



June 8, 2022

Cindy Mulkey, Program Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400
Submitted electronically to: sco@floridadep.gov

Re: Response to First Determination of Completeness
FPL Sweatt-Whidden 230-kV Transmission Line Project
TLSA Application No. TA22-19
FDEP Case No. 22-1716
DOAH Case No. 22-1246TL

Dear Ms. Mulkey:

Florida Power & Light Company (FPL) is pleased to submit the enclosed documents in response to the Department's May 25th, 2022 First Determination of Completeness regarding the subject TLSA Application.

The responses are provided in question and answer format in the same sequence that was received in the Completeness Determination. Several written responses reference attachments, which are also included herein.

FPL looks forward to continuing to work with the Department during the TLSA application review process.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Franck Leblanc', is written over a horizontal line.

Franck Leblanc
Director Environmental Services

Enclosures:

Distribution List
Responses to Completeness Determination with Attachments 1-6

**FPL Sweatt-Whidden 230-kV Transmission Line TLISA (TA22-19)
Distribution List**

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FLORIDA POWER & LIGHT COMPANY
SWEATT-WHIDDEN 230-kV TRANSMISSION LINE
TLSA APPLICATION NO. TA22-19
FDEP CASE NO. 22-1716
DOAH CASE NO. 22-1246TL
RESPONSES TO COMPLETENESS DETERMINATION
JUNE 8, 2022

Agency comments and questions are listed below in **bold font**, and responses are provided in *italic font*. Questions for which answers will not be available until the post-certification phase of the certification process are identified, and the provided responses are reflective of information that is currently available. Those items believed to be more suitably handled through the post-certification submittal process are identified below.

I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

A. Siting Coordination Office

1. The Application does not include certification by a professional engineer registered in the State of Florida pursuant to Chapter 471, Florida Statutes (F.S.) and Rule 62-4.050(3), Florida Administrative Code (F.A.C.). Please submit the required certification.

Response:

Refer to Attachment 1 for the requested certification by a professional engineer.

2. Please provide an additional map showing the project location within the state of Florida (Inset Map).

Response:

Refer to Attachment 2 for a revised location map showing the project location within the state of Florida.

3. Only Figure 2-2 Map 1 (Map 1 of 35) shows an FPL Parcel Boundary as identified on the legend with a heavy black line. Are there any other FPL Parcel Boundaries on the other maps? If so, please identify more clearly.

Response:

Refer to Attachment 3 for a new map set showing all FPL-owned parcels along the Preferred Corridor. Specifically, the maps clearly identify a total of 6 FPL-owned parcels within the Preferred Corridor generally associated with FPL substations that are not part of this TLSA Application.

4. In Section 2.2.1 – Corridor Description of the Application it is stated that, “The width of the corridor ranges from 200 ft to approximately 5,150 ft at its widest point.” However, in the Sweatt substation to Basinger Substation corridor description (at the point just north of NW 184th St) the Application states, “...the corridor is reduced to approximately 50 ft on either side of road...”. In the actual Brighton to Childs Substation corridor description, the corridor width is described as approximately 5,190 ft. Please explain.

Response:

The Preferred Corridor is of variable width, and was developed to provide flexibility to address site specific considerations, generally described as being between 200 ft and 5,150 ft. In several locations the corridor was in fact further narrowed. With regards to the minimum width of the Preferred Corridor, the 200 ft referenced in Section 2.2.1 was an approximation. More specifically, at the point described just north of NW 184th Street, the corridor narrows to 50 ft on either side of the road right-of-way. Therefore, when adding in the road right-of-way, the Preferred Corridor width at this location is approximately 185 ft. The narrowest section of the Preferred Corridor is actually 170 ft and is found at a location along CR 724 where the Preferred Corridor is defined to include 50 ft on either side of the 70 ft road right-of-way along CR 724.

With regards the maximum width of the Preferred Corridor, the 5,150 ft referenced in Section 2.2.1 was an approximation, and should have been stated to be approximately 5,190 ft. At the point around Brighton, the limits of the Preferred Corridor were expanded to encompass various options including the potential relocation of the Brighton substation (not part of this application). The maximum width of the Preferred Corridor in this area is 5,190 ft, which does not exceed the 1-mile Preferred Corridor width limitation described in Chapter 403.522(10), F.S.

Therefore, a more accurate description of the range of widths for the Preferred Corridor is between 170 ft and 5,190 ft.

5. Regarding the Electric Magnetic Field (EMF) report, Cross Section 5 is labeled to represent a 15-foot-wide easement/right-of-way (ROW), however, the EMF report shows that field information was calculated using a 115-foot-wide ROW. Please explain or correct as necessary. Note that once a final ROW is determined, an EMF report must be submitted to demonstrate compliance prior to construction.

Response:

For the Cross Section 5, the EMF report assumes a one-hundred-foot road right-of-way plus a 15-foot wide easement on adjoining property for a total 115-foot-wide ROW. FPL will provide an updated EMF report prior to construction if any portion of the project varies from the locations assumed in the report.

6. Throughout the EMF report, a maximum current rating of 3,025 amperes (amps) is provided, however, Table 4-1 in the Application provides a maximum current rating of 3,205 amps. Please correct this inconsistency including updating your EMF report if necessary.

Response:

The maximum current rating of 3,025 amps shown in the EMF report is correct. Table 4-1 contains a scrivener's error and should have indicated 3,025 amps. Refer to Attachment 4 for a revised Table 4-1.

7. The EMF report lists Desoto, Highlands, and Okeechobee Counties for the location of proposed transmission line, but not Glades County. Please explain.

Response:

For the cross section shown in the EMF report, FPL made several assumptions regarding the location of the proposed transmission line in order to complete the assessment. Along State Road 70, FPL assumed the line will be constructed paralleling the existing FPL facilities. In the area where the corridor crosses into Glades County, FPL's existing facilities are located on the north side of State Road 70 in Highlands County. As such, FPL did not assume any placement of the proposed transmission line within Glades County, and thus no cross-section within Glades County has been developed. FPL will provide an updated EMF report prior to construction if any portion of the construction varies from the locations assumed in the report.

8. The Application mentions upgrades to two substations will be necessary for the new transmission line, as well as modifications to three other substations. Does FPL plan to permit all substations requiring upgrades or modifications independent of the Transmission Line Siting Act?

Response:

Yes, as stated in Sections 2.1.1 and 2.3 of the TLSA Application, substations are not being included for certification as part of this TLSA Application. All necessary local government and regulatory agency permits for future expansions (upgrades and modifications) to the existing substations will be obtained separately, consistent with Section 403.522(22), F.S.

9. In Section 2.4.3 – Easement, Title, Agency Works, the Application indicates that a crossing of the Kissimmee River will require an application for authorization to use state-owned submerged lands. Is FPL requesting this authorization to use state-owned submerged lands with this TLSA application? If not, when does FPL intend to make this request? Are there other state land authorizations potentially necessary?

Response:

Table 2-2, within Section 2.4.3 of the TLSA Application, identifies Kissimmee River and Fisheating Creek as two potentially affected sovereignty submerged lands. A determination of state lands and sovereignty submerged lands has been requested from FDEP's Division of State Lands which may identify additional state lands within the Preferred Corridor.

FPL is not requesting the authorization to use state-owned lands with this TLSA Application at this time. FPL is currently unable to specifically identify the proposed location of the final right-of-way in state-owned lands. FPL intends to apply for and obtain the required authorizations to use state lands upon

finalizing the design of the project, which will be during the post-certification review process after the certification proceeding, pursuant to Chapter 403.531(3)(b), F.S. FPL's approach is consistent with prior TLSA projects, in which a proposed transmission line corridor was certified subject to obtaining any necessary state-lands approvals during post-certification review. (See, e.g., OUC St. Cloud East-Magnolia Ranch North 230kV Certification Final Order para. 11 and Condition of Certification #XVII; FPL Duval-Raven 230kV Certification Final Order para. 43 and Condition of Certification #XVI; TECO Willow Oak-Wheeler-Davis 230kV Certification Final Order pp. 1-2 and Condition of Certification #XIII; and FPL Bobwhite-Manatee 230kV Certification Final Order pp. 19-20 and Conditions of Certification #XIII and XVIII(B)).

10. Please provide the total acreage of wetlands within the proposed corridor.

Response:

Refer to Table 2-4 in Section 2.5 of the TLSA Application which identifies approximately 410.39 acres of wetlands within the Preferred Corridor. This acreage is based on available desktop data and has not been field-verified. This information is classified using FDOT's Florida Land Use, Cover and Forms Classification System (FLUCFCS) utilizing data obtained from SWFWMD and SFWMD (2021).

As discussed in Section 3.1.1.2 of the TLSA Application, FPL's corridor selection process avoided and minimized wetlands within the study area and within the Preferred Corridor, to the extent practicable. In addition, FPL will avoid and minimize impacts to wetlands in the design of the proposed transmission line, to the extent practicable. FPL will demonstrate compliance with these requirements during the post-certification review. Thus, FPL anticipates the impacted wetland acreage associated with the proposed transmission line to be substantially lower than the total amount of wetland acreage within the Preferred Corridor.

11. In Section 3.4, the Application states, "Approximately 79 miles (approximately 98 percent) of the Preferred Corridor include the opportunity to locate within or adjacent to existing road rights-of way." To date, approximately how many miles of collocation with existing road rights-of-way has FPL secured? What percentage of the 79 miles does FPL anticipate being able to locate within or adjacent to existing road rights-of way.

Response:

At this time, the proposed transmission line right-of-way and design have not been developed; these details will be developed after the corridor is certified and narrowed to a specific right-of-way during post-certification review. To date, FPL has not initiated right-of-way acquisition for the Sweatt-Whidden 230-kV Transmission Line and is not able to identify the percentage of the transmission line that would be located within or adjacent to roads right-of-way. FPL's practice is to co-locate electrical facilities along other linear infrastructure where practicable.

B. Southeast District – ERP & Stormwater

1. The Department requires a conceptual layout of the Project and associated wetland and other surface water impacts that show direct, secondary, permanent and temporary impacts to the biological communities each identified according to Florida Land Use Cover and Forms Classification System (FLUCCS) codes. Areas of potential wetland, and other surface water dredging and filling, should be indicated by hatching and/or crosshatching. [Ch. 62-330.060, F.A.C.]

Response:

FPL will comply with all applicable requirements of Chapter 62-330, F.A.C. FPL has not selected a specific right-of-way or transmission line design at this time. Detailed information showing the project layout with clear identification of wetland and other surface water direct, secondary, permanent and temporary impacts will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

2. Please demonstrate that the proposed project meets the requirements of Section 10.2.1 of the Applicant's Handbook Volume I (Vol. I) with regard to the elimination or reduction of wetland and other surface water impacts. Any unavoidable wetland impacts will require submittal of a detailed mitigation proposal that provides adequate compensation for wetland and other surface water impacts in accordance with the requirements of Section 10.3, Vol. I. In addition, please include an estimation of credits for functional loss to determine the extent of potential wetland and other surface water impacts associated with the proposed activity. [Ch. 62-330.060, F.A.C.]

Response:

As provided in Table 2-4 of Section 2.5 of the TLSA Application, the total amount of wetlands within the Preferred Corridor is 410.39 acres. This acreage is based on available desktop data and has not been field-verified. FPL will mitigate for unavoidable wetland impacts associated with the project.

FPL has not selected a specific right-of-way or transmission line design at this time. Thus, there is no design-level information available to gauge where wetland impacts might occur; further, the location and quality of wetlands have not been field verified.

In order to respond to the question, FPL was instructed by FDEP to assess impacts based on the total amount of wetlands within the Preferred Corridor (identified in Table 2-4 of the Application as approximately 410.39 acres). For this reason, this analysis is overly conservative, no specific right-of-way is assumed, and assumes an unrealistic worst-case scenario that will not occur. As such, this analysis is not representative of potential actual impacts in the final location of the right-of-way, which will contain far fewer wetlands and have far less functional loss than is conceptualized in Attachment 5.

Additionally, the actual impacts will be substantially lower due to FPL's commitment to avoid and minimize wetlands. Since FPL is unable to specifically identify the types of impacts, FPL had to make a number of assumptions regarding the type of impacts to wetlands. These assumptions are overly conservative and are

not representative of actual potential impacts of the proposed transmission line. This analysis is provided in table format as Attachment 5.

Detailed information with regards to the elimination or reduction of wetland and surface water impacts including total wetland impacts and proposed mitigation for unavoidable wetland impacts will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

3. Pursuant to Sections 10.2.7 and 10.2.8, Vol. I, please demonstrate in detail how the proposed project will not result in unacceptable secondary or cumulative impacts to wetlands and other surface waters.

Response:

FPL will comply with all applicable requirements of Chapter 62-330, F.A.C., and the Applicant's Handbook. FPL has not selected a specific right-of-way or transmission line design at this time. The project will be designed, constructed, and operated in a manner to avoid and minimize unacceptable secondary or cumulative impacts to wetlands and other surface waters. Sections 3.1.1.2 and 3.4.1 of the TLSA Application outlines some of FPL's commitments to avoid and minimize impacts to wetlands associated with the proposed transmission line. Detailed information demonstrating how the project will not result in unacceptable secondary or cumulative impacts to wetlands and other surface waters will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

4. Please clarify the duration of use of temporary construction matting within wetlands. [Ch. 62-330.060, F.A.C.]

Response:

FPL will comply with applicable requirements of Chapter 62-330, F.A.C., including the requirement that temporary construction mats shall be installed where needed and removed as soon as practicable after equipment has completed passage through, or work has been completed, at each location along the alignment of the project. FPL has not selected a specific right-of-way or designed the transmission line at this time. Detailed information regarding the duration of use of temporary construction matting within wetlands will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

5. Staff cannot determine if the proposed project will result in any adverse impacts to other surface waters because a benthic resource survey was not submitted. Please provide a detailed description of the submerged land characteristics within all proposed surface waters. If the area contains submerged or emergent vegetation, or other valuable resources, include a map which indicates the location of those resources. If resources are found within the footprint of the proposed project, please

demonstrate that you have implemented practicable design modifications to avoid these resources or revise your project to avoid adverse impacts to these resources. Mitigation for unavoidable adverse impacts may be considered once impacts have been reduced to the furthest extent practicable. If mitigation is required, please submit a detailed mitigation plan that adequately offsets all adverse impacts to other surface waters. [Chapters 62-330.301 & 62-330.302, F.A.C.; Sections 10.2.1 & 10.3, Vol. I]

Response:

FPL will comply with all applicable requirements of Chapter 62-330, F.A.C., and the Applicant's Handbook. FPL has not selected a specific right-of-way or transmission line design at this time. During the design process, FPL will implement practicable design modifications to avoid and minimize adverse impacts to benthic resources. Detailed information identifying the location of and impacts (if any) along with mitigation for unavoidable impacts to benthic resources within surface waters will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

6. Please contact the Department to arrange a field inspection to verify wetland and other surface water boundaries and site conditions. Prior to field inspection, wetland and other surface water boundaries shall be field staked or flagged for DEP staff verification and approval. Additional information regarding wetlands and surface waters, including direct, secondary, cumulative impacts and mitigation information may be required, pending outcome of a site visit. [Section 10.2, Vol. I]

Response:

FPL will comply with all applicable requirements of the Applicant's Handbook. FPL has not selected a specific right-of-way or designed the transmission line at this time. Project specific design details will not be developed until the corridor is certified and narrowed to a specific right-of-way during post-certification review. Therefore, FPL will conduct wetland delineation surveys and coordinate field inspections with appropriate agency staff during the post-certification review process.

Further, detailed information identifying the location of and impacts to wetlands and surface waters along with mitigation information (if required) for unavoidable impacts to wetlands and surface waters will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

7. Please provide typical cross-sectional diagrams showing the transition from the construction area into adjacent wetlands. Provide details of slope grades, location of erosion and turbidity control devices, location of limits of construction, and methods and timing of slope stabilization and revegetation. [Ch. 62-330.060, F.A.C.]

Response:

FPL will comply with all applicable requirements of Ch. 62-330, F.A.C. FPL has not selected a specific right-of way or designed the transmission line at this time. Thus, no cross-sectional diagrams have been developed.. Detailed information including cross-sectional diagrams showing the transition from the construction area into adjacent wetlands, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

8. Please provide reasonable assurance that the regulated activity will not cause or contribute to violations of water quality standards. Please include the location of turbidity and erosion control devices on the plans and describe the proposed methodology for ensuring the project will not result in adverse short-term impacts to water quality. [Section 10.2.4, Vol. I]

Response:

FPL will comply with all applicable requirements of the Applicant's Handbook. The project will be designed, constructed, and operated in a manner to not cause or contribute to violations of water quality standards. As discussed in Sections 3.1.1 and 3.1.1.2 of the TLSA Application, appropriate erosion control devices will be installed and maintained along the limits of areas authorized to be dredged or filled. FPL has not selected a specific right-of way or designed the transmission line at this time. Detailed information, including the location of turbidity and erosion control devices and a description of the proposed methodology for ensuring the project will not result in adverse short-term impacts to water quality will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

9. The application states that special circumstances could require nighttime constructions activities. Please note that all proposed dredging and filling activities within other surface waters shall be limited to daylight, as turbidity plumes are not visible at night. Please revise the application, accordingly, to address this. [Section 10.2.4, Vol. I]

Response:

Project specific construction details, including special circumstances that could require nighttime construction, have not been developed. However, FPL will ensure that construction activities will not cause an exceedance of applicable water quality standards. Specific information will be provided as part of FPL's post-certification condition requirements once a right-of-way has been selected and transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

10. Please submit a construction sequence schedule for all activities associated with this project. The schedule should include, at a minimum, details on phases of vegetation clearing, installation of erosion and turbidity control devices, dredging, filling, slope stabilization and replanting. [Ch. 62-330.060(2), F.A.C.]

Response:

FPL has not selected a specific right-of way or designed the transmission line at this time. As part of post-certification, all information required by 62-330, F.A.C. will be provided. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

11. The application states that the proposed transmission line will traverse a Conservation 1 future land use category. Please specify what conservation areas may be affected by the proposed transmission line. How will the project avoid impacts to any conservation easement areas? [Ch. 62-330.301, F.A.C.]

Response:

Local government future land use categories are discussed in Section 2.4.2.2 of the TLSA Application, and conservation easements identified to date are listed in Table 2-2 of the TLSA Application. Once the corridor is certified and the right-of-way is selected, additional conservation easements may be identified as FPL begins right-of-way acquisition. Therefore, project impacts to conservation easement areas will be identified in the post-certification review process along with applicable avoidance, minimization, and mitigation requirements as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

12. Department staff recommends that the applicant coordinate with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service for appropriate guidance, recommendations and/or necessary federal permits to avoid impacts to the abundance and diversity of wildlife, including listed species and the habitat of listed species. [Section 10.2.2, Vol. I]

Response:

Acknowledged. FPL will continue coordination with the appropriate agencies regarding wildlife, including listed species and the habitat of listed species. FPL notes that Florida Fish and Wildlife Conservation Commission is a reviewing agency in the TLSA process and has provided comments.

13. Portions of the proposed transmission line may be located in, on, or over sovereignty submerged lands, and therefore require state lands authorization in the form of a public easement. Please clarify FPL's intention of obtaining these easements.

Response:

Table 2-2, within Section 2.4.3 of the TLSA Application, identifies Kissimmee River and Fisheating Creek as two potentially affected sovereignty submerged lands. A determination of state lands and sovereignty submerged lands has been requested from FDEP's Division of State Lands which may identify additional state lands within the Preferred Corridor.

FPL is not requesting the authorization to use state-owned lands with this TLSA Application at this time. FPL is currently unable to specifically identify the proposed location of the final right-of-way in state-owned lands. FPL intends to apply for and obtain the required authorizations to use state lands upon finalizing the design of the project, which will be during the post-certification review process after the

certification proceeding, pursuant to Chapter 403.531(3)(b), F.S. FPL's approach is consistent with prior TLSA projects, in which a proposed transmission line corridor was certified subject to obtaining any necessary state lands approvals during post-certification review. (See, e.g., OUC St. Cloud East-Magnolia Ranch North 230kV Certification Final Order para. 11 and Condition of Certification #XVII; FPL Duval-Raven 230kV Certification Final Order para. 43 and Condition of Certification #XVI; TECO Willow Oak-Wheeler-Davis 230kV Certification Final Order pp. 1-2 and Condition of Certification #XIII; and FPL Bobwhite-Manatee 230kV Certification Final Order pp. 19-20 and Conditions of Certification #XIII and XVIII(B)).

14. Please provide appropriate hydrologic studies to evaluate runoff characteristics for culvert crossings and access road designs.

Response:

FPL has not selected a specific right-of way or designed the transmission line at this time. There are no known culvert crossings or locations needing access roads that have been identified to date.. Detailed information, including hydrologic studies evaluating runoff characteristics for culvert crossings and access road designs, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

15. Provide details and cross sections of the transmission line crossing at the Kissimmee River.

Response:

FPL has not selected a specific right-of way or designed the transmission line at this time. The details needed to design the Kissimmee River crossing (i.e., which side of the road, unidentified conflicts) are not yet known. Detailed information, including cross sections of the transmission line crossing at the Kissimmee River, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

16. Please demonstrate the no-net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100-year event, which will adversely affect the existing rights of others [Section 3.6, Applicant Handbook II].

Response:

FPL has not selected a specific right-of way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. Detailed information demonstrating no-net encroachment into the floodplain will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

17. Please demonstrate that onsite works such as swales and dikes shall be used to allow the passage of drainage from offsite areas to downstream areas [Section 3.8, Applicant Handbook II]

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. The project will be designed, constructed, and operated in a manner that maintains passage of drainage from offsite areas to downstream areas. Detailed information demonstrating whether onsite swales and dikes will be used to allow passage of drainage from offsite areas to downstream areas will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

18. Provide reasonable assurance that state water quality standards within surface water and wetlands will not be violated during construction and land clearing activities. Prepare and submit a detailed erosion and sediment control plan for the project area served by the system and offsite lands, where applicable [Chapter 62-40.432(2), F.A.C. Applicant's Handbook Volume I and Section 4.1.2, Applicant Handbook II].

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of Ch. 62-40 and the Applicant's Handbook. The project will be designed and constructed in a manner to not cause violations of water quality standards during construction and land clearing activities. Detailed information, including a detailed erosion and sediment control plan, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

19. Provide a description of the proposed stormwater treatment methodology for existing and proposed paved and unpaved access roads, temporary or permanent, and impervious areas of the monopoles [62-330.301(1)(a),(b),(c),(e), F.A.C. & Applicant Handbook, Vol. II]

Response:

FPL has not selected a specific right-of-way or designed the transmission line or proposed access roads (if any) at this time. FPL will comply with all applicable requirements of Ch. 62-330 and the Applicant's Handbook. Detailed information describing proposed stormwater treatment methodology for existing and proposed paved and unpaved access roads, temporary or permanent, and impervious areas of the monopoles, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

20. If any associated land agreements are required to implement the proposed activities, such as flowage easements across lands not owned by the applicant, provide drafts of all stormwater management system easements and plats or the property containing the proposed system [62-330.301(1)(a),(b),(c),(e), F.A.C. & Applicant Handbook, Vol. II].

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of Ch. 62-330 and the Applicant's Handbook. Project specific design details, including the need for stormwater management systems, will be identified and developed after the corridor is certified and narrowed to a specific right-of-way during post-certification review. Therefore, property rights related to stormwater management system will be addressed as a post-certification submittal, if applicable.

21. The submittal indicated that one of the maintenance techniques is the use of approved herbicides. The proposed corridor traverses freshwater herbaceous and forested wetland habitats and serves as the wildlife habitat for small burrowing mammals, reptiles, amphibians, mammals, resident birds or migratory species. Please formulate and propose an herbicide management and application plan taking into account stormwater runoff, the distance to nearby surface water, wetlands and sensitive areas. [62- 330.301(1)(d), F.A.C.]

Response:

FPL's typical herbicide management plan utilizes multiple control methods to effectively control non-compatible vegetation on its rights-of-way. These control methods include foliar herbicide application, basal bark application and cut stump application. The control method selected in an area is based on using the herbicide with the lowest environmental impact along with providing effective control of the targeted vegetation.

In sensitive habitats, FPL identifies the type of sensitive habitat, the plant or animal species to be protected, and uses the proper herbicide application method to protect the sensitive species of concern. In wetlands and other areas where water is present, or where stormwater runoff can present a risk to nearby surface water, FPL uses only EPA-approved products labeled for aquatic habitats and follows the label requirements when applying herbicides. Also, herbicide applications in aquatic sites are applied as spot treatments on individual stems only. FPL is committed to the proper use of these products by a state certified herbicide applicator to control non-compatible vegetation without harming life in the aquatic environment.

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of Ch. 62-330, F.A.C. A project specific herbicide management and application plan taking into account stormwater runoff, the distance to nearby surface water, wetlands and sensitive areas, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

C. FDEP South District

1. Solid Waste: Please provide the methods of processing and disposal of land clearing debris and any other solid waste generated by the project. [Rules 62-701.300 and 62-709.300(7), F.A.C.]

Response:

Methods of processing and disposing of solid waste are described in Section 3.3 of the TLSA Application.

Solid waste generated from transmission line right-of-way preparation and line construction typically consists of cleared vegetation and construction-related debris. Solid waste will be collected and removed for disposal in compliance with state and local solid waste regulations. Proposed onsite chipping or burning of vegetation will be performed in compliance with state and local regulations. The quantity of solid waste generated will depend upon site-specific characteristics of the area being cleared.

Land clearing debris will either be mulched or burned in uplands onsite and/or handled off-site according to applicable regulations.

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of Ch. 62-701 and 62-709. Additional details regarding land clearing debris and any other solid waste management will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

2. Potable Water: Please provide an evaluation of the impact of the project on the public water supply area, shown on Figure 2-4, Map 25 of 39. [Rule 62-520.310(10), F.A.C.]

Response:

Please note that FPL facilities currently exist in, on, or over the public water supply area shown in the referenced figure; and although the project design is not complete, FPL will design, construct and operate the project in a manner to not impact public water supply. FPL will comply with all applicable requirements of Rule 62-520, F.A.C. Information demonstrating that the proposed transmission line does not impact the public water supply area will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

3. Erosion and Sedimentation Control: Please provide an Erosion and Sediment Control Plan. Include the potential staging areas in your plan. [Applicant's Handbook, Volume I, Part IV] Please be aware, hay bales are not accepted as a means of sediment control. (See Section 3.4.3 of the application and Section V, Page 1 of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, latest edition.)

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. Detailed information, including an Erosion and Sediment Control Plan for all project areas including staging areas, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way

has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

FPL acknowledges that hay bales are not to be used as a means of sediment control.

4. Permanent Stormwater Management: Note: the corridors are mostly in the geographic boundaries of the South Florida Water Management District. The Town of Lake Placid and all of Desoto County are within the Southwest Florida Water Management District's limits. The portions of the project that transect the Kissimmee River Basin have additional restrictions established by Rule 40E-41, F.A.C.

- a. Please provide locations and dimensions of all potential access roads and structure pads. Please indicate whether the roads and pads will be impervious or semi-impervious. [Applicant's Handbook, Volume II, Section 4.7 (SWFMD), and Section 5.6 (SWFWMD)]**

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. Detailed information, including locations and dimensions of all potential access roads and structure pads, either impervious or semi-impervious, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

- b. Please provide design and calculations for stormwater treatment systems to serve every potentially permanent road and pad. Please be aware that several waterbody drainage basins along the preferred corridor in Okeechobee, Highlands, and Glades Counties are not meeting water quality standards for nutrients. The Lake Placid Outlet waterbody (WBID 1938Y) is impaired for copper. FPL will need to demonstrate the activity does not contribute to the impairments or the activity provides a net improvement. [Applicant's Handbook, Volume I, Section 8.2.3]**

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. Detailed information, including design and calculations for stormwater treatment systems to serve each permanent road and pad in the various drainage basins, will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

Further, FPL acknowledges that several drainage basins do not currently meet water quality standards for nutrients and Lake Placid Outlet waterbody is impaired for copper. FPL also acknowledges the requirement to demonstrate that its activities will not contribute to the impairments or that the activities provide a net improvement to the impairment.

5. Floodplain Compensation:

Please provide design and calculations for floodplain compensation for potential floodplain encroachment. [Applicant's Handbook, Volume II, Section 3.6 (SFWMD), and Section 3.3 (SWFWMD)]

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. FPL will comply with all applicable requirements of the Applicant's Handbook. Detailed information, including design and calculations for floodplain compensation for potential floodplain encroachment will be provided to FDEP as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

D. State Lands

In Section 2.4.3 – Easement, Title, Agency Works, the Application indicates that a crossing of the Kissimmee River will require an application for authorization to use state-owned submerged lands. Coordination with the Land Managers are required before submittal of an application for easement. It is recommended to do so as early in the process as possible. Per Statutes, FPL is required to find replacement lands in exchange for any impacts caused by construction.

Response:

Table 2-2, within Section 2.4.3 of the TLSA Application, identifies Kissimmee River and Fisheating Creek as two potentially affected sovereignty submerged lands. Additionally, Lake Wales Ridge Wildlife and Environmental Area and Kissimmee River were identified as two potentially affected state-owned uplands. A determination of state lands and sovereignty submerged lands has been requested from FDEP's Division of State Lands, which may identify additional state lands within the Preferred Corridor.

Once all the state lands have been identified through the state lands title determination and the location of the final right-of-way has been identified, FPL will initiate the steps necessary to obtain the required state lands authorizations which will include coordinating with applicable Land Managers to determine suitable replacement lands and/or other net positive benefits as required by Chapter 253, Florida Statutes, and the Use of Natural Resource Lands by Linear Facilities Policy, dated January 23, 1996.

FPL is not requesting the authorization to use state-owned lands with this TLSA Application at this time. FPL is currently unable to specifically identify the proposed location of the final right-of-way in state-owned lands. FPL intends to apply for and obtain the required authorizations to use state lands upon finalizing the design of the project, which will be during the post-certification review process after the certification proceeding, pursuant to Chapter 403.531(3)(b), F.S. FPL's approach is consistent with prior TLSA projects, in which a proposed transmission line corridor was certified subject to obtaining any necessary state lands approvals during post-certification review. (See, e.g., OUC St. Cloud East-Magnolia Ranch North 230kV Certification Final Order para. 11 and Condition of Certification #XVII; FPL Duval-Raven 230kV Certification Final Order para. 43 and Condition of Certification #XVI; TECO Willow Oak-Wheeler-Davis 230kV Certification Final Order pp. 1-2 and Condition of Certification #XIII; and FPL

II. DEPARTMENT OF STATE - DIVISION OF HISTORICAL RESOURCES (DHR)

1. Due to the extended linear nature of this project, DHR requests the applicant address how the project will affect previously identified cultural resources as well as the potential for the project to affect unidentified cultural resources within the project area. To best fulfill this request, we recommend the applicant complete a desktop analysis report considering the potential impact to cultural resources from the project as well as the need for a more thorough cultural resources assessment survey for the project area. The desktop analysis should be completed by a professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards and conform to the provisions of Chapter 1A-46, F.A.C.

Response:

Attachment 6 includes the requested desktop analysis report completed by a qualified professional archaeologist (Janus Research) meeting the Secretaries of the Interior's Standards (36 CFR Part 61, Appendix A). The report includes previously identified cultural resources and the probability of identifying any additional cultural resources within the Preferred Corridor. After the corridor is certified and narrowed to a specific right-of-way, a more detailed cultural resource assessment survey will be completed and provided to the Division of Historical Resources (DHR) for review. This report will identify all cultural resources within the Project's Area of Potential Effects and provide recommendations for the National Register of Historic Places eligibility of these resources. Unavoidable affects to cultural resources (if any) and mitigation measures to be implemented during design of the project to protect historic properties will be discussed with DHR and included in a Memorandum of Agreement or Programmatic Agreement, if necessary.

The attached desktop analysis report reflects redacted maps because the locations of potential historical and cultural resources are protected from public disclosure pursuant to Section 267.135, F.S. (Location of Archeological Sites) and Section 304 of the National Historic Preservation Act. An unredacted version of the desktop analyses report has been submitted directly to DHR.

2. In addition, DHR would like to request information on any concerns or requests received by FPL from the Seminole and Miccosukee Tribes of Florida as they relate to potential effects on cultural resources.

Response:

The project has been discussed with the Seminole and Miccosukee Tribes of Florida. The Miccosukee Tribe had no further comment after the project introduction on March 9th, 2022. The Seminole Tribe agreed to a June 13, 2022, meeting via WebEx to review the corridor and provide initial feedback. FPL is committed to work closely with the Tribes throughout the corridor certification process and thereafter through construction.

III. SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

1. Does FPL plan any parallel run transmission lines within any SFWMD right of ways associated with this project? Under current SFWMD rules, specifically Rule 40E-6.091(1), F.A.C, parallel runs of transmission lines are expressly prohibited within SFWMD right of ways.

Response:

FPL will comply with all applicable regulatory requirements of the SFWMD, including those of Rule 40E-6.091. FPL agrees that the project will be designed in a manner that does not propose any parallel run of the transmission line within SFWMD canal rights-of-way.

2. Please advise if any transmission line structures are proposed within District right of way. If so, please provide documentation showing the proposed location(s) and the distance for such structures from top of bank.

Response:

FPL has not selected a specific right-of-way or designed the transmission line at this time. Detailed information, including documentation showing the proposed locations(s) and the distance for such structures from the top of bank, will be provided to FDEP and SFWMD as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S.

IV. FLORIDA DEPARTMENT OF TRANSPORTATION (DOT)

FPL provided a KMZ file to DOT showing the Sweatt-Whidden Routes. DOT District 1 reviewed that KMZ file and overlayed it with KMZ files produced by DOT.

- 1. The KMZ files were compared to the adopted and tentative DOT work which identifies upcoming DOT efforts from planning to project development and environment (PD&E) study through design, right of way (ROW), construction and maintenance.**

DOT developed a spreadsheet, by gathering input from various project managers, to understand anticipated ROW needs for DOT projects. Some projects do not need ROWs while in other cases, there is insufficient analysis to determine whether ROWs will be needed. At this time, DOT currently has approximately 21 adopted projects, 6 SUN Trail projects, and 19 tentative projects underway where the proposed corridor is located.

- a. For the PD&E studies, DOT cannot predetermine the outcome by recommending widening to one side or the other. During the PD&E study process, federal environmental law requires that DOT "consider all possible alternatives" and seeks input on those alternatives throughout the study. One of the alternatives is referred to as a No Build Alternative which means that the improvements to the roadway or other transportation infrastructure would not be selected as the outcome of the PD&E study so FDOT would take no further action (other than maintenance or other unrelated planned projects).**

While the PD&E study is underway, DOT does not know what the final recommendation will be and as such does not know if any widening in any direction would be necessary. In such a case, the PD&E study has not established ROW needs since the alternatives have not been fully analyzed and an infrastructure solution has not been selected.

State Road 70 presents a unique situation since enough analysis has been done on soils to indicate that a new alignment would be needed if an infrastructure improvement were to be selected as an outcome of the study. Initial research also indicates that the existing ROW widths would be insufficient if an infrastructure improvement were to be selected as an outcome of the study. Engineers have estimated that any infrastructure improvement may require somewhere between 200' and 220' to address soils, drainage, and the like.

- b. DOT has a Strategic Intermodal System (SIS) plan that identifies the purposes for various facilities throughout the state of Florida. These facilities are strategic investments made in the state transportation system. In the case of State Road 70, US 27 and the others identified in the spreadsheet developed by DOT, the facilities provide evacuation routes during significant storm events. Could such events lead to downed powerlines? If so, this possible conflict with evacuees would present a concern for DOT since safety is the first priority.**
- c. Most of SR 70 existing ROW is too narrow and muck soils present an issue.**
- d. Anticipated DOT ROW needs for SR 70 may be as wide as 220 feet.**
- e. Existing and proposed electric substations are generally located too close to the edge of DOT right of way (a setback of 80 to 100 feet is desirable). More in some locations to maintain continuous power service if there is a capacity project where additional right-of-way is needed.**
- f. Existing and proposed poles are generally too close to the edge of DOT right of way (a setback of 70 to 100 feet is desirable).**
- g. The suggested setbacks provide for safe vehicle operations, enhanced maintenance of traffic, and continuity of electric service in rural areas during and after DOT construction for capacity improvements**

Response:

FPL has received and is aware of the FDOT's plans described, including those for SR70, and will work with FDOT to coordinate those plans with this project. With respect to evacuation routes and any safety concerns, FPL will comply with all regulatory requirements and will work with FDOT consistent with the

Utility Accommodation Manual and past practice with the proposed transmission line facilities, and will provide the documentation to demonstrate compliance as a condition of certification.

- 2. Comments related to anticipated opportunities to collaborate:**
 - a. Environmental coordination regarding protected species and their habitat(s)**
 - b. Proposed improvements seem to be collocated with strategic investments for District 1**
 - i. Certain areas have muck soils and extensive canals**
 - ii. FGT is already located in some segments**
 - iii. The relationship between FPL utilities and FGT utilities is noteworthy and perhaps worth additional discussion**
 - c. Shared Use Paths (SUPs) are one area where FPL and DOT could coordinate to potentially reduce the footprint of improvements.**
 - d. Provision of power for certain rural DOT signals could provide an opportunity for further discussion**
 - e. Proposed SR 70 solutions could be worthy of additional discussions**

Response:

FPL will work with FDOT and the regulatory agencies to address protected species and habitat, canals, wetlands and other environmental resources. FPL is also collaborating with other linear utilities, such as FGT, and will remain in communication with FDOT as the project moves forward.

FPL has not selected a specific right-of-way or designed the transmission line at this time. Detailed information will be provided to FDOT as part of FPL's post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S.

Attachment 1

TLSA Application Cover Page
Signed by Professional Engineer



Sweatt-Whidden 230-kV Transmission Project

**Transmission Line Siting Act Application
No. TA22-19**



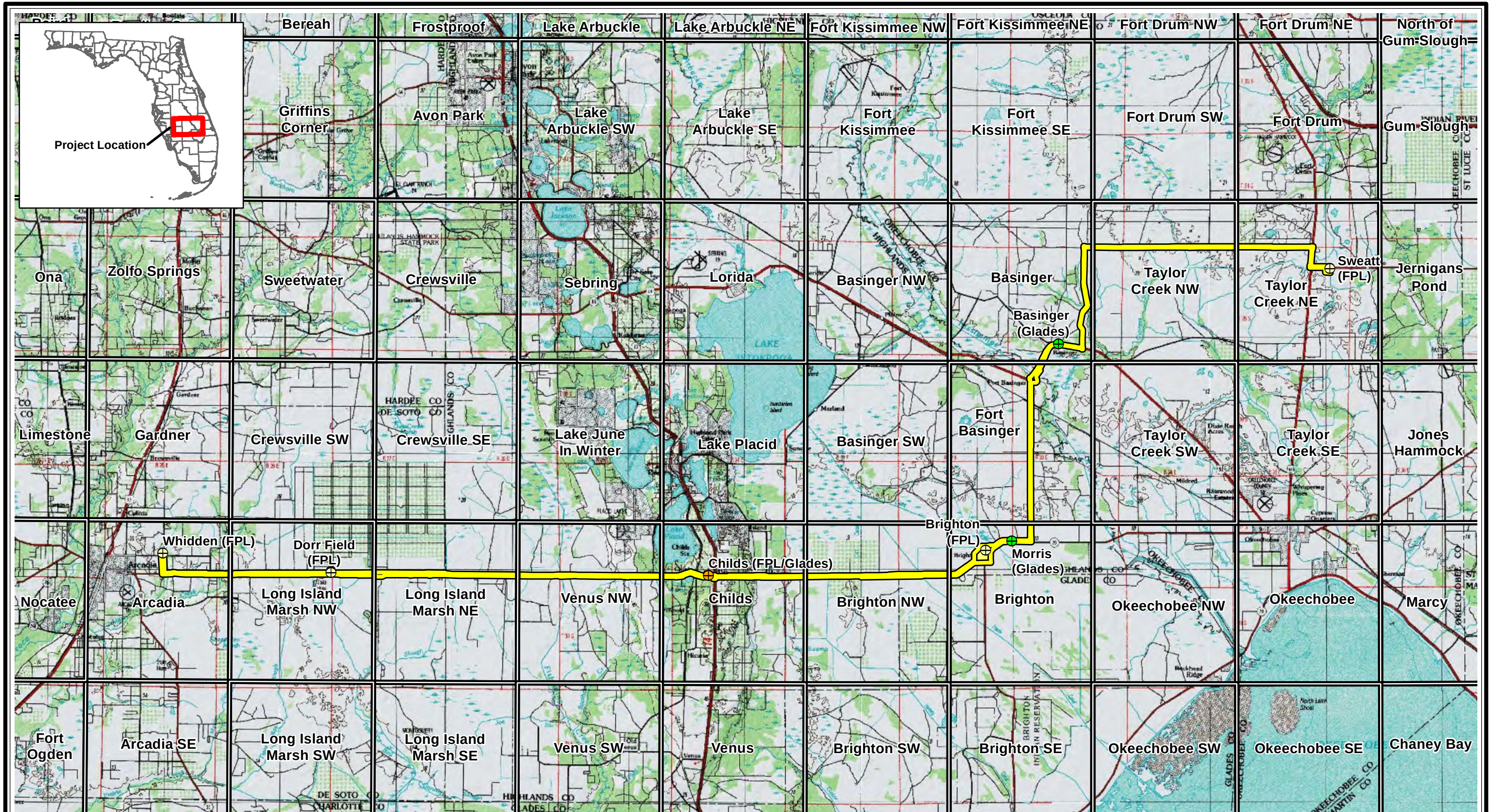
Daniel R. Hronec, P.E.

April 2022
ECT No. 210863-0300

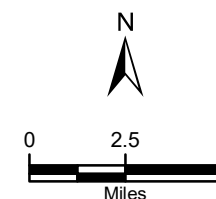
Attachment 2

Revised Figure 1-1

Location Map with Inset



- Legend**
- Preferred Corridor
 - USGS Quadrangle Index (24k)
 - + Substation (FPL)
 - +• Substation (FPL/Glades Co-op)
 - Substation (Glades Co-op)



Sources: ESRI Online, USGS, 2022; ECT, 2022.

**Figure 1-1
Project Location**

Sweett-Whidden 230-kV Transmission Project
Okeechobee, Glades, Highlands
and DeSoto Counties, Florida



Attachment 3

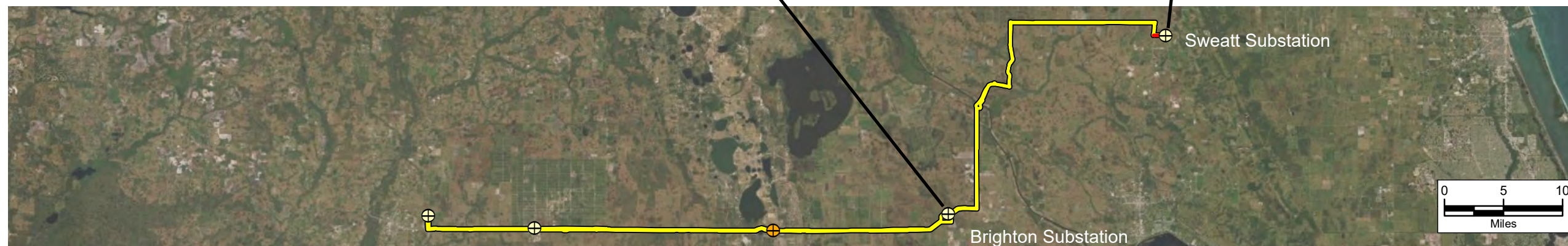
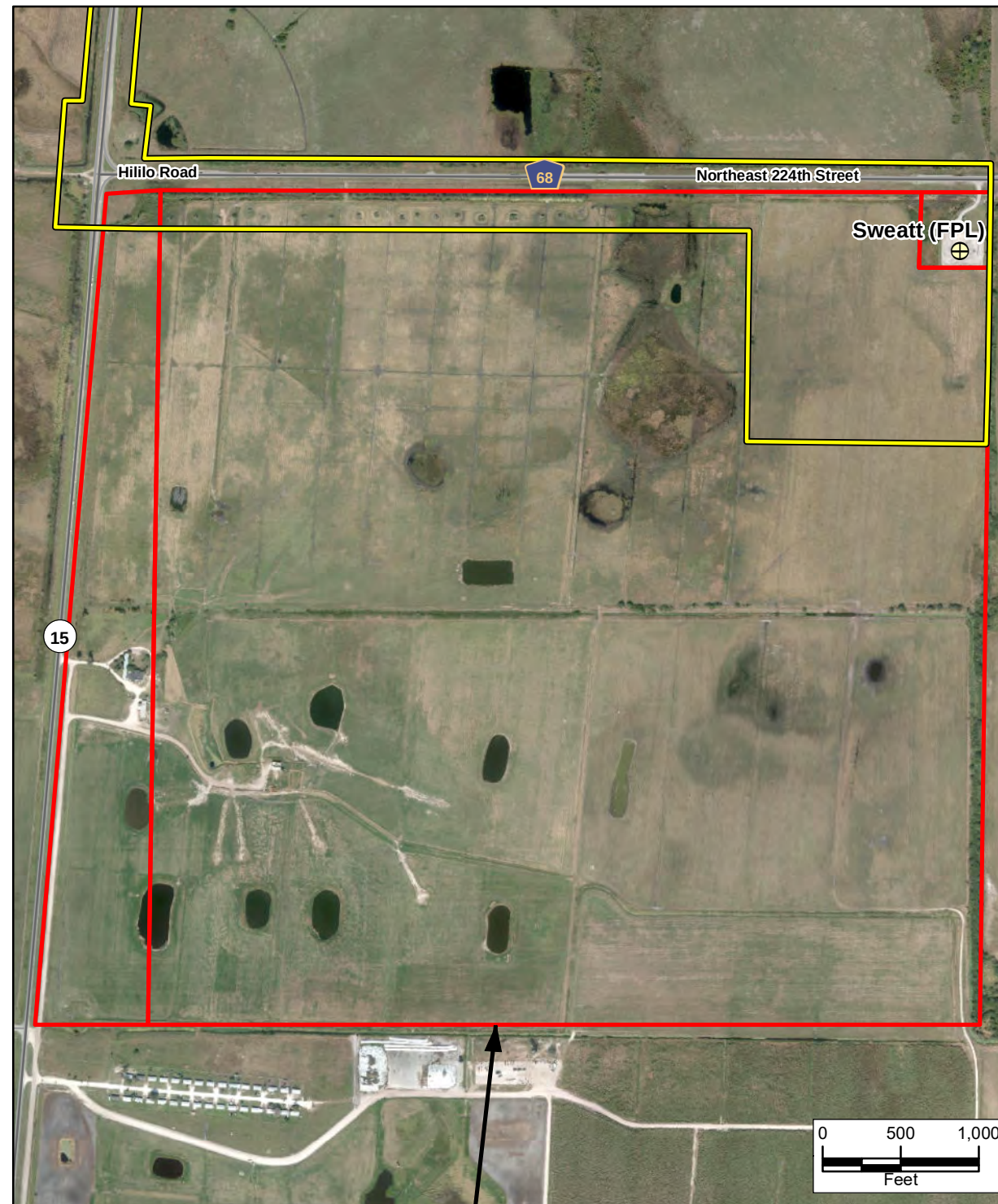
Map Set of FPL Owned Parcels

Attachment 3 FPL Owned Parcels

Sweatt – Whidden
230-kV Transmission Project
Okeechobee, Glades, Highlands
and DeSoto Counties, Florida

Legend

- Preferred Corridor
- ⊕ Substation (FPL)
- ⊕ Substation (FPL/Glades Co-op)
- ⊕ Substation (Glades Co-op)
- FPL Owned Parcel

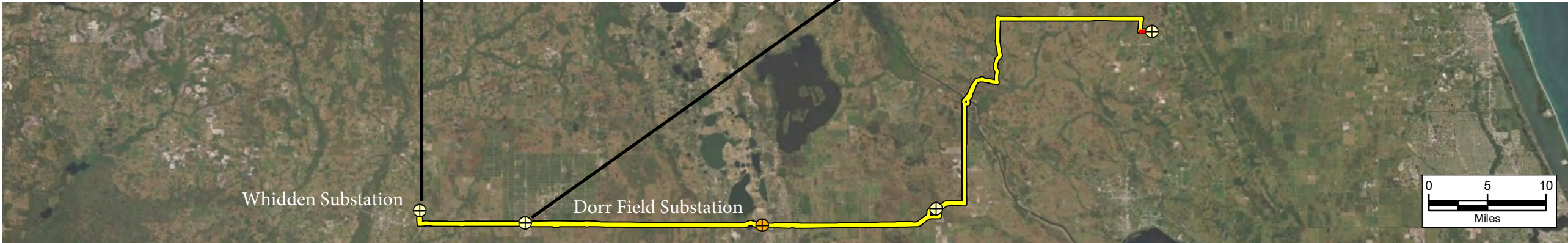
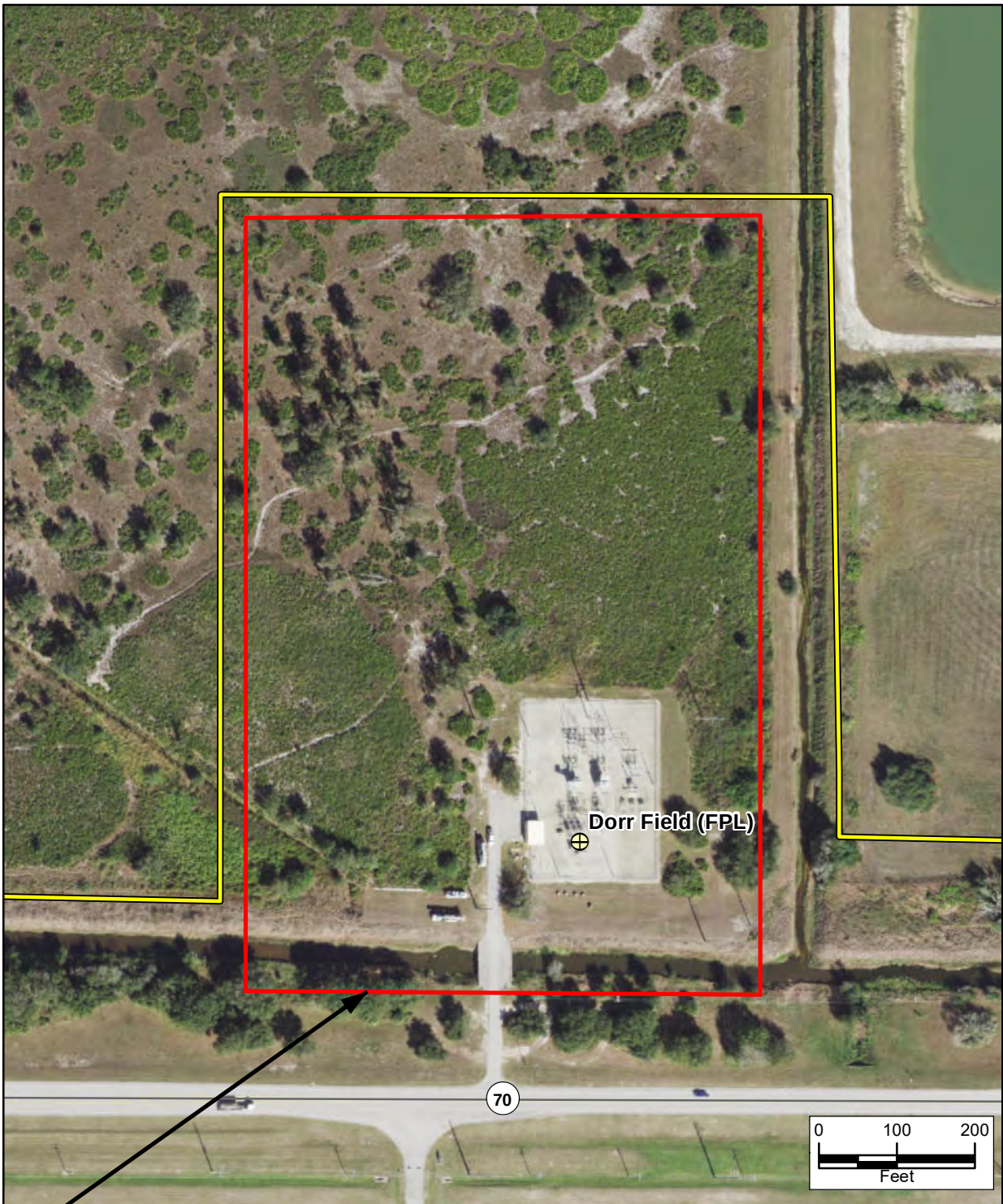
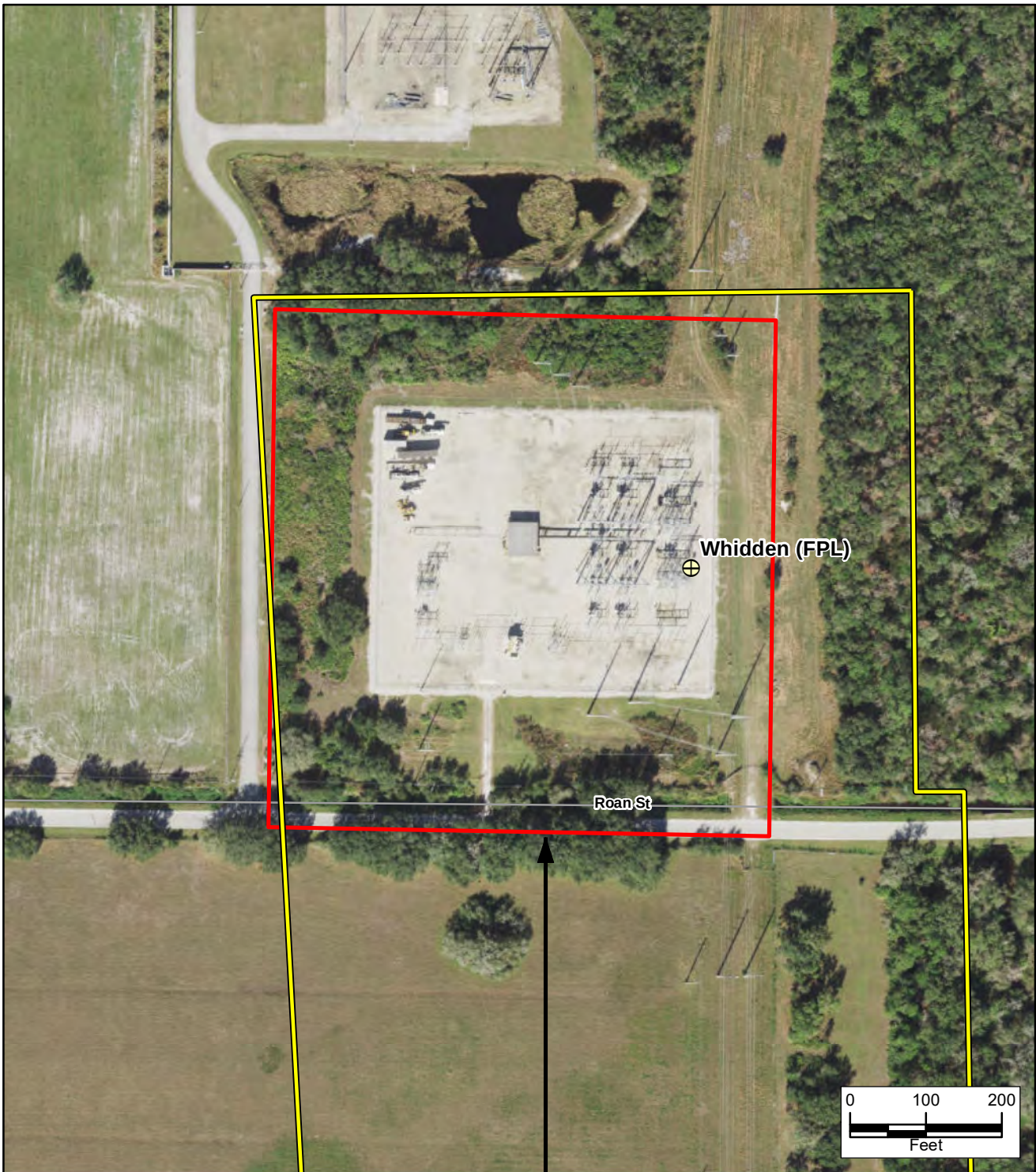


Attachment 3
FPL Owned Parcels

Sweatt – Whidden
230-kV Transmission Project
Okeechobee, Glades, Highlands
and DeSoto Counties, Florida

Legend

-  Preferred Corridor
-  Substation (FPL)
-  Substation (FPL/Glades Co-op)
-  Substation (Glades Co-op)
-  FPL Owned Parcel



Attachment 4

Revised EMF Table 4-1

Revised Table 4-1. Maximum EMF Capable of Being Produced by the Sweatt –Whidden Project

Cross Section Location	New or Existing	Ampacity of New Line (amps)	Right-of-Way Width (ft)	Electric Field (kV/m)			Magnetic Field (mG)	
				On Right-of-Way	Left Edge of Right-of-Way	Right Edge of Right-of-Way	Left Edge of Right-of-Way	Right Edge of Right-of-Way
Exiting Whidden Substation Property	Existing	3,025	660	5.24	0.01	0.12	1.61	49.97
Typical 170' Right-of-Way (Co-Located with other lines)	Existing	3,025	170	4.35	0.07	0.16	134.41	99.79
Typical 100' Right-of-Way	Existing	3,025	100	3.85	0.12	0.08	101.10	101.10
Typical 60' Right-of-Way	Existing	3,025	60	2.24	0.59	0.63	147.59	147.59
Typical 15' Right-of-Way Along Road Easement	New	3,025	15	1.65	0.07	1.07	30.74	149.46
Exiting Sweatt Substation Property	Existing	3,025	2,700	3.87	0.13	0.00	52.47	0.05
Florida EMF rule limit for new 230-kV lines ¹				8.00	2.00	2.00	150	150

Notes: EMF = electromagnetic field

kV = kilovolt

kV/m = kilovolts per meter

mG = milliGauss

The field levels of the proposed transmission lines shown in this table are based on the highest fields anticipated for the 230-kV transmission line configurations, even though structural configurations with lower fields may be employed for some portions of the line routes. The transmission lines will generally operate at a level well under the maximum current rating (MCR). MCR is the nominal value expected to cause the conductor to reach a temperature limit of 180°celsius

¹ The standard field levels are established in Rule 62-814.450(3), Florida Administrative Code.

Source: EzEMF software program developed through Florida Electric Coordinating Group and accepted by the Florida Department of Environmental Protection. FPL, 2022.



Attachment 5

Requested Impacts and Functional Loss Table (with assumptions)

Attachment 5
Conceptual Functional Loss Table with Assumptions

Note: FPL was instructed by FDEP to assess impacts based on the total amount of wetlands within the Preferred Corridor (identified in Table 2-4 of the Application as approximately 410.39 acres). For this reason, this analysis is overly conservative, assumes no specific right-of-way and pole location, and assumes an unrealistic worst-case scenario that will not occur, and as such is not representative of potential actual impacts in the final location of the right-of-way, which will contain far fewer wetlands and have far less functional loss than is estimated above.

Wetland Type (FLUCFCS)	Conceptual Acreage of FLUCFCS Wetlands within Preferred Corridor (1), (2)	Conceptual UMAM Score (2), (3)			Conceptual Permanent Wetland Impact Acreage (fill for access roads, structure pads, structures) (2)	Conceptual Permanent Wetland Conversion Acreage (from forested to herbaceous) (2)	Conceptual Functional Loss (UMAM Credits) (3), (4)
		Existing	Post Construction (fill)	Post Construction (wetland conversion)			
Freshwater Ponds and Surface Waters	8.37	0.43	0.00	n/a	4.19	n/a	1.80
Non-forested Wetlands	213.54	0.60	0.00	n/a	106.77	n/a	64.06
Freshwater Forested and Shrub Wetlands	135.82	0.77	0.00	0.47	67.91	67.91	72.66 *
Riverine (includes rivers, ditches and canals)	52.66	0.60	0.00	n/a	0.001	n/a	0.001
Totals	410.39	n/a	n/a	n/a	178.87	67.91	138.53

* Conceptual Functional Loss of 72.66 UMAM Credits = Conversion of 67.91 acres of forested wetlands to herbaceous wetlands multiplied by the delta between existing and post-construction conditions (0.30), which equals 20.37 UMAM Credits + the Functional Loss associated with permanently filling 67.91 acres multiplied by the delta between the existing and post-construction conditions (0.77), which equals 52.29 UMAM Credits.

Specific assumptions in conceptual impacts estimation include:

Freshwater Ponds, Surface Waters and Freshwater Non-Forested Wetlands	Assumes half of acreage will be permanently impacted and the other half of acreage will be temporarily impacted and and returned to pre-project vegetative and hydrologic function (temporary impacts not included in Functional Loss calculations).
Freshwater Forested and Shrub Wetlands	Assumes half of the acreage will be permanently impacted and the other half of the acreage will be converted from forested to herbaceous wetlands, resulting in a reduction of vegetative and hydrologic function.
Riverine (includes rivers, ditches and canals)	Assumes that only the Kissimmee River will not be able to be spanned, and assumes one structure (permanent fill) = 0.001154 acres. Assumes all other waterways (52.65 acres) will be spanned and will not be impacted.

Analyses Notes:

- (1) The total amount of wetlands within the Preferred Corridor is approximately 410.39 acres. This acreage is based on available desktop data and has not been field-verified. FPL will mitigate for unavoidable wetland impacts associated with the project.
- (2) FPL has not selected a specific right-of-way or transmission line design at this time. Thus, there is no design-level information available to gauge where wetland impacts might occur; further, the location, limits, and quality of wetlands have not been field verified.
- (3) Approximate Uniform Mitigation Assessment Method (UMAM) scores are provided based on pre-project and post-project landscape, vegetative and hydrologic values that might be expected for wetlands in the project area. The UMAM scores have not been field-verified.
- (4) Conceptual Functional Loss is calculated by multiplying the post-construction UMAM value and/or change in UMAM value by the conceptual impact acreages.

Detailed information with regards to the elimination or reduction of wetland and surface water impacts including total wetland impacts and proposed mitigation for unavoidable wetland impacts will be provided to FDEP as part of FPL’s post-certification condition requirements. This information will be provided after a right-of-way has been selected and the transmission line design has been completed, as authorized in Section 403.5317(2), F.S., and Rule 62-17.665, F.A.C.

Attachment 6

Cultural Resources Assessment Survey

Desktop Analyses and Research Design

**CULTURAL RESOURCES ASSESSMENT SURVEY
DESKTOP ANALYSIS AND RESEARCH DESIGN**

SWEATT TO WHIDDEN 230 KV TRANSMISSION LINE

OKEECHOBEE, HIGHLANDS, GLADES, AND DESOTO COUNTIES, FLORIDA

Prepared for:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Prepared by:

Janus Research
1107 N. Ward Street
Tampa, Florida 33607

June 2022

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INTRODUCTION

This cultural resources desktop analysis was prepared for Florida Power & Light Company (FPL) for the Sweatt to Whidden 230 kV Transmission Line in Okeechobee, Highlands, Glades, and DeSoto Counties, Florida (DHR Project Number 2002-2207 and DEP Application Number TA22-19) (Figure 1).

The study area is located within the following townships and sections:

- Sections 34–36 of Township 34 South, Range 33 East
- Sections 31–36 of Township 34 South, Range 34 East
- Sections 31–35 of Township 34 South, Range 35 East
- Sections 1–3, 10–11, 14–15, 22–23, 26–27, and 32–35 of Township 35 South, Range 33 East
- Sections 1–6 of Township 35 South, Range 34 East
- Sections 1–6 and 10–12 of Township 35 South, Range 35 East
- Sections 5, 7–8, 17–20, and 29–32 of Township 36 South, Range 33 East
- Sections 37–38, and 33–36 of Township 37 South, Range 25 East
- Sections 31–36 of Township 37 South, Range 26 East
- Sections 31–36 of Township 37 South, Range 27 East
- Sections 31–36 of Township 37 South, Range 28 East
- Sections 31–36 of Township 37 South, Range 29 East
- Sections 31–36 of Township 37 South, Range 30 East
- Sections 31–36 of Township 37 South, Range 31 East
- Sections 25–26 and 31–35 of Township 37 South, Range 32 East
- Sections 5–8, 17–20, and 29–30 of Township 37 South, Range 33 East
- Sections 1–4 of Township 38 South, Range 25 East
- Sections 1–6 of Township 38 South, Range 26 East
- Sections 1–6 of Township 38 South, Range 27 East
- Sections 1–6 of Township 38 South, Range 28 East
- Sections 1–6 of Township 38 South, Range 29 East
- Sections 1–6 of Township 38 South, Range 30 East
- Sections 1–6 of Township 38 South, Range 31 East
- Sections 3–6 of Township 38 South, Range 32 East

The study area is located on the following United States Geological Survey (USGS) quadrangle maps:

- Taylor Creek NE (1953 Photoinspccted [PI] 1971)
- Taylor Creek NW (1953 Photorevised [PR] 1972)
- Basinger (1953 PR 1972)
- Fort Basinger (1953 PR 1972)

- Brighton (1953 PR 1972)
- Brighton NW (1953 PR 1983)
- Childs (1953 PR 1972)
- Venus NW (1953 PR 1972)
- Long Island Marsh NE (1957 PR 1972)
- Long Island Marsh NW (1957 PR 1987)
- Arcadia (1957 PR 1988)

This desktop analysis includes a search of the Florida Master Site File (FMSF) to identify any previously recorded archaeological and historical resources within the study area. An analysis of General Land Office historic plat maps, historic aerial photographs, and soil surveys was conducted to examine past environmental conditions. The desktop analysis also identified archaeological site potential zones. County Property Appraiser records, historic plat maps, and aerial photographs were reviewed to identify potential historic resources.

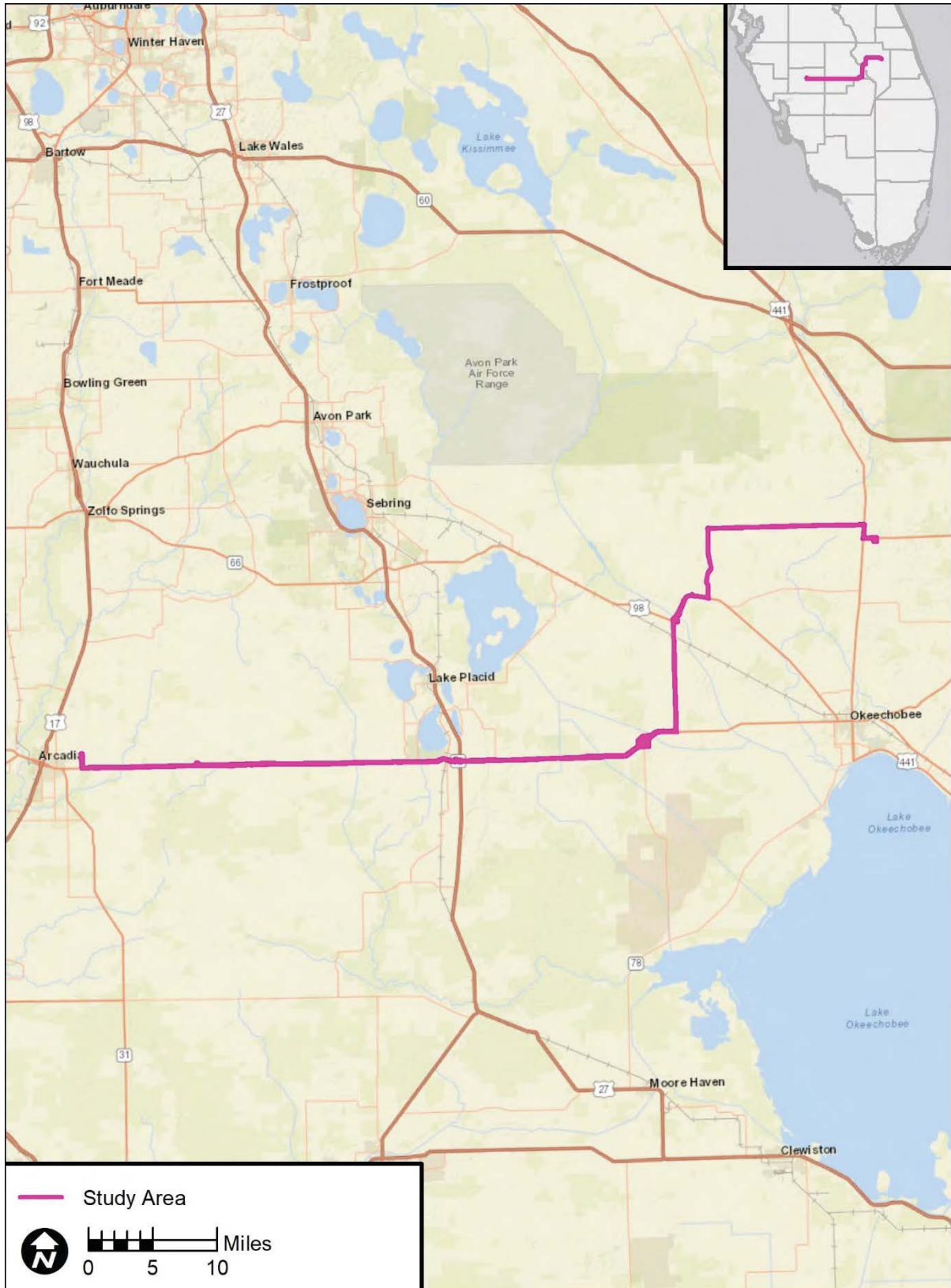


Figure 1: General Location of the Study Area

STUDY AREA

The study area for archaeological resources for this desktop analysis is a corridor approximately 80 miles (129 km) in length. The width of the corridor varies but in general ranges from approximately 300 ft (91 m) to 1200 ft (365 m). The study area for historic resources includes the corridor and a buffer of 100 m (328 ft). The archaeological and historic resources study areas are illustrated on aerial photos in Appendix A.

Florida Managed Areas

The study area intersects eleven managed areas (Appendix A). These include one area managed by the South Florida Water Management District (Kissimmee River), one managed by the Florida Fish and Wildlife Conservation Commission (Lake Wales Ridge Wildlife and Environment Area), and eight managed by the U. S. Department of Agriculture, Natural Resource Conservation Service (Wetland Reserve Program Easements). Finally, the corridor also crosses the Archbold Biological Station, a non-profit research institute.

ASSESSING POTENTIAL AFFECTS OF THE PROPOSED FPL SWEATT- WHIDDEN 230KV TRANSMISSION LINE ON KNOWN HISTORIC PROPERTIES

Florida Master Site File

An archaeological and historical literature and background information search pertinent to the study area has been performed. This research determined the chronological placement, types, and location patterning of cultural resources within the study area.

This included a search of the Florida Master Site File (FMSF), unpublished cultural resource management (CRM) reports, and other pertinent literature. The FMSF serves as an archive and repository of information about Florida's recorded cultural resources. It represents an inventory of resources for which available information exists and describes their condition at a particular point in time. Because the inventory of resources is not all-inclusive on a statewide basis, gaps in data may exist. The FMSF is only as accurate and as comprehensive as the information that is submitted, and users should be cognizant of the sometimes-uneven quality of the information. The FMSF is an important planning tool that assists in identifying potential cultural resources issues and resources that may warrant further investigation and protection. It can be used as a guide but should not be used to determine the FDHR/State Historic Preservation Officer's (SHPO) official position about the significance of a resource.

A search of pertinent literature and records was conducted to determine the locations of previously recorded *National Register of Historic Places* (National Register)-listed, eligible, and potentially eligible resources within the project APE, as well as any archaeological and historical assessments of other tracts of land within the study area.

Previous Cultural Resource Surveys

A search of the FMSF identified 42 previous cultural resource surveys which contain portions of or intersect the current study area. These surveys are listed in Table 1. Eleven of the surveys are reconnaissance level surveys, two are cell tower surveys, three are bridge surveys, and 13 are large surveys which only included a small portion of the current project corridor. There are a few surveys of note which are summarized below.

The survey for the Florida Gas Transmission Company (FGT) Phase VIII Expansion (FMSF Manuscript Nos. 16476, 16532, and 16938) includes part of the current study area along SR 70, mostly to the south of the road. Two previously recorded archaeological sites (8HG1122 and 8HG1123) within the current study area were identified during this previous survey.

The survey of SR 70 from Jefferson Avenue to CR 29 (FMSF Manuscript Nos. 27291 and 27291) included the area within the SR 70 right of way (ROW) and seven proposed pond locations for a length of approximately 7 miles. A total of 103 shovel tests were excavated within the ROW and approximately 30 shovel tests (within the current study area) during the pond survey.

Two surveys are associated with the Pearce-Lockett Estate south of the Kissimmee River (FMSF Manuscript Nos. 5573 and 19890). The *Pearce Homestead Preservation Plan* (Janus

Research 1999) included shovel testing primarily around the homestead area to identify any archaeological resources associated with the historic Pearce-Lockett occupation. Archaeological survey in other portions of the project area was limited to pedestrian survey. FMSF Manuscript No. 19890 reassessed the historic resources but did not include any archaeological survey.

Two surveys included part of the current study area at Brighton (FMSF Manuscript Nos. 17494 and 18388). The *Archaeological Survey of the Brighton Sugarcane Project* (Pepe and Hughes 1997) included part of the current study area south of SR 70 at Brighton. Site 8HG894 was identified during this project. The locations of shovel tests within the study area during the survey is not known. The *Phase I Archaeological Survey of Selected Locations, Feedstock Farm, Highlands Ethanol Project, Highlands County, Florida* (Bradley et al. 2011) included part of the current study area north of SR 70. Shovel tests were primarily excavated on the sandy ridge present in this location, although this physiographic feature was not tested systematically.

Table 1. Previous Surveys Conducted within the Study Area

FMSF Survey No.	Report Title	Author(s)	Publication Date
197	An Archaeological and Historical Survey of the Proposed Keentown-Whidden Transmission Line	Wisenbaker, Michael	1981
1722	Proposed Replacement of the Brighton Canal Bridge on SR78	Browning, William D., And Melissa G. Wiedenfeld	1988
4543	Cultural Resource Assessment Survey for Bridge Numbers 090024, 090920, and 090013 along State Road 70 Highway & Bridge Design Project, Highlands County, Florida	Janus Research	1996
5573	Pearce Homestead, Historic Preservation Plan	Janus Research	1999
5699	Cultural Resource Survey and Evaluation Report of the Florida Gas Transmission Company Phase IV Expansion	Allen, Matthew, Robert J. Austin, and Geoffrey Mohlman	1999
6031	Inventory and Assessment of Cultural Resources Lake Placid Wildlife and Environmental Area Highlands County, Florida	Memory, Melissa, Christine Newman, and Brenda Swann	2000
6297	Gulfstream Cultural Resources Supplemental Report 3	Janus Research	2001
6332	Gulfstream Natural Gas System Cultural Resources Supplemental Report 1	Janus Research	2000
13506	A Cultural Resource Reconnaissance Survey of The Sunset Trails Tract Highlands County, Florida	Arbuthnot, Michael A., Brian S. Marks, and Jennifer L. F. Nash	2006
13998	A Cultural Resource Reconnaissance Survey of the B-4, Inc. Property, Highlands County, Florida	Arbuthnot, Michael A., Brian S. Marks, and Jennifer L. F. Nash	2007

FMSF Survey No.	Report Title	Author(s)	Publication Date
16476	Cultural Resource Assessment Survey of the Florida Gas Transmission Company (FGT) Phase VIII Expansion Loop 10 and Extension: Station 27 to Arcadia Greenfield 3: Arcadia to Station 29	Janus Research and R. Christopher Goodwin Associates	2008
16494	Cultural Resource Assessment Survey Chandler Slough Reconnaissance Survey, Okeechobee County, Florida	Archaeological Consultants, Inc.	2009
16532	Florida Gas Transmission Phase VIII First Addendum Report Related to Report Nos. 2008-07035 and 2008-07036	Barse, William, Sean Coughlin, and Emily E. Crowe	2009
16938	Florida Gas Transmission Phase VIII Second Addendum Report Related to Report Nos. 2008-07035 and 2008-07036 (Goodwin & Coughlin et al. 2010)	Coughlin, Sean, Emily E. Crow, and R. Christopher Goodwin	2010
17494	An Archaeological Survey of the Brighton Sugarcane Project, Glades and Highlands Counties, Florida	Pepe, James, and Daniel Hughes	1997
18388	Phase I Archaeological Survey of Selected Locations, Feedstock Farm, Highlands Ethanol Project, Highlands County, Florida	Bradley, Dawn, John Hunter, and Marc E. Wampler	2011
19034	Cultural Resources Survey Westby Parcel, Highlands County, FL	Smith, Greg C.	2011
19229	Cultural Resources Reconnaissance Survey, Carlton North Tract, Highlands County, Florida	Smith, Greg C.	2010
19230	Cultural Resources Reconnaissance Survey, Carlton South, Highlands County, Florida	Dickinson, Martin F., and Lucy B. Wayne	2010
19231	NRCS Carlton WRP CUA Highlands County Cultural Resources Reconnaissance Survey (Part I)	Dunn, Shannon	2012
19443	Trip Report: NRCS Bluehead WRP CUA Highlands County Cultural Resources Reconnaissance Survey	Dunn, Shannon	2012
19506	Trip Report: NRCS Scarborough WRP Highlands County Cultural Resources Reconnaissance Survey	Dunn, Shannon	2012
19507	Cultural Resources Reconnaissance Survey, Scarborough and Sons Ranch, Inc., Highlands County, Florida	Wayne, Lucy B.	2010
19890	Cultural Resource Assessment of Edna Pearce-Lockett Homestead	Kanaski, Richard S.	2011
19974	NRCS Woerner South CUA WRP Highlands County Cultural Resources Reconnaissance Survey	Dunn, Shannon	2013
20284	FCC Wireless Telecommunications Bureau New Tower Submission Packet, Form 620: F703A, John, Highlands County, Florida	Wayne, Lucy B.	2013

FMSF Survey No.	Report Title	Author(s)	Publication Date
20419	A Cultural Resource Reconnaissance Survey of the Highlands Ethanol Site, Highlands County, Florida	Hunter, John A., and Hillori Schenker	2009
23055	Cultural Resource Survey, Brighton Valley Water Management Project, Highlands County, Florida	Ambrosino, James N.	2015
23363	USDA - NRCS 4D Citrus Wetland Reserve Easement (WRE) Cultural Resource Assessment Survey, Glades County	Bertine, Jessica	2016
23368	Cultural Resource Assessment Survey, 4-D Citrus & Sod, Inc., Glades County, Florida; Task Order #2	Dickinson, Martin F., and Lucy B. Wayne	2012
23981	Federal Communication Commission R.S. Webb & Associates No. 12-MAC-438 New 280-Foot Self Supporting Lattice Cellular Tower, County Road 721, Brighton, Highlands County, Florida	Bowen, Neil J., Ligita Kravchuk, and Robert S. Webb	2012
24449	Cultural Resources Reconnaissance Survey & Effects Determination Tech Memo: SR 70 over DCI Canal/FDOT Bridge No. 040033 DeSoto County, Florida	Archaeological Consultants	2017
24890	Lonesome Island Wetland Reserve Easement (WRE) Cultural Resources Survey	Bertine, Jessica	2018
24969	Cultural Resources Survey Sun Ray and Lonesome Tracts, Highlands County, Florida	Smith, Greg C.	2013
25343	Westby II (Fisheating Creek Stage 1) Wetland Reserve Easement (WRE) Cultural Resources Survey	Bertine, Jessica, Henry Burkwhat, and Teresa Paglione	2018
25345	Carlton South (Fisheating Creek Stage 1) Wetland Reserve Easement (WRE) Cultural Resources Survey	Bertine, Jessica	2018
25346	Bluehead II (Fisheating Creek Stage 1) Wetland Reserve Easement (WRE) Cultural Resources Survey	Bertine, Jessica	2018
25347	Cultural Resources Reconnaissance Survey, Blue Head Ranch-Central, Highlands County, FL.	Smith, Greg C.	2011
26565	USDA-NRCS Wetland Reserve Program (WRE) Located within Highlands County; Fisheating Creek (Stage I); Lake Placid, Highlands County, Florida	Morgan, Russel	2017
26797	Scarborough 2020 Wetlands Reserve Program (WRP) Project - FY-20	Hussey, R. Scott	2019
27291	Cultural Resource Assessment Survey Project Development and Environment (PD&E) Study SR 70 from Jefferson Avenue to CR 29 Highlands County, Florida. FPID No.: 414506-1-22-01; FAP: 1502 018 P; ETDM: 3054	Archaeological Consultants Inc	2019

FMSF Survey No.	Report Title	Author(s)	Publication Date
27292	Cultural Resource Assessment Survey Technical Memorandum, Proposed Pond Sites, State Road (SR) 70 from Jefferson Avenue to County Road (CR) 29, Highlands County, Florida. FPID No.: 414506-1-22-01	Archaeological Consultants Inc	2019

Previously Recorded Archaeological Sites

A search of the FMSF identified 13 previously recorded archaeological sites within the study area (Table 2; Appendix B). Seven of the sites are precontact sites, five are historic archaeological sites, and one has precontact and historic components. Although none of the sites have been determined National Register-eligible by the SHPO, the SHPO found that there was insufficient information to determine the eligibility of five of the sites (8HG706, 8HG1077, 8HG1078, 8HG1079, 8OB31). The SHPO has not made a National Register determination for six of the sites. Two of the sites have been previously determined National Register-ineligible as expressed within the APE of the previous survey (8HG1022, 8HG1023).

Table 2. Previously Recorded Archaeological Sites Within or Adjacent to the Archaeological Study Area

FMSF #	Site Name	Site Type	National Register Evaluation*
8DE23	KWS 1	Isolated Middle Archaic Period point	Not Evaluated by SHPO
8HG706	North Lake Annie	Precontact artifact scatter	Insufficient Information
8HG742	Lockett's Grove	20th Century historic artifact scatter	Not Evaluated by SHPO
8HG894	Brighton Sugarcane #22	Precontact midden and 20th Century historic artifact scatter	Not Evaluated by SHPO
8HG904	Lantana Pad	20th Century historic artifact scatter	Not Evaluated by SHPO
8HG923	Johnson	Belle Glade II Period artifact scatter	Not Evaluated by SHPO
8HG924	Pearce Homestead	19th and 20th Century historic artifact scatter	Not Evaluated by SHPO
8HG1077	Arced Landform Site	Precontact black dirt midden	Insufficient Information
8HG1078	STA Historic #1	20th Century historic artifact scatter	Insufficient Information
8HG1079	STA Historic #2	20th Century historic artifact scatter	Insufficient Information
8HG1122	FGT8-5	Precontact midden	Ineligible
8HG1123	FFT8-6	Precontact lithic scatter	Ineligible
8OB31	Kissimmee Circle	Belle Glade Period earthenworks	Insufficient Information

* As recorded in the FMSF, may require re-evaluation.

Previously Recorded Historic Resources

A search of the FMSF identified 24 historic resources that are within or intersect the study area: 10 resource groups (nine linear resources and one landscape), three bridges, 10 structures, and one cemetery (Tables 3–6; Appendix A). Four resources, Pearce-Lockett House (8HG226), Pearce-Lockett Guest House (8HG855), Pearce-Lockett Estate Cemetery (8HG875), and Old SR 18/Mahon Avenue (8DE828), have been determined National Register-eligible by the SHPO. The SHPO concluded there was insufficient information to make a determination for four canals (8GL476, 8GL477/8HG1235, 8HG1125, and 8HG1126). Two resources, Dorr Airfield (8DE382) and DeSoto Correctional Institute Warehouse (8DE447) have not been evaluated by SHPO. The remainder of the historic resources have been determined National Register-ineligible.

Table 3. Previously Recorded Historic Resource Groups

FMSF #	Name	Year Built	Resource Type	National Register Evaluation*
8DE382	Dorr Airfield	1917	Historic Landscape	Not Evaluated by SHPO
8DE828	Old SR 18/Mahon Avenue	c. 1915	Historic Roadway	Eligible
8DE858	DCI Canal	c. 1943	Historic Canal	Ineligible
8GL476	C-39A Canal	c. 1940	Historic Canal	Insufficient Information
8GL477/8HG1235	County Line Canal	c. 1940	Historic Canal	Insufficient Information
8HG1115	CSX Railroad	c. 1920	Historic Railroad	Eligible
8HG1125	Harney Pond Canal	c. 1940	Historic Canal	Insufficient Information
8HG1126	Indian Prairie Canal C-40	c. 1953	Historic Canal	Insufficient Information
8HG1127	Slough Ditch Canal C-41A	c. 1944	Historic Canal	Ineligible
8HG1157	Carlton Canal	c. 1944	Historic Canal	Ineligible

* As recorded in the FMSF, may require re-evaluation

Table 4. Previously Recorded Bridges

FMSF #	Name	Year Built	National Register Evaluation*
8DE859	Bridge No 040033	1959	Ineligible
8HG765	Slough Ditch Canal Bridge	1946	Ineligible
8HG1170/8OB323	US-98/Kissimmee River Bridge	1953	Ineligible

* As recorded in the FMSF, may require re-evaluation

Table 5. Previously Recorded Structures

FMSF #	Name	Year Built	National Register Evaluation*
8DE447	DeSoto Correctional Institute Warehouse	c. 1945	Not Evaluated by SHPO
8DE829	Arcadia Villa Entry Gates	c. 1925	Ineligible
8DE830	Tiger Bay Ranch	c 1950	Ineligible
8DE831	State Road Department Marker	c. 1960	Ineligible
8HG226	Pearce-Lockett House	1897	Eligible
8HG766	Outbuilding off SR 70	c. 1945	Ineligible
8HG855	Pearce-Lockett Guest House	1930	Eligible
8HG1124	Pump House	c. 1940	Ineligible
8HG1307	301 SR 70	c. 1964	Ineligible
8HG1309	1469 SR 70	c. 1948	Ineligible
8HG1310	1571 SR 70	c. 1940	Ineligible
8HG1311	1556 SR 70	c. 1959	Ineligible

* As recorded in the FMSF, may require re-evaluation

Table 6. Previously Recorded Cemetery

FMSF #	Name	Year Established	National Register Evaluation*
8HG875	Pearce-Lockett Estate Cemetery	c. 1889	Eligible

* As recorded in the FMSF, may require re-evaluation

Potential Historic Resources

A search of Property Appraisers data identified 63 parcels with an historic Actual Year Built date of 1974 or earlier within the historic resources study area (Appendix A). These parcels either have a potential unrecorded structure visible on the modern aerial or it cannot be determined if a structure is present due to tree cover.

A search of the National Bridge Inventory identified 15 unrecorded bridges within the historic resources study area that were built in 1974 or earlier (Appendix A).

Historic Maps

A review of the General Land Office (GLO) historic plat maps (Florida Department of Environmental Protection [FDEP] 1859a-g, 1860a-b, 1870a-o; Appendix C) and surveyor's field notes (FDEP 1855a-e, 1858a, 1859h-j, 1860c, 1870p-r) was conducted to examine past environmental conditions within the vicinity of the study area. The historic plat maps were also reviewed for evidence of early settlement.

The eastern end of the study area is described as “3rd rate pine and prairie” in the surveyor’s notes. A “wagon trail” labeled as the “Road to Fort Van Swearengen” on the plat map is illustrated running north-south and crossing the study area east of a pond at the north end of Section 11 of Township 35 South, Range 35 East (Appendix C: Map 1). The region about a mile farther west is described as “3rd rate prairie.” Scattered ponds are illustrated on the plats and mentioned in the surveyor’s notes throughout the vicinity.

Moving west, the project corridor is still described as prairie until just north of the Ash and Chandler Sloughs where the environment changes to pine. These pinelands continue until just north of the Kissimmee River. The Ash and Chandler Sloughs are labeled as “Boggy Glade, being mud & water with a growth of Maiden Cane” on the plat map. The study area crosses what is described as a “bayhead of slough” near the southern end of Section 27 of Township 35 South, Range 33 East (Appendix C: Map 3). Beginning about 1.5 miles north of the Kissimmee River the land is again described as prairie.

The area north and east of the Kissimmee River is labeled as “Impracticable Swamp” on the plat map. Just south of the Kissimmee River the area is described as oak scrub in the surveyor’s notes. South of the hammock and adjacent to the river, the land again becomes prairie. About a half mile south of the river the study area crosses an “Old Military Trail” (Appendix C: Map 4). “Fort Bassinger” is illustrated on the plat adjacent to the river about 2/3 of a mile east of the study area. The plat also includes an “Indian Old Field” in the hammock south of the river about 1/3 of a mile east of the study area.

Beginning about 1.25 west of CR 721, the area is described as “2nd rate sawgrass & marsh” or “sawgrass prairie” and is labeled as inundated. The study area crosses a few “cabbage islands,” the largest of which is labeled as “Marvins Island” on the plat map (Appendix C: Map 6). Beginning one mile east of the western boundary of Townships 37 and 38 South, Range 32 East, the plat maps are labeled as “Impracticable.” The entirety of Townships 37 and 38 South, Range 31 East were considered “Impracticable” and were not surveyed within the study area. The easternmost section and a half of Townships 37 and 38 South, Range 30 East were labeled as “Impracticable” and “Impracticable Baygall” on the plat maps and the surveyor’s notes describe the area as “very soft rich swamp land” and “the ground became so soft and boggy could not proceed and further.”

The Lake Wales Ridge is described in the surveyor’s notes as “3rd rate spruce pine oak and hickory scrub ground undulating,” “3rd rate pine & scrub land,” and “3rd rate pine oak scrub & saw palmetto land.” About 8 miles to the east the land was again described as “3rd rate prairie land.”

The study area is described as prairie with scattered wetland ponds until about 3.5 miles east of its western terminus. The surveyor’s notes describe this area as “3rd rate prairie land,” “3rd rate low flat prairie and saw palmetto,” “3rd rate low wet prairie land,” and “3rd rate saw palmetto land.” The “Road from Fort Mead to Fort Thompson” is illustrated on the plat map crossing the study area about 0.8 miles east of current day NE Guynn Ave (Appendix C: Map 12). The remainder of the study area is described as pine and saw palmetto.

An examination of Seminole War period and other historic maps did not identify any other potential villages, battlefields, or other historic sites within the study area.

Historic Aerial Photographs

Aerial photographs from 1943, 1944, 1948, 1950, 1953, 1954, and 1958 (University of Florida, George A. Smathers Libraries 2022; USGS 2022; Appendix D) were reviewed to examine land use within the vicinity of the study area during the mid-20th century. The earliest available aerial photos for the east terminus of the project corridor date to 1950. At this date, this area appears unimproved with very few trees, and NW 240th Street was not yet constructed. Many wetlands were present, but no potential hammocks are visible near the study area. Forested areas, likely low hammocks, are primarily limited to the interior of sloughs such as Gore Slough, which crosses and parallels the current location of NW 176th Avenue for part of the study area. Scattered agricultural fields begin to appear north of US 98 near where the Ash, Gore, and Chandler Sloughs meet. US 98 is visible on the 1954 aerial and scattered trees are common in the area becoming less frequent closer to the Kissimmee River.

North of the Kissimmee River part of an earthenwork circle (Kissimmee Circle, 8OB31) is visible on the 1944 aerial photo adjacent to one of the old river channels (Appendix D: Map 7). The old US 98 roadway, about 75 m (250 ft) east of the current location, bisects the earthenwork. South of the Kissimmee River some hammock vegetation was present but much of area had been cleared for agriculture. Structures associated with the Pearce Homestead are visible on the aerial photo.

South of the Kissimmee River, the 1944 aerials show CR 721 within the study area down to SR 70, which is also located within the study area for most of the remainder of length of the corridor. Like the eastern end of the study area, the area south of the Kissimmee River is mostly unimproved prairie with scattered wetlands and few trees. Wetlands are more frequent as one goes south. A few roadways extend east or west from CR 721 and the Seaboard Railroad visible crossing the study area.

A tree covered ridge is visible on the 1944 aerial photo at Brighton (Appendix D: Map 11). The C-41A Canal, which goes through the large slough north of the ridge, was present but much narrower than the current canal. The street grid of the former town of Brighton is visible to the north and south of SR 70 south of the ridge. Several structures within the town were still present in 1944. Drainage canals and agricultural fields are more frequent west of the Indian Prairie Canal. The study area became more wet farther west until the Lake Wales Ridge.

On the 1944 aerials, scrubby vegetation was present on the Lake Wales Ridge and the eastern portion had many small depressions (Appendix D: Map 14). The study area passes just north of Lake Annie. The western portion of the ridge has scrubby vegetation with scattered trees and fewer depressions (Appendix D: Map 15–16). West of the Lake Wales Ridge, the study area is again prairie with only scattered trees. Trees are generally near wetlands and a few possible hammocks adjacent to wetlands are visible on the aerial photographs.

The Dorr Airfield (8DE382) area is visible on the 1943 aerial photo (Appendix D: Map 20). Although built in 1917, the airfield was also used during WWII. A couple structures were present in the study area in 1943. West of the former location of Dorr Airfield, the street layout for Arcadia Villa, a failed real estate development from the 1920s, can be seen on the 1943 aerial (Appendix D: Map 21). There are no structures associated with the development or visual evidence of former structures within the study area. Agricultural fields were more common near the western end of the study area, but much was still unimproved prairie and flatwoods.

Soil Drainage

The soil surveys of Okeechobee, Highlands, Glades, and DeSoto Counties (United States Department of Agriculture [USDA] 1989a, 1989b, 2000, 2003) were reviewed to help determine the environment, assess the level of modification, and identify natural features within the study area indicative of increased archaeological site potential. Most of the soils within the project area are poorly and very poorly drained and are associated with flatwoods, wetlands, and marshes. Soils on the Lake Wales Ridge are primarily excessively drained except on the western side south of Lake Placid where soils are moderately well to somewhat poorly drained. The other area of better drained soil is south of the Kissimmee River. Drainage characteristics and environmental associations for each detailed soil type within the study area are included in Table 2, and drainage is illustrated on maps in Appendix B.

Table 7. Characteristics of Detailed Soil Types within the Study Area

Drainage Characteristics	Soil Type	Environmental Association
Excessively drained	Astatula sand, 0 to 5 percent slopes	Ridges.
	Paola sand, 0 to 8 percent slopes	High sandy ridges.
	Paola-Basinger sands, rolling	Side slopes and ridgetops and small depressions.
Moderately well drained	Archbold sand, 0 to 5 percent slopes	Moderately high ridges.
	Daytona sand, 0 to 5 percent slopes	Moderately high ridges on the Lake Wales Ridge and elevated ridges in flatwoods.
	Orsino sand, 0 to 5 percent slopes	Moderately high sandy ridges.
	Pomello sand, 0 to 5 percent slopes	Elevated knolls and ridges in flatwoods.
Somewhat poorly drained	Satellite sand	Slightly elevated ridges in flatwoods and lower ridges of Lake Wales Ridge.
	Zolfo fine sand	Low ridges in flatwoods.
	Basinger fine sand	Sloughs, depressions, low flats, and poorly defined drainageways.
	Basinger fine sand, frequently flooded	Adjacent to streams and well defined drainageways.
	Basinger fine sand, depressional	Wet depressions.

Drainage Characteristics	Soil Type	Environmental Association
	Basinger, St. Johns, and Placid soils	Seep areas on Lake Wales Ridge.
	Bradenton fine sand	Hammocks and open areas in flatwoods.
	EauGallie fine sand	Flatwoods and flatwoods adjacent to sloughs and drainageways.
	Farmton fine sand	Flatwoods.
	Felda fine sand	Low flats and large drainageways in flatwoods.
	Immokalee fine sand	Flatwoods.
	Malabar fine sand	Low, narrow to broad sloughs, in poorly defined drainageways in flatwoods, and low-lying hammocks.
	Malabar fine sand, high	Flatwoods and hammocks.
	Myakka fine sand	Flatwoods.
	Ona fine sand	Flatwoods.
	Pineda sand	Low flats, sloughs, and poorly defined drainageways in flatwoods.
	Punta fine sand	Flatwoods.
	Riviera fine sand	Low areas in flatwoods, sloughs, and poorly defined drainageways.
	Smyrna fine sand	Flatwoods.
	Smyrna sand	Flatwoods.
	St. Johns fine sand	Flats and depressions.
	Valkaria fine sand	Low flatwoods, low flats, sloughs, depressions, and poorly defined drainageways.
	Wabasso fine sand	Flatwoods.
Very poorly drained	Anclote mucky fine sand, depressional	Depressions.
	Basinger and Placid soils, depressional	Swamps, marshes, and low-lying areas.
	Delray mucky fine sand, depressional	Depressions.
	Floridana fine sand, depressional	Wet depressions ponded for much of the year
	Floridana, Placid, and Okeelanta soils, frequently flooded	Hardwood swamps and marshes that are part of major drainageways.
	Floridana, Riviera, and Placid soils, depressional	Freshwater swamps and marshes and in low lying areas.
	Gator muck	Swamps, marshes, and wet depressions.
	Hicoria mucky sand, depressional	Wet depressions.
	Hontoon muck	Marshes and swampy areas.
	Kaliga muck	Swamps and marshes.
	Malabar fine sand, depressional	Depressions.

Drainage Characteristics	Soil Type	Environmental Association
	Manatee, Floridana, and Tequesta soils, frequently flooded	Hardwood swamps and marshes in Kissimmee River basin.
	Placid fine sand, depressional	Depressional areas in flatwoods and along edges of swamps and marshes.
	Samsula muck	Depressions, swamps, and marshes.
	Tequesta muck	Marshes and depressions.
Not applicable	Arents, very steep	Unconsolidated soil that has been excavated from canals and redeposited along the sides of the canals.
	Udorthents, 2 to 35 percent slopes	Unconsolidated soil that has been excavated from canals and redeposited along the sides of the canals.

USDA 1989a:15–18, 23–26, 30–35, 39–43, 46–48; USDA 1989b:15–34, 36–42, 45–46; USDA 2000:18–19, 23–24, 26–28; USDA 2003:20–26, 28–33, 35–38

Archaeological Site Potential

Four environmental factors are typically employed in predicting site locations: distance to fresh (potable) water, distance to hardwood hammocks, topography and relative elevation, and soil type (soil drainage). Zones of archaeological site potential are designated based on these environmental factors and previous research conducted within the Okeechobee and Central Peninsular Gulf Coast cultural regions.

Fresh water is obviously an important resource, as the need for water is universal. Water would have been available from the Kissimmee River and the many wetland ponds and sloughs near the study area.

In Florida, the use of hammocks by native groups is well documented. Hardwood hammocks provide a variety of resources that would have been exploited by the aboriginal inhabitants of this region. Hydric hardwood hammocks can contain abundant animal and plant life, particularly a variety of tubers. Mesic hardwood hammocks contain cabbage palms and other plants that produce edible foodstuffs. Other mesic hardwood species, such as ash and elm, are woods that are known to have been used for specific purposes, i.e., bows, canoes, mortars, and dart shafts. Often, areas of higher relative elevation correspond with better-drained soils or the presence of hardwood hammocks (xeric and mesic). Examination of historic plat maps and aerial photos identified possible hammocks south of the Kissimmee River, on a sandy ridge at Brighton, and adjacent to some creeks and wetlands.

The study area is within the Osceola Plain, Okeechobee Plain, Caloosahatchee Incline, Lake Wales Ridge, and Desoto Plain physiographic provinces. Most of the area is flat with gradual slopes. The exception is the Lake Wales Ridge which rises to 210 feet above sea level, about 150 feet above the surrounding area east and west of the ridge.

The characteristics of soils have been used successfully by several researchers in the formulation of predictive models for precontact site location. As mentioned previously (Table 2), soils within the project area are primarily poorly and very poorly drained. Better drained soils are found on the Lake Wales Ridge and south of the Kissimmee River and a few other small, isolated areas.

Based on the background research, most of the study area has low archaeological site potential (Appendix B). High probability zones for archaeological sites were identified within 50 m of previously recorded archaeological sites, the eastern edge of the Lake Wales Ridge, on sandy ridges, potential hammocks, within 100 m of creeks with good slopes or drier ground, within 100 m of lakes, and areas with structures or other evidence of historic occupation identified on historic aerials. Moderate probability zones were identified between 100-300 m from good water sources, adjacent to sloughs or creeks with gentle slopes, between 100–200 m from the eastern edge of the Lake Wales Ridge, locations where historic roads intersected the study area, and areas within historic resources with limited evidence of occupation.

RECOMMENDATIONS FOR CONDUCTING A CULTURAL RESOURCE ASSESSMENT SURVEY FOR THE PROPOSED FPL SWEATT-WHIDDEN 230KB TRANSMISSION LINE

Area of Potential Effects

According to 36 CFR 800.16(d), the Area of Potential Effect (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if such properties exist. The APE is influenced by the scale and nature of the undertaking as well as its geographical setting. The APE must include measures to identify and evaluate both archaeological and historical resources. Normally, archaeological and other below-ground resources will be affected by ground disturbing activities and changes in ownership status. Structural resources and other above ground sites, however, are often impacted by those activities as well as alterations to setting, access and appearance. Therefore, the survey methodologies for these two broad categories of cultural resources differ.

The archaeological APE will include a corridor that includes all potential ground disturbing activities associated with the construction and maintenance of the proposed transmission line. The historic resources APE will include the project corridor and a buffer of 100 m (328 ft) on either side to include any potential visual impacts.

Field Methods

Archaeological Field Methods

The archaeological field survey will include a surface inspection which will consist of a visual inspection of exposed ground to look for evidence of archaeological sites. Additionally, a careful surface inspection will be undertaken in areas of minimal vegetation and/or upturned soil such as dirt roadways, drainage ditches, recent clearings, and animal burrows. Subsurface testing will employ conventional shovel testing throughout the investigation. Shovel tests will be circular and roughly 20 inches (50 centimeters) in diameter. They will be excavated to a

minimum depth of 39 inches (1 meter), unless excavation is inhibited by pit slumping due to the influx of water or by subsurface obstructions such as concreted clay or limestone. All excavated soil will be dry screened through ¼ inch hardware cloth suspended from portable wooden frames.

Shovel tests will be excavated at 25-meter intervals within high probability zones and 50-meter intervals within moderate probability zones. At least 10 percent of the low probability archaeological APE will be tested in keeping with DHR requirements.

Standard archaeological methods for recording field data will be followed throughout the project. The identification number, location, stratigraphic profile, and soil descriptions will be recorded for every shovel test excavated. Field notes will also include artifact counts, provenience information, and description of any cultural feature encountered during testing. The location of all tests will be plotted on field aerial maps of the project APE and recorded with Global Positioning System (GPS) units with sub-meter accuracy (UTM-NAD83).

Should human remains be observed on the surface or encountered during testing, all ground-disturbing activities will cease within 100 feet of that location and will resume upon further consultation with the appropriate parties per the requirements of Chapter 872, *Florida Statutes (FS)*. Chapter 872 states that when human remains are encountered, all activity that might disturb the remains shall cease and may not resume until authorized by the District Medical Examiner (if the remains are less than 75 years old) or the State Archaeologist (if the remains are more than 75 years old). If human remains that are less than 75 years old are encountered, or if they are involved in a criminal investigation, the District Medical Examiner has jurisdiction. If the remains are determined to be more than 75 years in age, then the State Archaeologist overtakes jurisdiction in determining appropriate treatment and options for the remains.

Historic Resources Field Methods

An historic resource assessment survey will also be conducted within the project area. The historic resource survey will use standard field methods to identify and record historic structures. All historic resources within the historic APE will receive a preliminary visual reconnaissance. Any resource with features indicative of 1974 or earlier construction materials, building methods, or architectural styles will be noted on aerial photographs.

Laboratory Methods

Laboratory processing will consist of the cleaning, cataloguing, packaging, and temporary storage of the artifacts recovered. Artifacts will be carefully washed clean of sand and dirt and allowed to air-dry. All materials will be processed by their provenience. Lab procedures and analyses necessary in meeting project objectives will be employed, and they will be conducted and completed in the most cost efficient and effective manner possible. Initial sorting of the artifacts will be done during the re-bagging of materials after they have been allowed to dry.

Artifact analysis will involve the morphological and functional classification of artifacts and, if possible, establish their temporal/cultural affiliations. Once artifact analysis is completed,

Janus Research will provide temporary curation services of the artifact assemblage until being transferred to the client.

Documentation

FMSF forms will be completed for every cultural resource identified during the survey. A draft report presenting the methods, findings, evaluations, and recommendations of the CRAS will be prepared and submitted to FPL, for review and comment. This report will conform to the standards set forth in the FDHR *Cultural Resource Management Standards and Operational Manual*. Once any necessary changes are made, the final report will be produced and submitted to FPL as well as to the FDHR.

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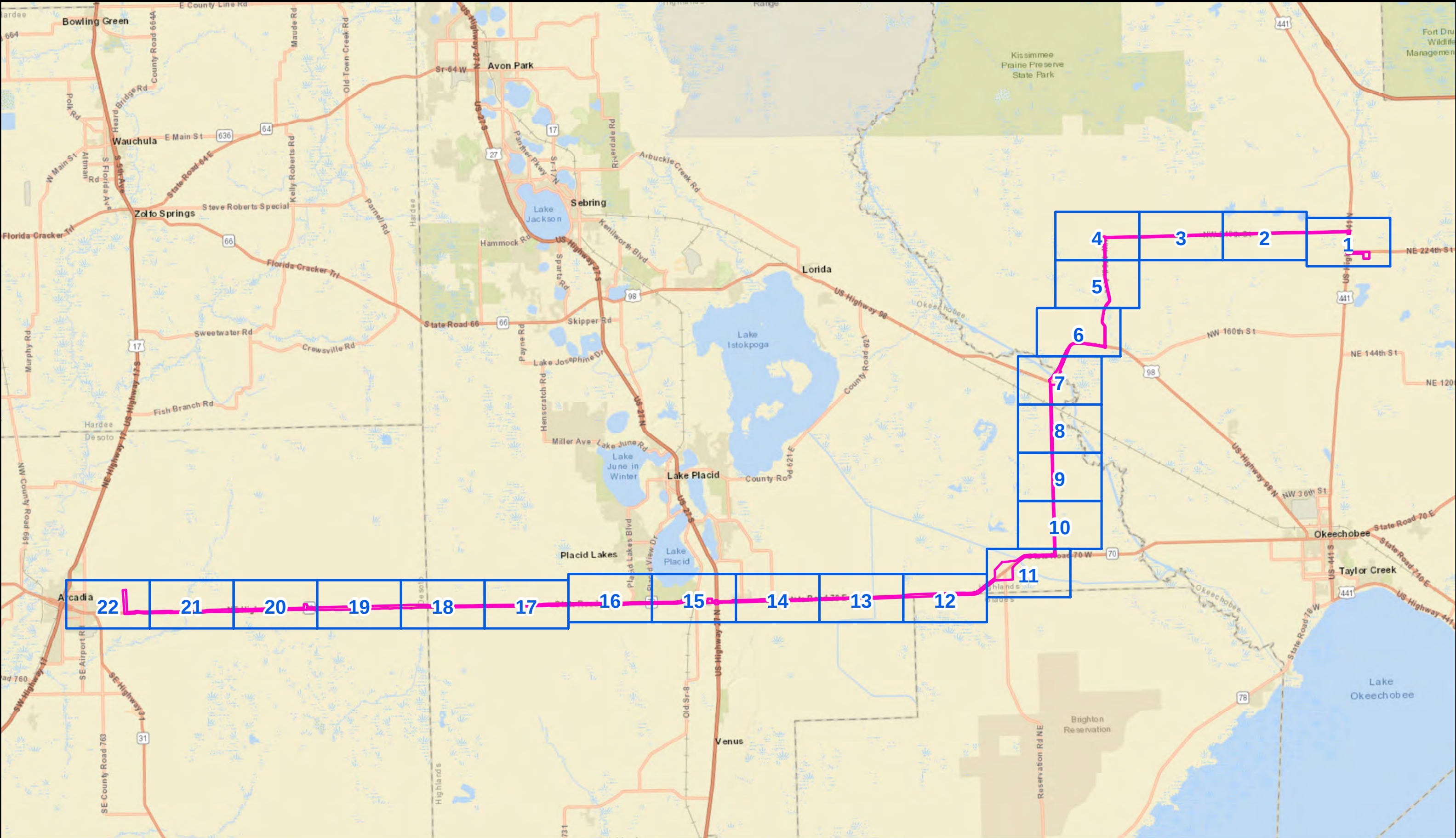
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APPENDIX A:

**STUDY AREA, PREVIOUSLY RECORDED HISTORIC RESOURCES,
POTENTIAL HISTORIC RESOURCES, AND MANAGED LAND**

**Redacted per 267.135 Florida Statutes
(Location of Archaeological Sites)**



Study Area, Previously Recorded Historic Resources, Potential Historic Resources, and Managed Land (Overview Map)

- Map Frame
- Study Area

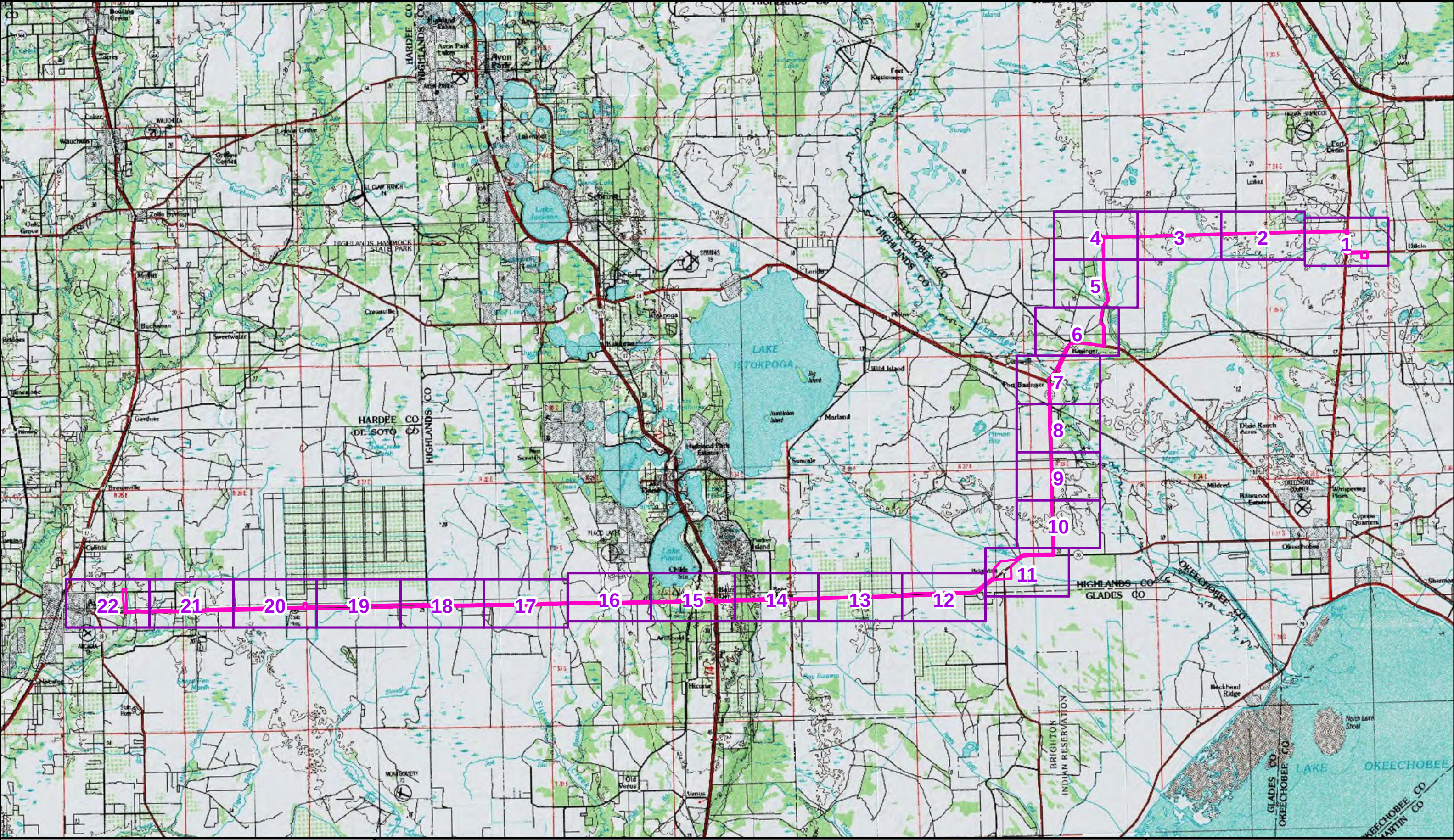
Okeechobee, Highlands, Glades, and DeSoto Counties

0510

Miles

APPENDIX B:
**PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES, ARCHAEOLOGICAL
PROBABILITY ZONES, AND SOIL DRAINAGE**

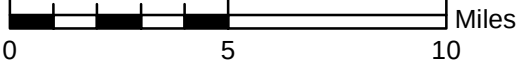
**Redacted per 267.135 Florida Statutes
(Location of Archaeological Sites)**



Previously Recorded Archaeological Sites,
Archaeological Probability Zones,
and Soil Drainage
(Overview Map)

- Map Frame
- Study Area

Okeechobee, Highlands,
Glades, and DeSoto Counties

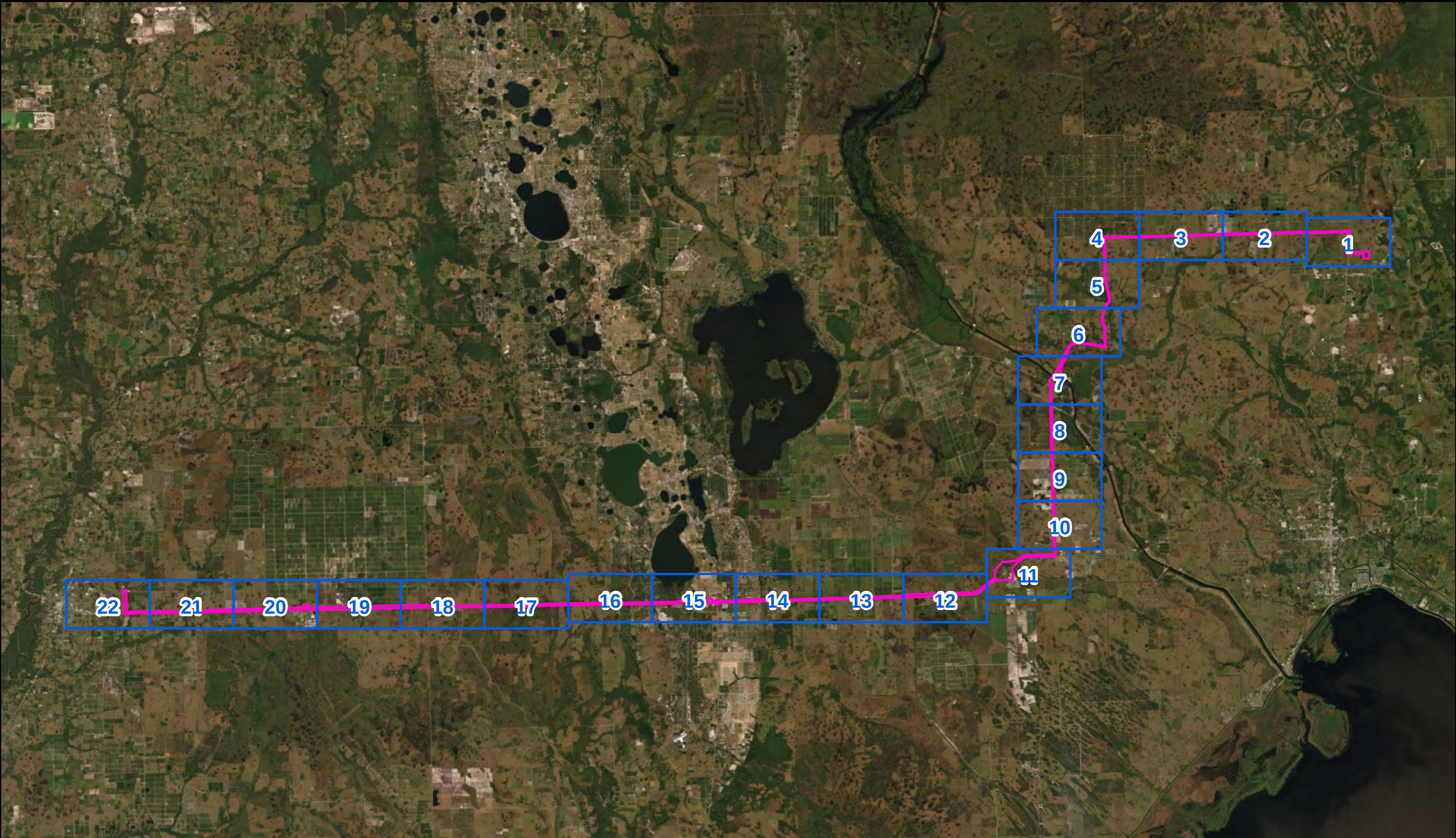


APPENDIX C:

STUDY AREA ON PLAT MAPS

**Redacted per 267.135 Florida Statutes
(Location of Archaeological Sites)**

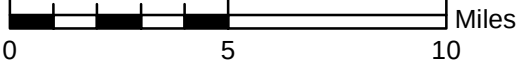
APPENDIX D:
APPROXIMATE LOCATION OF STUDY AREA ON HISTORIC AERIAL
PHOTOGRAPHS



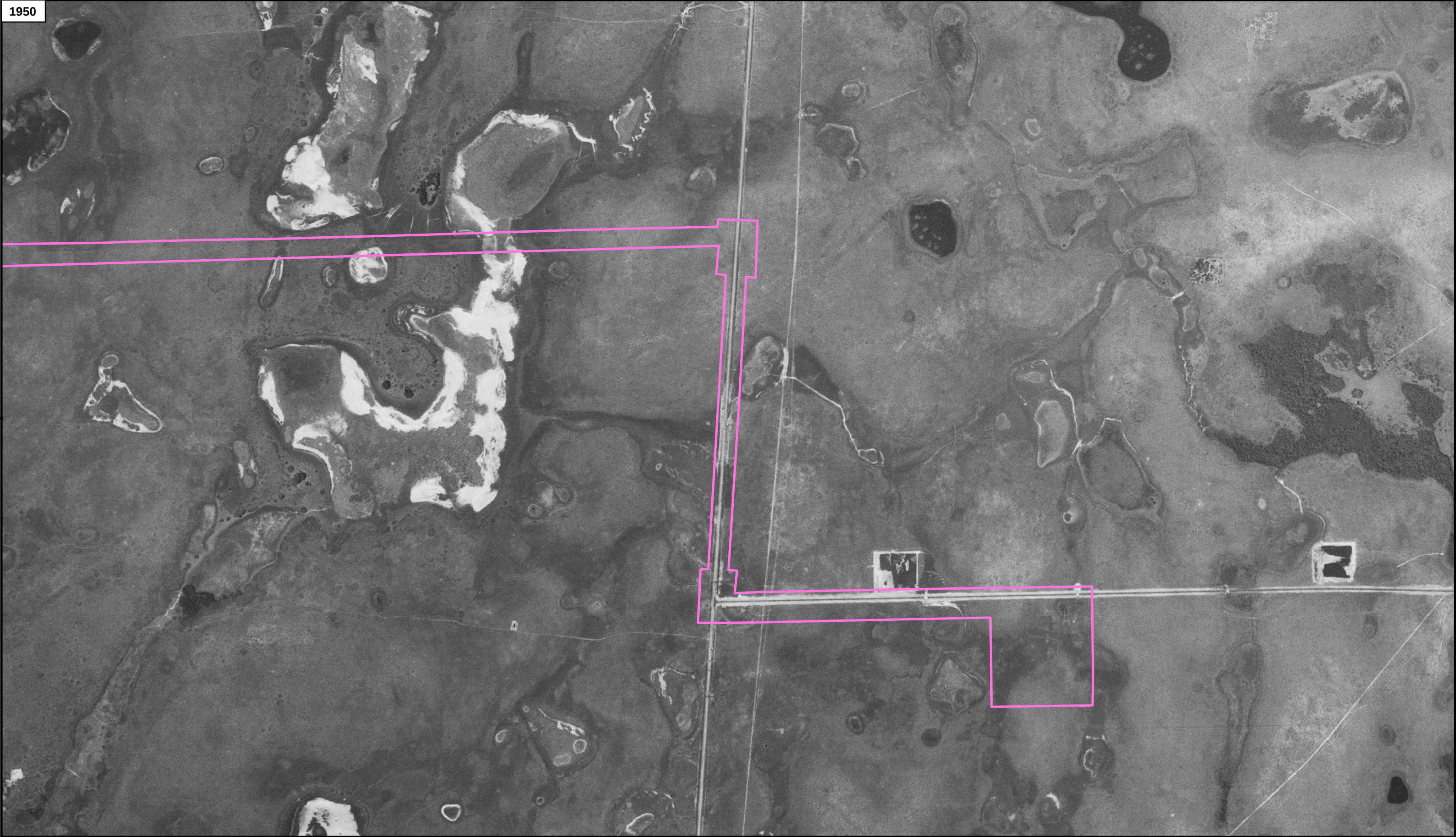
Approximate Location of Study Area
on Historic Aerial Photographs
(Overview Map)

-  Map Frame
-  Study Area

Okeechobee, Highlands,
Glades, and DeSoto Counties



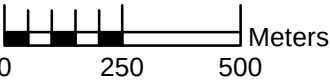
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Approximate Location of Study Area
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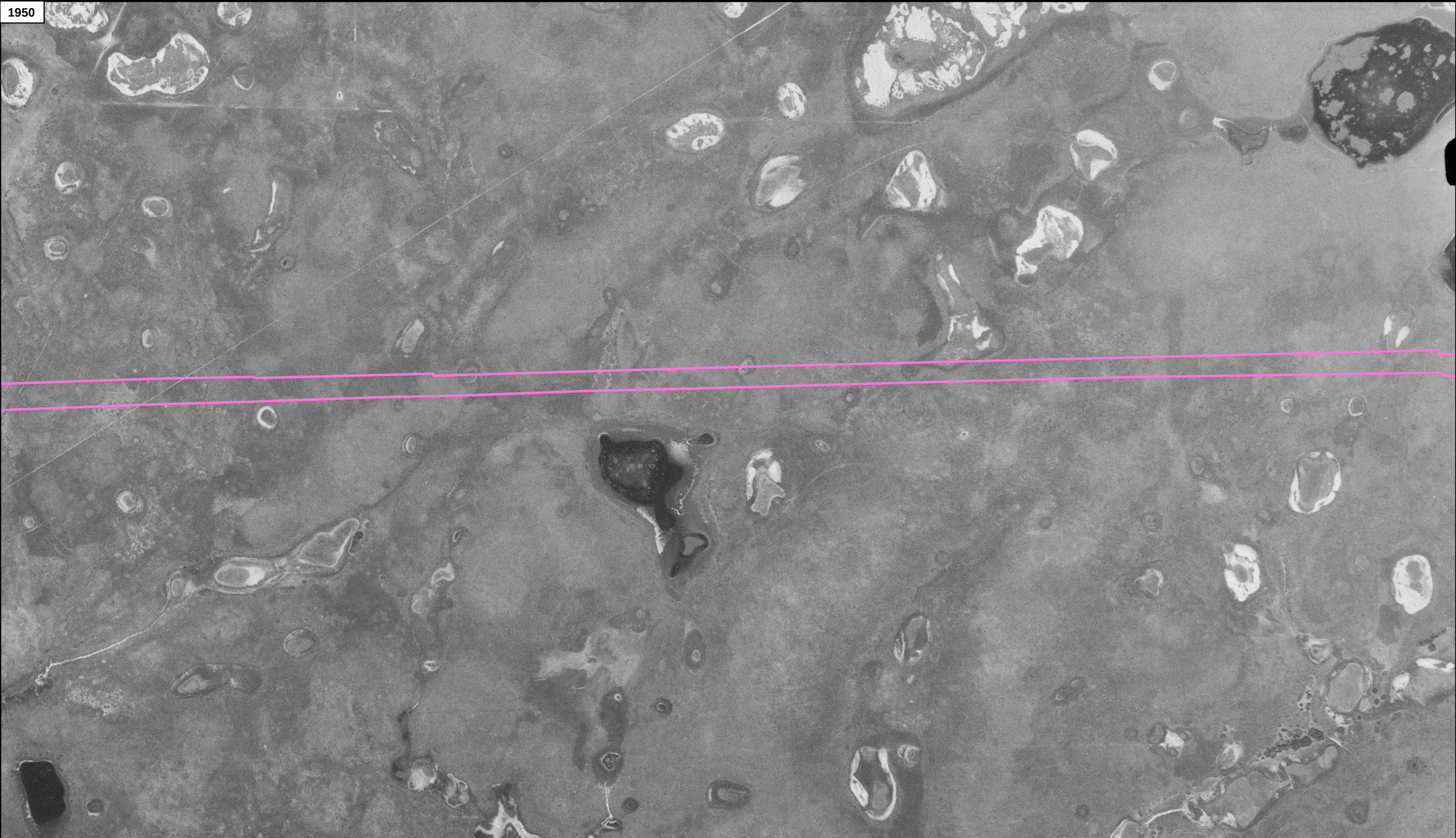
 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
1

1950

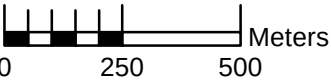


Approximate Location of Study Area
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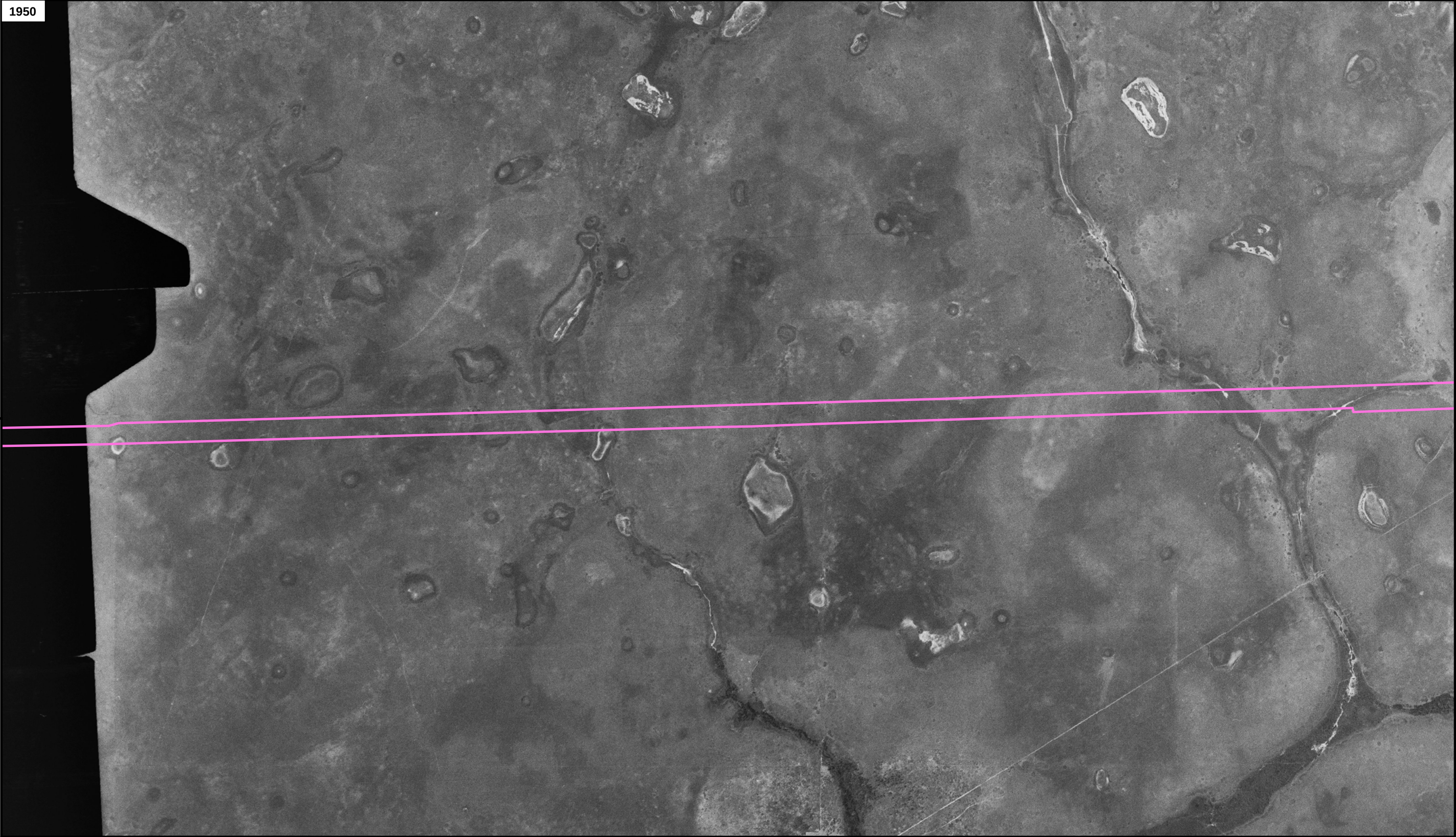
Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
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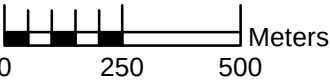
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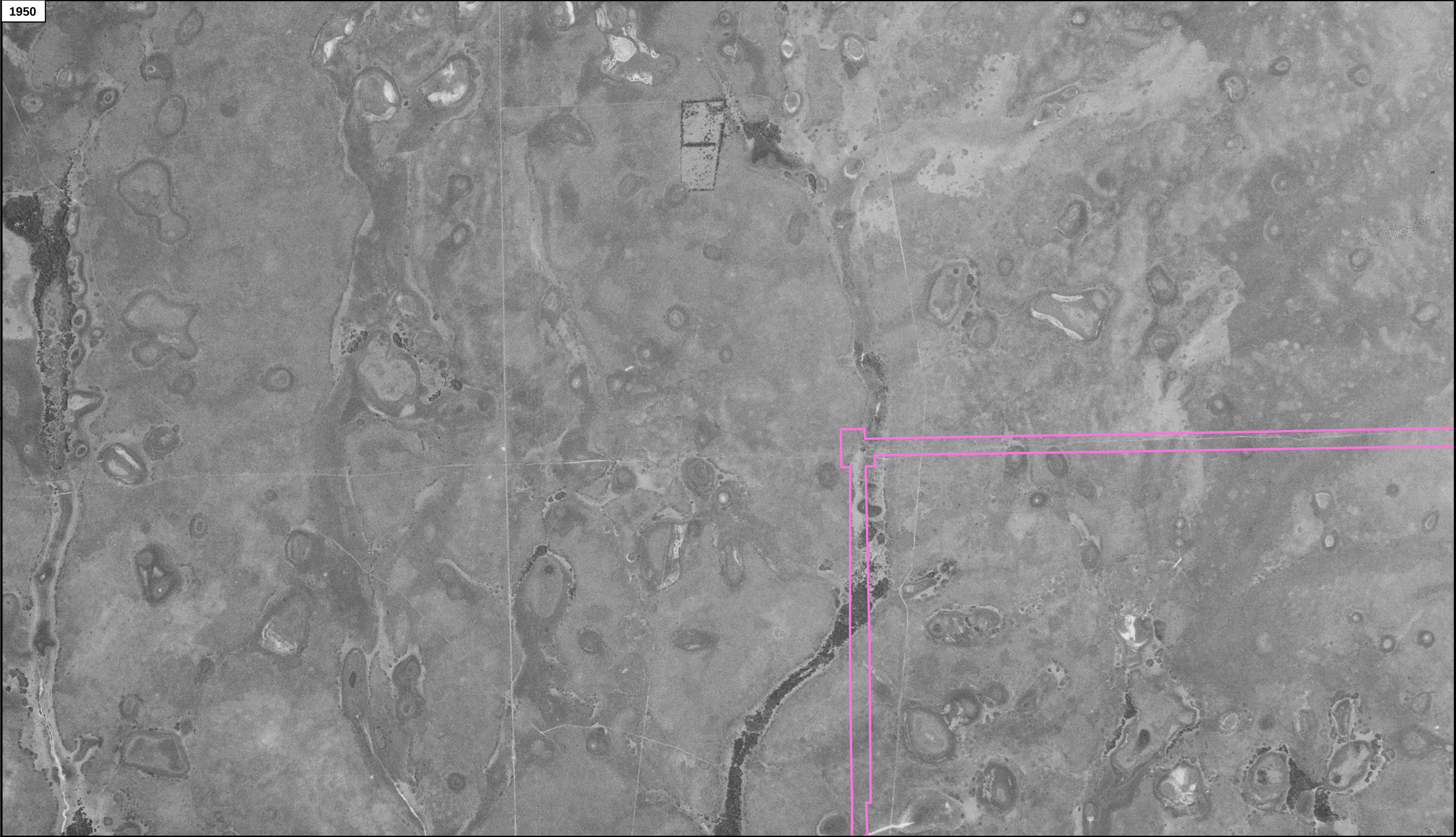
 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
3

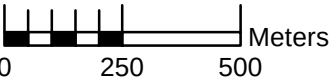
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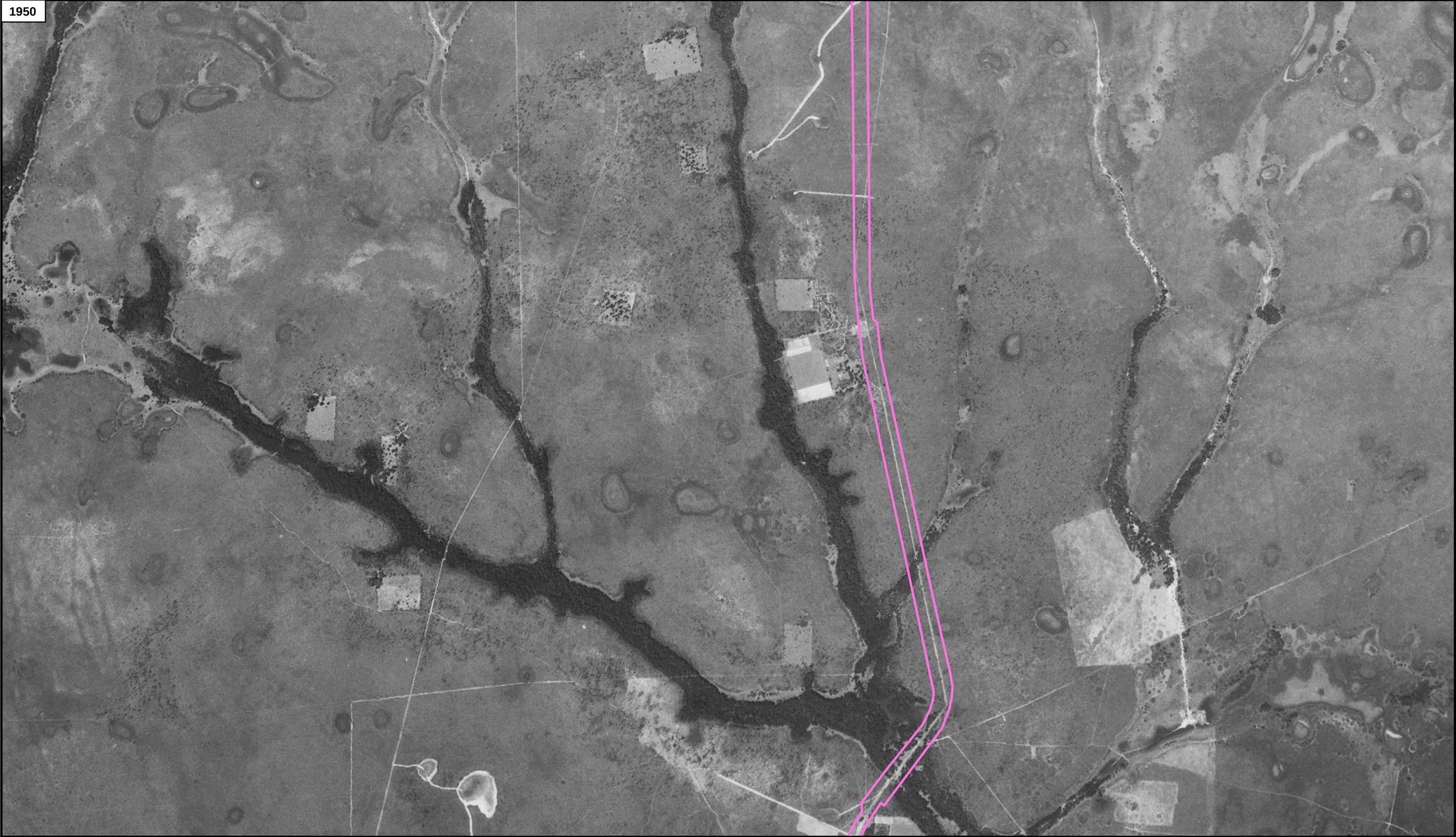
 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
4

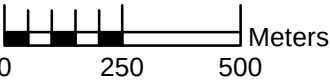
1950



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
5

1944
1950
1954
1962

2-27-44

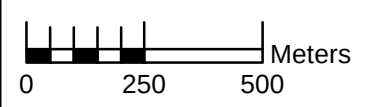
CYW - 2C -1 7

DSL - 2

Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
6

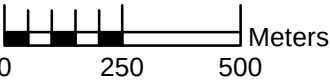
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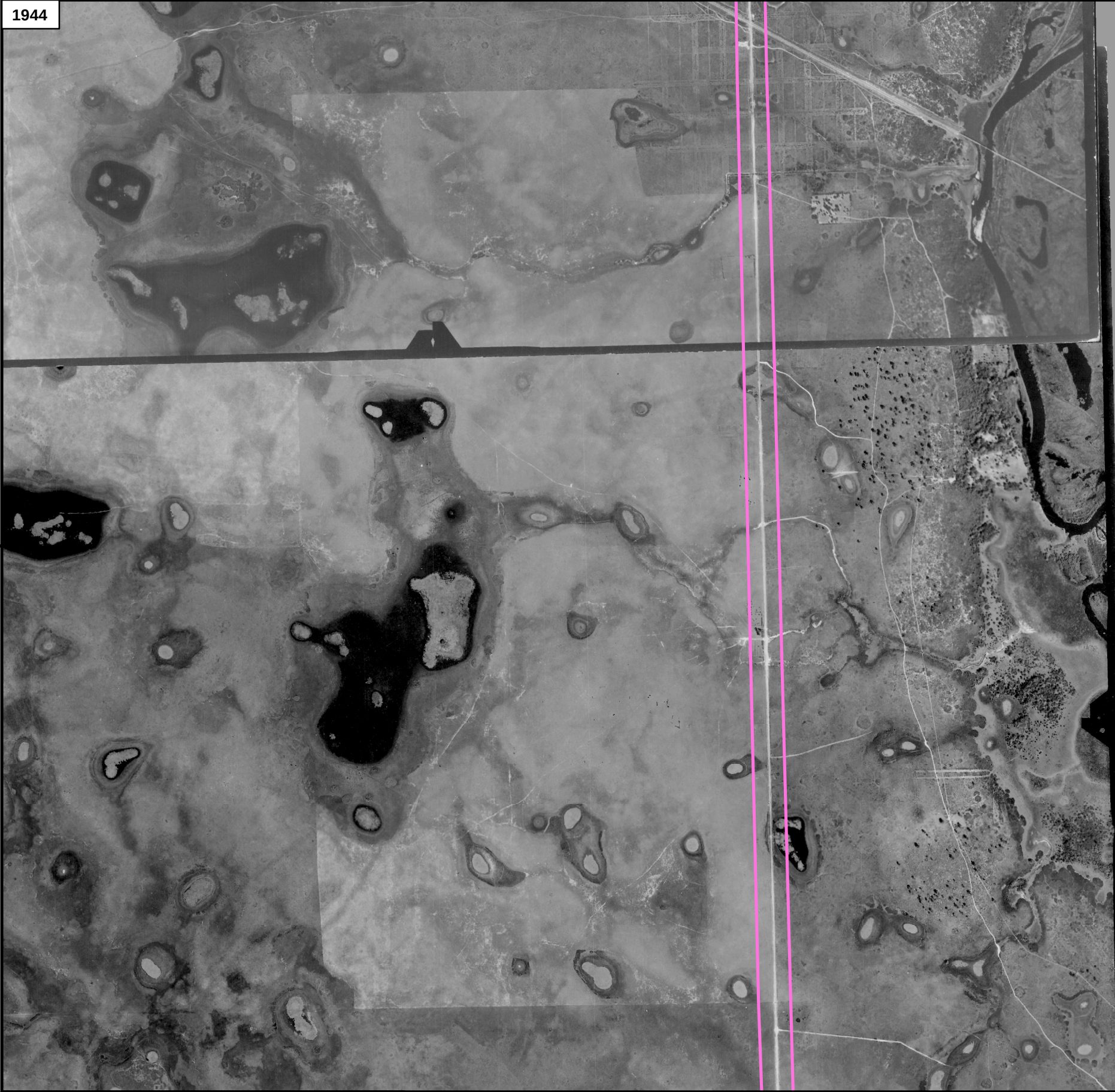
Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
7



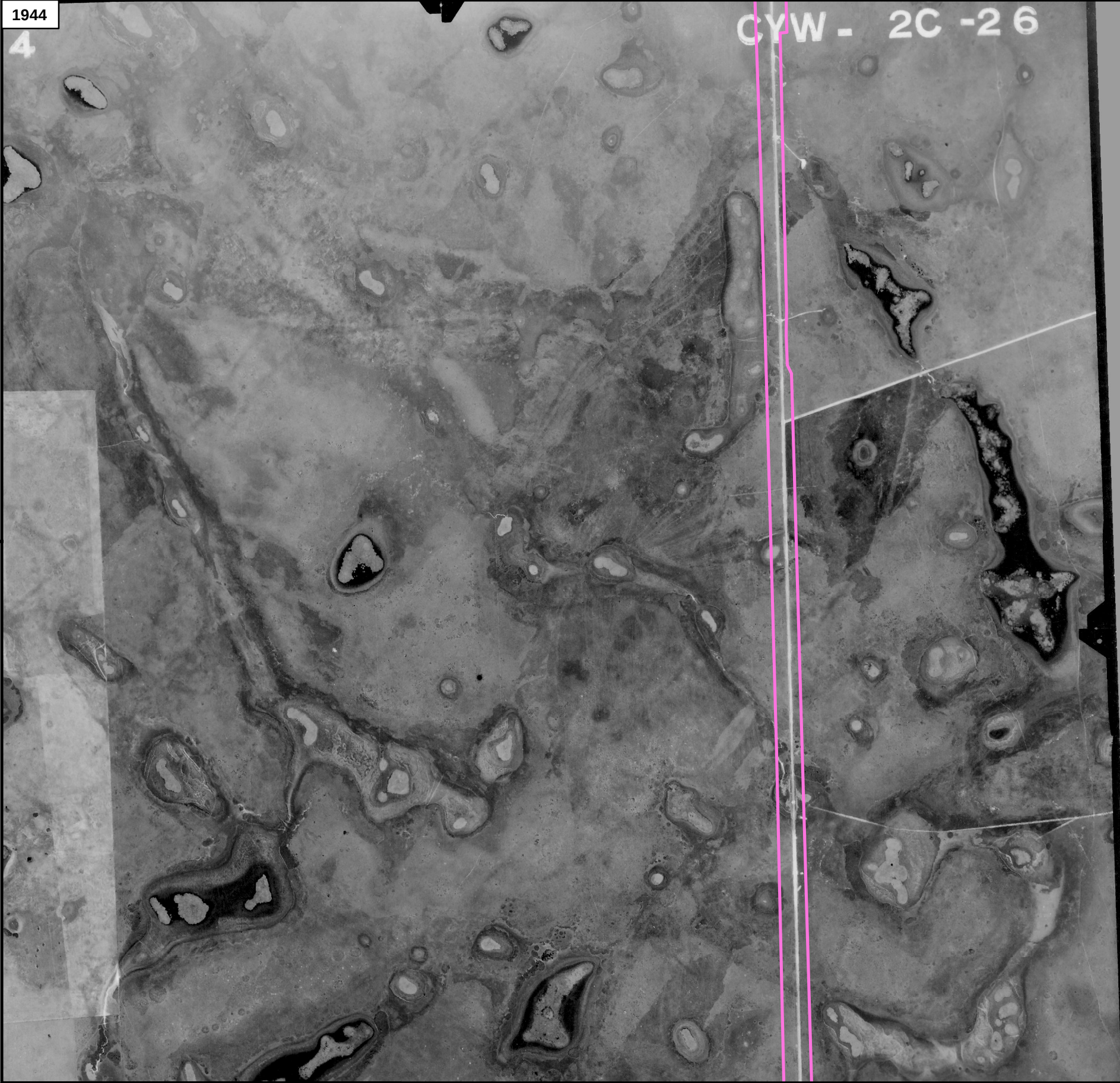
Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties

 Meters





Approximate Location of Study Area
on Historic Aerial Photographs

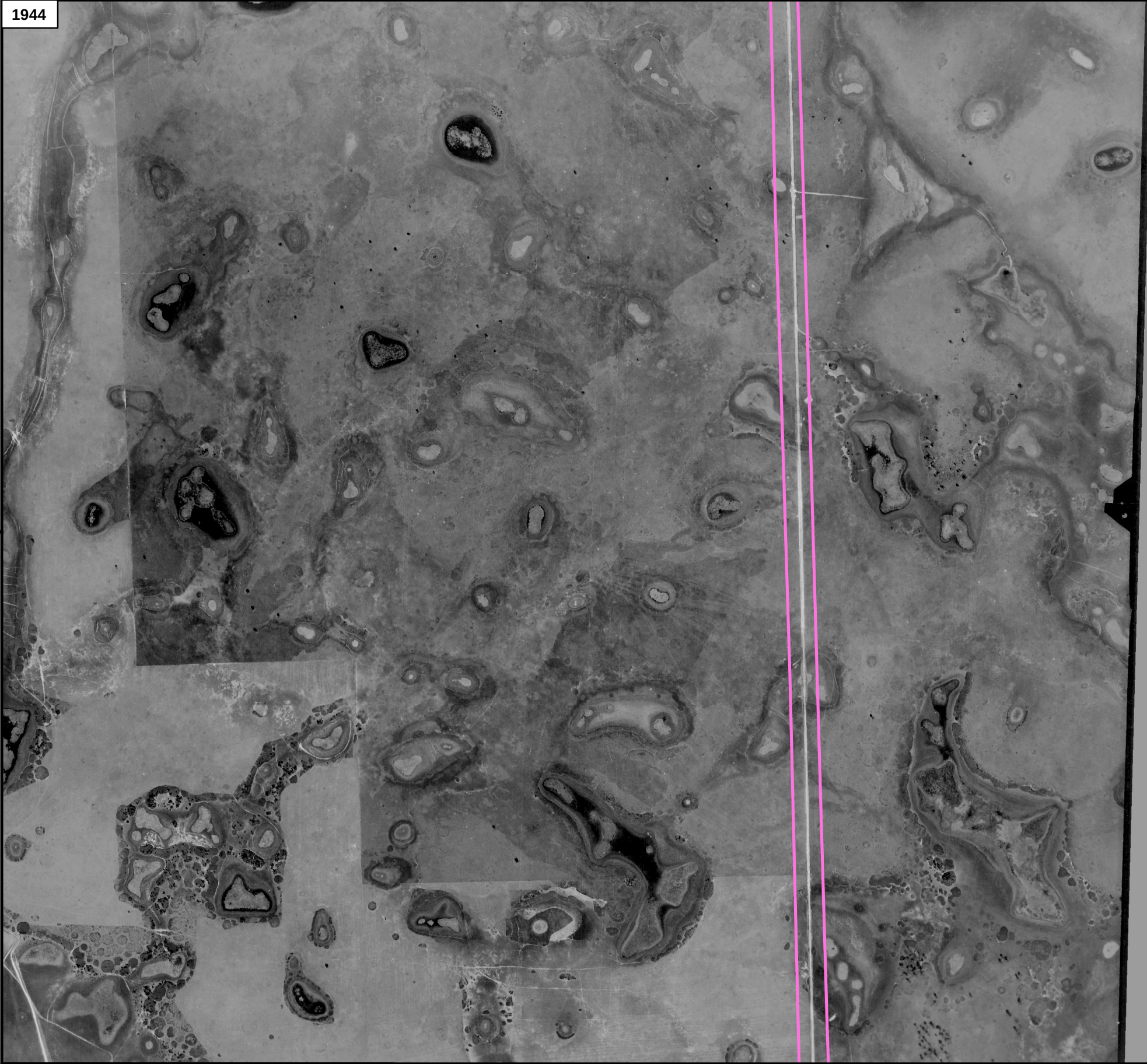
 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties

 Meters
0 250 500



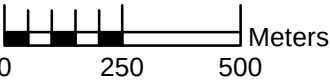
1944



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties





1944
1948

Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

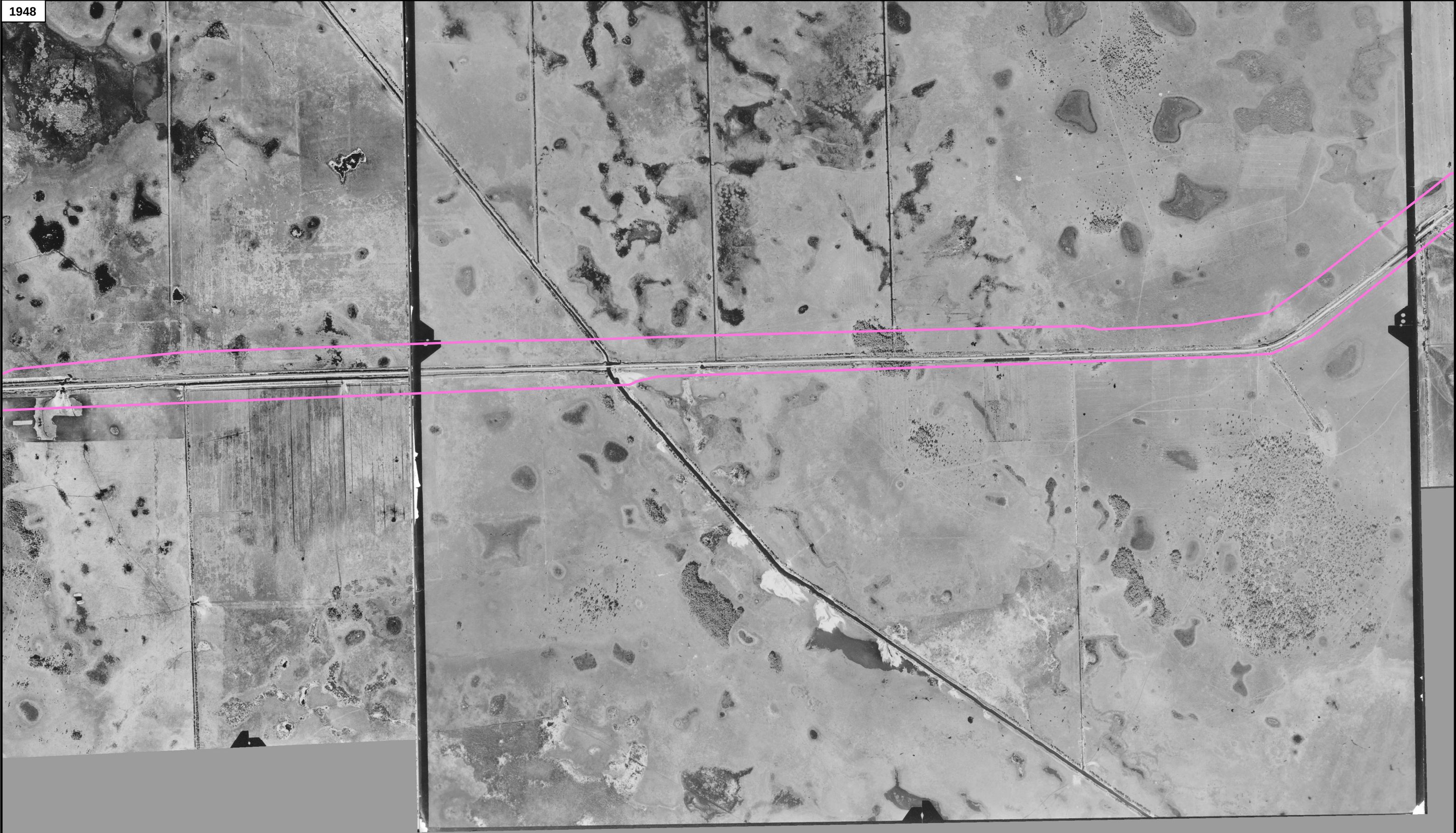
Okeechobee, Highlands, Glades,
and DeSoto Counties

 Meters
0 250 500



Map
11

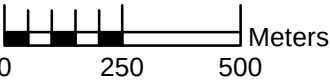
1948



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

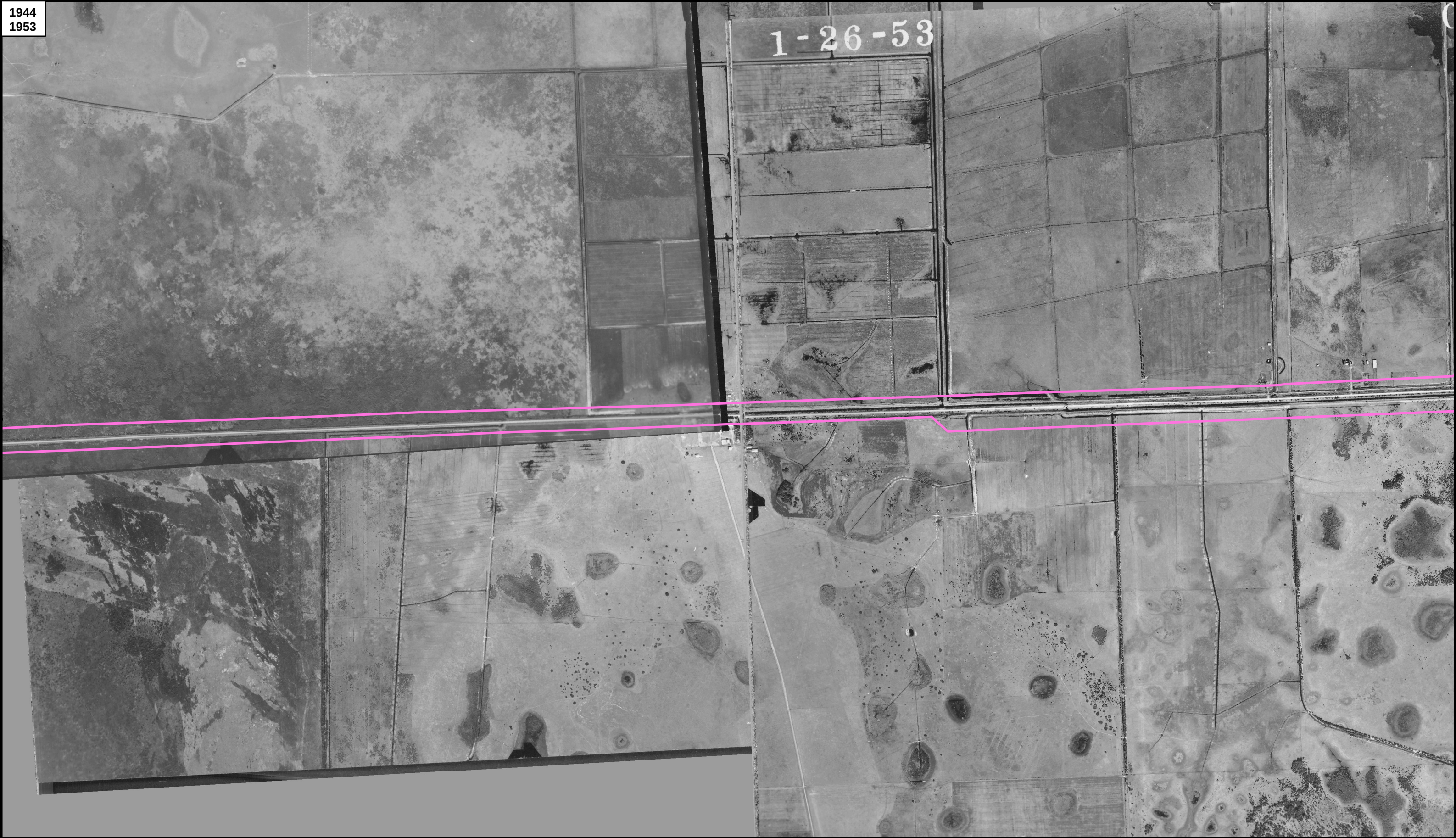
Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
12

1944
1953

1-26-53



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

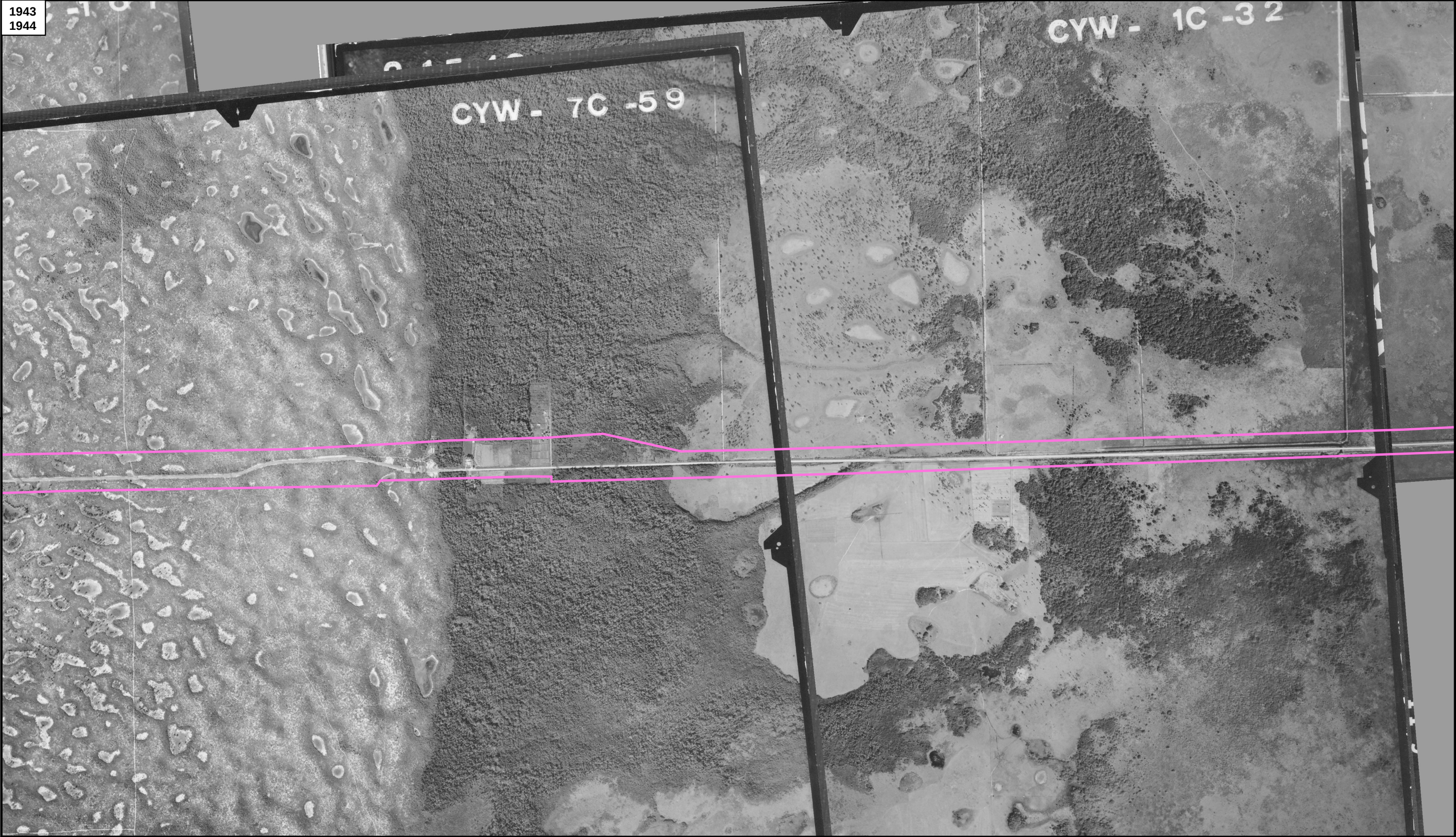
Okeechobee, Highlands, Glades,
and DeSoto Counties

 Meters
0 250 500



Map
13

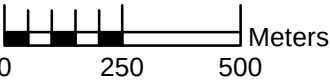
1943
1944



Approximate Location of Study Area
on Historic Aerial Photographs

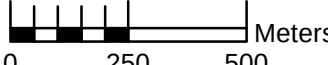
 Study Area

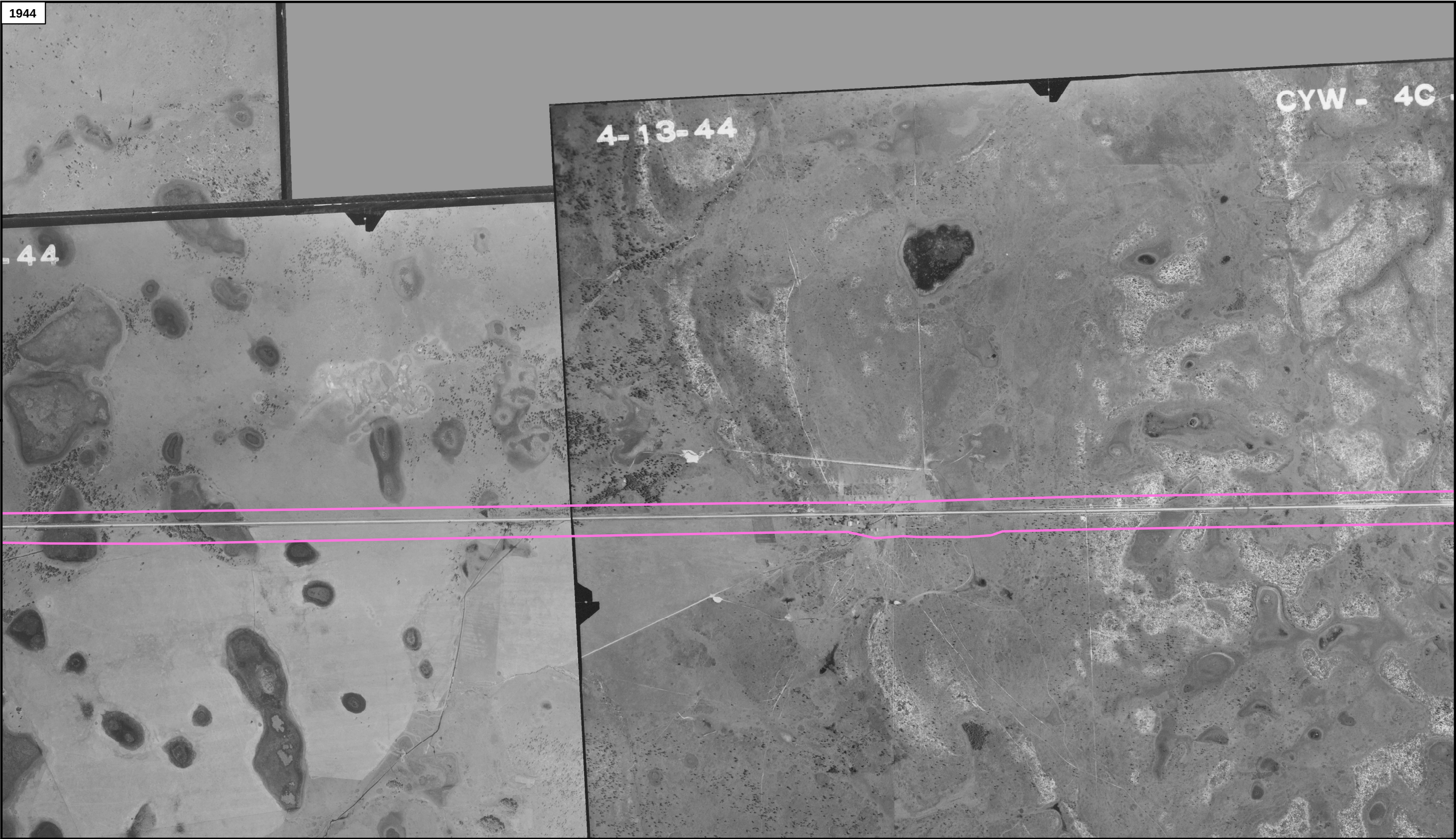
Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
14



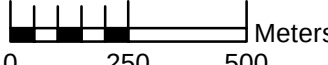
Approximate Location of Study Area on Historic Aerial Photographs	 Study Area	Okeechobee, Highlands, Glades, and DeSoto Counties  Meters 	Map 15
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Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties

 Meters

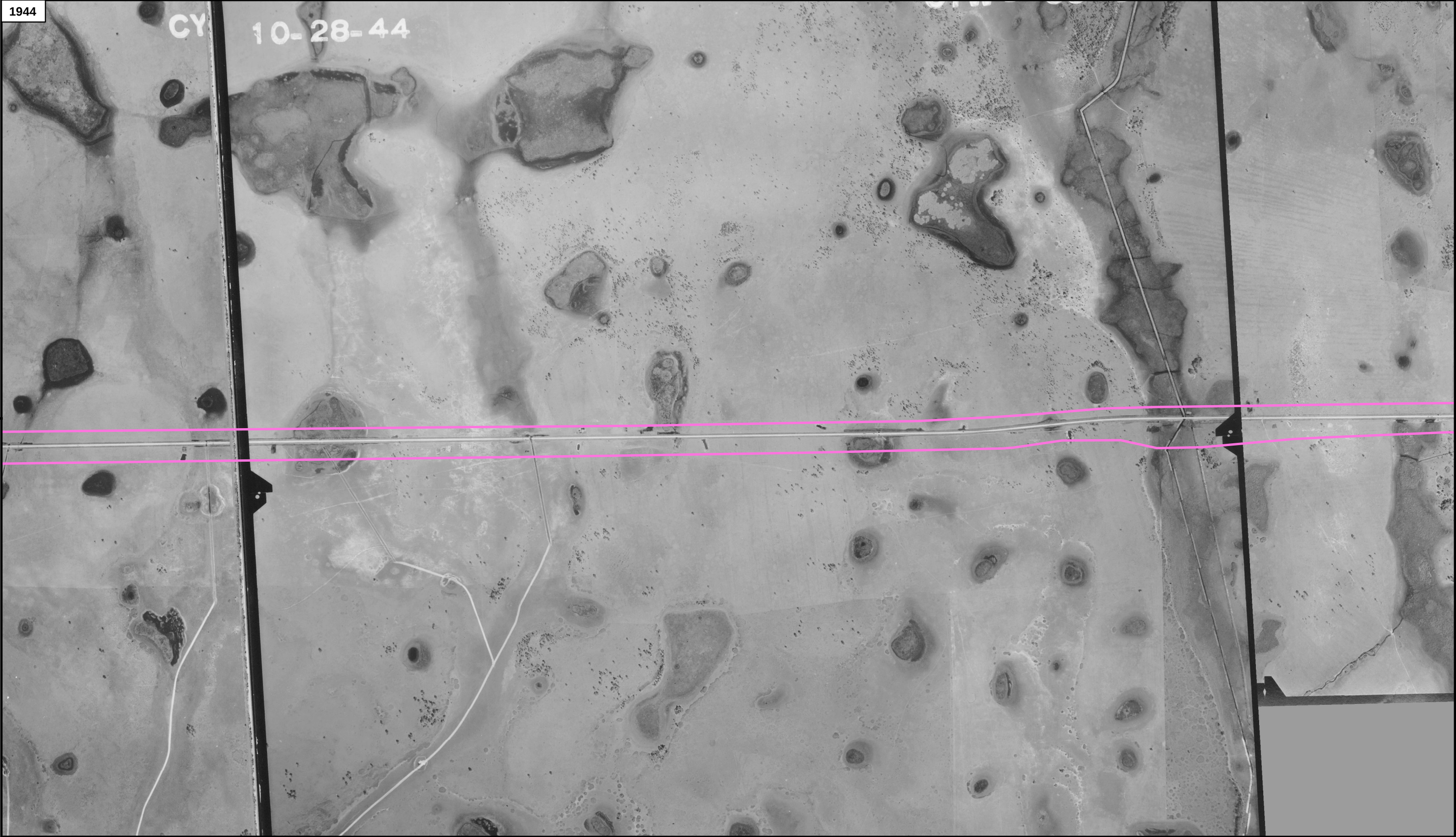


Map
16

1944

CY

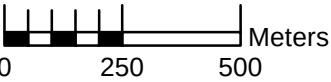
10-28-44



Approximate Location of Study Area
on Historic Aerial Photographs

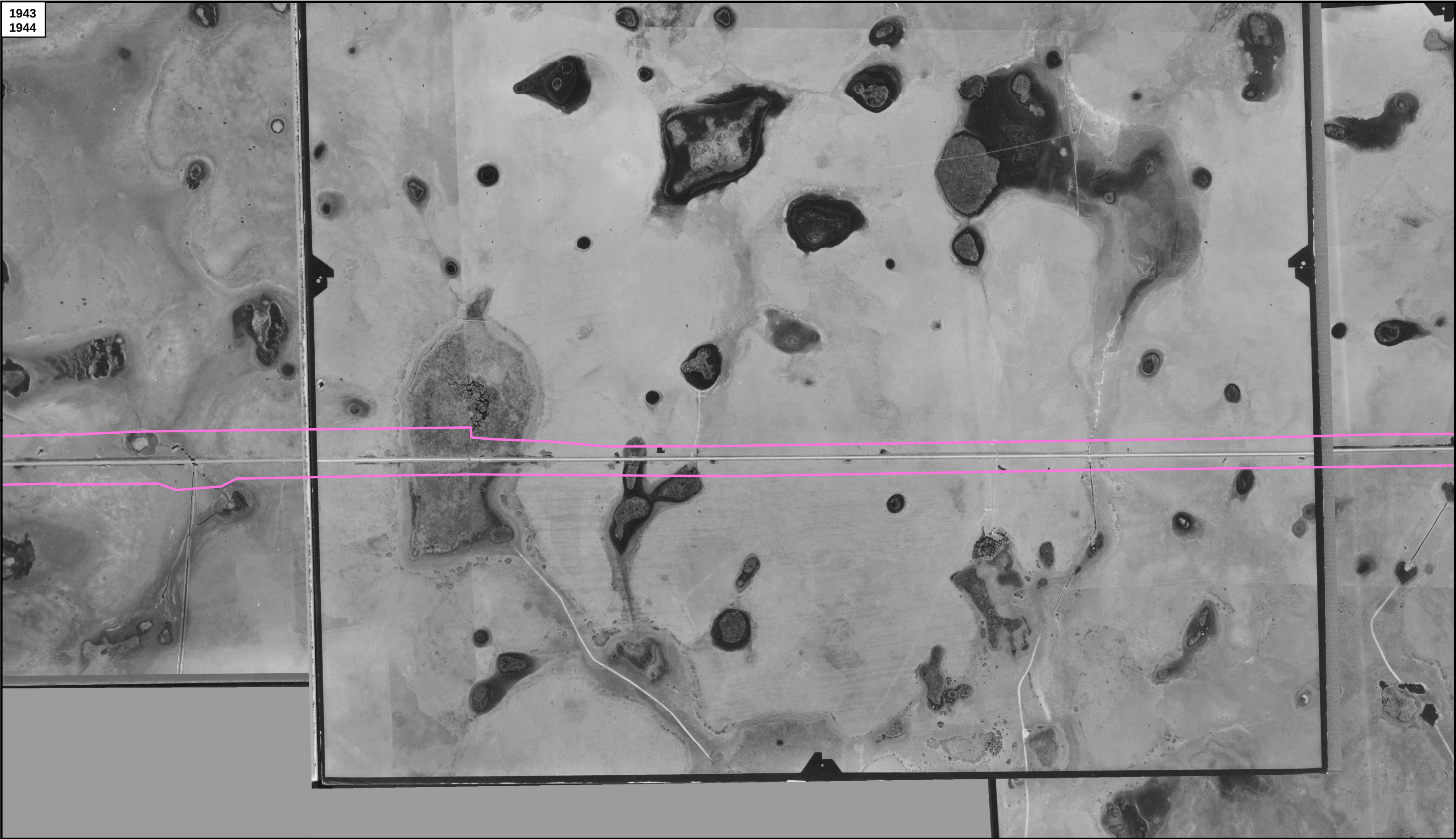
 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
17

1943
1944



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties

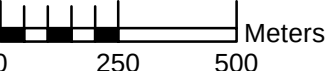
 Meters
0 250 500



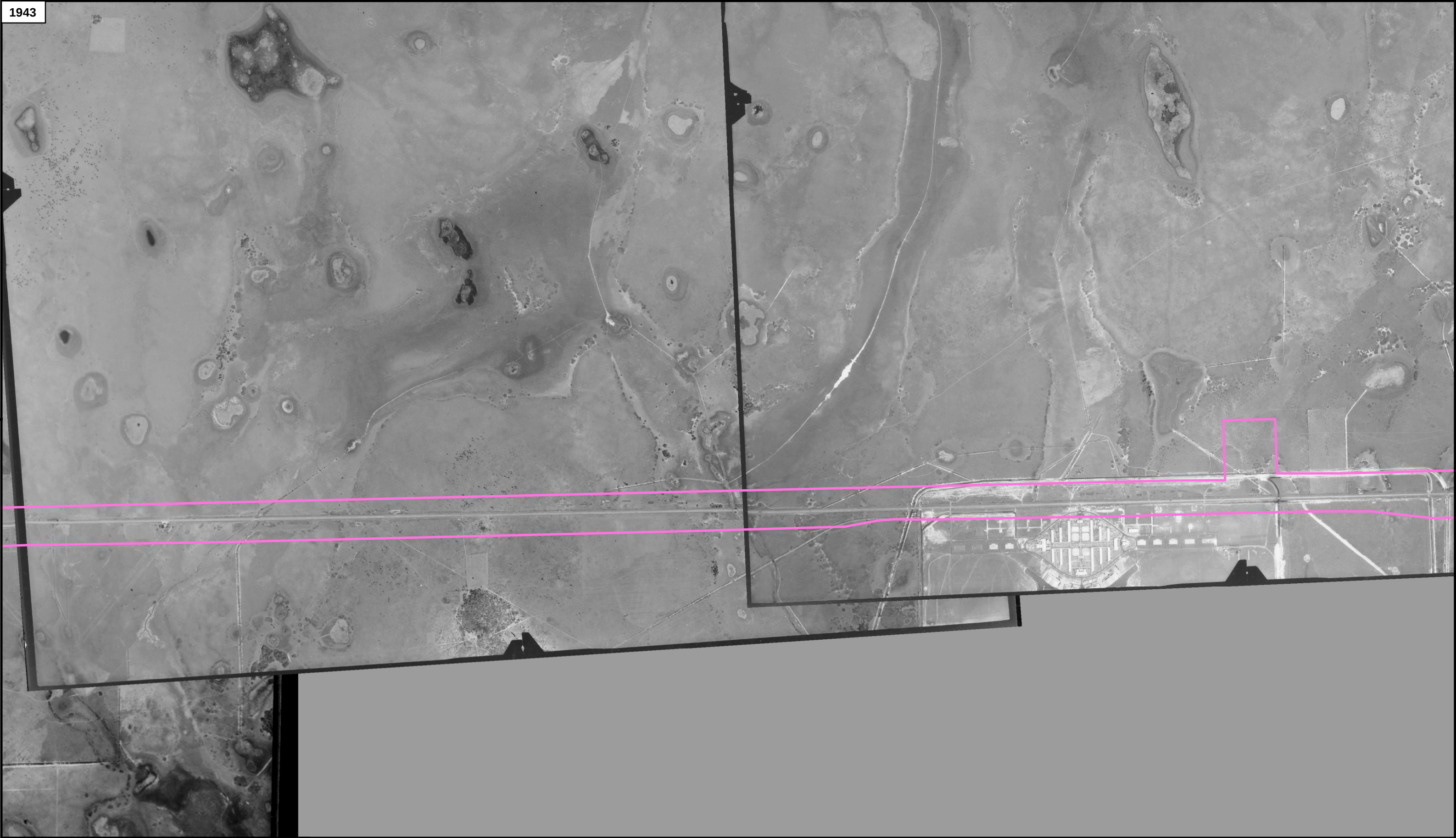
Map
18

1943

4-16-43

Approximate Location of Study Area on Historic Aerial Photographs	 Study Area	Okeechobee, Highlands, Glades, and DeSoto Counties  Meters 	Map 19
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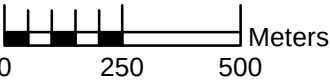
1943



Approximate Location of Study Area
on Historic Aerial Photographs

 Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
20



**Approximate Location of Study Area
on Historic Aerial Photographs**

 Study Area

**Okeechobee, Highlands, Glades,
and DeSoto Counties**

 Meters



1943

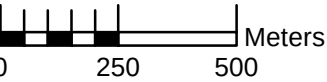


Approximate Location of Study Area
on Historic Aerial Photographs



Study Area

Okeechobee, Highlands, Glades,
and DeSoto Counties



Map
22