS\Aerial.mxd



Legend

Source: Preliminary phase 1 boundary recieved by Community Solutions Group; 2015/10/30.

Surveyed Boundary

Sections 1, 2, 11-14, Township 25 s., Range 31 e. and Section 6, Township 25 s., Range 32 e.

USGS Narcoossee, Fla. Quadrangle (7½ Minute Topographic Map)

0 0.5 1 Mi.

1 inch = 1 miles

Figure 3: USGS Quad Map

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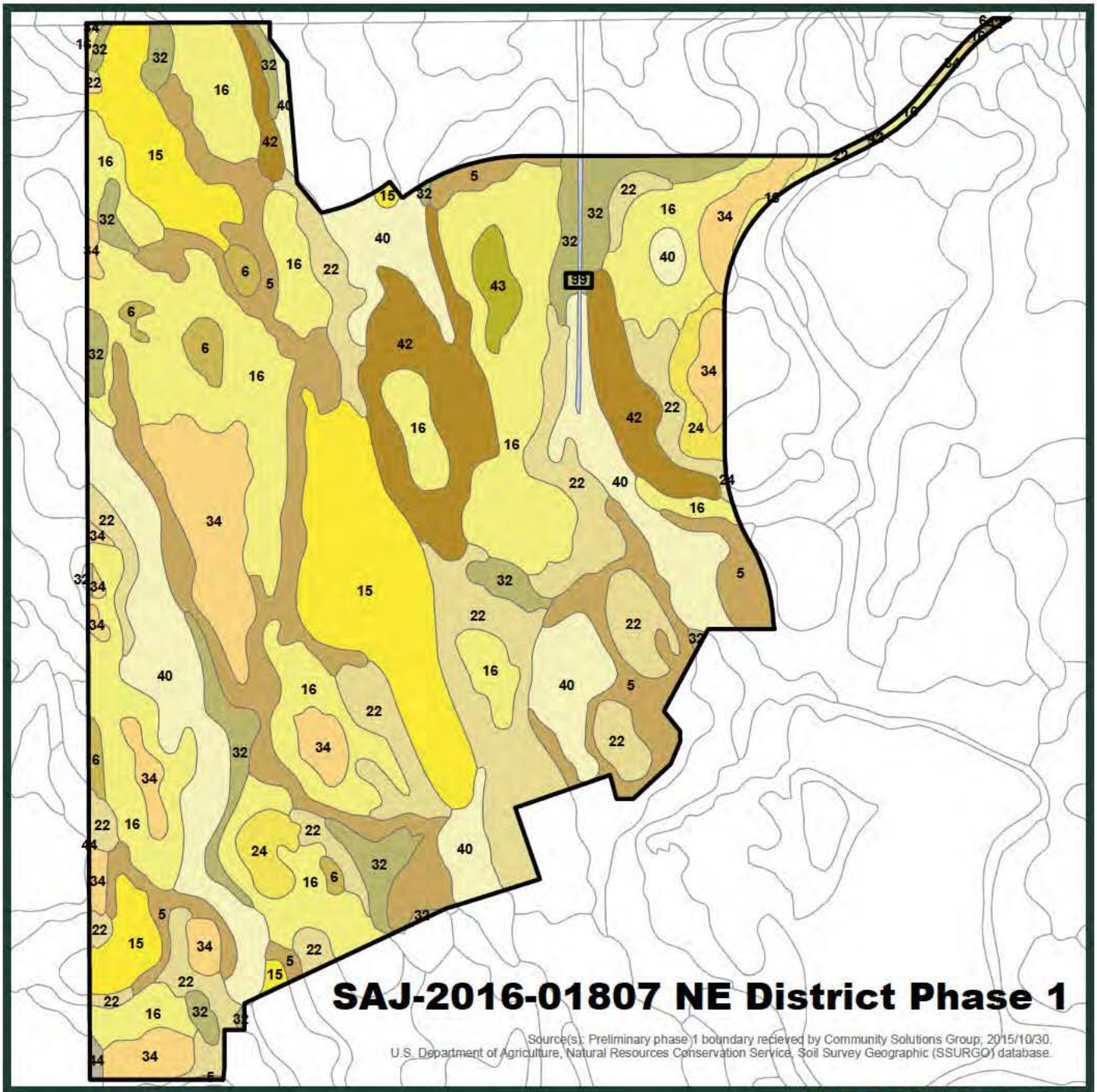

SAJ-2016-01807 NE District Phase 1

Source(s): Preliminary phase 1 boundary recieved by Community Solutions Group; 2015/10/30.
U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database.

Legend

- Surveyed Boundary
- 05 - Basinger fine sand
- 06 - Basinger fine sand, depressional
- 15 - Hontoon muck
- 16 - Immokalee fine sand
- 22 - Myakka fine sand
- 24 - Narcoossee fine sand
- 32 - Placid fine sand, depressional
- 34 - Pomello fine sand, 0 to 5 percent slopes
- 40 - Samsula muck
- 42 - Smyrna fine sand
- 43 - St. Lucie fine sand, 0 to 5 percent slopes
- 44 - Tavares fine sand, 0 to 5 percent slopes
- 99 - Water

0 1,000 2,000 ft.
1 inch = 2,000 feet

Figure 4 Soils Map

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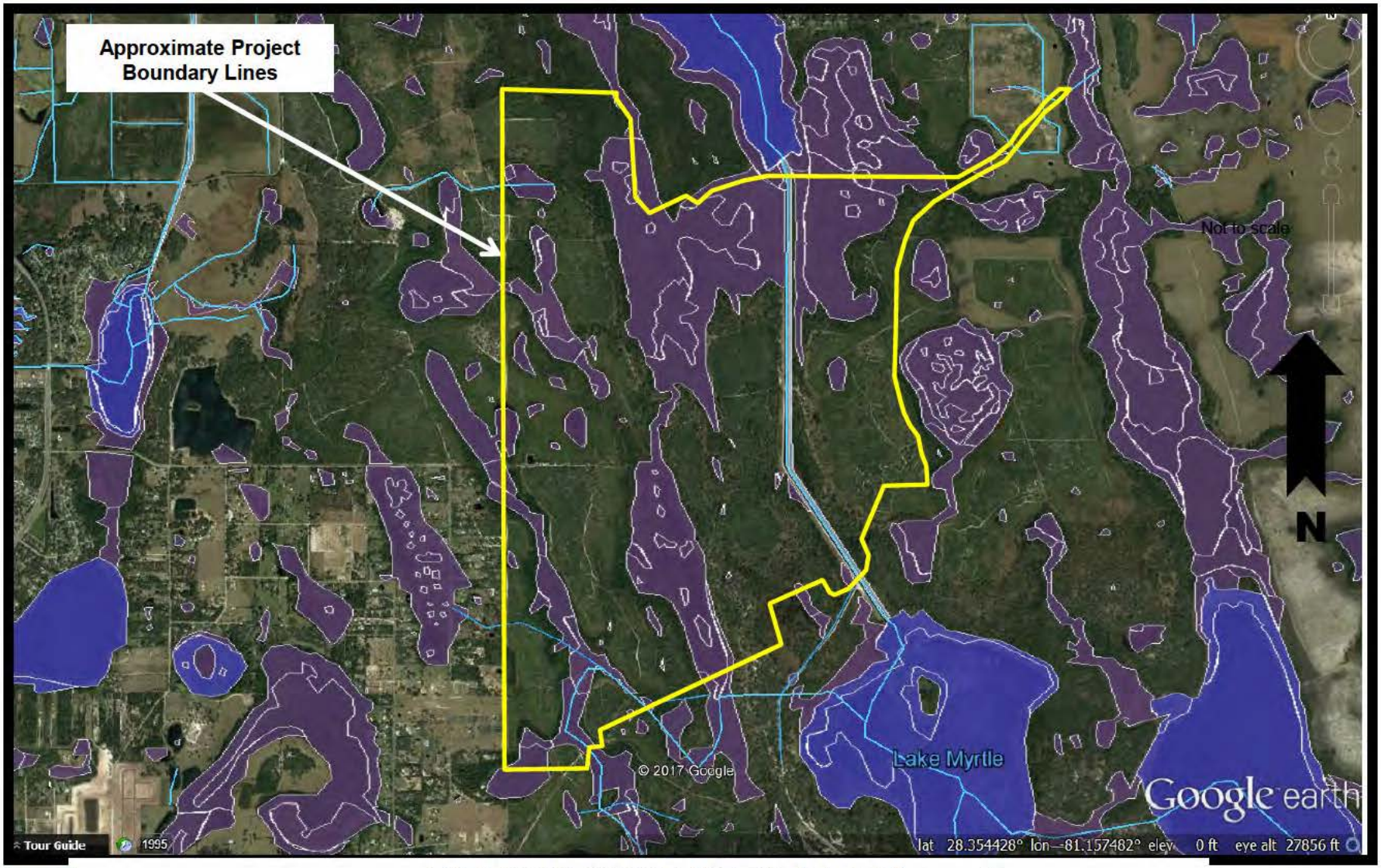


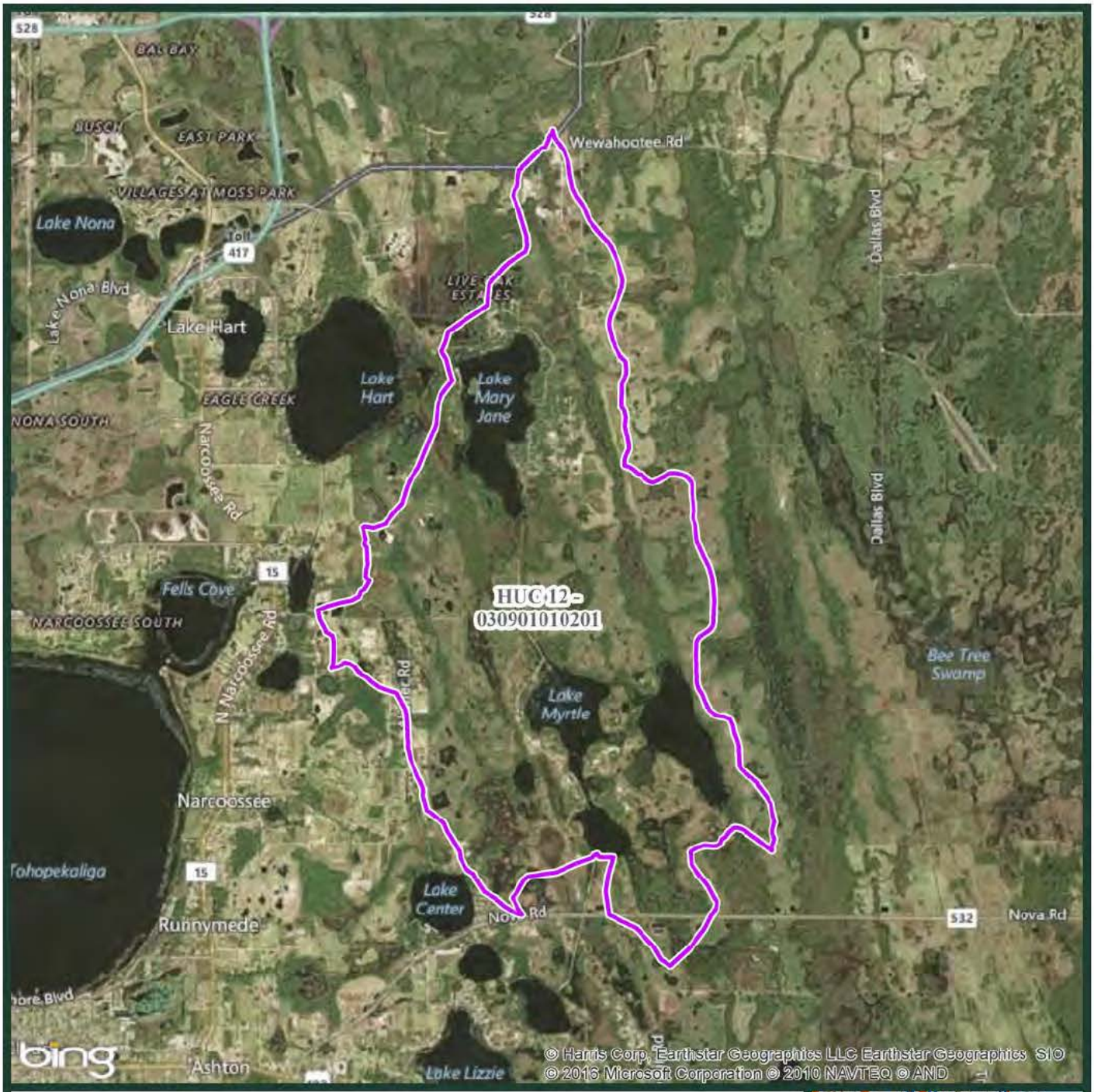
Wetlands

Flow Lines

SAJ-2016-01807 NE District Phase 1

Not to scale

FIGURE 5 - NWI and NHD Flow Lines



Legend

HUC 12 - 03090101201

0 1 2 mi.

1 inch = 2 miles

SAJ-2016-01807 NE District Phase 1

Source: HUC 12 bounday from The U.S. Department of the Interior, USGS The National Map - National Hydrography Dataset (NHD); 2014.

Figure 6 - 12 Digit HUC Map

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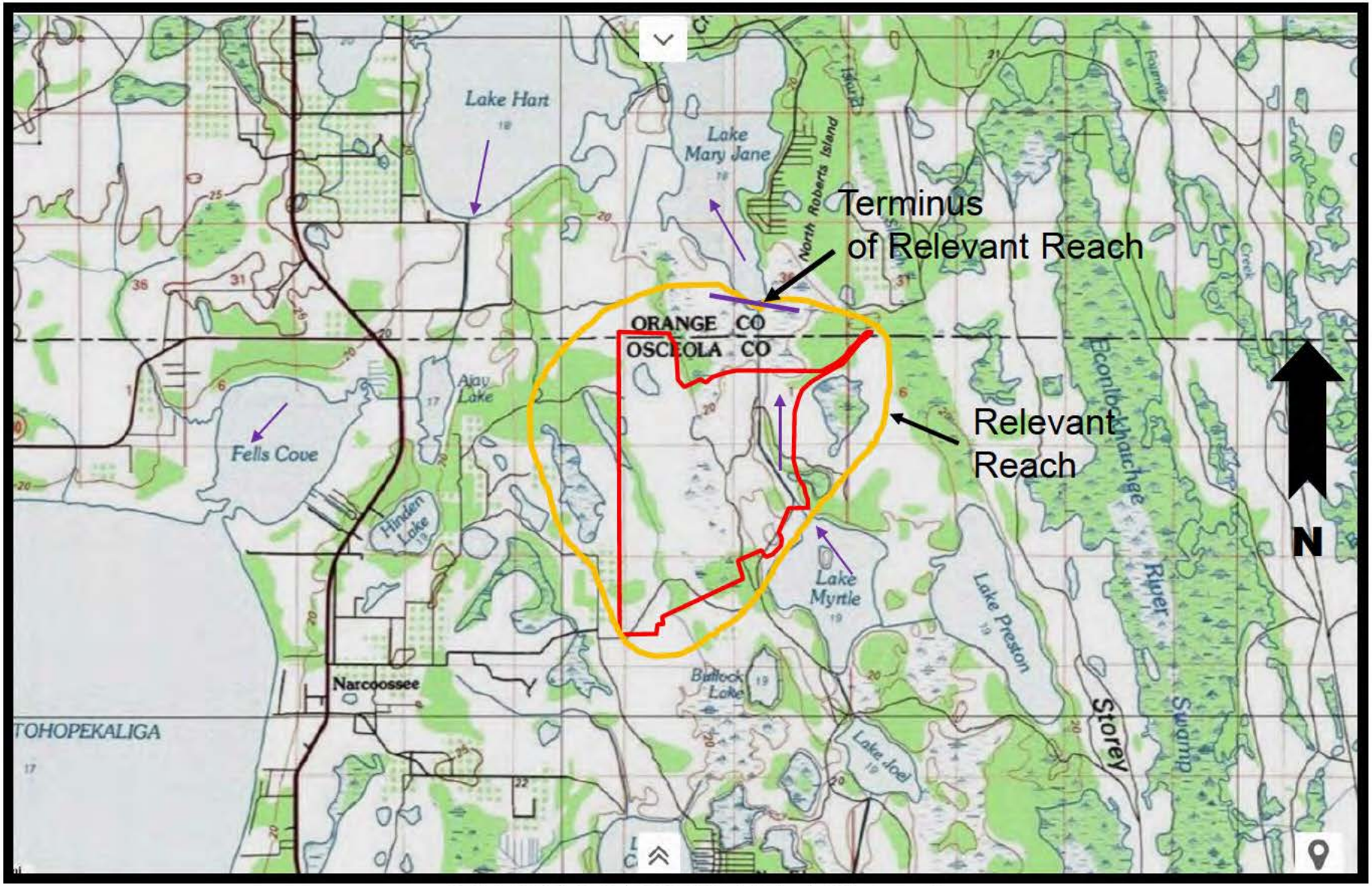
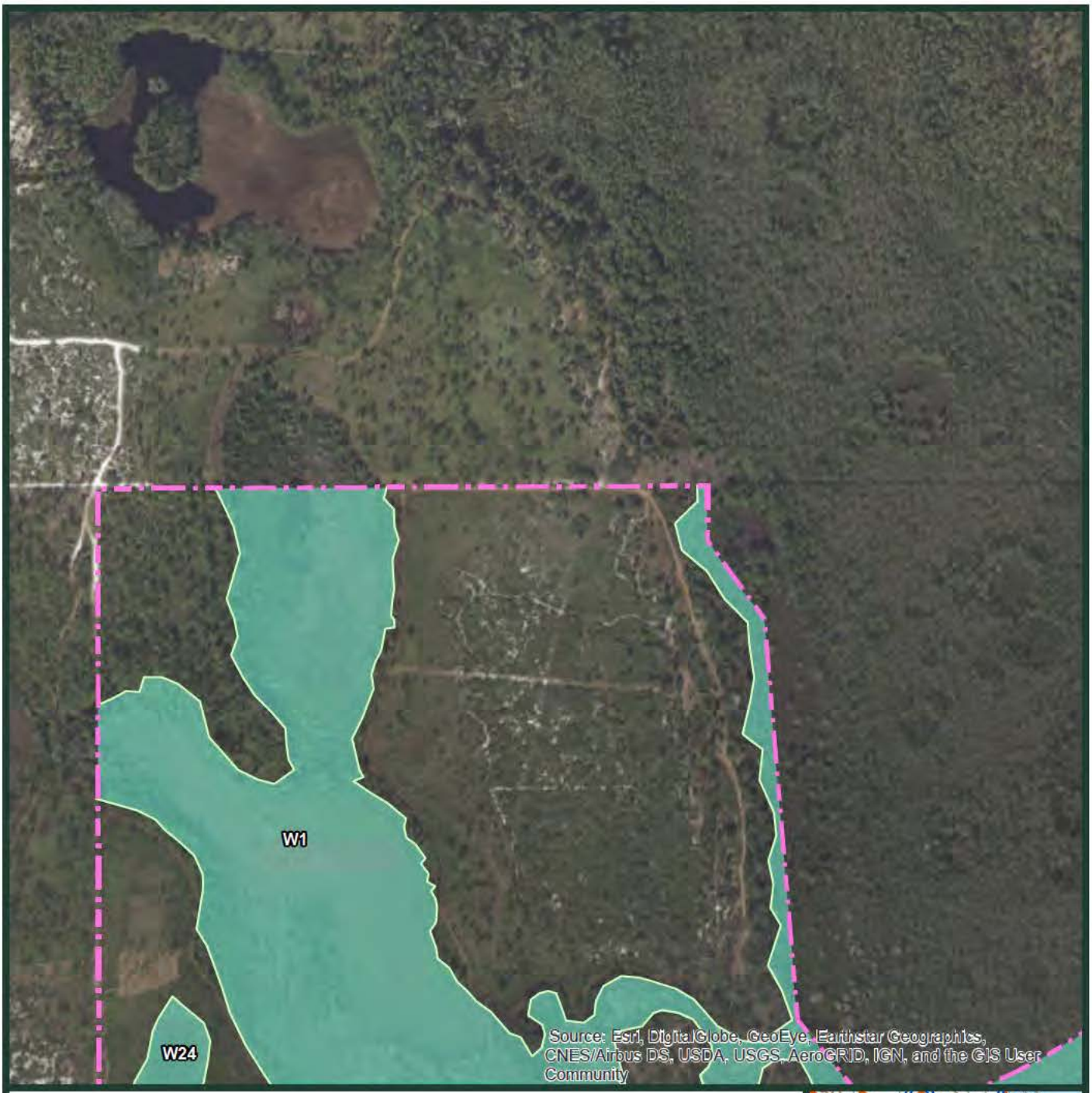


SAJ-2016-01807 NE Dist Phase 1

Not to scale

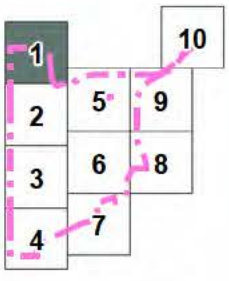
FIGURE 7 - Relevant Reach

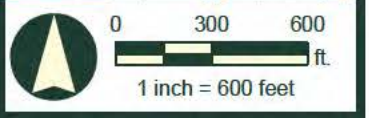


Legend

Source(s): Donald W. McIntosh Associates, Inc.; 2016-04-25. Vegetative delineation based on photointerpretation and selective groundtruthing by BDA.

- Surveyed Boundary
- Wetland Line
- Surface Water Line
- Adjacent to TNW or connected
- Isolated (non-JD)
- RPW
- TNW





SAJ 2016-01807 - NE Dist Phase 1 JD Map
Figure 8 - Verified Wetlands and Surface Water limits
(10 Pages)

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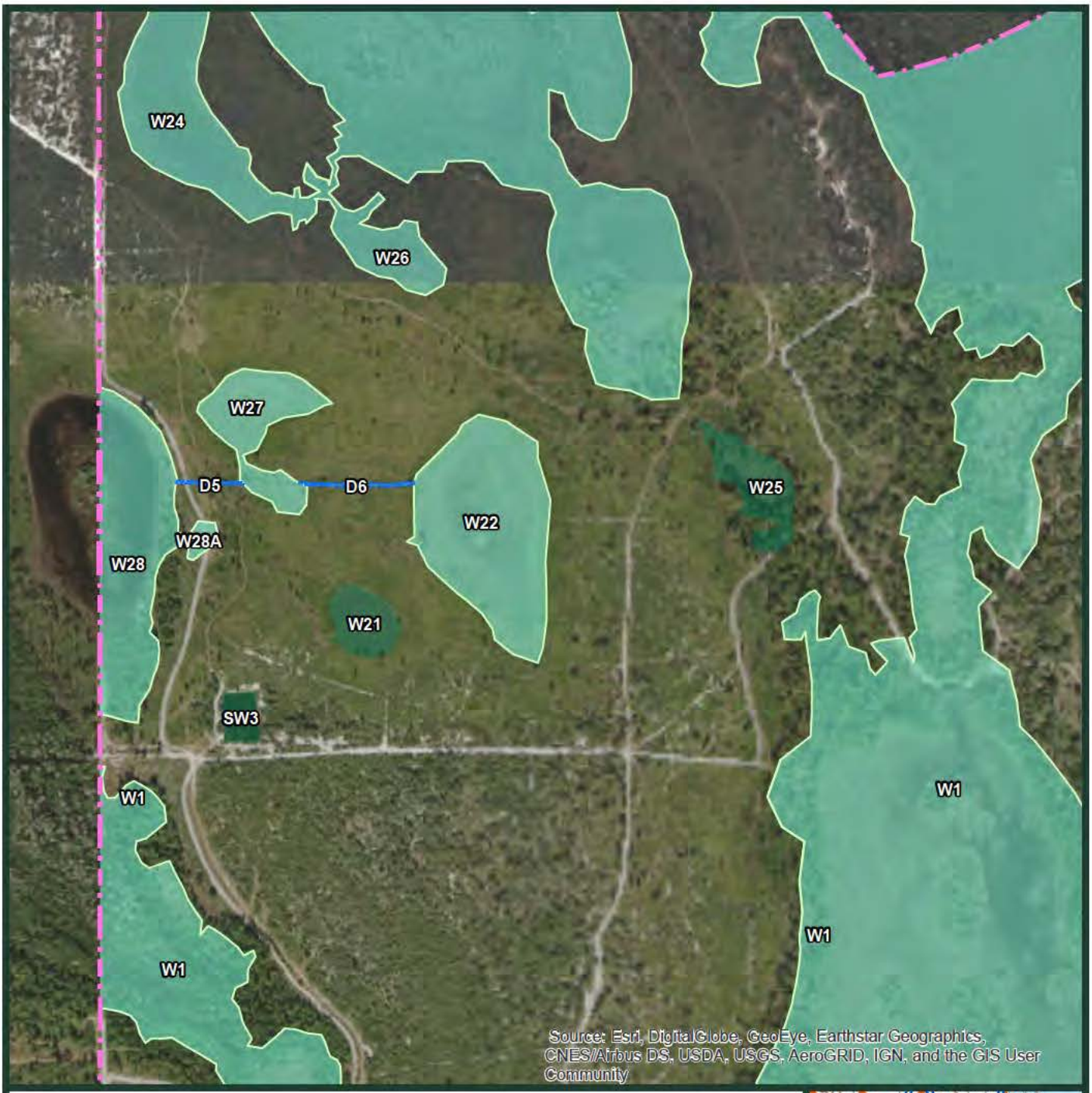
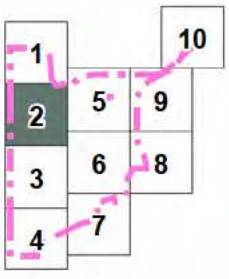


Legend

Source(s): Donald W. McIntosh Associates, Inc.; 2016-04-25. Vegetative delineation based on photointerpretation and selective groundtruthing by BDA.

- Surveyed Boundary
- Wetland Line
- Surface Water Line
- Adjacent to TNW or connected
- Isolated (non-JD)
- RPW
- TNW



0 300 600 ft.

1 inch = 600 feet

SAJ 2016-01807 - NE Dist Phase 1 JD Map
Figure 8 - Verified Wetlands and Surface Water limits
(10 Pages)

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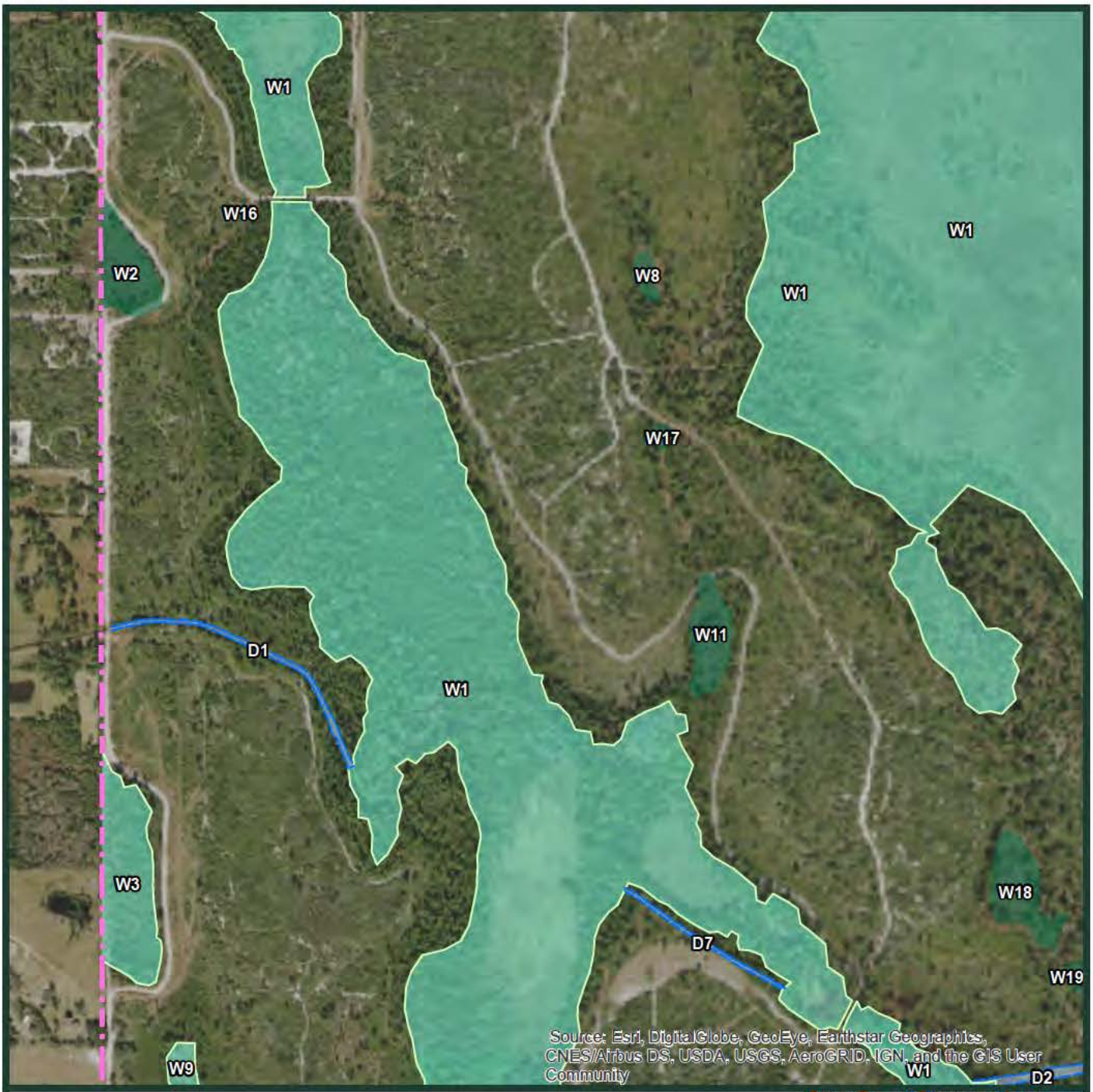

Legend

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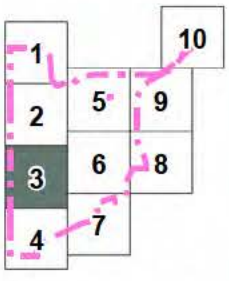

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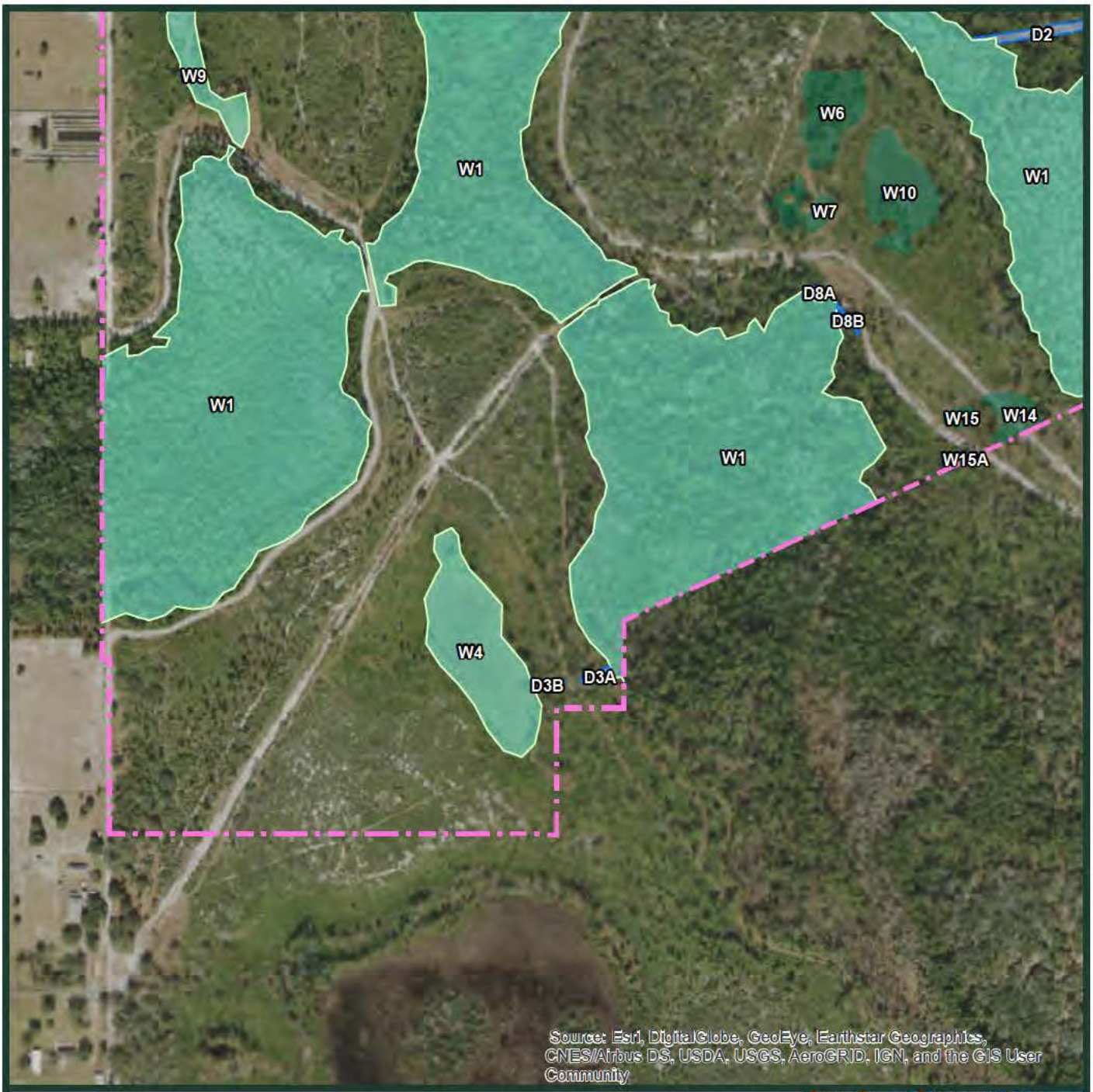

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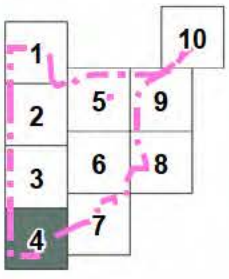

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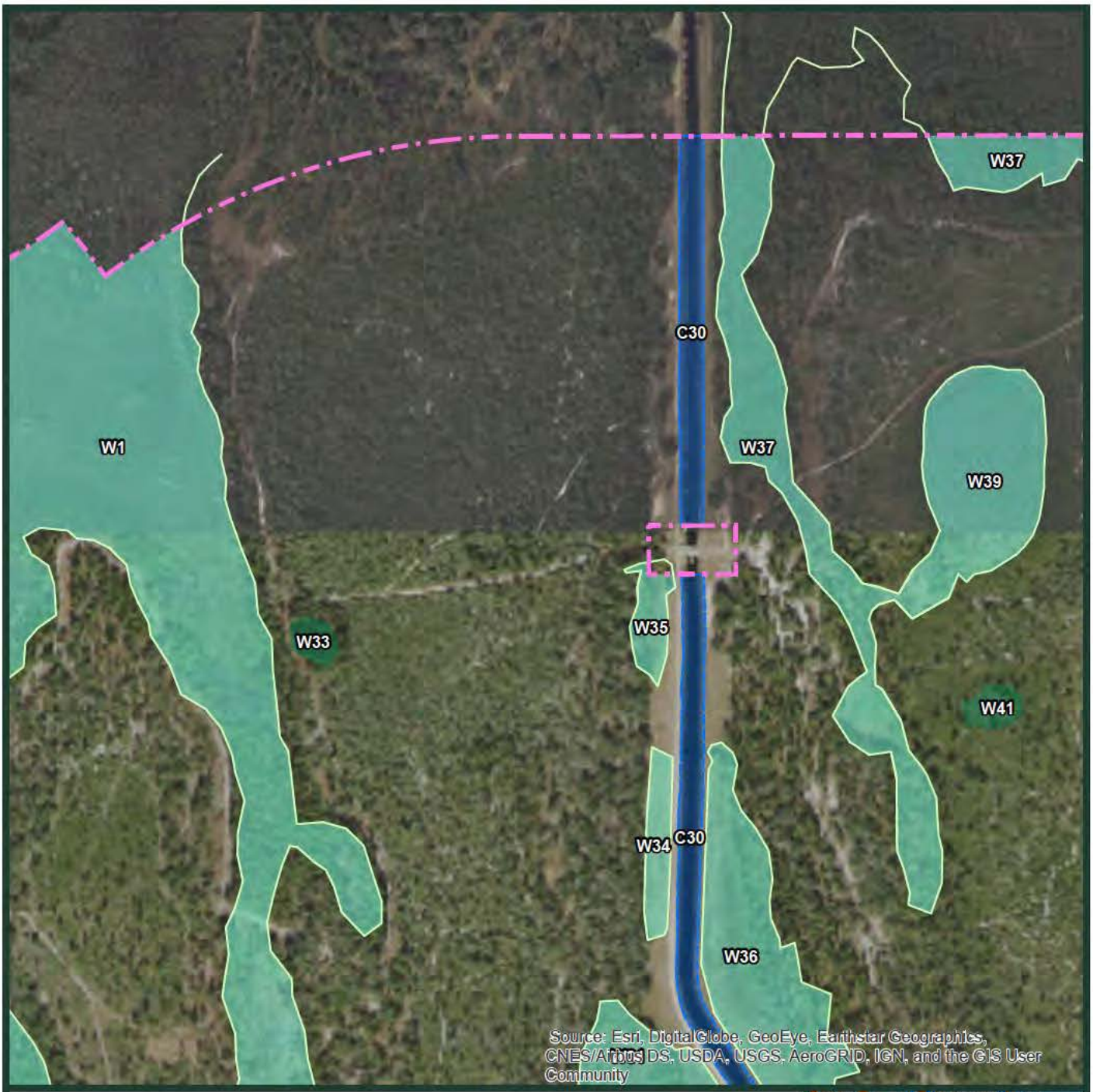

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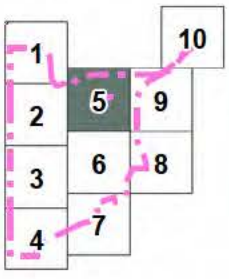

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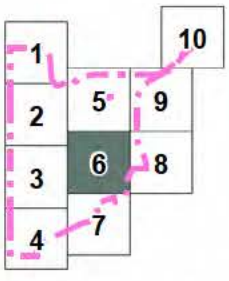

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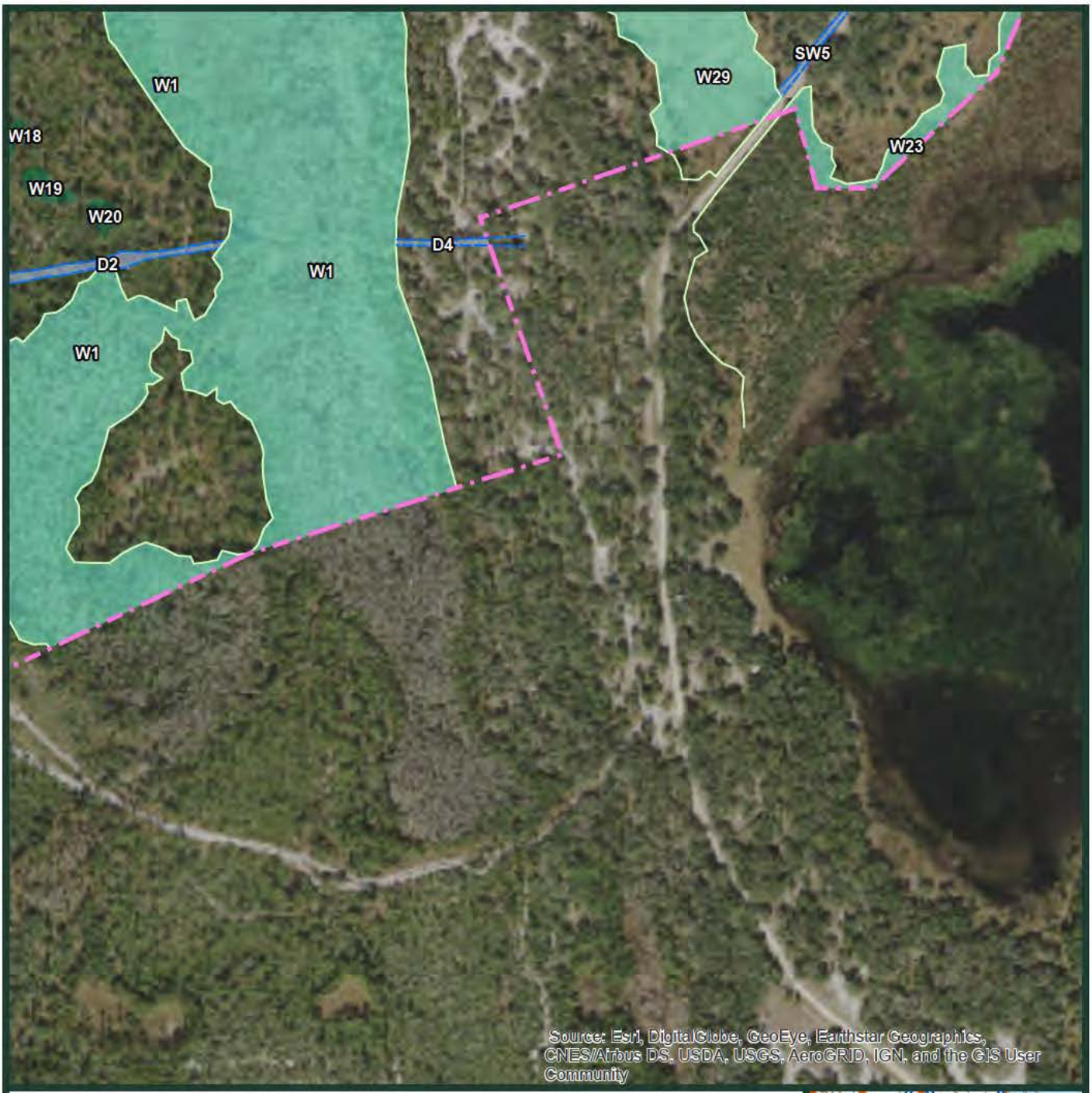

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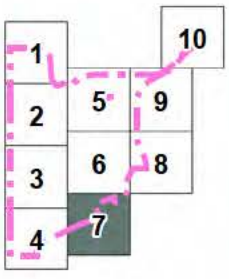

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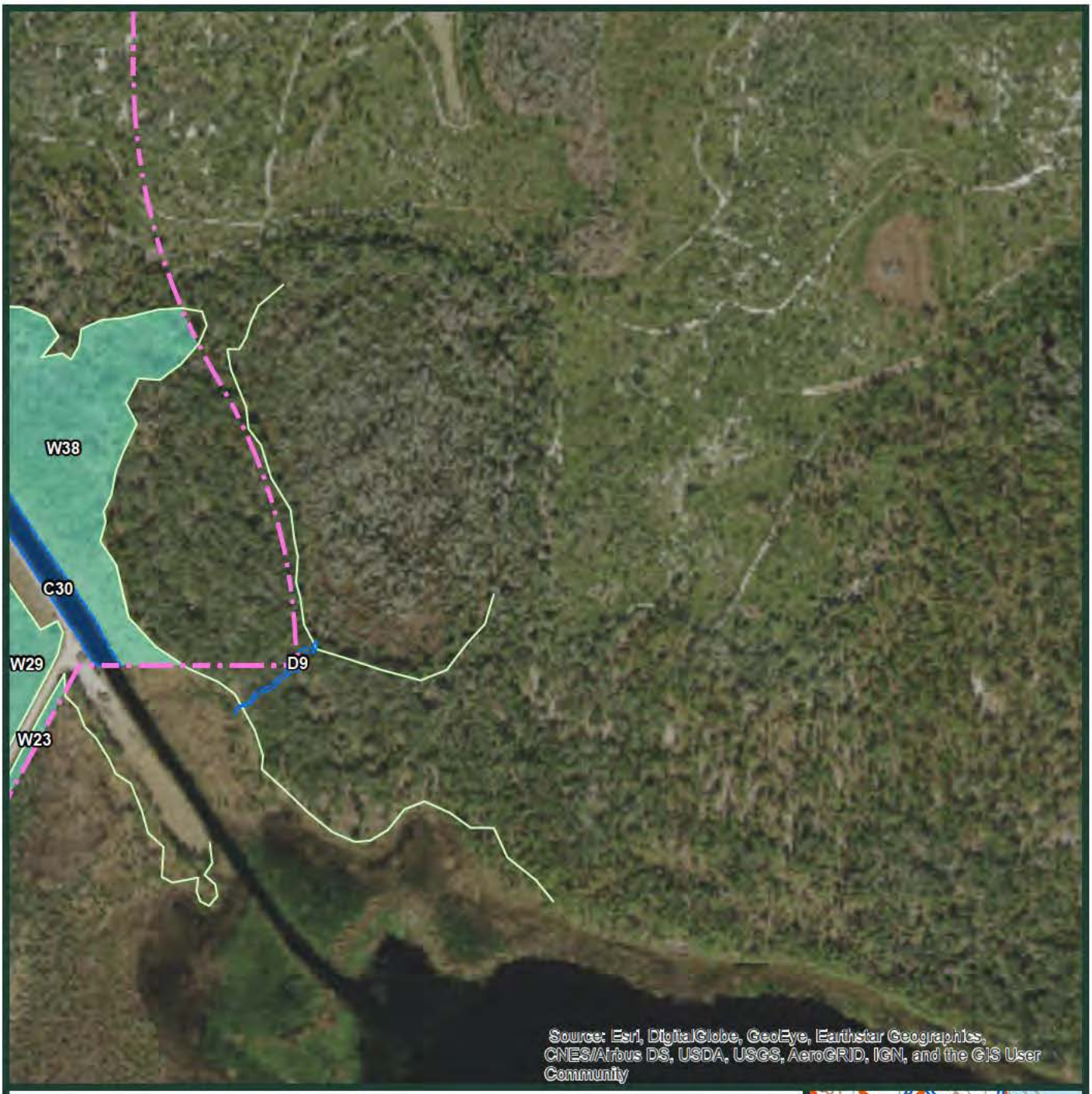

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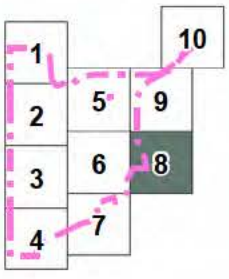

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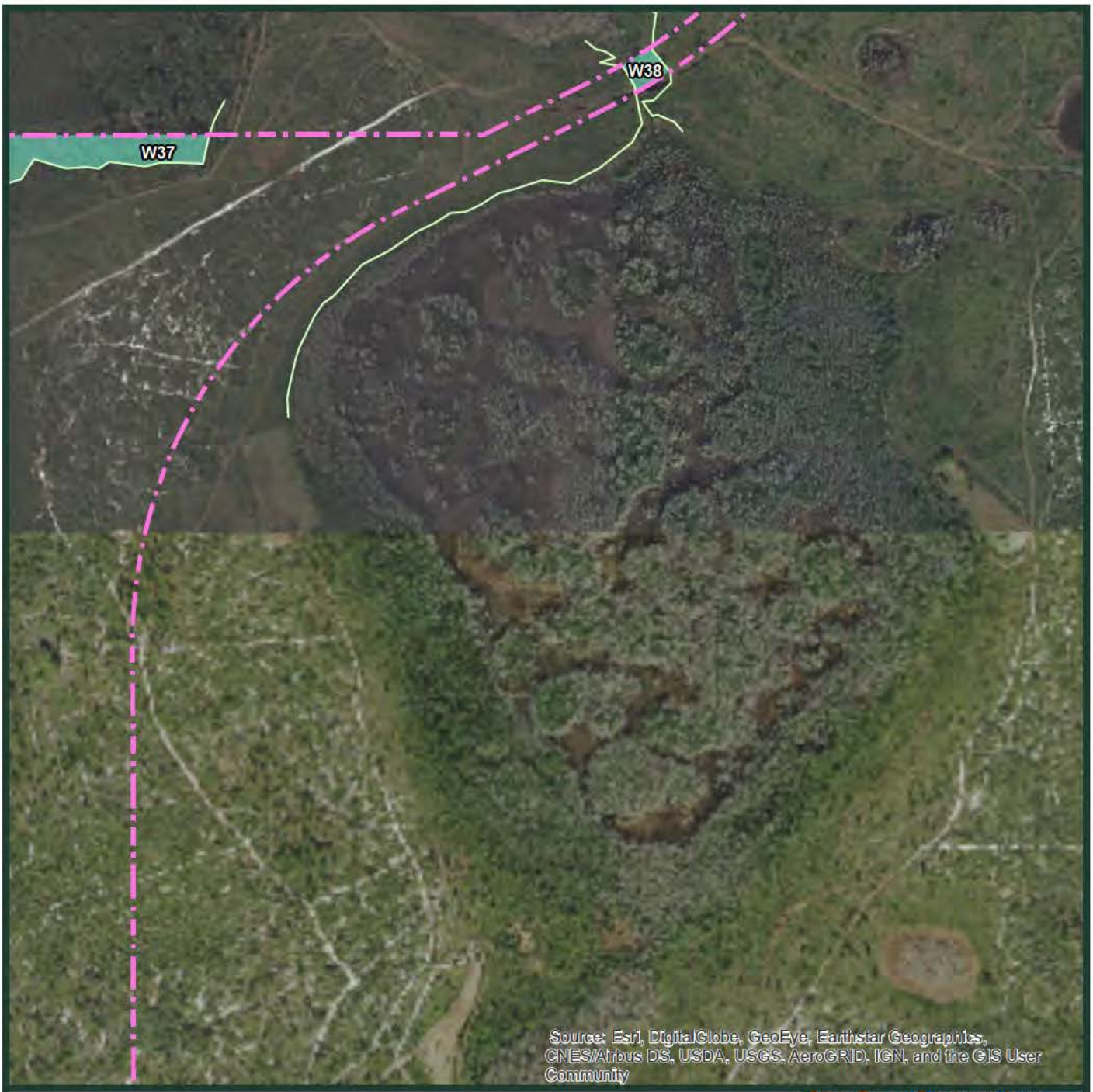

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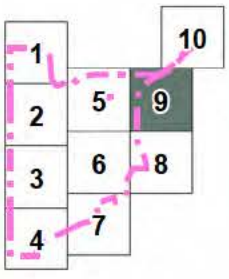

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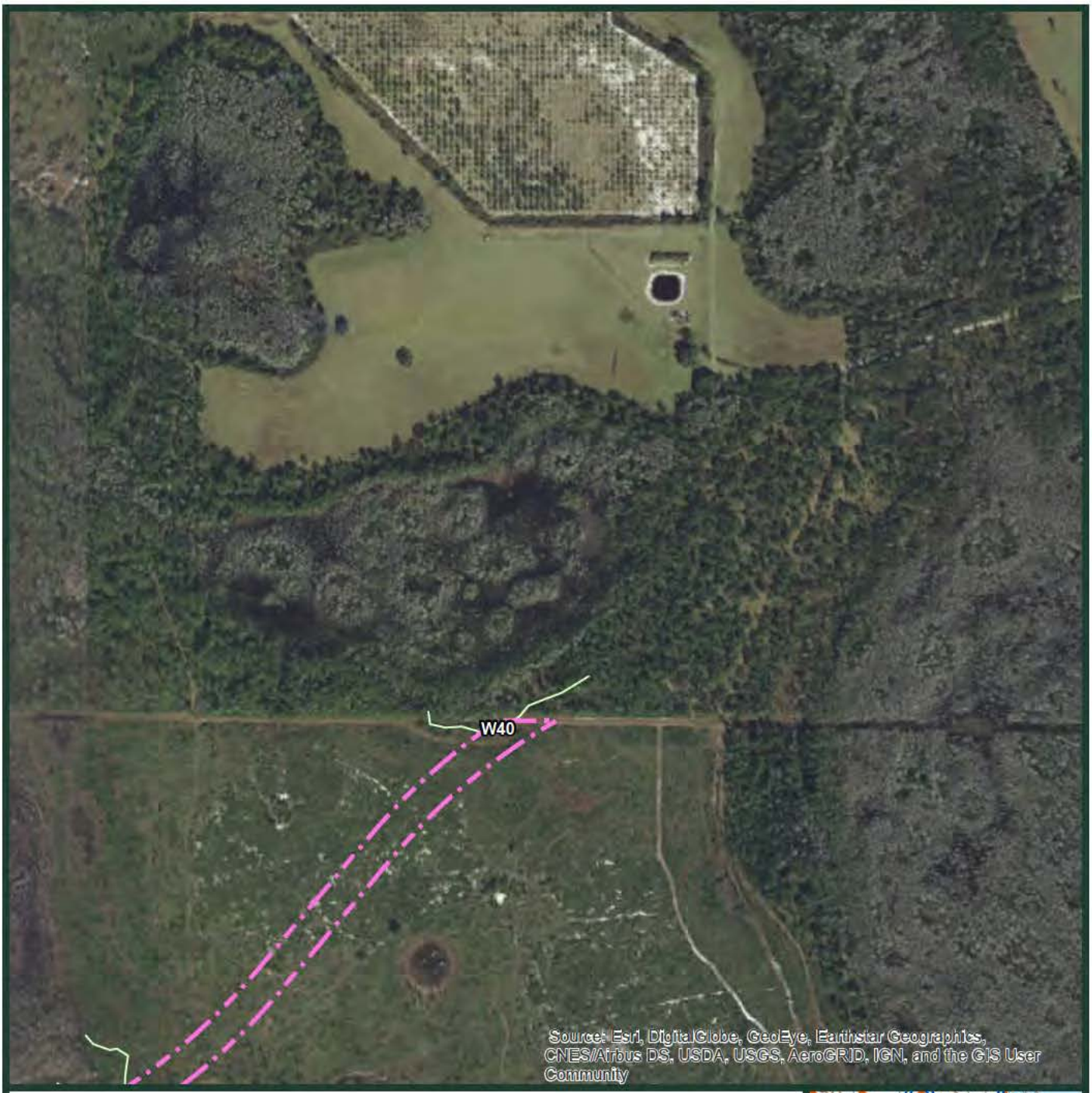

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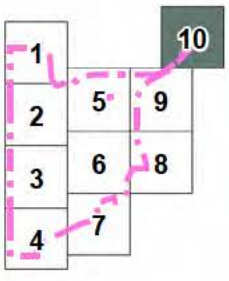

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