

COASTAL RESOURCES DIVISION

ONE CONSERVATION WAY - BRUNSWICK, GA 31520 - 912-264-7218

WALTER RABON COMMISSIONER DOUG HAYMANS DIRECTOR

March 4, 2024

Russel Parr (by email) Resource Land Consultants 41 Park of Commerce Drive, Suite 101 Savannah, GA 31405

Re: Coastal Marshlands Protection Act (CMPA) Permit Application Request for Additional Information for Vaden Enterprises, LLLP., Fill of Coastal Marshlands for Construction of a Residential Driveway, 113 Meriweather Drive, Dutch Island, Grimball Creek Marshes, Chatham County, Georgia

Dear Mr. Parr:

The Department has reviewed the application proposing fill of coastal marshlands for installation of a culvert and a paved residential driveway. Staff has identified additional information that is needed before the application can be placed on public notice. Keep in mind that an application needs to be "substantially complete" before it can be presented to the Coastal Marshlands Protection Committee (CMPC). The following items are required before the application can be placed on Public Notice:

- 1. Please provide proof of a recorded easement that grants vehicular ingress & egress to 113 Merriweather Drive from 119 Merriweather Drive.
- 2. Please provide additional discussion on how the proposed project design addresses the State's Public Interest consideration specifically related to increased erosion, shoaling of the channels, or stagnant areas of water that may be created as a result of this project;
- 3. A list of all current adjoining landowners together with such owners' addresses (4 properties total);
- 4. Details for all temporary impacts in CMPA jurisdiction from construction of the project. All impacts must be quantified;
- 5. A site plan illustrating the upland component, the 50ft. CMPA marshlands buffer associated with the project; as well as all activities that will occur within the 50ft. CMPA marshlands buffer. This includes, but is not limited to clearing, grading, and paving associated with the proposed paved driveway;
- 6. Description of proposed activities associated with the upland component (including, but not limited to, land-disturbing activities like clearing, grading, and filling, within the project boundaries associated with construction of the fill associated with the access road). This includes paved driveways, roads, and paths through the 50ft. buffer;
- 7. A discussion of the activities that certify that the project will be conducted in compliance with applicable erosion and sediment control responsibilities;
- 8. A completed Coastal Marina, Community or Commercial Dock Checklist;

- 9. A letter from the local governing authority of the political subdivision in which the property is located stating that the applicant's proposal to clear vegetation, grade upland, fill wetlands, install a culvert and paved driveway, is not violative of any zoning law. This includes E&S and Floodplain Plan approvals from Chatham County;
- 10. Project plans signed by the local zoning authority;
- 11. A letter from the local reviewing authority of the political subdivision in which the property is located stating that the applicant's proposal to construct a paved driveway on private property to provide ingress and egress to 113 Merriweather Drive is not violative of any zoning law;
- 12. The application states a NWP #18 was filed for the project, but in a USACE PCN dated 12/23/2022 the project is advertised as a NWP #14 for construction of a driveway. Please provide a copy of the USACE Permit and / or application;
- 13. A properly executed Federal Consistency Certification Statement;
- 14. A non-refundable application fee of \$250.00 (or a copy of the check submitted);

Staff also requests that the following information be provided prior to the permit application being presented to the CMPC:

 Provide a copy of the water quality certification issued by the Department, if required, for the proposed project, or a written statement that water quality certification is not required.

Our permitting and legal staff will be reviewing your application simultaneously. Our legal staff may contact you to clarify ownership interests or to request additional information. Once these materials have been received, and the application is substantially complete, we will begin the public notice process. During the public comment period, the committee will be reviewing the project. I will notify you of any additional information requested by them as provided in the Official Code of Georgia Annotated (O.C.G.A.) 12-5-286. Public comments and questions about your project will be forwarded to you for a written response. Staff will assist you throughout the process.

I appreciate your assistance in working with staff to provide a substantially complete permit application to the Coastal Marshlands Protection Committee for their consideration. Please feel free to contact me at 912.264.7218 with any questions or comments.

Sincerely,

Deb Barreiro

Coastal Permit Coordinator



RLC#: 18-209

17 April 2024

Georgia Department of Natural Resources Coastal Resource Division Attn: Deb Barreiro deb.barreiro@dnr.ga.gov

RE: Response to Comments

113 Meriweather Drive Chatham County, Georgia

Dear Ms. Barreiro:

In a letter dated 4 March 2024, the Georgia Department of Natural Resources Coastal Resource Division (CRD) requested additional information required for continued processing of the CMPA Permit Application Request for construction of a residential driveway, 113 Meriweather Drive, Dutch Island, Chatham County, Georgia. The following provides a response to each comment in the order outlined in the CRD letter.

- Please provide proof of a recorded easement that grants vehicular ingress & egress to 113 Merriweather Drive from 119 Merriweather Drive.
   Please see the attached deed and plat. The plat includes a 30' Access & Utility Easement from Meriweather Drive.
- 2. Please provide additional discussion on how the proposed project design addresses the State's Public Interest consideration specifically related to increased erosion, shoaling of the channels, or stagnant areas of water that may be created as a result of this project;
  The proposed project will access an upland area within the parcel that does not have a non-marsh alternative. The existing houses and infrastructure on the adjacent lots prohibit accessing the lot from any other direction. This is not an isolated island or hammock; it is upland that abuts other residences along the main road.
- 3. A list of all current adjoining landowners together with such owners' addresses (4 properties total); The following provides a current list of all adjoining landowners.

Owner Name	Parcel Number	Property Address	Owner Address
FEARON, ROBERT J & FEARON,		109 DUTCH ISLAND DR,	109 DUTCH ISLAND DR,
CYNTHIA A	1018602052	SAVANNAH, GA 31406	SAVANNAH, GA 31406-3222
THOMAS, JESSICA E & THOMAS,		111 DUTCH ISLAND DR,	111 DUTCH ISLAND DR,
DAVID C	1018602053	SAVANNAH, GA 31406	SAVANNAH, GA 31406-3222
DUTCH ISLAND HOMEOWNERS		101 DUTCH ISLAND DR,	PO BOX 9479, SAVANNAH,
ASSOCIATION INC	1018501010	SAVANNAH, GA 31406	GA 31412-9479
HEADLEY, JONATHAN NICHOLAS		119 MERIWEATHER DR,	119 MERIWEATHER DR,
& HEADLEY, ASHLEIGH	1018602056	SAVANNAH, GA 31406	SAVANNAH, GA 31406-7214

4. Details for all temporary impacts in CMPA jurisdiction from construction of the project. All impacts must be quantified; A site plan illustrating the upland component, the 50ft. CMPA marshlands buffer associated with

the project; as well as all activities that will occur within the 50ft. CMPA marshlands buffer. This includes, but is not limited to clearing, grading, and paving associated with the proposed paved driveway;

A site plan depicting the upland component, and the 50' CMPA marshlands buffer is included in Appendix

C. The 50' upland buffer for this project totals 15,054 ft² and activities that will occur within the 50' buffer

include the following:

- Clearing and grading of the road corridor totaling 6,116 ft<sup>2</sup>.
- 2. Installation of road which will be constructed with earthen fill with a pervious driveway surface (i.e. pervious pavers, pervious concrete, or gravel) totaling 4,090 ft<sup>2</sup>.
- 3. Installation of road shoulder/slope totaling 2,026 ft<sup>2</sup>. The shoulder slopes will be planted with native vegetation.
- 4. The remaining 8,938 ft<sup>2</sup> of 50' upland buffer will not be disturbed.
- Description of proposed activities associated with the upland component (including, but not limited to, landdisturbing activities like clearing, grading, and filling, within the project boundaries associated with construction of the fill associated with the access road). This includes paved driveways, roads, and paths through the 50ft. buffer;

See item 4 above. The applicant has elected to use a pervious road surface within the 50' buffer.

- 6. A discussion of the activities that certify that the project will be conducted in compliance with applicable erosion and sediment control responsibilities;
  All phases of the project will be conducted in accordance with applicable local and state erosion and
  - sediment control requirements and the construction phase of the project will include all BMPs required for sedimentation and erosion control.
- A completed Coastal Marina, Community or Commercial Dock Checklist;
   The proposed project is a driveway crossing for a residential property and is therefore not a Marina,
   Community or Commercial Dock; however, we have provided the checklist with applicable information included.
- A letter from the local governing authority of the political subdivision in which the property is located stating that the applicant's proposal to clear vegetation, grade upland, fill wetlands, install a culvert and paved driveway, is not violative of any zoning law. This includes E&S and Floodplain Plan approvals from Chatham County;

The revised plans have been provided to the local zoning authority and a copy confirming that the proposed road complies with local zoning law will be provided upon receipt. "E&S and Floodplain Plan" approvals will be obtain following receipt of the CMPA Permit as required by Chatham County.

- Project plans signed by the local zoning authority;
   Signed project plans will be provided once we receive them.
- 10. A letter from the local reviewing authority of the political subdivision in which the property is located stating that the applicant's proposal to construct a paved driveway on private property to provide ingress and egress to 113 Merriweather Drive is not violative of any zoning law; See items 8 and 9.
- 11. The application states a NWP #18 was filed for the project, but in a USACE PCN dated 12/23/2022 the project is advertised as a NWP #14 for construction of a driveway. Please provide a copy of the USACE Permit and / or application:

The applicant submitted a NWP #18 Pre Construction Notification (Minor Discharges). The USACE, at their discretion, elected to authorize the project under NWP #14 (Linear Transportation Projects). A copy of the NWP verification is attached.

- 12. A properly executed Federal Consistency Certification Statement; See attached.
- 13. A non-refundable application fee of \$250.00 (or a copy of the check submitted);
  A copy of the check is included, and the check has been forwarded to your office with a hard copy of this package.

We appreciate your assistance with this project. For your review and use, we have attached the following:

Appendix A: Deed and Plat

Appendix B: Revised Permit Drawings
Appendix C: 50' Upland Component Exhibit

Appendix D: Marina, Community or Commercial Dock Checklist

Appendix E: Zoning Letter package to Chatham County

Appendix F: SAS-2019-00900 Nationwide Permit

Appendix G: Federal Consistency Certification Statement

If you should have any questions or require additional information, please contact us at 912-443-5896.

Sincerely,

Russell Parr, Sr., PWS Project Manager

Resource & Land Consultants



#### CHATHAM COUNTY DEPARTMENT OF BUILDING SAFTEY AND REGULATORY SERVICES

1117 EISENHOWER DRIVE, SAVANNAH, GA 31406 P.O. Box 8161, Savannah, GA. 31412-8161 912 201 4300 – Fax 912 201 4301

May 10, 2024

Russell Parr, Sr. Resource and Land Consultants Savannah, Georgia

RE: GADNR CMPA Application Vaden Enterprises, LLP. 113 Meriweather Drive

Dear Mr. Parr,

The above referenced improvements and those identified on the attached documents do not represent a violation of the Chatham County Zoning Ordinance.

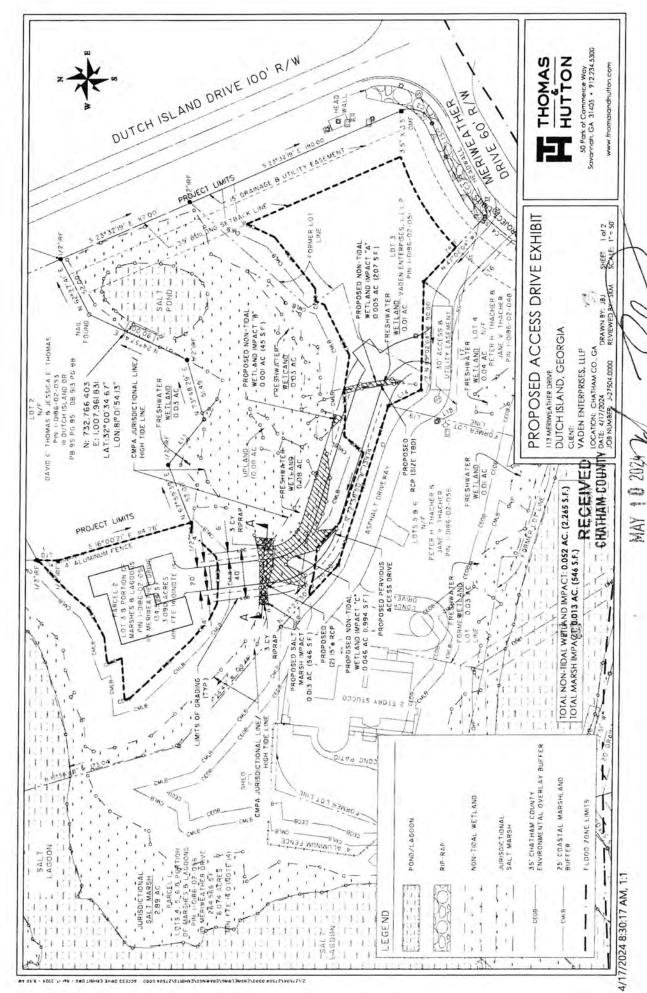
If there are questions, I can be reached at 912 201 4315.

Sincerely,

Marcus Lotson, Office of Zoning Administration

Assistant Director, Building Safety and Regulatory Services.

Attachments



& REGULATORY SERVICES DEPT OF BUILDING 874 E.J

# Coastal Marina, Community or Commercial Dock Checklist (fill in the blanks as indicated or answer yes or no)

LOCATION:		elinedpiso di constituti		
County Municipality _	Chatham County		Landmarks Waterway	Grimball Creek
FACILITY:				
Facility Type Dock Space	_X Private Lease		Sold	Commercial Other Rented Other
Size of Upland	d Area (sq. ft.)		Size of Submo	erged Area (sq. ft)
WATERWAY	(INFORMATION:			
Ditch	X river		creek	basin
Tidal Range (f Channel Widt	t MLW) <u>2'</u> h (ft. MLW) <u>10'</u>		Water Depth (ft. MLV Depth of Dredging	(ft. MLW)0
Distance facili	ity will extend into th	e waterway beyo	nd MLW	
EXISTING O	R PLANNED SER	VICES IN JURIS	SDICTION:	
boat ra	mp fuel it vessels ding	hoist hull repair ship's store showers	mobile lift propeller repair engine repair dockmaster's office	vessel electric hookup
DREDGING/	FILLING/SHOREL	INE STABILIZA	TION:	
<u>X</u>	Is shoreline stabilizated in or n	quired for boat ban tidal wetlands? In open water ditcled sites be required disposal sites been so ation proposed? It was a US Army C	sin?  n? n? n identified? et aside with deeds or so, what type? orps of Engineers ma	easements?  intained channel or basin with an ne Corps of Engineers)

<u>No</u>	Is this site located near a wildlife refuge, wilderness area, special management area, or other area specifically located for the protection of fish and wildlife?  If yes, what is the distance?
No_	*Is this habitat identified as "essential fish habitat"?
No	Are rare, threatened, endangered or otherwise designated unique or outstanding aquatic or terrestrial species or their habitats known to be present at or near the project site?
No	Do oyster or clam beds occur in or near the project site or access channels?  If yes, what is the distance? If yes, what is the acreage?
No	*Is project site near active crabbing areas?
No	*Is the project site in designated bait zones?
No	Is the project site in or near an area of historic, archeological, or scenic value?  If yes, explain

HABITAT/WILDLIFE/CULTURAL RESOURCES: (contact GADNR Wildlife Resources Division, US Fish & Wildlife



#### 8 December 2022

US Army Corps of Engineers Savannah District / Regulatory Division Attention: CESAS-RD (William M. Rutlin, Coastal Branch Chief) 100 West Oglethorpe Avenue Savannah, Georgia 31401-3640

Georgia Department of Natural Resources Coastal Resources Division Attn: Mr. Josh Noble One Conservation Way Brunswick, Georgia 31520-8687

Subject: NWP 18 PCN & CMPA Permit Request Vaden Enterprises, LLLP Parcel 2 Chatham County, Georgia RLC# 18-209

Dear Mr. Rutlin & Mr. Noble:

Resource & Land Consultants (RLC), on behalf of Vaden Enterprises, LLLP, is submitting the attached Nationwide Permit 18 Pre-Construction Notification and Coastal Marshlands Permit Application for minor wetland impacts associated with installation of a driveway to provide access to an existing residential lot. The subject tract is located at the intersection of Dutch Island Drive and Meriweather Road on Dutch Island within in Chatham County, Georgia (32.009175°, -81.032538°). The project area includes Parcel 2 totaling 3.09 acres and contains ±1.57 acres of upland, ±0.23 acre of saltmarsh lagoon, ±0.09 acre of saltwater pond, ±0.97 acres of salt marsh, 0.08 acre of tidal ditch and ±0.15 acres of freshwater wetlands. The proposed project requires a total of 0.065 acre of aquatic resource impact including 0.052 acre of non-tidal freshwater wetland impact and 0.013 acre of tidal ditch impact during installation of a driveway required to access the rear of the residential parcel. The proposed layout represents a plan that has avoided and minimized impacts to aquatic resources to the greatest extent practicable while satisfying the need and purpose of the project.

The attached information includes the following:

- USACE & GADNR Permit Application Forms
- Figures/Site Maps
- Permit Drawings
- Hazardous Site Index
- Property Ownership Documentation
- Adjacent Landowner Information
- Threatened & Endangered Species Documentation & IPaC Database & Edges Information
- Zoning Letter
- GADNR-CRD Marshline Verification Letter & USACE DRAR

We appreciate your assistance with this project. If you have any questions or require any additional information, please contact us at (912) 443-5896.

Sincerely,

Russell Parr, Sr. Project Manager

**Resource & Land Consultants** 

cc: Ms. Jane Thacher – Vaden Enterprises, LLLP

Mr. Scott Monson – Thomas & Hutton

# Vaden Enterprises Parcel 2

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Prepared For:

Vaden Enterprises, LLLP



**RESOURCE+LAND**C O N S U L T A N T S

Resource + Land Consultants 41 Park of Commerce Way, Suite 101 Savannah, Georgia 31405 912.443.5896 | rlandc.com

## Vaden Enterprises Parcel 2 Dutch Island, Chatham County, Georgia

USACE & GADNR Permit Application December 2022

Applicant: Vaden Enterprises, LLLP





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- A: USACE & GADNR Permit Application Forms
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- E: Property Ownership Documentation
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- G: Threatened & Endangered Species Documentation & IPaC Database & Edges Information
- H: Zoning Letter
- I: GADNR-CRD Marshline Verification Letter & USACE DRAR
- J: GNARHGIS Database Exhibit
- K: FEMA Flood Map Georgia DFIRM





Vaden Enterprises Parcel 2
Dutch Island, Chatham County, Georgia
Project Description

#### 1.0 INTRODUCTION:

Vaden Enterprises, LLLP, is submitting the attached Coastal Marshlands Permit Application for minor impacts associated with installation of a driveway to provide access to an existing residential lot. The subject parcel is located at the intersection of Dutch Island Drive and Meriweather Road on Dutch Island in Chatham County, Georgia (32.009175°, -81.032538°).

#### 2.0 PROJECT PURPOSE:

The purpose of the project is to construct a driveway to provide access to a single-family residential lot. The proposed driveway will require installation of a culvert in an existing man-made ditch that is subject to tidal flow and adjacent nontidal freshwater wetlands.

#### 3.0 PROPOSED PROJECT:

The project area includes Parcel 2 totaling 3.09 acres and contains  $\pm 1.57$  acres of upland,  $\pm 0.23$  acre of saltmarsh lagoon,  $\pm 0.09$  acre of saltwater pond,  $\pm 0.97$  acres of salt marsh, 0.08 acre of tidal ditch and  $\pm 0.15$  acres of freshwater wetlands. The proposed project requires a total of 0.065 acre of aquatic resource impact including 0.052 acre of non-tidal freshwater wetland impact and 0.013 acre of tidal ditch impact during installation of a driveway required to access the rear of the residential parcel. The proposed layout represents a plan that has avoided and minimized impacts to aquatic resources to the greatest extent practicable while satisfying the need and purpose of the project. Exhibits depicting the proposed impacts are provided in Appendix C.

#### 3.1 Marshlands Component:

The marshlands component of the project is defined as the part of the project in an estuarine area or any structure on or over an estuarine area, including but not limited to marinas, community docks, bridges, piers and bulkheads requiring a permit under the Coastal Marshlands Protection Act. The marshlands component of the project includes the culvert associated with the proposed driveway.

#### 3.2 Upland Component:

Per 391-2-3-.02 ""Upland component of the project" is all of those service areas, amenities, and recreational areas located inland of the Coastal Marshlands Protection Act jurisdiction line, that serve or augment the functioning of the marshlands component of the project, such as, but not limited to, dry stack boat storage; dockmaster shop; fuel storage and delivery facilities to serve the marshlands component of the project; and restrooms intended for users of the marshlands component of the project. This term may extend to and cover such facilities adjacent to or in proximity to the marshlands component of the project that are intended to serve exclusively or primarily the users of the marshlands component of the project if the Committee finds in its sole discretion that such facility is likely to alter the marshlands". The proposed project does not include any features or area that serve or augment the functioning of the marshlands component of the project. For this reason, there is no upland component associated with this project.

#### 3.3 Stormwater Management:

Because the proposed project includes installation of a driveway and culvert within a man-made ditch, the proposed project does not include site development activities that require a stormwater management plan. The project will implement standard BMP's during the construction phase for sedimentation and erosion control purposes and to protect adjacent tidal waters and marsh.

3.4 GADNR-EPD 401 Water Quality Certification (WQC): The proposed project does not require WQC





separate from that issued in association with the U.S. Army Corps of Engineers NWP 18.

#### 4.0 ALTERNATIVES ANALYSIS AND MINIMIZATION:

The proposed project will provide access to an existing single-family lot. While the front portion of the lot can be accessed from Merriweather Drive via an existing easement accessing the rear of the property requires the proposed alignment. As depicted on the aerial imagery, existing residential homes prohibit alternate upland access points and any alternative alignment would require a greater acreage of impact to vegetated tidal marsh. The proposed driveway footprint was designed to limit impacts to the manmade ditch and a small freshwater wetland area to minimize impacts to the greatest extent practicable. In addition to the location of the driveway, the proposed design includes the minimum width required by Chatham County for emergency access.

#### **5.0 ESSENTIAL FISH HABITAT:**

The proposed project includes installation of culvert within a manmade tidal ditch. No loss of essential fish habitat will occur as part of the project.

#### **6.0 THREATENED AND ENDANGERED SPECIES:**

Coordination with US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) was conducted to assess potential impacts to federally protected species on the project site. The results of this consultation, the Official Species List, is attached to this document. The project area consists of a developed residential lot, habitats required to support listed species are not present. Based on the location of the proposed project and proposed activities associated with construction of the driveway (installation of a culvert within a manmade ditch), no adverse impacts to any individual or population of protected species is anticipated.

#### 7.0 COMMERCIAL BAIT SHRIMP, OYSTER, AND CRABBING AREAS

The proposed project is not located in a designated bait shrimp zone according to Georgia Department of Natural Resources *Commercial and Recreational Bait Shrimp Zones, Coastal Georgia* map. The project area is not listed on the *Georgia Harvester Reported Crabbing Areas* list, and the project area is not located in designated commercial or recreational oyster harvest areas.

#### 8.0 IMPAIRED WATERS

The subject waterway is not listed on the U.S. Environmental Protection Agency 303(d) list for impaired water bodies.

#### 9.0 SUPPLEMENTAL INFORMATION

This additional information is provided for compliance with Coastal Marshlands Protection Act of 1970 information requirements:

#### OCGA 12-5-286. Permits to fill, drain, etc., marshlands.

- (b) Each application for such permit shall be, properly executed, filed with the department on forms as prescribed by the department, and shall include:
  - (1) The name and address of the applicant-See attached application form.
  - (2) A plan or drawing showing the applicant's proposal and the manner or method by which such proposal shall be accomplished. Such plan shall identify the coastal marshlands affected- Please refer to attached permit drawings.
  - (3) A plat of the area in which the proposed work will take place- See attached.
  - (4) A copy of the deed or other instrument under which the applicant claims title to the property or, if the applicant is not the owner, then a copy of the deed or other instrument under which





the owner claims title together with written permission from the owner to carry out the project on his land. In lieu of a deed or other instrument referred to in this paragraph, the committee may accept some other reasonable evidence of ownership of the property in question or other lawful authority to make use of the property; The committee will not adjudicate title disputes concerning the property which is the subject of the application; provided, however, the committee may decline to process an application when submitted documents show conflicting deeds- See attached.

- (5) A list of all adjoining landowners together with such owners' addresses, provided that if the names or addresses of adjoining landowners cannot be determined, the applicant shall file in lieu thereof a sworn affidavit that a diligent search, including, without limitation, a search of the records for the county tax assessor's office, has been made but that the applicant was not able to ascertain the names or addresses, as the case may be, of adjoining landowners-See attached.
- (6) A letter from the local governing authority of the political subdivision in which the property is located, stating that the applicant's proposal is not in violation of any zoning law; A request has been submitted to Chatham County and a copy of that request is included in this package. The response from the Chatham County will be provided upon receipt.
- (7) A non-refundable application fee to be set by the board in an amount necessary to defray the administrative cost of issuing such permit. Renewal fees shall be equal to application fees, which shall not exceed \$1,000.00 for any one proposal and shall be paid to the department. A \$500 check is attached to this application package.
- (8) A description from the applicant of alternative sites and why they are not feasible and a discussion of why the permit should be granted- See attached project description.
- (9) A statement from the applicant that he has made inquiry to the appropriate authorities that the proposed project is not over a landfill or hazardous waste site and that the site is otherwise suitable for the proposed project. A review of the Hazardous Site Index for Chatham County, Georgia indicates that the subject property does not contain hazardous waste sites or landfills. A copy is attached.
- (10) A copy of the water quality certification issued by the department if required for the proposed project- Not applicable.
- (11) Certification by the applicant of adherence to soil and erosion control responsibilities if required for the proposed project- The project will conform to all building, land disturbing, and stormwater management requirements of Chatham County.
- (12) Such additional information as is required by the committee to properly evaluate the application- This application has been prepared with consideration for the interests of the general public of the State of Georgia as defined in OCGA 12-5-286(g): OCGA 12-5-286. Permits to fill, drain, etc. marshlands.
- (g) In passing upon the application for permit, the committee shall consider the public interest, which, for purposes of this part shall be deemed to be the following considerations:
  - (1) Whether or not unreasonably harmful obstruction to or alteration of the natural flow of





navigational water within the affected area will arise as a result of the proposal- The proposed project will not alter natural flow of navigable waters or obstruct public navigation.

- (2) Whether or not unreasonably harmful or increased erosion shoaling of channels, or stagnant areas of water will be created- The proposed project will not increase erosion, shoaling of channels, or create stagnant areas of water.
- (3) Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, or wildlife, or other resources, including but not limited to water and oxygen supply- The proposed project will not interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, nor affect water and oxygen supply.



## **APPENDIX A:**

**USACE & GADNR Permit Application Forms** 

#### U.S. Army Corps of Engineers (USACE)

#### NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)

33 CFR 330. The proponent agency is CECW-CO-R.

Form Approved -OMB No. 0710-0003 Expires: 02-28-2022

#### DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Program of the Corps of

Engineers (Corps); Final Rule 33 CFR 320-332.

Principal Purpose Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and

may be made available as part of the agency coordination process.

Disclosure Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can

a permit be issued.

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at <a href="https://www.nc-alex.esd.mbx.dd-dod-information-collections@mail.mil">whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil</a>. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

#### PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the district engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

not completed in full will be returned.				
	(ITEMS 1 THRU 4 TO BI	E FILLED BY TH	IE CORPS)	
1. APPLICATION NO.	2. FIELD OFFICE CODE		3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
	(ITEMS BELOW TO BE	FILLED BY AP	PLICANT)	
5. APPLICANT'S NAME		8. AUTHORIZ	ZED AGENT'S NAME AN	ND TITLE (agent is not required)
First - Jane Middle -	Last - Thacher	First - Russell	1 Middle -	- Last - Parr
Company - Vaden Enterprises, LLLP		Company - R	esource & Land Cons	sultants
Company Title -		E-mail Addres	s - rparr@rlandc.com	
E-mail Address -				
6. APPLICANT'S ADDRESS		9. AGENT'S ADDRESS		
Address- 12020 Abercorn Street		Address- 41 Park of Commerce Way, Suite 101		
City - Savannah State - GA Zip - 31419 Country -USA		City - Savannah State - GA Zip - 31405 Country -US		
7. APPLICANT'S PHONE NOs. with AREA COL	DE	10. AGENT'S	PHONE NOs. with AREA	A CODE
a. Residence b. Business c. Fax 912-921-3500	d. Mobile	a. Residence	b. Business 912-443-5896	c. Fax d. Mobile
	STATEMENT OF	AUTHORIZATI	ON	
11. I hereby authorize, Russell Parr	to act in my behalf as	my agent in the	processing of this nation	wide permit pre-construction notification
and to furnish, upon request, supplemental infor	rmation in support of this nation	wide permit pre-c	onstruction notification.	
L	are has	-60	2022-12-06	
/_	SIGNATURE OF APPLIC	ANT.		
	THE RESERVE OF THE PARTY OF THE PARTY	St. Co.	DATE	
	ME, LOCATION, AND DESCRI	IPTION OF PRO	JECT OR ACTIVITY	
12. PROJECT NAME or TITLE (see instructions Vaden Enterprises, LLLP Parcel 2	:)			

NAME, LOCATION, AND DESCR	IPTION OF PROJECT OR ACTIVITY		
13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROPOSED ACTIVITY STREET ADDRESS (if applicable Meriweather Drive	<del>)</del>	
15. LOCATION OF PROPOSED ACTIVITY (see instructions) Latitude °N Longitude °W 32.009175 -81.032538	City: Savannah	State: GA	Zip: 31406
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)			
State Tax Parcel ID 1-0186-02-051	Municipality Chatham County		
Section Township	Range		
17. DIRECTIONS TO THE SITE  The property is located at the corner of Dutch Island Drive and Meriw	eather Road on Dutch Island within Chatham County, G	eorgia	
18. IDENTIFY THE SPECIFIC NATIONWIDE PERMIT(S) YOU PROPOSE TO 18	USE		
19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY (see instance of tract is located at the intersection of Dutch Island Drive ar Georgia (32.009175°, -81.032538°). The project area includes Parcel 2 saltmarsh lagoon, ±0.09 acre of saltwater pond, ±0.97 acres of salt maproposed project requires a total of 0.065 acre of aquatic resource imp 0.013 acre of tidal ditch impact during installation of a driveway requirepresents a plan that has avoided and minimized impacts to aquatic repurpose of the project.	and Meriweather Road on Dutch Island within in Chatham 2 totaling 3.09 acres and contains $\pm 1.57$ acres of upland, rsh, 0.08 acre of tidal ditch and $\pm 0.15$ acres of freshwate act including 0.052 acre of non-tidal freshwater wetland ared to access the rear of the residential parcel. The proportion	±0.23 a or wetlan impact osed lay	acre of nds. The and out
20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (see instruction. The proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has avoided and minimized impacts to the greater formal mitigation (purchase of mitigation credits) is required for the proposed project has a project for the proposed project has a project for the proposed project for the proposed project for the proposed project for the project formal mitigation (purchase of mitigation credits).	est extent practicable. Because the total impact is less tha	an 0.1 a	cre, no
21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY (Describe the reason or part The purpose of the NWP activity is to impact 0.065 acre of wetland un property.		nrough	the
22. QUANTITY OF WETLANDS, STREAMS, OR OTHER TYPES OF WATERS (see instructions)	DIRECTLY AFFECTED BY PROPOSED NATIONWIDE PERM	IIT ACTI	VITY
Acres Linear Feet 0.065	Cubic Yards Dredged or Discharg	jed	
Each PCN must include a delineation of wetlands, other special aquatic si and ephemeral strea	ites, and other waters, such as lakes and ponds, and perenr ms, on the project site.	nial, inte	ermittent,
23. List any other NWP(s), regional general permit(s), or individual permit(s) use related activity. (see $instructions$ ) N/A	ed or intended to be used to authorize any part of the proposed p	project o	r any
24. If the proposed activity will result in the loss of greater than 1/10-acre of wet mitigation requirement in paragraph (c) of general condition 23 will be satisfiand why compensatory mitigation should not be required for the proposed a The proposed project has avoided and minimized impacts to the greater	ied, or explain why the adverse environmental effects are no mo activity.	re than i	minimal

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formal mitigation (purchase of mitigation credits) is required for the project.
25. Is any portion of the nationwide permit activity already complete?  Yes No If Yes, describe the completed work:  N/A
26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (see instructions)  Coordination with US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) was conducted to assess potential impacts to federally protected species on the project site. The results of this consultation, the Official Species List, is attached to this document. In addition to the database query, a pedestrian survey was conducted onsite and no species or habitat conducive to the federally listed species was observed. Therefore, the proposed project does not pose a threat to any federally listed species.
27. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (see instructions) The project area consists of a developed single family lot. No historic properties are known to occur on the project site.
28. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river": The proposed project does not occur within a component of the National Wild and Scenic River System or a river officially designated as a "study river" for possible inclusion in the National Wild and Scenic River System.
29. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project?  Yes No  If "yes", please provide the date your request was submitted to the Corps district:
30. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (see instructions) N/A
31. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.  2022-12-06
SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE
The pre-construction notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in Block 11 has been filled out and signed, the authorized agent.  18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

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#### Instructions for Preparing a Department of the Army

#### Nationwide Permit (NWP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the Corps of Engineers.

**Block 5. Applicant's Name.** Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

**Block 6.** Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant's Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

**Block 13. Name of Waterbody.** Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

**Block 15. Location of Proposed Activity.** Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

**Block 16. Other Location Descriptions.** If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity, including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g.,a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

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Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, or occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distant crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands When Pre-Construction Notification is Required. Paragraph (c) of NWP general condition 23 requires compensatory mitigation at a minimum one-for-one replacement ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre, or provide an explanation of why the district engineer should not require wetland compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a Federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/.

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

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Block 30. Other Information Required For Nationwide Permit Pre-Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

- \* NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- \* NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
- \* NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
- \* NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification.
- \* NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
- \* NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
- \* NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions must be submitted to the district engineer and receive written authorization prior to commencing the activity.
- \* NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification.

If more space is needed, attach an extra sheet of paper marked Block 30.

**Block 31. Signature of Applicant or Agent.** The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

#### **DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS**

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

#### DRAWINGS AND ILLUSTRATIONS

#### General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

#### ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.

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#### **Supplemental Attachment:**

**26.** Coordination with US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) was conducted to assess potential impacts to federally protected species on the project site. The results of this consultation, the Official Species List, is attached to this document. In addition to the database query, a pedestrian survey was conducted on-site and no federally listed species were observed.

West Indian Manatee (*Trichechus manatus*) The West Indian manatee is a large aquatic mammal whose habitat consists of warm coastal and spring fed waters. It is listed as endangered under both its state and federal status. They are large, gray aquatic mammals with bodies that taper to a flat, paddle-shaped tail. They have two forelimbs, called flippers, with three to four nails on each flipper. Their head and face are wrinkled with whiskers on the snout. During winter months these mammals are primarily confined to the coastal waters of the southern half of Florida and the spring fed rivers of Florida and Georgia. During the summer months as the water temperature rises, the manatees' range expands as far north as Virginia and it is during these months that the "manatees" may occasionally utilize the estuaries of coastal Georgia. Critical habitat for this species has been identified as large portions of coastal Florida including the St. Mary's River.

The project site and impact area does not contain habitat which could support the manatee. For this reason, the proposed project will not adversely affect the West Indian Manatee.

#### Eastern Black Rail (Laterallus jamaicensis ssp. Jamaicensis)

The Eastern black rail is a small bird living in salt and freshwater marshes in portions of the United States, Central America, and South America. Males and females are similar in size and adults are generally pale to blackish-gray, with a small blackish bill and bright red eyes. Eastern black rail habitat can be tidally or non-tidally influenced, and range in salinity from salt to brackish to fresh. Tidal height and volume vary greatly between the Atlantic and Gulf coasts and therefore contribute to differences in salt marsh cover plants in the bird's habitat. Diet includes Insects, snails, seeds, etc. Loss of habitat is the main threat to this species however where habitat is projected numbers are likely stable.

The area consists of a developed residential lot and habitat required to support this species is not present. Thus, the project will have no effect on the black rail.

#### Wood Stork (Mycteria americana)

The wood stork was listed endangered by the USFWS on 28 February 1984 (Federal Register 49 (4):7332-7335). It is listed as endangered under both its state and federal status. Wood storks use freshwater and estuarine wetlands as feeding, nesting, and roosting sites, and annual population fluctuations are closely related to the year-to-year differences in the quality and quantity of suitable habitat. The overall decline in wood stork numbers is attributed to the loss or degradation of essential wetland habitat primarily in southern Florida. The adult is a large bird 33-45 inches tall and 58-71 inches in wingspan. Males typically weigh 5.5-7.3 lbs; females weigh 4.4-6.2 lbs. They appear all white on the ground, with blackish-gray legs and pink feet. In flight, the trailing edge of the wings is black. The head is dark brown with a bald, black face, and the thick down curved bill is dusky yellow. Juvenile birds are a duller version of the adult, generally browner on the neck, and with a paler bill. They nest colonially with up to twenty-five nests in one tree. Breeding once a year, a female lays 3-5 eggs in the typical clutch. The eggs are incubated 27–32 days by both sexes.

No forested or non-forested area suitable for wood stork nesting, feeding or roosting is present within the project area; therefore, the maintenance project will have no effect on the wood stork.

#### Eastern Indigo Snake (Drymarchon corais couperi)

The Eastern indigo snake is a large nonpoisonous, stout bodied snake averaging six to seven feet in length. The snake is smooth scaled and uniform glossy blue-black throughout its body except for some reddish orange or cream color suffusion on its throat, cheeks and chin. This coloration varies with some individuals having distinct coloration and others with no coloration. In the extreme southern reaches of its range (South Florida), the snake is less restricted

and inhabits flatwoods, tropical hammocks, dry glades and moist bogs. In this region of its range, overwintering sites include tree stumps and other underground dens. In the northern portion of its range, including south Alabama, the indigo snake requires deep sand ridges and is often associated with the gopher tortoise. The indigo snake is dependent upon the deep burrows dug by the gopher tortoise and uses them as a refuge from the extreme hot and cold temperatures. This restricted habitat is even more isolated by the snakes' preference for the interspersion of wet lowlands and cypress ponds.

The area consists of a developed residential lot and habitat required to support the sea turtle species is not present. Thus, the project will have no effect on the eastern indigo snake.

Green Sea Turtle (*Chelonia mydas*), Hawksbill Sea Turtle (*Eretmochelys imbricata*), Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), Leatherback Sea Turtle (*Dermochelys coriacea*), Loggerhead Sea Turtle (*Caretta caretta*) These large marine turtles inhabit the offshore waters of the Atlantic and Caribbean. During nesting periods which fall within the summer months, these species leave the water to nest on sandy beaches and primary dunes of the Atlantic and Caribbean coasts. Turtle nests are not uncommon on the barrier islands of Georgia and have been located in the past.

The area consists of a developed residential lot and habitat required to support the sea turtle species is not present. Thus, the project will have no effect on any of the listed sea turtles.

#### Frosted Flatwoods Salamander (Ambystoma cingulatum)

The frosted flatwoods salamander is listed as threatened for both its federal and state status. The frosted flatwoods salamander is black to dark brown and typically patterned with light gray or white flecked lines, forming a frosted pattern on the back, sides, head, and tail. "Frosted" forms show a more random flecking pattern. The underside is dark gray or black with small, scattered white or light gray spots. The head is relatively small, and the tail is quite fat. Adults are typically 4.5-6 inches in total length. The broad-headed, bushy-gilled larva is very distinct with a prominent tan or beige stripe running the length of the otherwise chocolate-brown body. The larva also has a dark brown stripe through each eye, extending from the nostril to the gills.

This salamander is endemic to mesic flatwoods habitats within the vanishing longleaf pine-wiregrass community. Slash pine was incorrectly reported in early species accounts as a commonly associated tree species within its non-breeding habitat. Nearly all frosted flatwoods salamander sites currently dominated by slash pine have been converted from historic longleaf pine stands. Pine flatwoods are fire-dependent communities, requiring periodic burns to promote grasses and forbs, while limiting shrubs and hardwoods. Breeding sites are typically shallow, ephemeral cypress and/or swamp tupelo ponds or "domes," although flooded borrow pits, roadside ditches, and deep firebreaks are occasionally used. Breeding sites are also dependent on periodic dry season fires, which maintain an open canopy conducive to the luxuriant growth of emergent and submerged grasses, sedges, and forbs necessary for sheltering the aquatic larvae.

The area consists of a developed residential lot and habitat required to support the sea turtle species is not present. Thus, the project will have no effect on the flatwoods salamander.

#### Pondberry/Pond Spicebush (Lindera melissifolia)

Pondberry is state and federally listed as endangered. Shrub up to 6 feet (2 meters) tall, forming dense colonies of green or brown stems with yellowish bases. Leaves 2 - 6 inches (5 - 16 cm) long, drooping, deciduous, alternate, widest at or below the middle, with a rounded base and sharply pointed tip; both surfaces of the leaf with conspicuous netted veins and short, soft hairs; leaves smell spicy (like sassafras) when crushed. Male and female flowers on separate plants, appearing before leaves, borne in clusters of 2 - 6 flowers, each with 6 pale yellow, petallike tepals. Fruit about ½ inch (1 - 1.2 cm) long, bright red, oval to round, on a stout stalk about ½ inch (0.9 - 1.2 cm) long with a blunt tip. The stalk persists through the winter following fruiting. Pondberry occur in shallow depression ponds within wetlands, along margins of cypress ponds, and in forested floodplain areas in the southeastern United States.

#### JOINT APPLICATION

FOR

A DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS PERMIT, STATE OF GEORGIA MARSHLAND PROTECTION PERMIT,

REVOCABLE LICENSE AGREEMENT
AND REQUEST FOR
WATER QUALITY CERTIFICATION
AS APPLICABLE

#### INSTRUCTIONS FOR SUBMITTING APPLICATION:

Every Applicant is Responsible to Complete The Permit Application and Submit as Follows: One copy each of application, location map, drawings, copy of deed and any other supporting information to addresses 1, 2, and 3 below. If water quality certification is required, send only application, location map and drawing to address No. 4.

- 1. For Department of the Army Permit, mail to: Commander, U.S. Army Engineer District, Savannah ATTN: CESAS-OP-F, P.O. Box 889, Savannah, Georgia 31402-0889. Phone (912)652-5347 and/or toll free, Nationwide 1-800-448-2402.
- 2. For State Permit State of Georgia (six coastal counties only) mail to: Habitat Management Program, Coastal Resources Division, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, Georgia 31523. Phone (912) 264-7218.
- 3. For Revocable License State of Georgia (six coastal counties plus Effingham, Long, Wayne, Brantley and Charlton counties only) Request must have State of Georgia's assent or a waiver authorizing the use of State owned lands. All applications for dock permits in the coastal counties, or for docks located in tidally influenced waters in the counties listed above need to be submitted to Real Estate Unit. In addition to instructions above, you must send two signed form letters regarding revocable license agreement to: Ecological Services Coastal Resources Division, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, Georgia 31523. Phone (912) 264-7218.
- 4. For Water Quality Certification State of Georgia, mail to: Water Protection Branch, Environmental Protection Division, Georgia Department of Natural Resources, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354 (404) 675-1631.

The application must be signed by the person authorized to undertake the proposed activity. The applicant must be the owner of the property or be the lessee or have the authority to perform the activity requested. Evidence of the above may be furnished by copy of the deed or other instrument as may be appropriate. The application may be signed by a duly authorized agent if accompanied by a statement from the applicant designating the agent. See item 6, page 2.

1.	Application No
2.	Date
3.	For Official Use Only
4.	Name and address of applicant. Vaden Enterprises, LLLP Attn: Ms. Jane Thacher 12020 Abercorn Street Savannah, Georgia 31419 912-921-3500

5. Location where the proposed activity exists or will occur.

Lat.32.008843° Long.-81.031520°

Chatham			
County	Military District	In City or Town	
Savannah	Dutch Island	Parcel 2	
Near City or Town	Subdivision	Lot No.	
		Georgia	
Lot Size	Approximate Elevation of Lot	State	
	Grimball Creek		
Name of Waterway	Name of Nearest Creek, River, S	ound, Bay or Hammock	

6. Name, address, and title of applicant's authorized agent for permit application coordination. Resource & Land Consultants Attn: Russell Parr, Sr. 41 Park of Commerce Drive, Suite 101 (912) 443-5896 Savannah, Georgia 31405 Statement of Authorization: I Hereby designate and authorize the above named person to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of this application. Signature of Applicant/Date 7. Describe the proposed activity, its purpose and intended use, including a description of the type of structures, if any to be erected on fills, piles, of float-supported platforms, and the type, composition and quantity of materials to be discharged or dumped and means of conveyance. If more space is needed, use remarks section on page 4 or add a supplemental sheet. (See Part III of the Guide for additional information required for certain activities.) See Attached Project Description

8.	Proposed use: Private X Public Commercial Other	
9.	Names and addresses of adjoining property owners whose property also adjoins the waterway. See attached	
LO.	Date activity is proposed to commence. Upon receipt of authorization to proceed.  Date activity is expected to be completed. Within 5 years of authorization to proceed.	
L1.	Is any portion of the activity for which authorization is sought now completeYX _N	
	A. If answer is "Yes", give reasons in the remarks in the remarks section. Indicate the existing work on the drawings.	
	B. If the fill or work is existing, indicate date of commencement and completion.	

 Issuing Agency
 Type Approval
 Identification No.
 Date/Application
 Date/Approval

 USACE
 NWP
 Concurrent
 In-Process

 GADNR
 CMPA
 Concurrent
 In-Process

C. If not completed, indicate percentage completed.

show zoning approval or status of zoning for this project.

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein? \_\_\_Yes X\_NO (If "yes", explain).

12. List of approvals or certifications required by other Federal, State or local agencies for any structures, construction discharges, deposits or other activities described in this application. Please

Note: Items 14 and 15 are to be completed if you want to bulkhead, dredge or fill.

14. Description of operation: (If feasible, this information should be shown on the drawing).

-	A.	Purpose of excavation or fill install	ation of a culve	ert for a road o	crossing	
		1. Access channel :	length	depth	width	
		2. Boat basin :	length	depth	width	
		3. Fill area : see attached	length	depth	width	
		4. Other: Excavation Area:	length	depth	width	
:	в.	1.If bulkhead, give dimensions	N/A			
		2.Type of bulkhead construction (mate	rial) N/A			
		Backfill required: Yes No _	Cubic yards	·	_	
		Where obtained				
	C. Exca	vated material:				
		1.Cubic yards N/A				
		2.Type of material N/A				
L5.Type	of cons	struction equipment to be used Mechaniz	zed dock constru	ction equipment	<u>.                                    </u>	
	A. Does	the area to be excavated include any	wetland? Yes	No X		
		s the disposal area contain any wetla E dredge disposal site.	and? Yes	No <u>X</u>	Project does not	include
	C. Loca	tion of disposal area N/A				
;	D. Main	tenance dredging, estimated amounts, futilized: N/A			o be	
:	E. Will	dredged material be entrapped or enca	sed? N/A			
:	F. Will	wetlands be crossed in transporting e	quipment to pro	ject site?	N/A	
	G. Pres	sent rate of shoreline erosion (if know	m) N/A			

- 16. WATER QUALITY CERTIFICATION: In some cases, Federal law requires that a Water Quality Certification from the State of Georgia be obtained prior to issuance of a Federal license or permit. Applicability of this requirement to any specific project is determined by the permitting Federal agency. The information requested below is generally sufficient for the Georgia Environmental Protection Division to issue such a certification if required. Any item which is not applicable to a specific project should be so marked. Additional information will be requested if needed.
  - A. Please submit the following:
    - 1. A plan showing the location and size of any facility, existing or proposed, for handling any sanitary or industrial waste waters generally on your property.
    - 2. A plan of the existing or proposed project and your adjacent property for which permits are being requested.
    - 3. A plan showing the location of all points where petro-chemical products (gasoline, oils, cleaners) used and stored. Any above-ground storage areas must be diked, and there should be no storm drain catch basins within the diked areas. All valving arrangements on any petrochemical transfer lines should be shown.
    - 4. A contingency plan delineating action to be taken by you in the event of spillage of petro-chemical products or other materials from your operation.
    - 5. Plan and profile drawings showing limits of areas to be dredged, areas to be used for

placement of spoil, locations of any dikes to be constructed showing locations of any weir(s), and typical cross sections of the dikes.

- B. Please provide the following statements:
  - 1. A statement that all activities will be performed in a manner to minimize turbidity in the stream.
  - 2. A statement that there will be no oils or other pollutants released from the proposed activities which will reach the stream.
  - 3. A statement that all work performed during construction will be done in a manner to prevent interference with any legitimate water uses.
- 17. Application is hereby made for a permit or permits to authorize the activities described herein, Water Quality Certification from the Georgia Environmental Protection Division is also requested if needed. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate. I further certify that I posses the authority to under take the proposed activities.

Signature of Applicant/Date

18. U.S.C. Section 1001 provides that: Whoever, in any matter within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations, or makes or uses false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined no more than \$10,000 or imprisoned not more than 5 years or both.

#### PRIVACY ACT NOTICE

The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary, however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

SUPPORTING REMARKS:

See Attached.

#### **STATE OF GEORGIA**

### REQUEST FOR A REVOCABLE LICENSE FOR THE USE OF TIDAL WATERBOTTOMS

APPLICANT NAME(S):	Vaden Er	nterprises, LLL	P			
MAILING ADDRESS:	12020 Abe	ercorn Street Sa	vannah GA 314	19		
	Street)	(	(City)		(State)	(Zip)
PROJECT ADDRESS/LO	CATION:	Meriwether I	Drive			
COUNTY:CHATHAM	W	ATERWAY:_	Marshes of Gr	imball Creek		
LOT, BLOCK & SUBDIV	ISION NA	ME FROM D	EED:			
Georgia Department of Coastal Resources Divi One Conservation Way Brunswick, Georgia 31	sion	Resources				
I am requesting on the beds of tidewater request is a copy of the parties of the	rs, which a plans and o nation su	are state own description of bmitted is to	ed property.  f the project true and corre	Attached he hat will be tect to the b	the subject of succest of my know	part of this ch a license.
I understand that will not constitute a lid does not resolve any act the property upon which or denying any such rig property interests of the license, permit, or aut expectation of privacy such project until the C in accordance with this	cense coup tual or po h the subjoints or inte e State and horization and I do rommission	pled with an tential dispused project is trests. I acknowld most required by not have the	interest. I actes regarding proposed, and cowledge that to obviate the y State law.	the owners d shall not such a lice necessity of I recognized f the State	ship of, or rights be construed as a case would relate of obtaining any that I waive r of Georgia to pr	able license in, or over recognizing only to the other State my right of roceed with
By: Signature of Ap		che	Sincerely,	Date:	12/12/2	1022
Title, if applica  By:  Signature of Ap	ble			Date:		
5. Similar of Tip	L 0111					
Title, if applicat	ole					

Attachments

#### **STATE OF GEORGIA**

## REQUEST FOR A REVOCABLE LICENSE FOR THE USE OF TIDAL WATERBOTTOMS

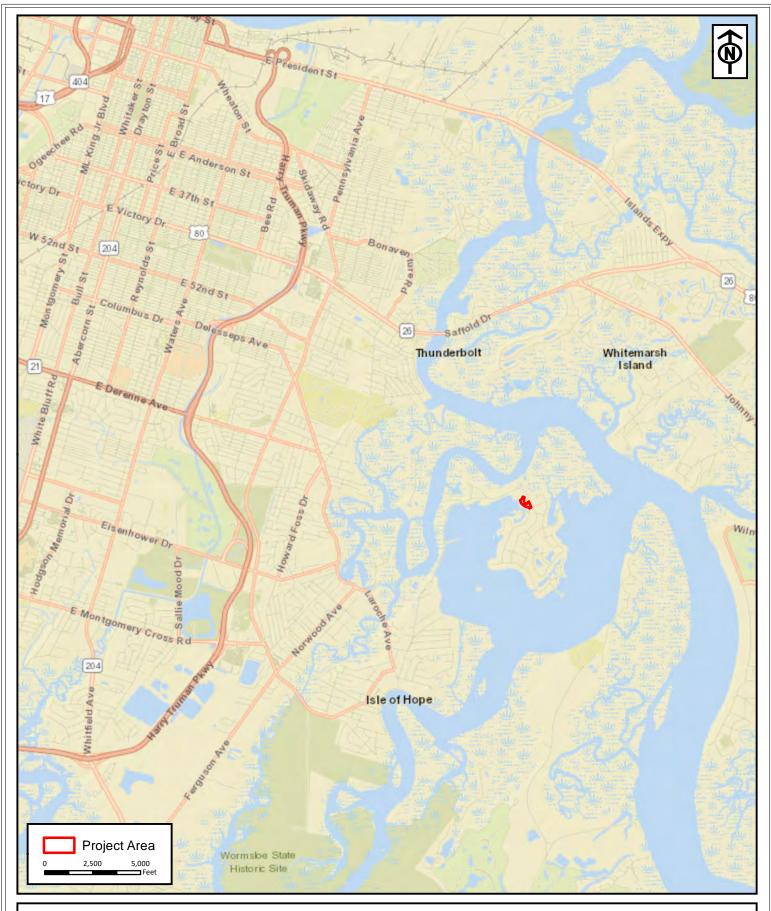
APPLICANT NAME(S): Vade	en Enterprises, L	LLP		
MAILING ADDRESS: 2020 Abercorn Street, Savannah, Georgia, 31419				
(Bil cet)	(City)		(State)	(Zip)
PROJECT ADDRESS/LOCATION	$_{ m DN:}$ Meriwether R	oad		
PROJECT ADDRESS/LOCATION COUNTY: Chatham	_ <sub>WATERWAY:</sub> _Grimb	oall Creek		
LOT, BLOCK & SUBDIVISION	NAME FROM DEED: _	Parcel 2, Phase 7	, Dutch Island S	ubdivision
Georgia Department of Natur Coastal Resources Division One Conservation Way Brunswick, Georgia 31520-86				
I am requesting that I on the beds of tidewaters, whi request is a copy of the plans a I certify that all information understand that willful misrep	and description of the pro- submitted is true and	perty. Attached he roject that will be to correct to the b	ereto and made a the subject of suc pest of my know	part of this h a license.
I understand that if per will not constitute a license of does not resolve any actual of the property upon which the start or denying any such rights or property interests of the State license, permit, or authorizate expectation of privacy and I as such project until the Commission accordance with this request	r potential disputes reg ubject project is proposi interests. I acknowled and would not obviation required by State do not have the permissioner of DNR or his/l	st. I acknowledge arding the owners sed, and shall not lige that such a lice te the necessity of law. I recognize ssion of the State	that this revoca ship of, or rights be construed as r nse would relate of obtaining any that I waive n of Georgia to pr	in, or over ecognizing only to the other State ny right of oceed with
By: Signature of Applican OWNEV Title, if applicable	ache	ly, Date:	12/12/3	7027
By:Signature of Applicant	i	Date:		
Title, if applicable				

Attachments



RESOURCE+LAND C 0 N S U L T A N T S

# **APPENDIX B:** Figures/Site Maps



 RLC Project No.:
 18-209

 Figure No.:
 1

 Prepared By:
 MG

 Sketch Date:
 12/8/2022

 Map Scale:
 1 inch = 5,000 feet

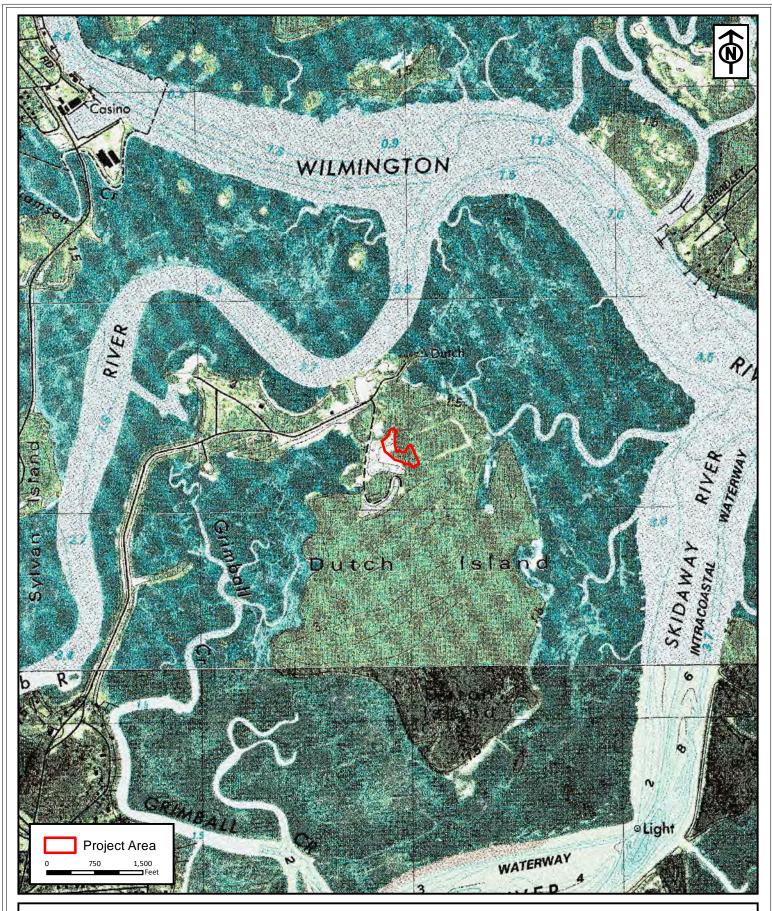
## Vaden Enterprises Parcel 2

Chatham County, Georgia

## **Project Location**

Prepared For: Vaden Enterprises, LLLP





 RLC Project No.: 18-209

 Figure No.: 2
 2

 Prepared By: MG
 MG

 Sketch Date: 12/8/2022
 12/8/2022

 Map Scale: 1 inch = 1,500 feet

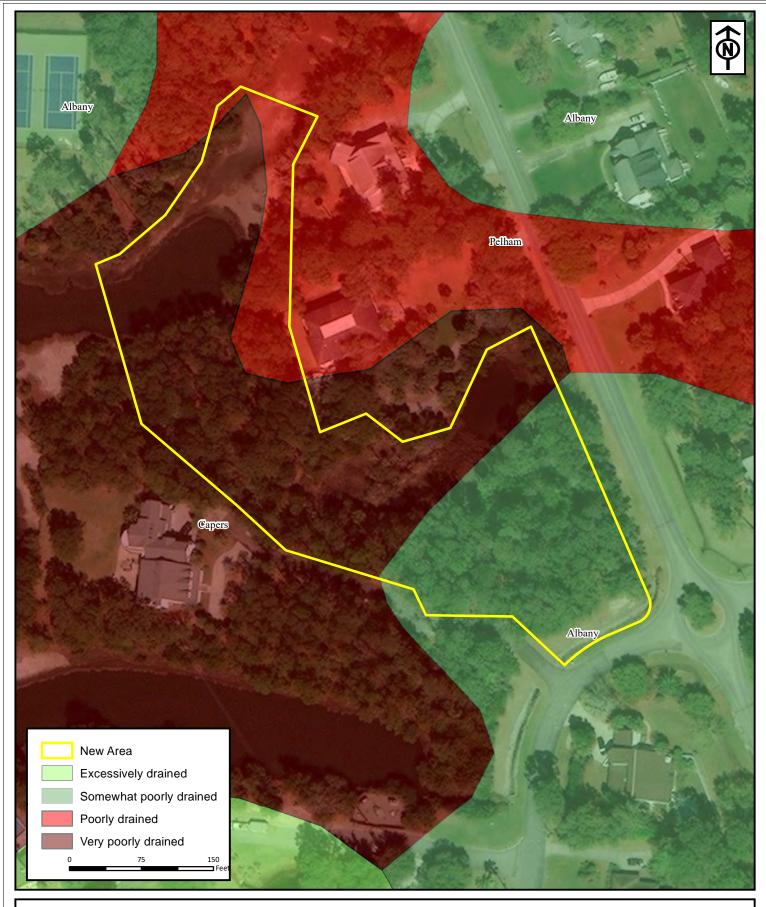
## Vaden Enterprises Parcel 2

Chatham County, Georgia

# USGS Topographic Survey

Prepared For: Vaden Enterprises LLLP





 RLC Project No.: 18-209

 Figure No.: 3
 3

 Prepared By: MG
 MG

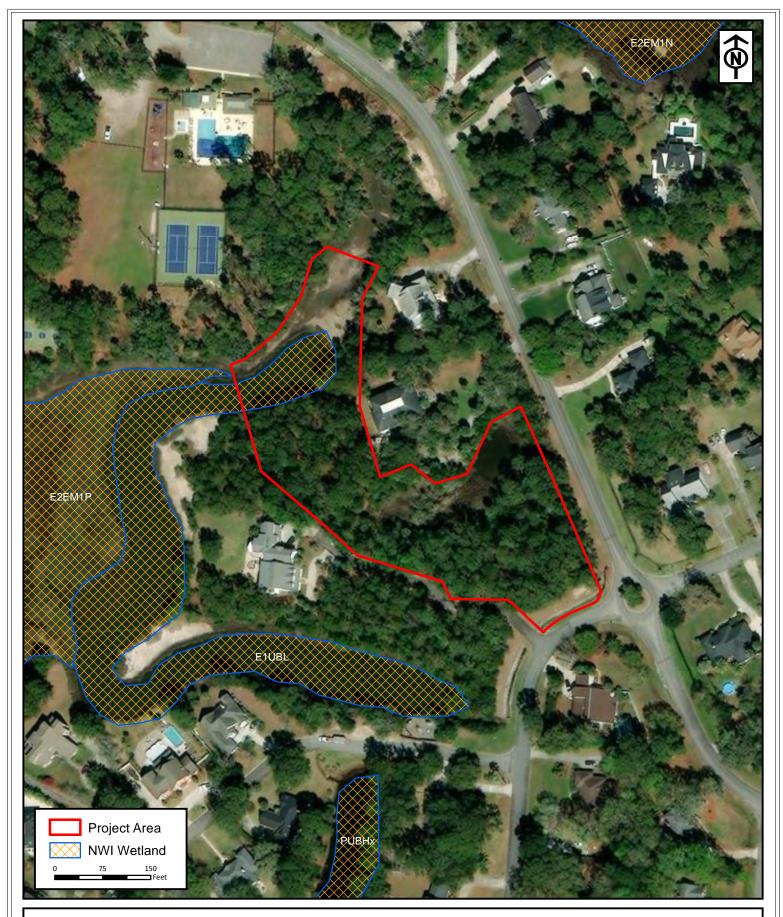
 Sketch Date: 12/8/2022
 1 inch = 100 feet

### Vaden Enterprises Parcel 2

Chatham County, Georgia

# **NRCS Soil Survey**





 RLC Project No.:
 18-209

 Figure No.:
 4

 Prepared By:
 MG

 Sketch Date:
 12/8/2022

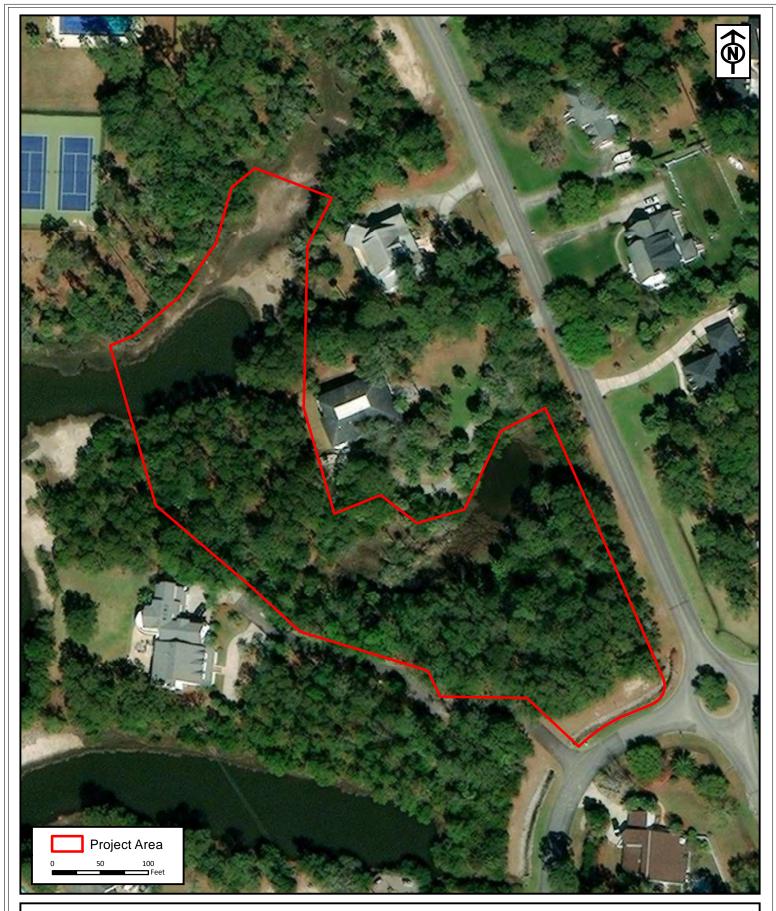
 Map Scale:
 1 inch = 150 feet

### Vaden Enterprises Parcel 2

Chatham County, Georgia

### National Wetlands Inventory





 RLC Project No.:
 18-209

 Figure No.:
 5

 Prepared By:
 MG

 Sketch Date:
 12/8/2022

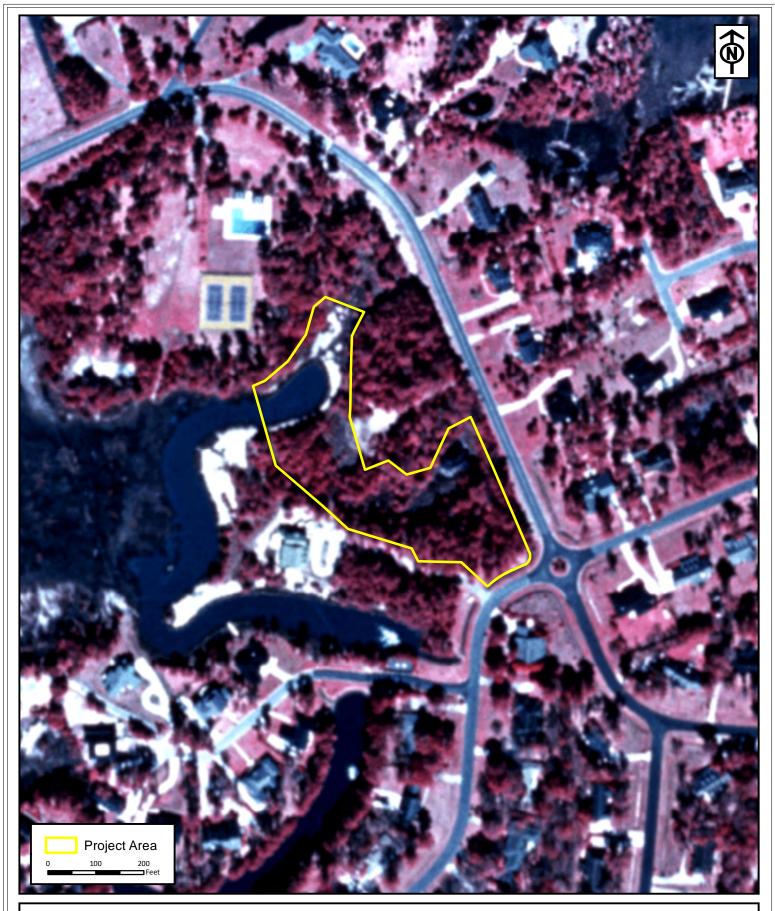
 Map Scale:
 1 inch = 100 feet

### Vaden Enterprises Parcel 2

Chatham County, Georgia

### **Ortho Aerial**





 RLC Project No.:
 18-209

 Figure No.:
 6

 Prepared By:
 MG

 Sketch Date:
 12/8/2022

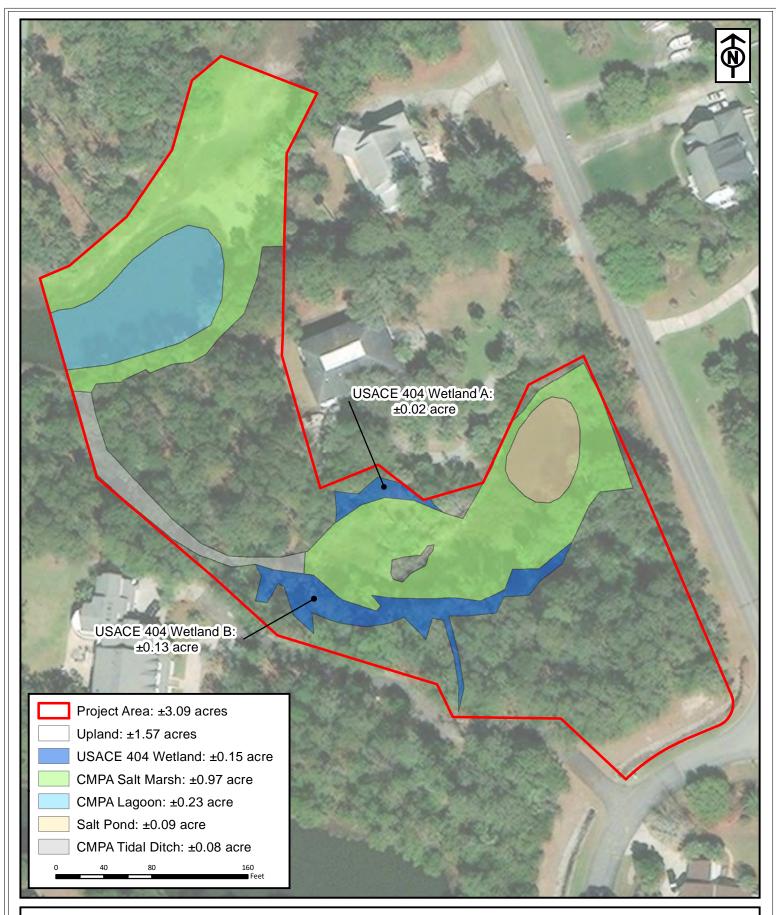
 Map Scale:
 1 inch = 200 feet

### Vaden Enterprises Parcel 2

Chatham County, Georgia

# 1999 Color-Infrared Imagery





RLC Project No.	: 18-209
Figure No.:	7
Prepared By:	MW
Sketch Date:	12/8/2022
Map Scale :	1 inch = 80 feet

### Vaden Enterprises Parcel 2

Chatham County, Georgia

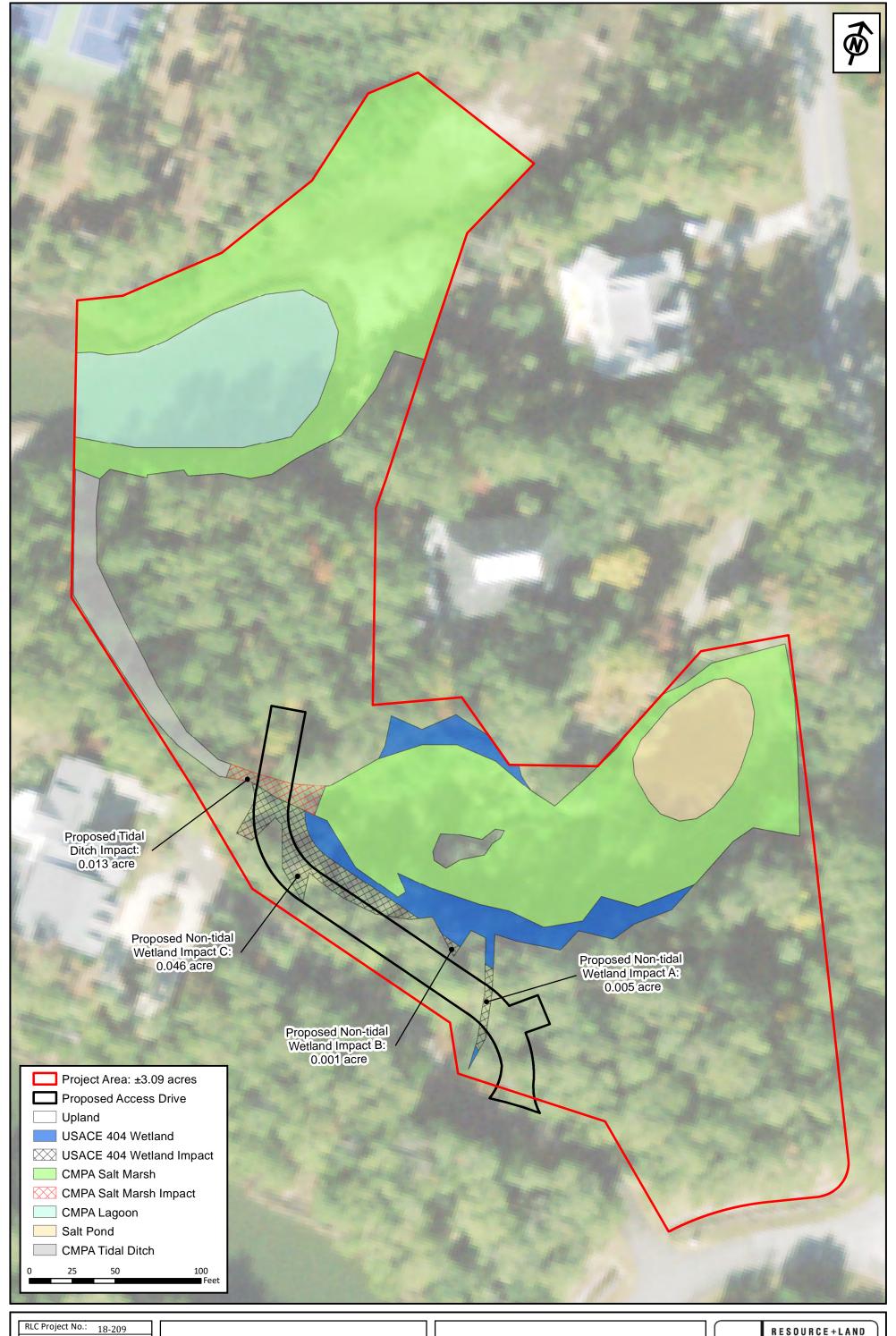
# Aquatic Resource Exhibit





R E S O U R C E + L A N D C O N S U L T A N T S

**APPENDIX C:** Permit Drawings



 RLC Project No.:
 18-209

 Figure No.:
 8

 Prepared By:
 MW

 Sketch Date:
 12/8/2022

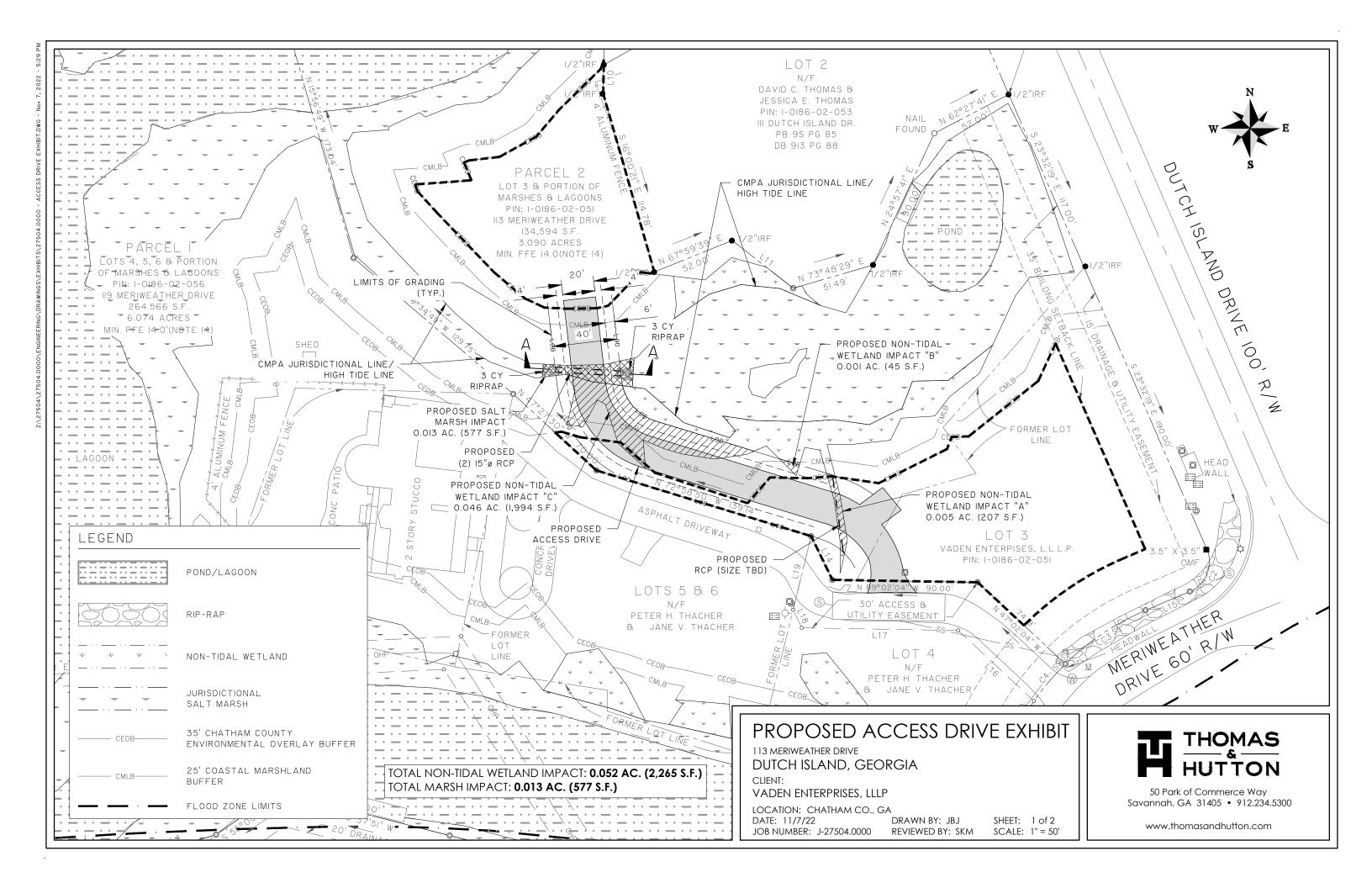
 Map Scale:
 1 inch = 50 feet

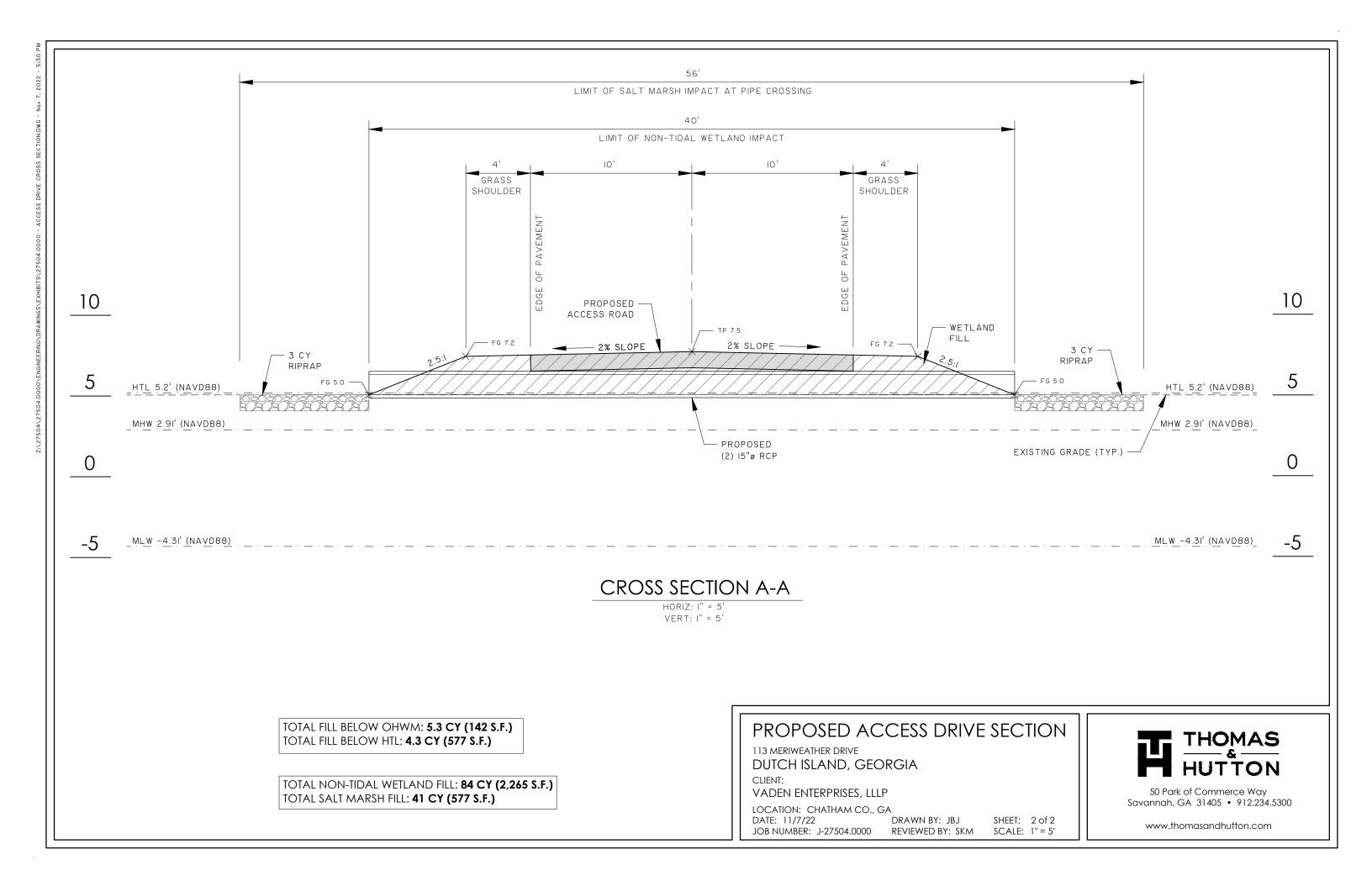
## Vaden Enterprises Parcel 2

Chatham County, Georgia

# **Aquatic Resource Impact Exhibit**









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### **APPENDIX D:**

Hazardous Site Index

## List of Sites on HSI by County

HSI ID	Site Name	Site County
10060	Southwire - Copper Division	Carroll
10061	Southwire - Wire & Cable Division	Carroll
10360	Douglas & Lomason Company	Carroll
10413	Muse Scrap Metals	Carroll
10604	Trent Tube Division	Carroll
10648	Carroll County / Carrollton SR 166 LF	Carroll
10780	Dixie/Candlewick Hurst Yarn Mill (Former)	Catoosa
10218	Union Camp Corp - DBA Thomas Treating	Charlton
10003	CSX Transportation - Savannah (Tremont Road)	Chatham
10018	Atlantic Wood Industries	Chatham
10045	Colonial Terminals, Plant #1	Chatham
10091	Travis Field/Savannah International Airport	Chatham
10095	Central of GA RR/Bernuth-Lembcke Site	Chatham
10098	Colonial Terminals, Plant #2	Chatham
10114	Union Camp Corp - Former Amoco Property	Chatham
10128	Atlanta Gas Light Company - Savannah MGP Site	Chatham
10162	Ashland Chemical Company	Chatham
10179	Deptford Tract Landfill	Chatham
10208	139 Brampton Road	Chatham
10241	Union Camp Corp - Allen Blvd Landfill	Chatham
10351	ARAMARK Uniform Services	Chatham
10371	Southern States Phosphate & Fertilizer Co.	Chatham
10372	Truman Parkway, Phase II	Chatham
10395	Hunter Army Airfield, Fire Training Area	Chatham
10406	McKenzie Tank Lines, Inc.	Chatham
10415	Savannah Electric - Plant Kraft	Chatham
10440	Blue Ribbon Dry Cleaners	Chatham
10464	Vopak Terminal Savannah	Chatham
10497	Savannah Dry Cleaners	Chatham
10521	Hunter Army Airfield - MCA Barracks	Chatham
10553	Georgia Air National Guard/Savannah/Site 8	Chatham
10579	Abercorn & Largo Development	Chatham
10590	Central of Georgia Railroad Company - Battlefield Park	Chatham
10591	Southern Motors of Savannah, Inc.	Chatham
10611	CSXT Depriest Signal Shop	Chatham
10641	Tronox (fka Kerr McGee Pigments, Inc.)	Chatham
10649	Chatham County Landfill	Chatham
10696	Hercules, Inc.	Chatham
10698	Norfolk Southern - Natrochem, Inc., Site	Chatham
10098	Southside Cleaners	Chatham
10788	Dry Clean, USA	Chatham
10769	Toto Distribution (Former)	Chatham
10849	Coastal Concrete, Inc.	Chatham
10903	Hunter Army Airfield/TCE Plume	Chatham
10905	CSXT Property on Feeley Avenue	Chatham
10919	2217 West Bay Street	Chatham
10454	Chattooga County - Penn Bridge Rd Ph 1 (SL)	Chattooga
10650	Cherokee County - Blalock Road Landfill	Cherokee
10014	Westinghouse Electric Corp	Clarke
10052	Georgia Power - Athens Foundry Street Property	Clarke



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C O N S U L T A N T S

## **APPENDIX E:**

**Property Ownership Documentation** 

Type: QCD Kind: QUIT CLAIM DEED Recorded: 7/27/2020 8:02:00 AM Fee Amt: \$25.00 Page 1 of 3 Chatham, Ga. Clerk Superior Court Tammie Mosley Clerk Superior Court

Participant ID(s): 4878462932, 7067927936

BK 1998 PG 696 - 698

ABOVE SPACE FOR RECORDING INFORMATION ONLY

Prepared by:

### BOUHAN FALLIGANT

One West Park Avenue
Savannah, Georgia 31401
ATTN: Harris G. Martin
(912) 644-5744

File Number: 19925-1

#### QUITCLAIM DEED

#### WITNESSETH, THAT:

GRANTOR, for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed, and by these presents does grant, bargain, sell, alien, convey and confirm unto said Grantee, all those tracts or parcels of land lying and being located in Chatham County, Georgia, and being known as Parcel 2, of a Recombination of Lots 3, 4, 5 & 6 and a Portion of Marshes & Lagoons, Phase 7, Dutch Island Subdivision, and more particularly described on Exhibit "A", attached hereto and incorporated herein by this reference (hereinafter referred to as the "Property").

TO HAVE AND TO HOLD the said described Property to the said Grantee, so that neither the said Grantor nor any person or persons claiming under the said Grantor, shall at any

time, by any means or ways, have, claim or demand any right or title to the said described Property or appurtenances, or any rights thereof.

IN WITNESS WHEREOF, the Grantor has signed and sealed this Deed on the day and year first above written.

GRANTOR:

Signed, sealed and delivered in the presence of:

Brake Will

Notary Public

[NOTARY SE

Janel There her (SEAL

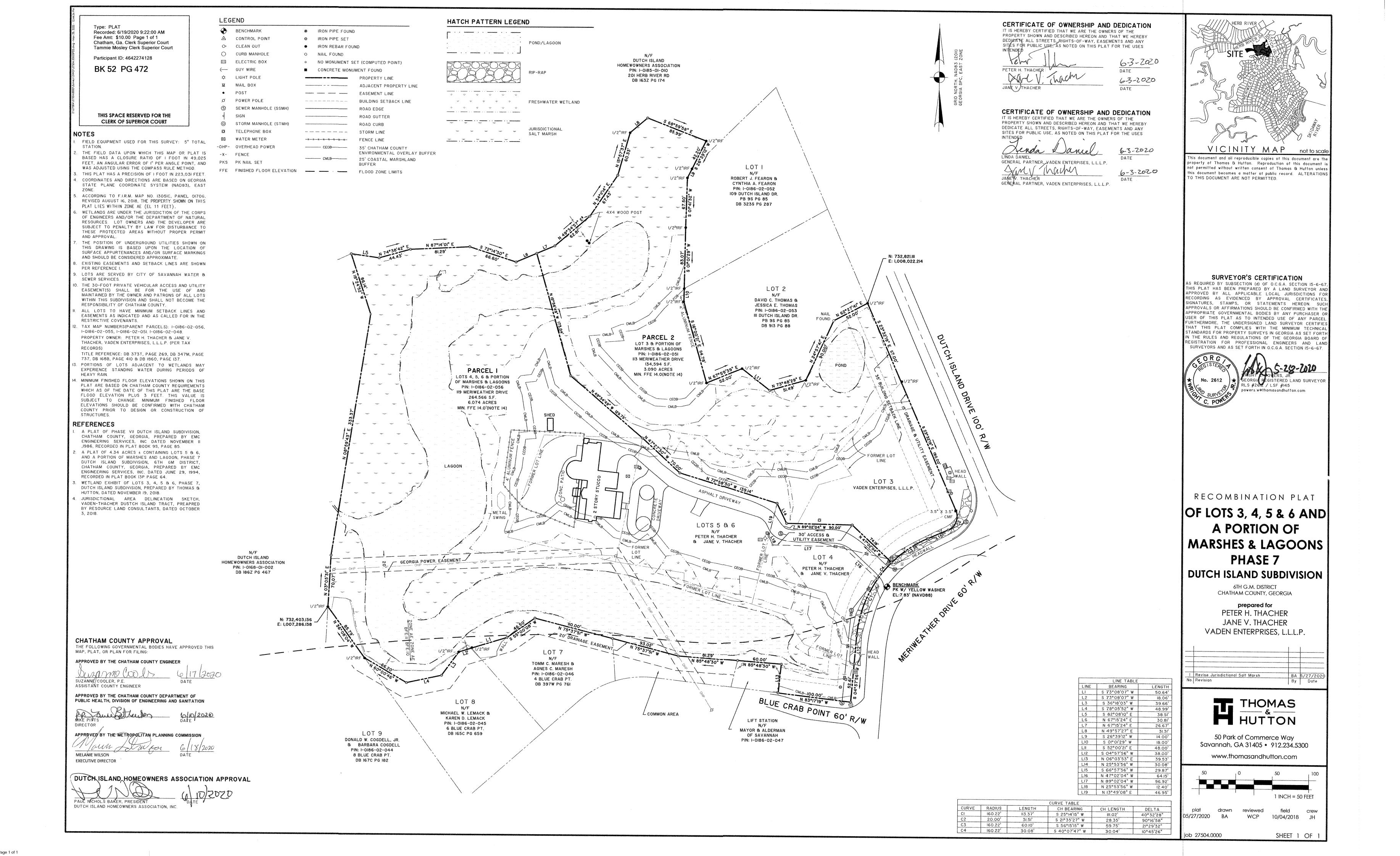
Jane V. Thacher,

(SEAL)

Peter H. Thacher

#### EXHIBIT "A"

All that certain lot, tract or parcel of land situate, lying and being located in Chatham County, Georgia, and shown as Parcel 2 on that plat entitled "Recombination Plat of Lots 3, 4, 5 & 6 and a Portion of Marshes and Lagoons, Phase 7, Dutch Island Subdivision, 6<sup>th</sup> G.M. District, Chatham County, Georgia", prepared by Thomas & Hutton and Wright C. Powers, G.R.L.S. No. 2612, dated May 27, 2020, recorded in Plat Book 52, page 472, Chatham County, Georgia, records, said plat being incorporated herein and made a part hereof by this reference.



Book: 52 Page: 472 Page 1 of 1



RESOURCE+LAND
C O N S U L T A N T S

## **APPENDIX F:**

Adjacent Landowner Information

#### **Adjacent Property Owners**

THOMAS, JESSICA E & THOMAS, DAVID C 111 DUTCH ISLAND DR, SAVANNAH, GA 31406-3222

HANNAH, TIM LEON & HANNAH, RACHEL LEIGH 4 BLUE CRAB PT, SAVANNAH, GA 31406-3291

ALDERMEN OF SAVANNAH MAYOR PO BOX 1027, SAVANNAH, GA 31402-1027



### **APPENDIX G:**

Threatened & Endangered Species Documentation, IPaC Database & Edges Information



## United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

Georgia Ecological Services Field Office 355 East Hancock Avenue Room 320 Athens, GA 30601-2523

Phone: (706) 613-9493 Fax: (706) 613-6059

In Reply Refer To: September 21, 2022

Project Code: 2022-0087770

Project Name: Vaden Thatcher Dutch Island

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

#### To Whom It May Concern:

Thank you for your request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design if you determine those species or designated critical habitat may be affected by your proposed project.

#### FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency, project proponent, or their designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally listed threatened or endangered fish or wildlife species without the appropriate permit. If you need additional information to assist in your effect determination, please contact the Service.

If you determine that your proposed action may affect federally listed species, please consult with the Service. Through the consultation process, we will analyze information contained in a biological assessment or equivalent document that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a) (1)(B) of the ESA (also known as a Habitat Conservation Plan) may be necessary to exempt harm or harass federally listed threatened or endangered fish or wildlife species. For more information regarding formal consultation and HCPs, please see the Service's Section 7 Consultation Library and Habitat Conservation Plans Library Collections.

**Action Area.** The scope of federally listed species compliance not only includes direct effects, but also any indirect effects of project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations). The action area is the spatial extent of an action's direct and indirect modifications or impacts to the land, water, or air (50 CFR 402.02). Large projects may have effects to land, water, or air outside the immediate footprint of the project, and these areas should be included as part of the action area. Effects to land, water, or air outside of a project footprint could include things like lighting, dust, smoke, and noise. To obtain a complete list of species, the action area should be uploaded or drawn in IPaC rather than just the project footprint.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. An updated list may be requested through IPaC.

If you determine that your action may affect any federally listed species and would like technical assistance from our office, please send us a complete project review package (refer to Georgia Ecological Services' <u>Project Planning and Review</u> page for more details), including the following information (reference to these items can be found in 50 CFR§402.13 and 402.14):

- 1. A description of the proposed action, including any measures intended to avoid, minimize, or offset effects of the action. Consistent with the nature and scope of the proposed action, the description shall provide sufficient detail to assess the effects of the action on listed species and critical habitat, including:
  - The purpose of the action;
  - The duration and timing of the action;
  - The location of the action;
  - The specific components of the action and how they will be carried out;
  - Description of areas to be affected directly or indirectly by the action;
  - Maps, drawings, blueprints, or similar schematics of the action
- 2. An updated Official Species List

3. Biological Assessments (may include habitat assessments and information on the presence of listed species in the action area);

- 4. Description of effects of the action on species in the action area and, if relevant, effect determinations for species and critical habitat;
- 5. Conservation measures and any other available information related to the nature and scope of the proposed action relevant to its effects on listed species or designated critical habitat (examples include: stormwater plans, management plans, erosion and sediment plans). Please see our <a href="Georgia Planning and Consultation Tools">Georgia Planning and Consultation Tools</a> page for recommendations.

**Please submit all consultation documents via email to gaes assistance@fws.gov** or by using IPaC, uploaded documents, and sharing the project with a specific Georgia Ecological Services staff member. If the project is on-going, documents can also be sent to the Georgia Ecological Services staff member currently working with you on your project. For Georgia Department of Transportation related projects, please work with the Office of Environmental Services ecologist to determine the appropriate USFWS transportation liaison.

#### WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value. We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's <a href="NWI program website">NWI program website</a> (https://www.fws.gov/program/national-wetlands-inventory) integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

#### **MIGRATORY BIRDS**

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Birds Program (https://fws.gov/program/migratory-birds). To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction. It can be found at the Service's <u>Migratory Birds Conservation Library Collection</u> (https://fws.gov/library/collections/migratory-bird-conservation-documents).

Information related to best practices and migratory birds can be found at the Service's <u>Avoiding and Minimizing Incidental Take of Migratory Birds Library Collection</u> (https://fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds).

#### **BALD AND GOLDEN EAGLES**

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at the Service's <u>Bald and Golden Eagle Management Library Collection</u> (https://fws.gov/library/collections/bald-and-golden-eagle-management).

#### **NATIVE BATS**

If your species list includes Indiana bat (*Myotis sodalis*) or northern long-eared bat (*M. septentrionalis*) and the project is expected to impact forested habitat that is appropriate for maternity colonies of these species, forest clearing should occur outside of the period when bats may be present. Federally listed bats could be actively present in forested landscapes from April 1 to October 15 of any year and have non-volant pups from May 15 to July 31 in any year. Non-volant pups are incapable of flight and are vulnerable to disturbance during that time.

Indiana, northern long-eared, and gray (*M. grisescens*) bats are all known to utilize bridges and culverts in Georgia. If your project includes maintenance, construction, or any other modification or demolition to transportation structures, a qualified individual should complete a survey of these structures for bats and submit your findings via the Georgia Bats in Bridges cell phone application, free on Apple and Android devices. Please include these findings in any biological assessment(s) or other documentation that is submitted to our office for technical assistance or consultation.

Additional information on bat avoidance and minimization can be found at Georgia Ecological Services' <u>Planning and Consultations Tools</u> and <u>Bat Conservation in Georgia</u> pages.

#### MONARCH BUTTERFLY

On December 20, 2020, the Service determined that listing the Monarch butterfly (*Danaus plexippus*) under the Endangered Species Act is warranted but precluded at this time by higher priority listing actions. With this finding, the monarch butterfly becomes a candidate for listing. The Service will review its status each year until we are able to begin developing a proposal to list the monarch.

As it is a candidate for listing, the Service welcomes conservation measures for this species. Recommended, and voluntary, conservation measures for projects in Georgia can be found at our Monarch Conservation in Georgia page.

#### STATE AGENCY COORDINATION

Additional information that addresses at-risk or high priority natural resources can be found in the State Wildlife Action Plan (https://georgiawildlife.com/WildlifeActionPlan), at Georgia Department of Natural Resources, Wildlife Resources Division Biodiversity Portal (https://

georgiawildlife.com/conservation/species-of-concern), Georgia's Natural, Archaeological, and Historic Resources GIS portal (https://www.gnahrgis.org/gnahrgis/index.do), and the <u>Georgia Ecological Services HUC10 Watershed Guidance</u> page.

Thank you for your concern for endangered and threatened species. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please email <a href="mailto:gaes\_assistance@fws.gov">gaes\_assistance@fws.gov</a> and reference the project county and your Service Project Tracking Number.

This letter constitutes Georgia Ecological Services' general comments under the authority of the Endangered Species Act.

#### Attachment(s):

- Official Species List
- Migratory Birds
- Marine Mammals
- Wetlands

# **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Georgia Ecological Services Field Office 355 East Hancock Avenue Room 320 Athens, GA 30601-2523 (706) 613-9493

## **Project Summary**

Project Code: 2022-0087770

Project Name: Vaden Thatcher Dutch Island

Project Type: Culvert Repair/Replacement/Maintenance

Project Description: Development

**Project Location:** 

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@32.009408750000006,-81.0325432825723,14z">https://www.google.com/maps/@32.009408750000006,-81.0325432825723,14z</a>



Counties: Chatham County, Georgia

### **Endangered Species Act Species**

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

#### **Mammals**

NAME STATUS

West Indian Manatee Trichechus manatus

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.

Species profile: https://ecos.fws.gov/ecp/species/4469

#### **Birds**

NAME STATUS

Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis

Threatened

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10477">https://ecos.fws.gov/ecp/species/10477</a>

Wood Stork Mycteria americana

Population: AL, FL, GA, MS, NC, SC

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a>

Threatened

Reptiles

NAME STATUS

Threatened

Candidate

Threatened

Endangered

Endangered

Endangered

Threatened

Threatened

Candidate

Eastern Indigo Snake *Drymarchon couperi* 

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/646">https://ecos.fws.gov/ecp/species/646</a>

Gopher Tortoise *Gopherus polyphemus* 

Population: eastern

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6994">https://ecos.fws.gov/ecp/species/6994</a>

Green Sea Turtle Chelonia mydas

Population: North Atlantic DPS

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/6199

Hawksbill Sea Turtle *Eretmochelys imbricata* 

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/3656

Kemp's Ridley Sea Turtle *Lepidochelys kempii* 

There is **proposed** critical habitat for this species. The location of the critical habitat is not

available.

Species profile: <a href="https://ecos.fws.gov/ecp/species/5523">https://ecos.fws.gov/ecp/species/5523</a>

Leatherback Sea Turtle Dermochelys coriacea

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: <a href="https://ecos.fws.gov/ecp/species/1493">https://ecos.fws.gov/ecp/species/1493</a>

Loggerhead Sea Turtle Caretta caretta

Population: Northwest Atlantic Ocean DPS

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: <a href="https://ecos.fws.gov/ecp/species/1110">https://ecos.fws.gov/ecp/species/1110</a>

**Amphibians** 

NAME STATUS

Frosted Flatwoods Salamander *Ambystoma cingulatum* 

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: <a href="https://ecos.fws.gov/ecp/species/4981">https://ecos.fws.gov/ecp/species/4981</a>

Insects

NAME

Monarch Butterfly Danaus plexippus

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/9743

## **Flowering Plants**

NAME STATUS

### Pondberry Lindera melissifolia

Endangered

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1279">https://ecos.fws.gov/ecp/species/1279</a>

### **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# **Migratory Birds**

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.
- 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a>	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
https://ecos.fws.gov/ecp/species/1626	

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NAME	BREEDING SEASON
Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/5234">https://ecos.fws.gov/ecp/species/5234</a>	Breeds May 20 to Sep 15
Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Golden Eagle Aquila chrysaetos  This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds elsewhere
Gull-billed Tern <i>Gelochelidon nilotica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9501">https://ecos.fws.gov/ecp/species/9501</a>	Breeds May 1 to Jul 31
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8936">https://ecos.fws.gov/ecp/species/8936</a>	Breeds May 1 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8938">https://ecos.fws.gov/ecp/species/8938</a>	Breeds Mar 10 to Jun 30
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

### **Probability Of Presence Summary**

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

#### **Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for

that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

#### **Breeding Season** (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (|)

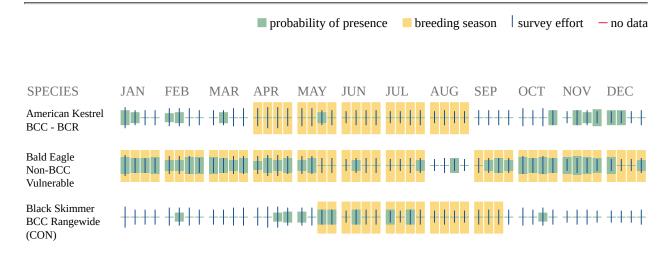
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

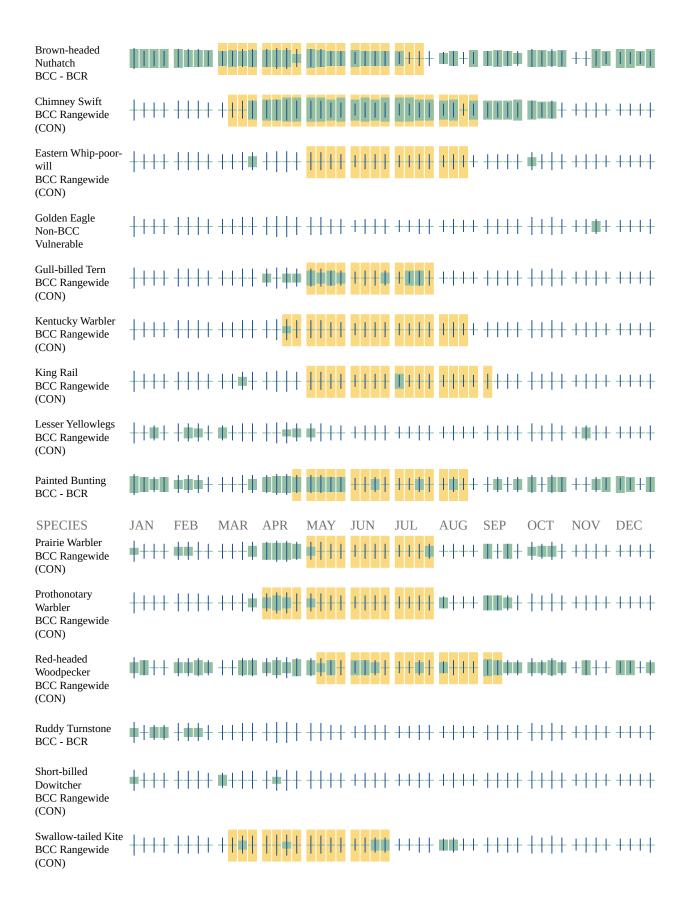
#### No Data (-)

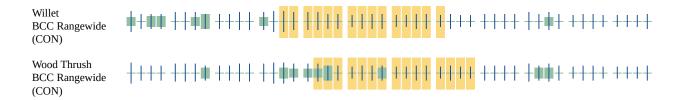
A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Additional information can be found using the following links:

- Birds of Conservation Concern <a href="https://www.fws.gov/program/migratory-birds/species">https://www.fws.gov/program/migratory-birds/species</a>
- Measures for avoiding and minimizing impacts to birds <a href="https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds">https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds</a>
- Nationwide conservation measures for birds <a href="https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf">https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf</a>

#### **Migratory Birds FAQ**

# Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

# What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern</u> (<u>BCC</u>) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <a href="Rapid Avian Information">Rapid Avian Information</a> Locator (RAIL) Tool.

# What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the <u>RAIL Tool</u> and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

#### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <a href="Northeast Ocean Data Portal">Northeast Ocean Data Portal</a>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <a href="NOAA NCCOS Integrative Statistical Modeling">NOAA NCCOS Integrative Statistical Modeling</a> and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic <a href="Outer Continental Shelf">Outer Continental Shelf</a> project webpage.

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Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

#### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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# **Marine Mammals**

Marine mammals are protected under the <u>Marine Mammal Protection Act</u>. Some are also protected under the Endangered Species Act<sup>1</sup> and the Convention on International Trade in Endangered Species of Wild Fauna and Flora<sup>2</sup>.

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries<sup>3</sup> [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the <u>Marine Mammals</u> page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

- 1. The Endangered Species Act (ESA) of 1973.
- 2. The <u>Convention on International Trade in Endangered Species of Wild Fauna and Flora</u> (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
- 3. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee Trichechus manatus

Species profile: https://ecos.fws.gov/ecp/species/4469

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# Wetlands

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT <a href="https://www.fws.gov/wetlands/data/mapper.html">https://www.fws.gov/wetlands/data/mapper.html</a> OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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# **IPaC User Contact Information**

Agency: RLC

Name: Matthew Willis

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#### West Indian Manatee Effects Determination Guidance for Endangered & Threatened Species (EDGES)

#### Bryan, Camden, Chatham, Glynn, Liberty, and McIntosh Counties

**Species Covered by This EDGES:** West Indian manatee (*Trichechus manatus*)

West Indian manatees are found in tropical and subtropical coastal and river waters along the southeast U.S. coast, the Caribbean coast of Central and South America, and locally throughout the West Indies. The Florida manatee subspecies is a year-round resident in Florida. During the warm months, an unknown portion of the Florida manatee population migrates northward into Georgia and the Carolinas, and westward along the Gulf coast into Alabama, Mississippi, and Louisiana -- manatees are most frequently sighted in Georgia waters from April through October in tidal waters of Camden, Glynn and McIntosh counties.

Habitats in Georgia include nearshore ocean waters, tidal creeks, estuaries, and the lower reaches of the St. Mary's, Satilla, Altamaha, Ogeechee, and Savannah



Rivers. As illustrated in the above image, manatees are difficult to spot in Coastal Georgia's dark turbid waters. Manatees have been sighted as far north as Massachusetts. During winter, manatees are attracted to warm water refuges in Florida. Natural refuges include warm springs in the central part of the state and subtropical waters in south Florida. Manatees are also attracted to warm water discharges at industrial sites, such as power generating plants and factories. Manatees have been documented at multiple industrial warm water sites north of Florida, including in Georgia. Note: there is no 'Critical Habitat' designated in Georgia for manatees.



This EDGES covers all activities proposed in Georgia tidal waters that are accessible to manatees.

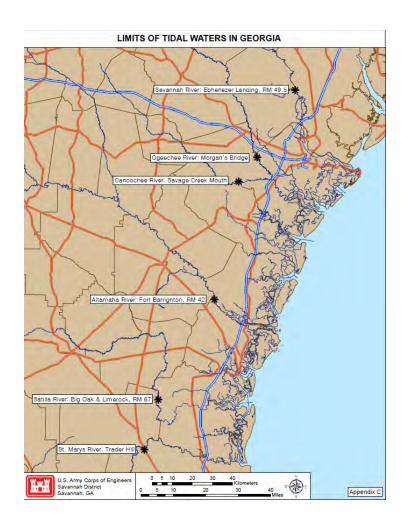
#### **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

- 1. IPAC indicates manatees may occur in the project area.

  - b. Yes......Go to #2.

2. The project will occur in tidal waters that are accessible to manatees (see map on the following page). Lakes and other water bodies upstream of structures such as dams, weirs, grated culverts, and fish ladders are normally not considered accessible to manatees.
a. No
b. YesGo to #3.
3. The Fish and Wildlife Service's Georgia Field Office (FWS-GA) provided documentation evaluating habitat, potential presence of species, and/or potential project impacts (FWS-GA signed letter or sticker, T&E survey where FWS-GA provided concurrence with negative findings, or similar documentation).  a. No
b. YesProvide FWS-GA project review documentation and/or survey data to the Savannah District with application/PCN.
Savannah District:
1. The project is in tidal waters accessible to manatees (see #2).
a. No
b. Yes Go to #5.
2. The project will require any of the following activities:
<ul> <li>blasting or other detonation activity (e.g., for channel deepening and/or widening, geotechnical surveys or exploration, bridge and structure removals, movies, military shows, or special events, etc.)</li> <li>modification or construction of warm or fresh water discharges from industrial sites, power plants, water treatment facilities, etc., or natural springs or artesian wells.</li> <li>a. No</li></ul>
b. YesMay affect. Consult with FWS-GA regarding project.
3. Project work involves dock or marina facilities and will follow conditions in the Savannah District/FWS-GA programmatic manatee agreement (page 3).  a. No
b. Yes
4. The project involves a public water access facility other than a dock or marina facility (e.g. public boat ramp, fishing pier, etc.) and project will be conditioned with Manatee Special Permit Conditions a through m from the PA. a. No
b. Yes
5. Project involves in-water construction other than as described above (e.g. bulkhead construction or repair, rip-rap, bridge, dredging, mooring buoys, etc.) and project will be conditioned with Manatee Special Permit Conditions a through k from the PA.  a. No
b. Yes
6. If the Corps or applicant does not elect to incorporate manatee protection guidelines according to the guidance of this key or the project directly or indirectly affects manatees and is not covered by this key then the appropriate determination is May Affect and consultation with the FWS-GA is required.



# Programmatic Agreement U.S. Army Corps of Engineers U.S. Fish and Wildlife Service Section 7 of the Endangered Species Act Manatee Consultation Procedures Dock and Marina Facilities in Coastal Georgia Waters

The U.S. Army Corps of Engineers, Savannah District, and the U.S. Fish and Wildlife Service, Georgia Ecological Services (FWS) agree to the consultation procedures outlined in this Programmatic Agreement (PA), pursuant to Section 7 of the Endangered Species Act, concerning effects on the West Indian Manatee (Trichechus manatus) (manatee), from construction, modification, maintenance and use of dock and marina facilities, in Brantley, Bryan, Camden, Charlton, Chatham, Effingham, Glynn, Liberty, Long, McIntosh and Wayne Counties, Georgia.

#### CONSULATION PROCEDURES:

- 1. The Corps will coordinate permit actions with FWS, as follows:
- a. <u>Individual Permits (IP)</u>: The Corps will include the following statement in joint public notices advertising Department of the Army IP applications for proposed dock and marina facilities, "Any permit that may be issued by the Corps for the proposed project will include the applicable manatee special permit conditions: (1) for single and multi-family private recreational docks, special conditions a thru j; or (2) for private community docks and commercial marinas, special conditions a thru p. The facility types will follow the definitions the Georgia Department of Natural Resources (Georgia DNR) uses in their facility permitting. With inclusion of the applicable special conditions in the permit, and with the requirement for the permittee to implement and adhere to these conditions, the Corps has determined that the project may affect, but is not likely to adversely affect the manatee."
- b. Letters of Permission (LOP): The Corps will include the following statement in the agency coordination email for all LOP for proposed dock and marina facilities, "Any permit that may be issued by the Corps for the proposed project will include the applicable manatee special permit conditions: (1) for single and multi-family private recreational docks, special conditions a thru j; or (2) for private community docks and commercial marinas, special conditions a thru p. With inclusion of the applicable special conditions the permit, and with the requirement for the permittee to implement and adhere to these conditions, the Corps has determined that the project may affect, but is not likely to adversely affect the manatee."
- c. Nationwide Permit 3(a) (NWP 3(a)): The Corps will include the following statement in agency coordination email for all Pre-Construction Notifications proposing use of NWP 3(a) to repair, rehabilitate or replace a previously authorized, currently serviceable dock or marina facility, "Any verification for use of NWP 3(a) that may be

issued by the Corps for the proposed project will include the applicable manatee special permit conditions: (1) for single and multi-family private recreational docks, special conditions a thru j; or (2) for private community docks and commercial marinas, special conditions a thru p. With inclusion of the applicable special conditions in the NWP 3(a) verification letter, and with the requirement for the permittee to implement and adhere to these conditions, the Corps has determined that the project may affect, but is not likely to adversely affect the manatee."

- d. Programmatic General Permit 83 (PGP 83): PGP 83 authorizes the construction, maintenance and modification of certain private recreational dock facilities in the tidal waters of Georgia. The Corps has delegated authority to the Georgia Department of Natural Resources, Coastal Resources Division (Georgia CRD) to review PGP 83 applications, and verify whether proposed dock facilities comply with the terms and conditions for authorization under the PGP. All dock facilities authorized by PGP 83 must comply with manatee special permit conditions a thru j. With inclusion of these special conditions in PGP 83 verifications issued by Georgia CRD, and with the requirement for the permittee to implement and adhere to these conditions, the Corps has determined that private single family docks authorized by PGP 83 may affect, but are not likely to adversely affect the manatee.
- 2. FWS: For IP, LOP and NWP 3.a, the FWS will respond in writing (letter or email) to the Corps' public notice or email notification during the specified comment period when there is a project specific issue that would preclude FWS' concurrence with the Corps' may affect but not likely adversely affect determination for the project. The Corps will initiate Section 7 consultation with the FWS for such a project. However, if FWS does not disagree in writing with the Corps' determination within the specified comment period; the FWS is thereby concurring with the Corps' determination for the project. For private recreational dock facilities authorized by PGP 83, the FWS concurs with the Corps' may affect but not likely adversely affect determination.

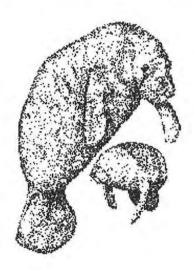
# MANATEE SPECIAL PERMIT CONDITIONS:

- 1. Single and multi-family private recreational docks, conditions a thru j.
- 2. Private community docks and commercial marinas, conditions a thru p.
- 3. Special Permit Conditions:
- a. The permittee shall ensure that all personnel associated with construction of the authorized dock facility are informed of the civil and criminal penalties for harming, harassing or killing manatees, which are protected under the Endangered Species Act of 1973 (ESA) and the Marine Mammal Protection Act of 1972. The permittee and the permittee's contractor(s) (contractor) will be held responsible for any manatee harmed, harassed or killed as a result of construction activities.

- b. The use of siltation barriers in waters of the United States, below the high tide line, is not allowed in association with the construction of the authorized dock facility.
- c. All vessels associated with project construction shall operate at "no wake/idle" speeds at all times while in the project area. All vessels will follow routes of deep water when entering or exiting the project area, and while operating in the project area, whenever possible. For the purposes of compliance with manatee conditions, the project area is defined as all areas of shoreline, marsh and open waters within 100 feet of the outermost perimeter of the authorized dock facility.
- d. All contractors and other on-site personnel are responsible for observing for the presence of manatees in or near the project area. All in-water construction activities shall cease upon sighting of a manatee within 50 feet of any ongoing work in the marsh or open waters. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Extreme care shall be taken when lowering equipment and materials below the water surface and/or to the water bottom. Equipment and materials include, but are not limited to: piles; sheet piles; casings for drilled shaft construction; spuds; pile templates; and anchors. All such equipment/material shall be lowered as slow as possible, to avoid injury to any manatee that may have entered the project area undetected.
- f. In the event of injury to or mortality of a manatee in the project area, the permittee or contractor shall immediately notify the Georgia Department of Natural Resources (Georgia DNR) at 912-264-7218 or 1-800-272-8363 on weekdays between 8:00 a.m. to 4:30 p.m., or 1-800-241-4113 on nights and weekends. Within one hour of a manatee injury or mortality the permittee or contractor shall notify the Corps at 1-800-448-2402 and the US Fish and Wildlife Service, Georgia Ecological Services Field Office at 912-832-8739. Any dead manatee found in the project area shall be secured to a stable object to prevent the carcass from moving with the current. In the event of a manatee injury or mortality, all open water construction activity shall cease pending completion of consultation between the Corps and the FWS, pursuant to Section 7 of the ESA.
- g. The permittee shall ensure that the contractor keeps a log of sightings, collisions or injury to manatees that occur during construction of the dock facility.
- h. Within 30 days of project completion, the permittee shall submit a report summarizing manatee sightings or incidents that occurred during project construction, to the FWS, Ecological Services Field Office, Coastal Georgia Sub-Office, 4980 Wildlife Drive NE, Townsend, Georgia 31331. Submission of a negative report is not required.
- i. All temporary or unused construction materials shall be removed from the project area upon completion of the work, and any impacted area of salt marsh shall be restored. No construction debris or trash is to be discarded in project area.

- j. The permittee shall regularly inspect and maintain all hoses, faucets, and other potential sources of freshwater, to ensure that any freshwater leak is stopped and immediately repaired. Manatees are attracted to freshwater leaking from dock facilities, where boats are concentrated and there is an increased risk for manatee collisions.
- k. Prior to initiating authorized construction activities, the permittee shall contact Georgia DNR at 912-264-7218 for assistance with development of temporary manatee awareness sign plan for the project area. The plan will include the types and number of signs; and locations where signs will be installed to be prominently visible to contractors entering the project area from uplands and from the water. The permittee shall install temporary manatee awareness signs in accordance with the Georgia DNR approved plan. See attached Appendix A for information about the size and appearance of temporary manatee awareness signs. Within 30 days of project completion, the permittee shall remove all temporary manatee signs.
- I. Once construction activities are completed, and prior to use of the facility, the permittee shall contact Georgia DNR at 912-264-7218 for assistance with development of permanent manatee awareness sign plan. The plan will include the types and number of signs; and locations where signs will be installed to be prominently visible to all facility users entering the project area from uplands and from the water. The permittee shall install permanent manatee awareness signs in accordance with the Georgia DNR approved plan. See attached Appendix A for information about the size and appearance of permanent manatee awareness signs.
- m. Within 30 days of installation, the permittee shall submit a notarized letter to the Corps confirming that required permanent manatee signs have been installed in compliance with the Georgia DNR approved plan. The permittee shall maintain all permanent manatee signs in a clearly visible condition for the life of the facility.
- n. The permittee shall utilize the Georgia DNR video, "Georgia Wildlife Sharing the Coast Manatee" as a manatee education awareness program; available at <a href="https://www.youtube.com/watch?v=whD8KX4PBNA">www.youtube.com/watch?v=whD8KX4PBNA</a>. This video program focuses on educating boaters on manatee biology, how watercraft can adversely affect the manatee, and detail actions that boaters can take to avoid impacts to the manatee. The permittee shall insure that all boat operators view this video before using the permitted facility. The permittee shall continue a manatee education awareness program for the life of the facility. The permittee may develop and use a comparable manatee education awareness program upon approval by the Corps, FWS, and Georgia DNR.
- After project completion, the permittee shall identify the individual, facility operator or homeowner's association representative to be responsible for reporting manatee sightings, boat strikes or other manatee concerns to the FWS and Georgia DNR.
- p. For facilities with oil/gas pumps and/or sewage pump-out equipment, the permittee shall develop and maintain spill contingency plans in accordance with the requirements of the Georgia DNR, Coastal Resources Division.

# PRIVATE COMMUNITY DOCK AND COMMERCIAL MARINAS MANATEE SIGNS PLACEMENT PROCEDURES



The West Indian manatee (*Trichechus manatus*) is an endangered species protected at the Federal level by the Endangered Species Act of 1973, as amended and the Marine Mammal Protection Act of 1972, as amended. In Georgia they inhabit coastal estuaries and rivers primarily from March through November. Increasing coastal development and associated watercraft facilities are expected to increase boat traffic and the probability of collisions between manatees and watercraft. Raising boater awareness of this threat and educating the public about manatees in general are important components of manatee conservation within Georgia waters. Signage has and will continue to play a key role in informing the boating community and general public about the species and how best to protect it from adverse impacts.

#### Use

Manatee signage may be temporary or permanent. Temporary signs are most often associated with the construction phase of in-water structures and facilities. They are intended to remind those involved with the construction of the potential presence of manatees within the project area. Although the project permit usually mandates their use, they are informative and non-regulatory in nature. Two examples of such signage are included in this Appendix under the "Temporary Construction Sign" section. Permanent signs are intended to provide long-term boater awareness and public education about manatees in Georgia waters. Examples of permanent signage include, "Manatee Basics for Boaters" and waterway display sign, "Protect Georgia's Manatees", and are included in this Appendix under the "Permanent Signs" section. Both "Manatee Basics for Boaters" and "Protect Georgia's Manatees" permanent signs are required for all private community docks and commercial marinas. Private single or dual family docks are not required to have manatee signs.

#### Procedure for Approval of Sign Installation:

- 1. The applicant should forward a project site plan, including the proposed location for the permanent signs to: Manatee Sign Approval, Nongame Conservation Section, Department of Natural Resources, One Conservation Way, Brunswick, GA 31520. The applicant should also include a chart indicating the location of the facility in relation to waterways, location within a given county (specify county name), Contact person with phone number, and the Permit and/or Lease number associated with the project
- 2. The Nongame Conservation Section of the Georgia Department of Natural Resources (GDNR) will review the proposed sign placement site plan and will respond to the applicant within 30 days. If the proposed location is unacceptable, guidance on an alternate site will be provided. The contact person should notify the Nongame Conservation Section when sign placement has been completed (912-264-7218). A photograph(s) of the posted manatee signage at your facility must be submitted with the required permit compliance form to the Marsh and Shore Regulatory Program of the Coastal Resources Division/GA Department of Natural Resources.
- 3. If during a site visit, approved signs and their locations are found not to be in compliance with the instructions given in this document, relocation or addition of signs will be required. Annual site visits will be conducted to document sign placement and condition. All signs locations will be recorded in the GDNR manatee database.

<u>Approved Suppliers of Manatee Signs</u>: Signs are available through the companies listed below and may also be available from other local suppliers throughout the state. Permit/lease holders, marinas, and boat docking/launching facilities should contact sign companies directly to obtain pricing information and arrange for shipping and billing.

Grafix, Inc. 455 Montgomery Street Savannah, GA 31402 912-691-1117

Image Sign Company 785 King George Blvd., Bldg. 3 Savannah, GA 31419 912-961-1444

Doug Bean Signs, Inc. 160 Dean Forest Rd Savannah, GA 31408 912-964-1900 Fendig Signs 411 Arnold Rd St. Simons Island, GA 31522 912-638-3668

Good & Associates 344 Major Wright Road St. Simons Island, GA 912-638-7664

#### Temporary Construction Signs







"Protect Georgia's Manatees" sign — At least one sign will be required to face the waterway for each facility. This is dependent upon the size of the facility and the number of docks/piers present. The number and placement of signs will be determined on a site-by-site basis by GDNR biologists. Each approach to the marina from the waterway to the facility will need a visible sign. This sign is intended to alert any passing boater that may or may not be associated with the facility that manatees may be present and again raise awareness of this endangered species.



"Manatee Basics for Boater" sign — One sign is required for each entry point to any dock /pier space. It should be placed where anyone boarding or launching a boat will easily see the sign. This sign is intended to provide detailed information about manatees, how to avoid negative impacts to manatees, and to raise awareness of their presence in Georgia to any person using the facility. Sign placement approval by the Nongame Conservation Section is required.

#### -- Flatwoods Salamanders --

## **Effects Determination Guidance for Endangered & Threatened Species (EDGES)**

Baker, Bryan, Charlton, Chatham, Decatur, Dougherty, Early, Evans, Lanier, Lee, Liberty, Long, McIntosh, Miller, Screven, and Seminole Counties

**Species Covered by This EDGES**: Frosted flatwoods salamander (*Ambystoma cingulatum*, threatened) and Reticulated flatwoods salamander (*Ambystoma bishopi*, Endangered)

These flatwoods salamanders are found only in the Georgia and South Carolina coastal plain and the Florida panhandle. They occur in isolated populations scattered across the historical range in remnants of their suitable habitat.

Flatwoods salamanders are pond-breeding amphibians that have aquatic larval stages and terrestrial juvenile and adult stages. Adult flatwoods salamanders migrate in the fall to seasonally-flooded depressional wetlands, where they breed in small, isolated ephemeral ponds. Eggs hatch into larvae in the winter and metamorphose between March and May. Juveniles disperse from ponds to terrestrial habitat after metamorphosing. The terrestrial adults and juveniles spend much of their time below ground in crayfish burrows or root channels until it is time to return to their natal pond to breed. Breeding wetlands are located in the same mesic longleaf pine-wire grass dominated flatwoods, where adults and juveniles reside outside of the breeding season.





Frosted (above) and reticulated flatwoods salamanders



Habitat loss is the primary cause of the rapid decline of these species throughout their ranges. Agriculture and silviculture have altered much of Georgia's longleaf pine-flatwoods ecosystem and eliminated adult habitat and their breeding wetlands. Fire suppression in the Coastal Plain has reduced suitable habitat by allowing midstories and closed canopies to develop which shade and suppress herbaceous groundcover.

This EDGES covers (1) existing structure maintenance and (2) new development, including subdivisions, commercial development, roads, pipelines and powerlines, stream and wetland

restoration/ stabilization, and similar projects. It does not cover new drinking water reservoirs, airports, or similar large-impact projects.

# **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

- 2. The Fish and Wildlife Service-Georgia Field Offices (FWS-GA) provided documentation evaluating habitat, potential presence of species, suitable survey methodology and/or potential project impacts (FWS-GA signed letter or sticker, T&E survey where FWS-GA provided concurrence with negative findings, or similar documentation).

#### **Savannah District**:

- 3. The project occurs in Baker or Miller Counties, where Critical Habitat for the reticulated flatwoods salamander has been designated (Critical Habitat for the frosted flatwoods salamander has not been identified in Georgia).

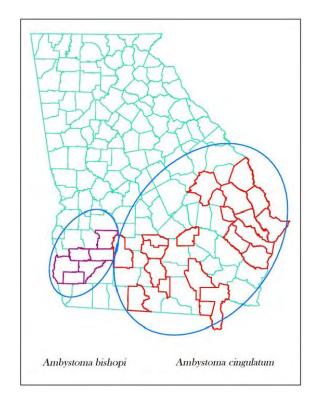
  - b. Yes...........Contact FWS-GA to determine if consultation is needed.
- 4. The project will impact longleaf pine-wiregrass flatwoods or slash pine flatwoods (not managed pine plantations).

  - b. Yes......Go to #5.
- 5. Project information listed below is provided to assist the Savannah District and FWS-GA evaluate T&E impacts:

  - - i) NLAA, and FWS-GA concurs, consultation complete.
    - ii) LAA, and FWS-GA concurs, initiate formal consultation.

#### Information to be Provided the Savannah District for Endangered Species Act Review

- A map detailing the size and location of pine flatwoods and isolated depressional wetlands on the site.
- A description of each wetland and flatwoods habitat that will be impacted by the project, keyed to the map.
- An evaluation of the effects of the project on fire frequency on the site.



# DRAFT – Eastern Indigo Snake -- DRAFT Effects Determination Guidance for Endangered & Threatened Species (EDGES)

#### **South Georgia Coastal Plain Counties**

Species Covered by This EDGES: Eastern indigo snake (Drymarchon couperi) - Threatened

The Eastern indigo snake (EIS) in Georgia is closely associated with the gopher tortoise (Gopherus polyphemus), a reptile that excavates extensive underground burrows that provide the snake shelter from winter cold and summer desiccation. Gopher tortoises are a characteristic species of the longleaf pine and wiregrass community, which includes sandhills, dry flatwoods, and turkey oak scrub. Historically, this community was found in open-canopied forest that allowed abundant sunlight penetration and conditions favorable for a rich growth of herbaceous vegetation. Little of this habitat still exists; many tortoises have been forced into artificial habitats, such as roadsides and old fields that retain the three key habitat





requirements: sandy soil for burrowing, sunlight, and abundant herbaceous vegetation.

During the warmer months, EIS during the day forage on the edge of wetlands where frogs and other snakes typically are abundant. In Georgia, adult EIS may range 1-4 mi from the overwintering sandhill, although they typically return to the same sandhills in winter. Breeding occurs November - April, and females often place eggs in the moist sand of tortoise burrows. Threats to EIS include loss and fragmentation of sandhill habitats that support tortoises, removal of prescribed fire, which maintains suitable understory habitat, and declining gopher tortoise populations.

This EDGES covers maintenance of existing structures and new development, including subdivisions, commercial development, roads, water supply infrastructure, and sewer mains, pipe and powerlines, stream restoration and stabilization (including mitigation banks) and similar projects. It does not cover new drinking water reservoirs, airports, or similar large-impact projects.

# **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

- 1. IPAC indicates EIS may occur in the project area.

  - b. Yes......Go to #2.
- 2. The Fish and Wildlife Service's Georgia Field Office (FWS-GA) provided documentation stating project impacts to EIS were likely to be minimal (FWS-GA signed letter or sticker, T&E survey where FWS-GA provided concurrence with negative findings, or similar documentation).

  - b. Yes......Provide FWS-GA project review documentation and/or survey data to the Savannah District with application/PCN.

#### **Savannah District:**

- 3. A soil map, with the site clearly marked (provided by applicant), shows suitable soils for gopher tortoise burrows on site (see list of suitable soils list below).
  - a. No...........NLAA. Consultation complete. FWS-GA concurrence not needed.
- 4. There are gopher tortoise burrows on site.
  - a. No.............NLAA. Consultation complete. Further review from FWS-GA not needed.
  - b. Yes or Don't Know......Go to #5.
- 5. The area has an open tree canopy AND abundant forb groundcover (see photos below) OR is on a right-of-way, fence row, orchard edge, golf course, old field, or pastureland.
  - a. No .............NLAA. Consultation complete. FWS concurrence is needed, in writing, for JPNs, but is assumed for other Savannah District actions if FWS-GA does not respond.
  - b. Yes......May affect. Consult with FWS-GA



Best Gopher Tortoise Soils	Moderate Gopher Tortoise Soils	Marginal Gopher Tortoise Soils		
Bonifay	Bonneau	Ailey		
Centenary	Fuquay	Albany Cowarts		
Foxworth	Hurricane			
Lakeland	Luch	Norfolk		
Lucknow	Mandarin	Orangeburg Tifton		
Troup	Meldrim			
Valdosta	Ridgewood	Vaucluse		
	Stilson			
	Uchee			

#### -- Sea Turtles --

#### **Effects Determination Guidance for Endangered & Threatened Species (EDGES)**

#### Bryan, Camden, Chatham, Glynn, Liberty, and McIntosh Counties

**Species Covered by This EDGES**: Loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*), and Kemp's ridley sea turtle (*Lepidochelys kempii*).

Sea turtles may be found in the marine and estuarine waters of Georgia. Nesting season in the state is May 1-August 31, and hatching extends to October 31. Nesting habitat includes both sandy beach and any sandy areas that wrap around the north and south ends of islands. Loggerheads are Georgia's primary nesting sea turtle, laying 99.6% of the nests found on the State's beaches. Green, leatherback, and Kemp's ridley sea turtles occasionally nest in Georgia. Sea turtles have site fidelity to their nesting beaches. A primary threat to these species is loss or degradation of nesting habitat. Most of GA's beaches (map page 2) are designated Critical Habitat.



This EDGES covers projects on Georgia's coast that permanently or temporarily alter sea turtle nesting habitat. The Fish and Wildlife Service and the National Marine Fisheries Service share Federal jurisdiction for sea turtles. FWS has responsibility for sea turtles on the nesting beach and NMFS in the marine environment. This EDGES, therefore, only addresses activities, that may impact nesting sea turtles, their nests, eggs, or hatchlings, as they emerge from the nest and crawl to the sea. Separate consultation with NMFS, may be required for potential impacts to sea turtles in ocean waters.



# **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

- 1. IPAC indicates sea turtles may nest in the project area (see range map on Page 2).

  - b. Yes......Go to #2.
- 2. The proposed project will impact or alter any of Georgia's coastal beaches, sandy north/south island ends, or associated dune habitat.
  - a. No......Provide this information to the Savannah District with application/PCN
  - b. Yes.....Go to #3.
- 3. The Fish and Wildlife Service's Georgia Field Office (FWS-GA) provided documentation stating project impacts to sea turtles were likely to be minimal.

  - b. Yes...........Provide FWS-GA project review documentation and/or survey data to the Savannah District with application/PCN.

#### **Savannah District**:

- 4. IPAC indicates the project is within designated Critical Habitat for one or more of the listed sea turtles.
  - a. No......Go to #5.
  - b. Yes......Contact FWS-GA to determine if consultation is needed.

- 5. The project would result in impacts <6 months to sea turtle nesting habitat (e.g., construction of groins, sea walls, jetties, ocean piers, placement of fill, etc.).
  - a. No......Go to #6.
  - b. Yes......May affect. Consultation required.
- 6. Projects that cause temporary impacts to sea turtle nesting habitat (e.g., beach renourishment, beach restoration, or inlet sand transfer) will be constructed only from September through April, when sea turtles are not nesting.

  - b. Yes......Go to #7.
- 7. The sea turtle conditions below will be implemented throughout project preparation and construction.
  - a. No......MALAA. Consultation with FWS-GA required.
  - b. Yes......NLAA. Consultation complete. FWS-GA concurrence is needed, in writing, for JPNs, but is assumed for other Savannah District actions if FWS does not respond.

#### **Sea Turtles Conditions**

- 1. Permittee will not work between May 1 and August 31 in order to avoid impacts to sea turtle nests.
- 2. Permittee will have a designated qualified biological monitor, acceptable to FWS-GA and the Savannah District, present each day to monitor construction activity and the presence of sea turtles. Permittee will provide the name of the monitor and their qualifications prior to commencing work.
- 3. For work between September 1 and October 31, the permittee or their contractor shall coordinate with GADNR WRD nongame, sea turtle specialist (currently Mark Dodd phone number 912-280-6892) before work commences concerning protection of sea turtle nests that may be present in the project area. Permittee or contractor will be expected to avoid impacts to sea turtle nests and hatchlings through protective measures such as hay bales or similar materials, through the end of nesting season on October 31.
- 4. Permittee will measure sand compaction in the work area immediately after project completion and consult with FWS-GA' Coastal Georgia ES Office to determine if the sand needs to be tilled to improve sea turtle nesting habitat. Sand compaction monitoring and tilling protocols are posted on pages 2-3 of the following document: https://www.fws.gov/panamacity/resources/PostConstructionRequirementsChecklist.pdf.
- 5. Visual surveys for escarpments along beach renourishment projects must be made immediately after completion and in late March-early April for three years post-construction. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet must be leveled and the beach profile reconfigured to minimize scarp formation before May 1 annually.
- 6. FWS-GA and GADNR will be notified if a sea turtle adult, hatchling, or egg is harmed or destroyed as a direct or indirect result of the project.
- 7. All personnel associated with the project will be notified, in writing, that there are civil and criminal penalties for harming, harassing or killing sea turtles.
- 5. All vessels associated with the project will operate at "no wake/idle" speeds at all times while in the construction area. All vessels will follow routes of deep water whenever possible.
- All temporary construction materials will be removed upon completion of the work. No construction debris or trash will be discarded in the water.



#### -- Wood Stork --

#### **Effects Determination Guidance for Endangered & Threatened Species (EDGES)**

#### **South Georgia Coastal Plain Counties**

#### Species Covered by this EDGES: Wood stork (Mycteria americana) – Threatened

The wood stork is a large, bald-headed wading bird that stands more than 3 feet tall, has a 5-foot wing spread, and weighs 4 to 6 pounds. It is the only stork that breeds in the United States. It eats primarily fish, foraging in a variety of open, shallow freshwater and estuarine wetlands. It favors areas with falling water levels (when fish and other prey are likely to be more concentrated in pools). Birds forage mainly by wading in shallow water with their bills partly open in the water, so they can quickly snap them shut when contact is made with prey.

The wood stork is a highly colonial species usually nesting in large rookeries and feeding in flocks. Colony size in Georgia has ranged from fewer than 12 to more than 500 nests. Nests may be located in





small trees (3-7' above ground) or large trees (60' or more above ground), but the trees must be in standing water or on islands surrounded by water to protect from predators. Nesting periods vary geographically. In north and central Florida, Georgia, and South Carolina, storks lay eggs March-late May, with fledging occurring July-August. Wood storks have also nested in man-made structures. Storks occasionally use the same rookeries for years, but most colonies are shorter lived. Loss of foraging and breeding wetland habitat is the primary cause for declines.

This EDGES covers any project that might affect freshwater or estuarine wetlands.

# **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

- 1. IPAC indicates wood storks may occur in the project area.

  - b. Yes......Go to #2.
- 2. The Fish and Wildlife Service's Georgia Field Office (FWS-GA) provided documentation stating project impacts to listed wood storks were likely to be minimal (FWS-GA signed letter or sticker, T&E survey where FWS-GA provided concurrence with negative findings, or similar documentation).

  - b. Yes......Provide FWS-GA project review documentation and/or survey data to the Savannah District with application/PCN.

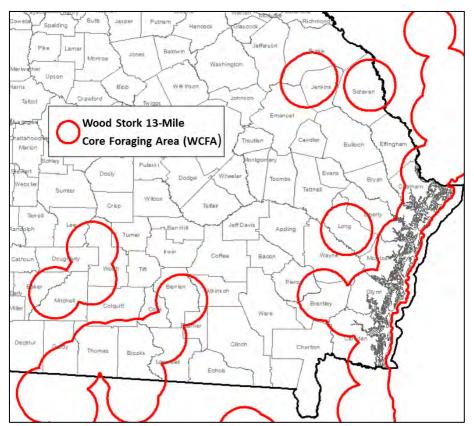
#### **Savannah District**

- 3. The project is within 2,500 feet of an active wood stork nesting colony (see GIS layer).

b. YesMay affect.	Consult with FWS-GA	4.
-------------------	---------------------	----

- 4. The project will affect suitable wood stork foraging habitat (SFH). SFH contains patches of relatively open (< 25%) aquatic vegetation, calm water, and a permanent or seasonal water depth between 2 and 15 inches. Examples of SFH include, but are not limited to, freshwater marshes, seasonally flooded roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.
  - a. No......NLAA. Consultation complete. FWS-GA concurrence not needed.
  - b. Yes......Go to #5.
- 5. Project impacts to SFH are greater than 0.5 acre.
  - a. No...........NLAA. Consultation complete. FWS-GA concurrence not needed.
  - b. Yes......Go to #6.
- 6. The project will impact SFH within a Wood Stork Core Foraging Area (WSCFA) for a known colony (see map below) OR wood storks have been documented foraging in the wetland. WCFAs in Georgia include SFH within a 13-mile radius of a colony.

  - b. Yes.....May affect. Consult with FWS-GA



#### -- Eastern Black Rail --

**Effects Determination Guidance for Endangered & Threatened Species (EDGES)** 

Brantley, Bryan, Camden, Chatham, Glynn, Liberty, Greene, McIntosh, and Troup Counties

**Species covered by this EDGES:** Eastern black rail (Laterallus jamaicensis ssp.) (BLRA)





The eastern black rail (Laterallus jamaicensis ssp.) (BLRA) is Endangered Species Act (ESA) listed as 'Threatened'. Threats include habitat loss, sea level rise and tidal flooding from increasing storm intensity and frequency. There is an ESA 4(d) rule for the BLRA. Prohibited activities include incidental take that causes long-term or permanent damage, fragmentation, or conversion of BLRA habitat to other habitat types that do not support the bird.

Habitat - Black rail habitat is higher elevations in Estuarine and Palustrine persistent emergent wetlands and where these wetlands meet upland edges. The BLRA species habitat needs are; the higher elevations of salt, brackish, or freshwater marsh, dense herbaceous vegetative cover that allows movement underneath the canopy, plant structure is considered more important than plant species composition, elevated refugia to escape high water events, and moist to saturated substrates interspersed with or adjacent to very shallow water.

On the Georgia Coast, habitat is the higher elevations of Estuarine Persistent Emergent Wetlands dominated by saltmarsh cordgrass (*Spartina alterniflora*) and needlerush (*Juncus roemerianus*). Inland habitat in both non-tidal wetlands and low salinity tidal areas is Palustrine Persistent Emergent Wetlands contain a vast array of grasslike plants such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.), sedges (*Carex* spp.); and true grasses such as reed (*Phragmites australis*). Inland minimum habitat size, based on the breeding home range, is 3.2 acres (1.3 ha). Shrub-scrub and forested areas are not black rail habitat.

Should BLRA habitat be present, the USFWS recommends a presence/absence survey for the bird. Survey protocol recommended to be used in Georgia can generally be described as playback/listening of recorded bird calls during mating season, with three surveys conducted between April and July.

For more information on the eastern black rail, see the USFWS Species Status Assessment (SSA) at: https://ecos.fws.gov/ServCat/DownloadFile/154242.

#### **Applicant:**

- 1. IPaC indicates BLRA are potentially affected by activities in the project location.
  - a. No No effect. Provide IPaC information to the Savannah District with application/PCN.
  - b. Yes Go to #2.
- 2. The U.S. Fish and Wildlife Service's Georgia Field Office (FWS-GA) provided documentation stating project impacts to BLRA were likely to be minimal (FWS-GA signed letter or sticker, T&E survey where FWS-GA provided concurrence with negative findings, or similar documentation).
  - a. No Provide completed EDGES Applicant Consultation Form, with supporting documentation to the Savannah District with 404 application/PCN. Supporting documentation should include a habitat description and results of BLRA presence/absence surveys if completed. Habitat descriptions should provide sufficient detail to determine whether BLRA habitat is present. Wetland dataforms may be used, for example, to document vegetation structure and composition
  - b. Yes Provide FWS-GA project review documentation and/or survey data to the Savannah District with application/PCN.

#### Savannah District:

- 3. Will BLRA habitat be affected by the project (habitat present within action area and activity will result in an effect to habitat)?
  - a. No No effect. No additional coordination with FWS-GA is necessary.

b. Yes Go to #4.

- 4. The USFWS recommends presence/absence surveys following the protocol described at the end of this EDGES. Were BLRA presence/absence surveys completed?
  - a. No Based on IPaC listing and presence of habitat, Savannah District assumes BLRA is present. The project May Affect the BLRA. Go to #6.
  - b. Yes Go to #5.
- 5. Did the surveys find presence of the BLRA?
  - a. No May affect, not likely to adversely affect (MA NLAA). Consultation complete. No additional coordination with FWS-GA is necessary. FWS-GA concurrence is assumed. The effects of the action on the BLRA are considered to be discountable or insignificant. Discountable effects are those extremely unlikely to

occur. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.

- b. Yes May affect. Go to #6.
- 6. Are the effects of the action on the BLRA considered to be discountable, insignificant, or wholly beneficial? Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.
  - a. No
    b. Yes
    May affect, likely to adversely affect. Please consult with FWS-GA.
    May affect, not likely to adversely affect (MA NLAA). Consultation

complete. FWS-GA concurrence is needed, in writing, for JPNs. Requests for concurrence should include an explanation of why the project ESA determination is MA NLAA. FWS-GA concurrence is assumed for other actions (i.e. NWPs and LOPs) unless a response is provided.

#### Presence / absence survey protocol for the eastern black rail in Georgia.

Surveys for the eastern black rail in Georgia should be based on the survey protocols used for the 2017 – 2018 Georgia BLRA survey. The protocol is described in: Smith, F. M., B. D. Watts, B. J. Paxton and L. S. Duval. 2018. Assessment of Black Rail Status in Georgia, Breeding Season 2017 and 2018 Summaries. Center for Conservation Biology Technical Report Series: CCBTR-18-10. College of William and Mary/Virginia Commonwealth University, Williamsburg, VA. 48 pp..

Survey protocol recommended to be used in Georgia can generally be described as playback/listening of recorded bird calls during mating season, with three surveys conducted between April and July.

#### **Survey Playback Sources:**

Ki-ki-kerr: Sourced from Cornell Lab of Ornithology, Macaulay Library in 2007.

Churt: Sourced from Christy Hand, South Carolina DNR

Growl: Sourced from Cornell Lab of Ornithology, Macaulay Library in 2007.

Eek-eek call: Sourced from Cornell Lab of Ornithology, Macaulay Library, Florida call.

**Survey Windows:** All coastal surveys will take place between 18 April and 21 July, with survey window #1 between 18 April and 17 May, window #2 between 18 May and 17 June, and window #3 between 18 June and 21 July. All inland surveys will take place between 1 May and 15 July, with survey window #1 between 1 May and 31 May, survey window #2 between 31

May and 21 June, and survey window #3 between 22 June and 15 July. There should be a 10-day minimum between surveys of the same point.

All coastal surveys will take place at night, between a half hour after sunset and will conclude by a half hour prior to sunrise. All inland surveys will follow standard SCDNR and USFWS protocols and start a half hour before sunrise to 3.5 hours after sunrise or 3.5 hours before sunset to .5 hours after sunset.

<u>Survey Points:</u> The number of survey points should adequately cover the BLRA habitat on the project site, keeping in mind that the survey should cover the project's area of impact. Surveyor(s) will stand at pre-selected survey point coordinates. Survey points should be marked with pin flagging (and labeled with survey point ID with a permanent marker in a nook of the flagging) during scouting, if visited, or the first survey of the season for ease of location through the rest of the season. Surveys are 10 minutes long at each pint. Each point should be surveyed at least 3 times (e.g. windows #1, #2, and #3), with a 10-day minimum between surveys of the same point. Avoid sampling the same point repeatedly at the same time of day.

Broadcast Equipment Placement: The game caller should be placed on the ground near the center of the point (on road based surveys) or the bow of the boat during playback surveys. Surveyor should stand 5m away from caller if possible to better hear responses. When surveyors are surrounded completely by marsh, orient the caller toward magnetic north. At survey points located on the edge of open water or upland habitat, orient the broadcast caller towards the center of appropriate marsh habitat. Do not rotate the speaker during the broadcast survey. Speakers should not face the surveyors. Both speakers of the broadcast callers should be operational in open marsh and only the forward speaker operational when the surveying from the edge of open water or upland habitat. Sound pressure should be 70-80 dB at 3 feet in front of the speaker. The appropriate volume level on the FoxPro NX3 or NX4, in combination with this project's audio file, is illustrated in the figure below. When viewed straight on, the centerline of the volume knob should align with the trailing edge of the last marked volume setting. Replace batteries in game caller with freshly charged batteries at least every other day of surveys and daily, if necessary.

NX4 or NX3 volume level during surveys.



Weather Restrictions: Surveys should only be conducted when wind speed is <20 kmph (moderate breeze; dust and loose paper raised; small branches begin to move), and not during periods of sustained rain or heavy fog. Even winds <20 kmph affect the detection probability of marsh birds, especially BLRA, and perhaps even suppresses their calling behavior. Surveyors should postpone surveys if they believe winds (or other ambient noise) are dramatically affecting the detection probability. If wind speed increases to >20 kmph, or sustained rains/fog begin during a morning or evening survey window, surveyors should cease surveys for that window and visit unsurvey sites at another time.

**Recording Bird Detections:** Record the point number and Lat / Lon. Use the 4-letter American Ornithological Union (AOU) code: BLRA to indicate an eastern black rail detected. Each individual is recorded on a separate line and record minute by minute data.

<u>Distance and direction:</u> Record an estimate of the exact distance and the general direction (N, NE, E, SE, S, SW, W, or NW, or to the degree marker on a compass) to the initial detection of each individual BLRA.

<u>Time of detection</u>: Detections of each individual BLRA should be recorded minute-by-minute during the 10-minute survey period. Surveyors should distinguish and indicate the call type(s) of all BLRA detections during a given survey minute; Ki-ki-kerr, Churt, Growl, and/or Eek-eek calls. Abbreviations may be used and multiple call types may be recorded in a given minute (e.g., a black rail *ki-ki-kerr* followed by a *growl* could be recorded K, GR).

**Birds detected at a prior survey point:** If a surveyor suspects that a BLRA bird detected during a survey is an individual detected at a previous survey point, the surveyor should proceed to record the requisite detection data and record "detected at a previous point" in the comments column. When in doubt, be conservative as to whether an individual bird detected at the current

point was the same individual recorded at a previous point (i.e., make a note in the comments column).

<u>Birds detected outside the survey period (approaching or leaving)</u>: Record any BLRA detected outside of the survey period by recording the distance and direction of the detection, indication the call type(s) in the "outside survey period" column, and recording your coordinates at the time of detection in the notes column. For example, if a BLRA is detected while moving between survey points, record the detection data on the data sheet for the prior (or forthcoming) survey point as described, and record coordinates of the location where you detected the BLRA.

# Federally Endangered and Threatened Plant Species Effects Determination Guidance for Endangered & Threatened Species (EDGES)

#### Various Counties throughout Georgia

#### **Species Covered by This EDGES:**

#### North Georgia, Blue Ridge

- Endangered: Rock Gnome Lichen (*Gymnoderma lineare*), Green Pitcherplant (*Saracenia oreophila*) and Persistent Trillium (*Trillium persistens*)
- Threatened: Swamp Pink (*Helonias bullata*), Small Whorled Pogonia (*Isotria medeoloides*), Monkeyface Orchid (*Platanthera integrilabia*)

#### South Georgia

• Endangered: Hairy Rattleweed (*Baptisia arachnifera*), Pondberry (*Lindera melissifolia*) and Canby's Dropwort (*Oxypolis canbyi*), Harperella (*Ptilimnium nodosum*), American Chaffseed (*Schwalbea americana*), Cooley's Meadowrue (*Thalictrum cooleyi*)

#### Northwest, Central, and Southwest Georgia

- Endangered: Alabama leather flower (*Clematis socialis*) and Whorled sunflower (*Helianthus verticillatus*)
- Threatened: Large-flowered skullcap (Scutellaria montana) and Ocmulgee skullcap (Scutellaria ocmulgee)

#### Floyd County

- Endangered: Alabama leather flower (*Clematis socialis*) and Whorled sunflower (*Helianthus verticillatus*)
- Threatened: Mohr's Barbara's buttons (Marshallia morhii)

# **Endangered Species Act Consultation Checklist:**

#### **Applicant:**

1.	IPAC indicates Federally-listed plant species may occur in the project area.
	a. No
2.	The Fish and Wildlife Service's Georgia Ecological Services Field Office (GA ES) provided documentation that the project will not impact Federally-listed plants.  a. No
2	application/PCN.  Determination key(s) were completed in IPaC and a consistency letter was outs generated for the project.

- 3. Determination key(s) were completed in IPaC and a consistency letter was auto-generated for the project.

  - b. Yes......Provide IPaC determination key and consistency letter to the Savannah District with application/PCN.

## **Savannah District:**

4.	IPAC indicates the project is within designated Critical Habitat for one or more of these plant species.  a. No
5.	IPAC indicates federally listed plant species may occur in the project's potential area of effect.  a. No
6.	GA ES has reviewed the project and provided information that Federally-listed plant species will not be impacted by the project or the Savannah district has determined that the project will have 'no effect' on listed plants.  a. No
7.	The applicant has provided the Savannah district a consistency letter from IPaC indicating the project will have 'no effect' on federally listed plant species or is 'not likely to adversely affect' federally listed species.  a. No
8.	The Savannah district completed the required determination key in IPaC and generated a concurrence letter.  a. No
9.	Suitable habitat for one or more federally listed plant species occurs within the project's action area. Please find suitable habitat guidance by species at: <a href="https://georgiabiodiversity.org/portal/table/plants/">https://georgiabiodiversity.org/portal/table/plants/</a> a. No
10	Surveys were conducted when listed plants can be correctly identified. Survey guidance can be found for each species at: <a href="https://georgiabiodiversity.org/portal/table/plants/">https://georgiabiodiversity.org/portal/table/plants/</a> a. No
11.	a. No
12.	<ul> <li>Appropriate avoidance and minimization measures provided on the following page are included with the project and would result in avoidance of all impacts to listed plant species.</li> <li>a. No</li></ul>

# Information to be upload into IPaC or provided to Georgia Ecological Services for Endangered Species Act Review:

All (where applicable):

- Description of the proposed project activities, including any BMPs that will be utilized to avoid impacts to listed plant species.
- Project location overlain on a USGS topographic map and latitude/longitude coordinates (in decimal degrees) for center of project.
- Depiction of suitable habitat(s) aerial imagery of the area.
- Representative images of suitable habitat(s).
- Verification that the project will meet all requirements of the Georgia NPDES General Permits for sediment and erosion, construction stormwater management, and waste disposal.
- A post-construction stormwater management plan that meets at least the current Georgia Blue Book standards.
- A timeline documenting when project activities will be implemented.
- An estimate of total acreage that will be graded at any one time.
- Plans for re-vegetation and maintenance of disturbed habitats adjacent to forests. Plans should focus on use of native, non-invasive species that minimize seed dispersal and encroachment into forested habitats.

#### **Avoidance and Minimization for Plant Species:**

- Use orange barrier fence or other measure to protect suitable habitats during construction activities.
- Vegetation removal, mowing and management of plants using mechanical devices for locations within known
  populations of federally listed plants should be coordinated with Georgia Ecological Services and Georgia
  Department of Natural Resources. Each Environmentally Sensitive Area shall have a management plan for all
  activities within the designated area.
- Any restoration, seeding, or replanting within habitats identified will be coordinated with Georgia Ecological Services and Georgia Department of Natural Resources or be in accordance with an approved management plan for the area or species. These activities will use only native seed mixes or plantings that are compatible with the focal species or habitats within the project area.
- Ensure all materials used in project design or construction are free from invasive plants before placement on site.
- All vehicles, machinery, and equipment are clean and free from invasive species before use at a project site.
- All vehicles, machinery, and equipment should be clean and free from plant or animal materials before being transported to a new project site, unless this movement is related to moving fill or other materials to an appropriate offsite disposal location.

#### Savannah District EDGES Applicant Coordination Slip

Project:	Vaden Enterprises Parcel		County:	С	hatham	
Applicant:	Vaden Enterprises, LLLP		Coordinates:	32.00917	5°, -81.032538°	
Consultant:	Resource + Land Consultants		Date of Consultants As	sessment:	12/6/2022	
FWS-GA Revi	ew of Project or Survey Data (yes/no):	no	Date of FWS-G	GA Review:	n/a	
Project N	Nodifications After FWS-GA Review (including cha	nges in timing):		n/a		

Species IPaC Indicated May Occur on Site	Ipac Status	Critical Habitat (yes /	Applicable EDGES	Species Habitat(s), as Described in the EDGES (e.g., wetland, stream, forested, flatwoods, sandhills)  Habitat occur on Project Site (yes		Will this Habitat be Altered by the Project	Determ EDGES	ination
West Indian Manatee (Trichechus manatus)	Threatened	no) No	West Indian Manatee	warm coastal and spring fed waters	/ no) Yes	(yes / no) No	No effect	-
Eastern Black Rail (Laterallus jamaicensis ssp. Jamaicensis)	Threatened	No	Eastern Black Rail	salt and freshwater marshes	No	No	MA- NLAA	-
Wood Stork (Mycteria americana)	Threatened	No	Wood Stork	relatively open aquatic vegetation, calm water, permanent of seasonal water depths 2-15"	No	No	NLAA	-
Eastern Indigo Snake (Drymarchon corais couperi)	Threatened	No	Eastern Indigo Snake	longleaf pine and wiregrass community, Fuquay, Blanton, Centenary, Foxworth, Echaw, Meldim, Dothan, Ridgeland, Stilson, Chipley, and Albany soils.	No	No	NLAA	-
Green Sea Turtle (Chelonia mydas), Hawksbill Sea Turtle (Eretmochelys imbricata), Kemp's Ridley Sea Turtle (Lepidochelys kempii), Leatherback Sea Turtle (Dermochelys coriacea), Loggerhead Sea Turtle (Caretta caretta):	Threatened & Endangered	No	Sea Turtles	offshore waters of the Atlantic and Caribbean and beaches of the Atlantic and Caribbean.	No	No	No Effect	-
Frosted Flatwoods Salamander (Ambystoma cingulatum)	Threatened	No	Flatwoods Salamander	longleaf pine wiregrass flatwoods or slash pine flatwoods (not managed pine plantatins)	No	No	No Effect	-
Pondberry (Lindera melissifolia)	Endangered	No	n/a	pond margins and wet savannas	No	No	No effect	

Please provide this form, the IPaC map and printout of listed species/Critical Habitat that may occur on site, and any FWS-GA comments on the project to the Savannah District with your application/PCN.



RESOURCE+LAND C 0 N S U L T A N T S

# **APPENDIX H:** Zoning Letter



6 December 2022

Chatham County
Mr. Gregori Anderson
gsanderson@chathamcounty.org

RE: GADNR CMPA Application RLC#: 18-209

Vaden Enterprises, LLLP Parcel Chatham County, Georgia

Dear Mr. Anderson:

Vaden Enterprises, LLLP is applying for a permit, under the Coastal Marshlands Protection Act of 1970, O.C.G.A. §12-5-280, requesting authorization to impact 0.013 acre of man made tidal ditch during installation of an assess drive on the subject parcel located at the intersection of Dutch Island Drive and Meriweather Road in Chatham County, Georgia (32.009175°, -81.032538°). In accordance with O.C.G.A. § 12-5-286(6), the applicants must submit a letter from the local issuing authority in which the property is located stating that the proposed activity does not conflict with any zoning laws. In addition, it is the Georgia Department of Natural Resources, Coastal Resources Division policy to request that you also initial and date the attached plans so that they can insure that the final permitted facility is consistent with your initial review. At your earliest convenience, please provide a letter stating that the applicant's proposal does not violate the Chatham County zoning laws associated with the project location. Please forward your letter, along with the initialed copies of the permit drawings, to our office.

We appreciate your timely response to this request. If you should have any questions or require additional information, please contact me at your earliest convenience.

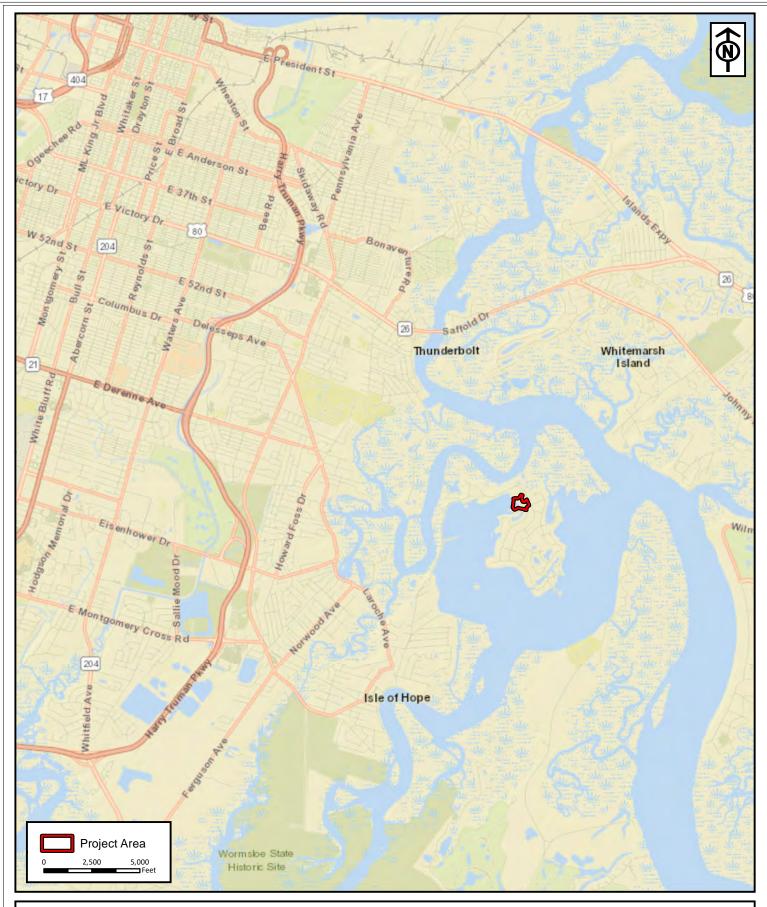
Sincerely,

Russell Parr, Sr. Project Manager

Resource & Land Consultants

cc: Ms. Jane Thacher – Vaden Enterprises, LLLP

Mr. Scott Monson - Thomas & Hutton



 RLC Project No.:
 18-209

 Figure No.:
 1

 Prepared By:
 MG

 Sketch Date:
 12/6/2022

 Map Scale:
 1 inch = 5,000 feet

# Vaden Enterprises Parcel

Chatham County, Georgia

# **Project Location**

Prepared For: Vaden Enterprises, LLLP





 RLC Project No.: 18-209

 Figure No.: 2
 2

 Prepared By: MG
 MG

 Sketch Date: 12/6/2022
 12/6/2022

 Map Scale: 1 inch = 1,500 feet

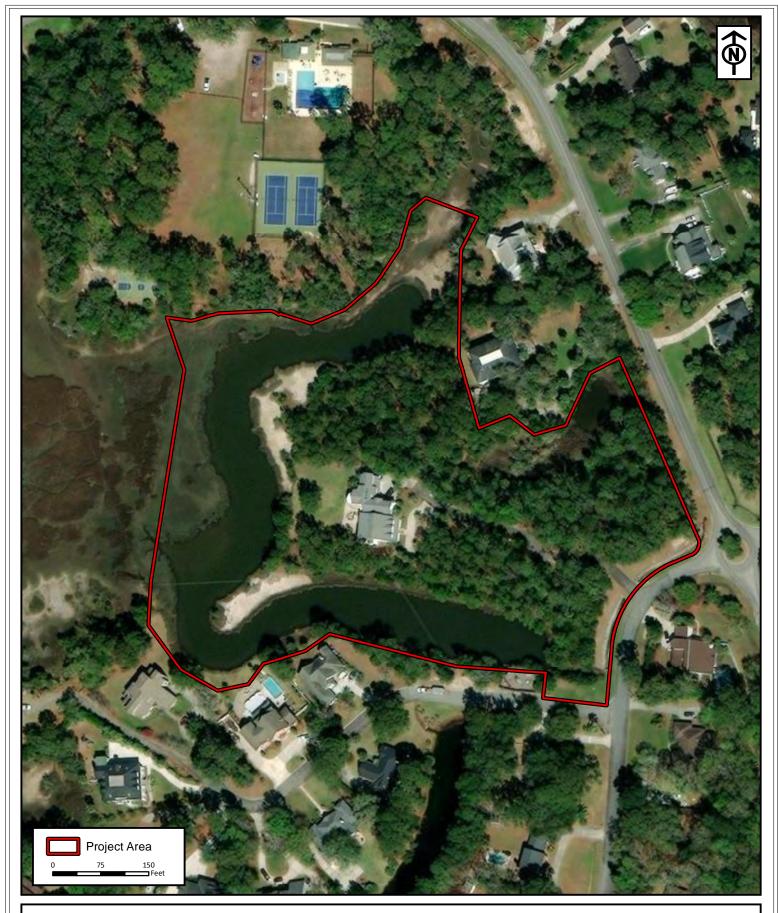
### Vaden Enterprises Parcel

Chatham County, Georgia

# USGS Topographic Survey

Prepared For: Vaden Enterprises LLLP





 RLC Project No.: 18-209

 Figure No.: 5
 5

 Prepared By: MG
 MG

 Sketch Date: 12/6/2022
 1 inch = 150 feet

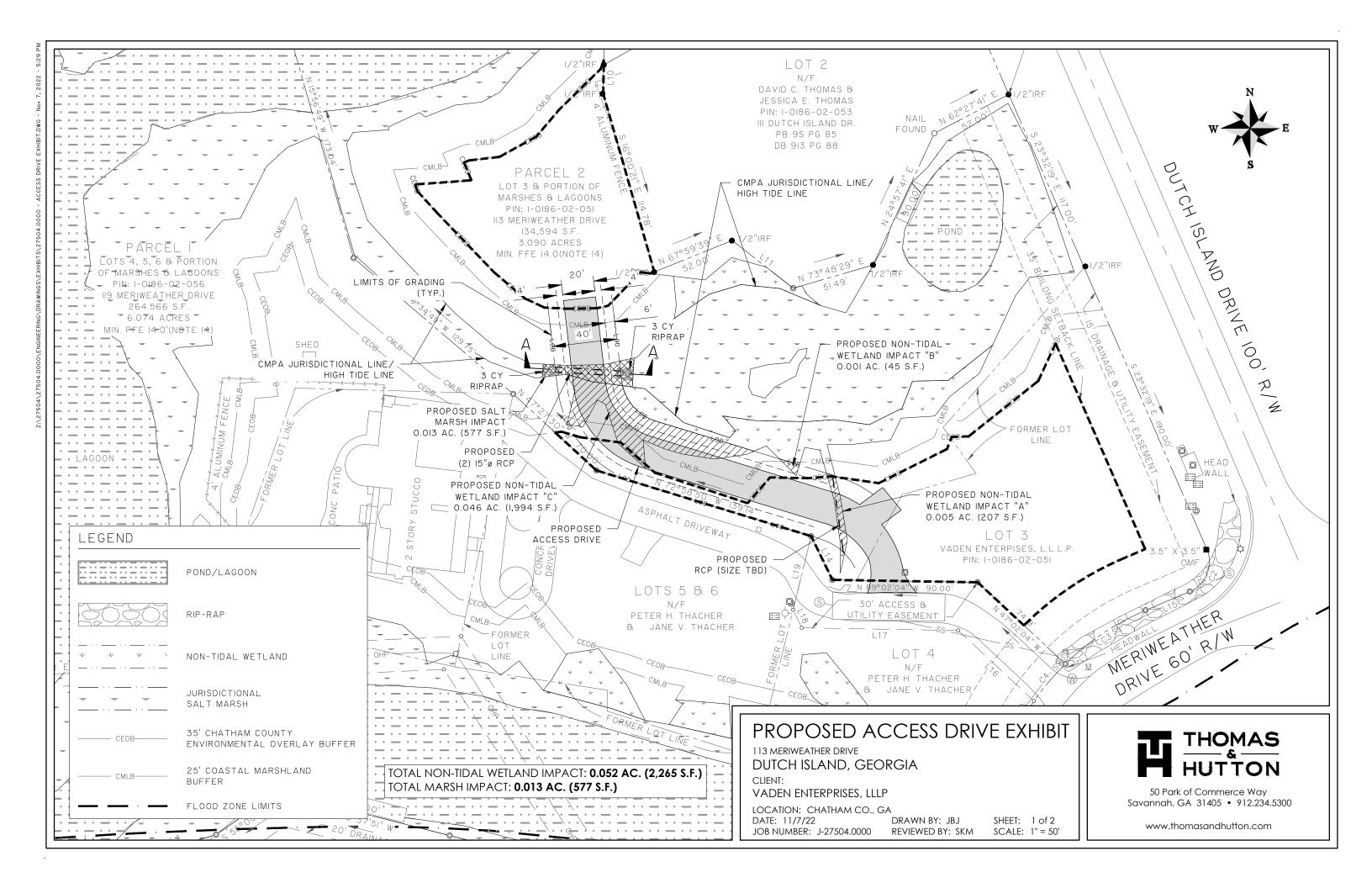
### Vaden Enterprises Parcel

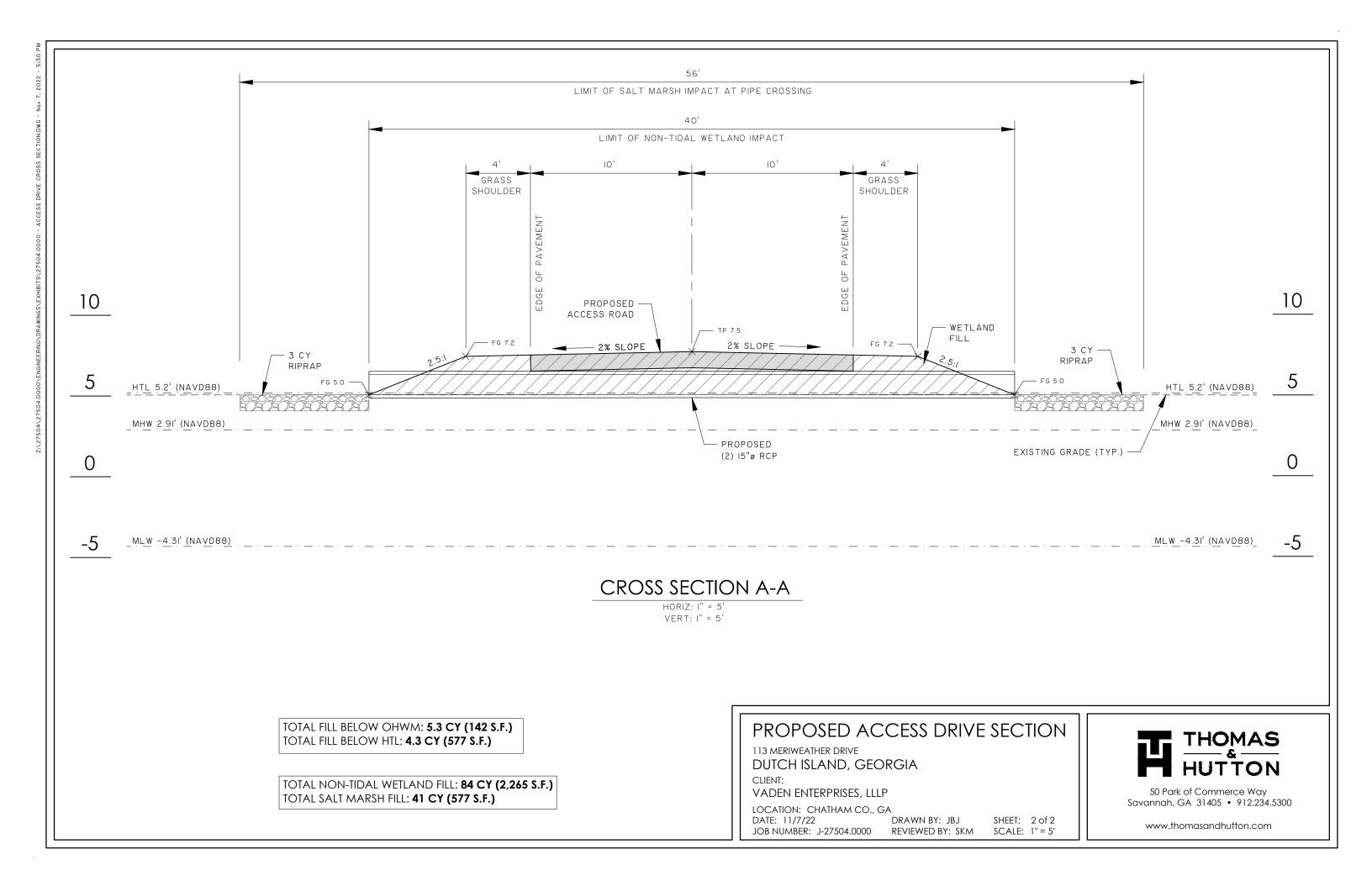
Chatham County, Georgia

### **Ortho Aerial**

Prepared For: Vaden Enterprises, LLLP









RESOURCE+LAND
CONSULTANTS

### **APPENDIX I:**

GADNR-CRD Marshline Verification Letter & USACE DRAR



MARK WILLIAMS COMMISSIONER DOUG HAYMANS DIRECTOR

June 17, 2020

Russell Parr RLC 41 Park of Commerce Way, Ste. 101 Savannah, GA 31405

Re: Georgia Department of Natural Resources Coastal Marshlands Jurisdiction Line Verification, Wetland Exhibit of Lots 3, 4, 5 & 6, Phase 7, Dutch Island Subdivision, 6<sup>th</sup> G.M. District, Chatham County, Georgia

Dear Mr. Parr:

Our office has received a surveyed plat by Wright C. Powers, Jr., Georgia Registered Land Surveyor No. 2612, being a revised surveyed dated March 26, 2020 for Peter Thacher and Jane Thacher entitled "Wetland Exhibit of Lots 3, 4, 5 & 6, Phase 7, Dutch Island Subdivision, 6th G.M. District, Chatham County, Georgia". The parcel is also known as 119 Meriweather Drive, Dutch Island, Chatham County, Georgia. Based on my site inspection February 14, 2020, this plat and survey generally depict the delineation of the marsh/upland boundary as required by the State of Georgia for jurisdiction under the authority of the Coastal Marshlands Protection Act of 1970. The delineation of the parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year and will normally expire one year from the date of my inspection which occurred February 14, 2020 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local or federal permission or authorization relative to the site. Authorization by the Coastal Marshlands Protection Committee or this Department is required prior to any construction or alteration in the marsh jurisdictional area.

I appreciate you providing us with this information for our records. Please contact me at 912.266.3695 if I can be of further assistance.

Sincerely,

Deb Barreiro

Coastal Permit Coordinator

Deb Barreiro

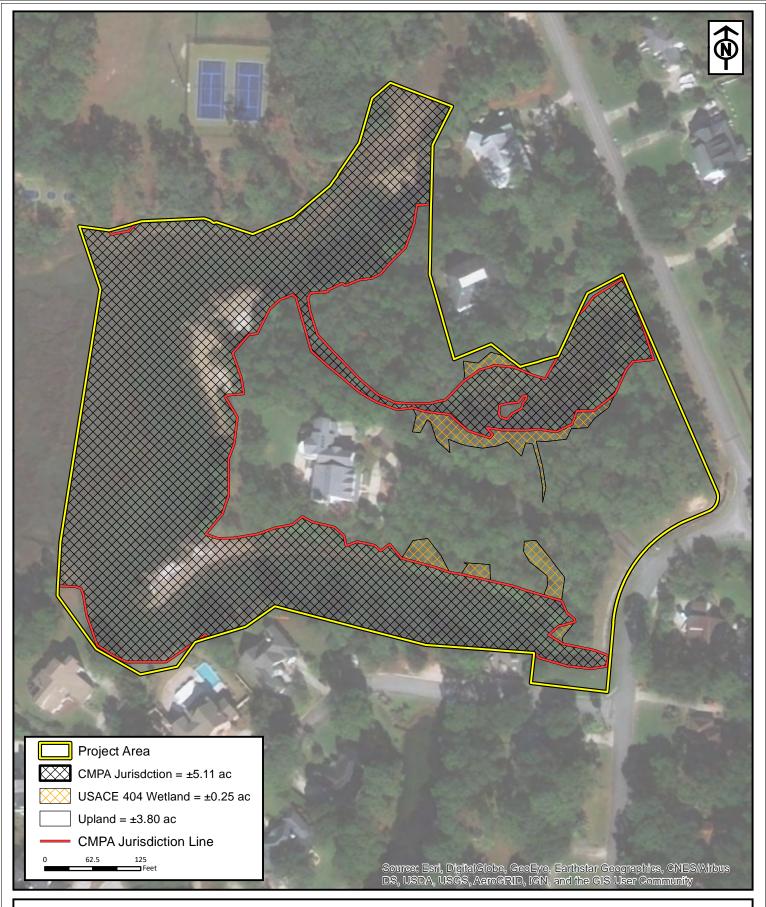
Marsh and Shore Management Program

119 Meriweather Drive CMPA Jurisdiction Page **2** of **2** 

Enclosures: Wetland Exhibit of Lots 3, 4, 5 & 6, Phase 7, Dutch Island Subdivision, 6<sup>th</sup> G.M. District, Chatham County, Georgia; Vaden Thacher Aquatic Resources Exhibit;

cc: Mr. Gregori Anderson Chatham County Building Safety Regulatory Services (BSRS) P.O. Box 8161 Savannah, GA 31412

JDS20200189



RLC Project No.: 18-209 Figure No.: Prepared By: RP Sketch Date: 5/27/2020 Map Scale : 1 inch = 125 feet

### Vaden-Thacher **Dutch Island Tract**

Chatham County, Georgia

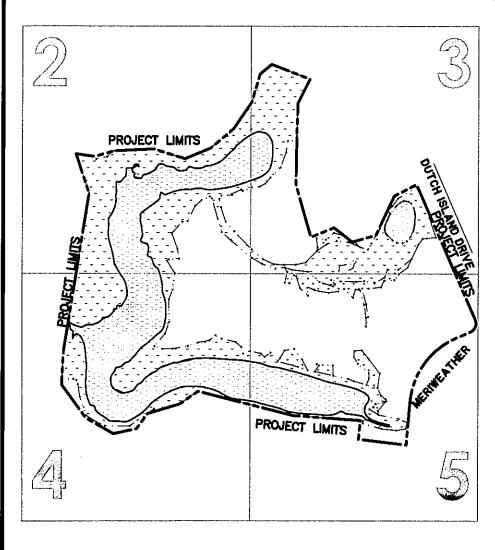
### **Aquatic Resource Exhibit**

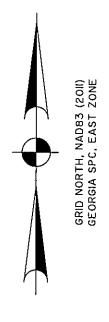
Prepared For: Thomas & Hutton

Deb Barreiro 06/17/2020



Z:\27504\27504.0000\Survey\DWG\27504.0000SW01.dwg - Nov 27, 2018 - 2:42:15 PM





NOTE: SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

### **LEGEND**

MEANDER POINT (NO MONUMENT)



PROJECT LIMIT LINE

FRESHWATER WETLAND

JURISDICTIONAL SALT MARSH

WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

> WRIGHT C. POWERS, JR. GEORGIA REGISTERED LAND SURVEYOR RLS No. 2612 / LSF No. 145

Revise Jurisdictional Solt Marsh Area 3/26/2020 ВΑ No. Revision

WETLAND EXHIBIT

THOMAS & HUTTON Engineering | Surveying | Planning | GIS | Consulting

50 Park of Commerce Way Savannah, GA 31405 • 912.234.5300

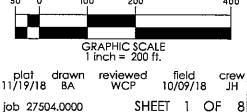
www.thomasandhutton.com

OF LOTS 3, 4, 5 & 6, PHASE 7

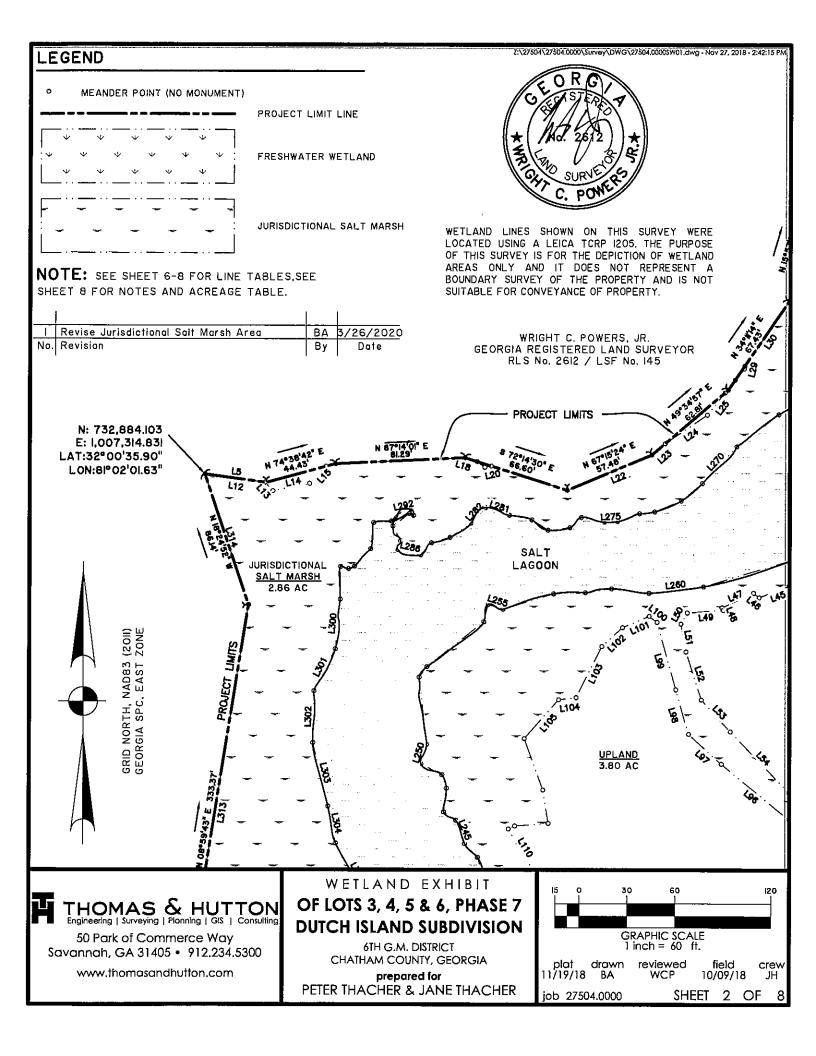
**DUTCH ISLAND SUBDIVISION** 

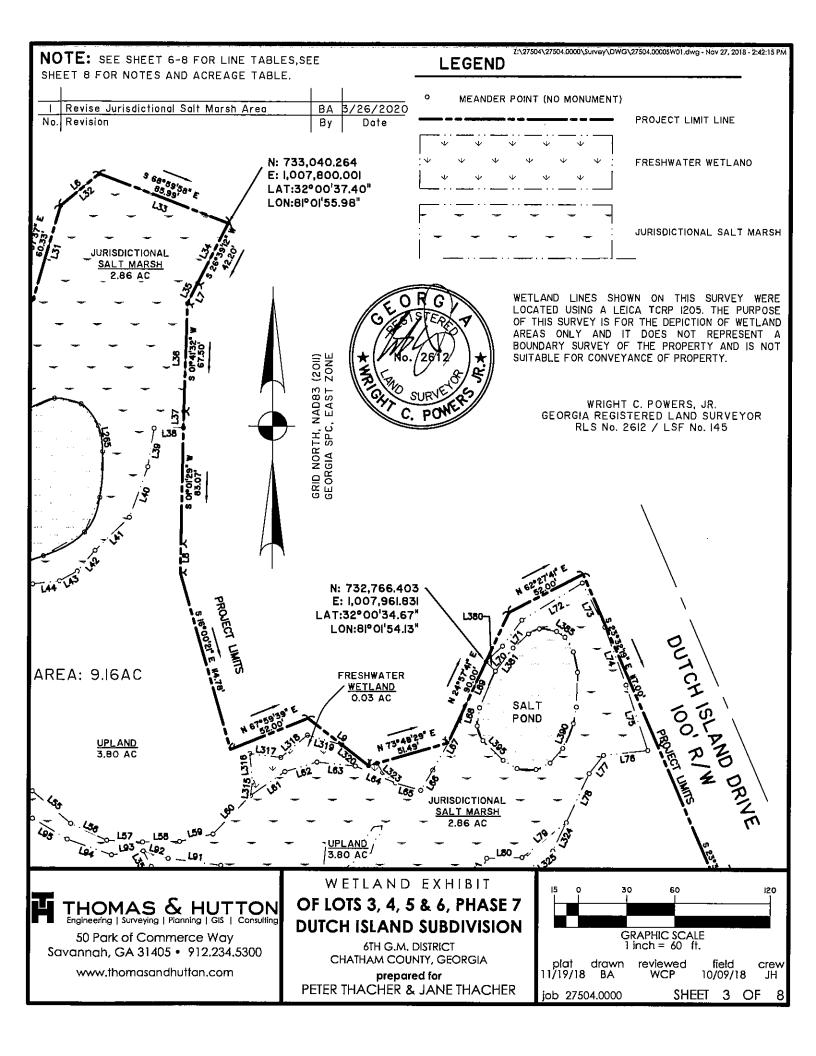
6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

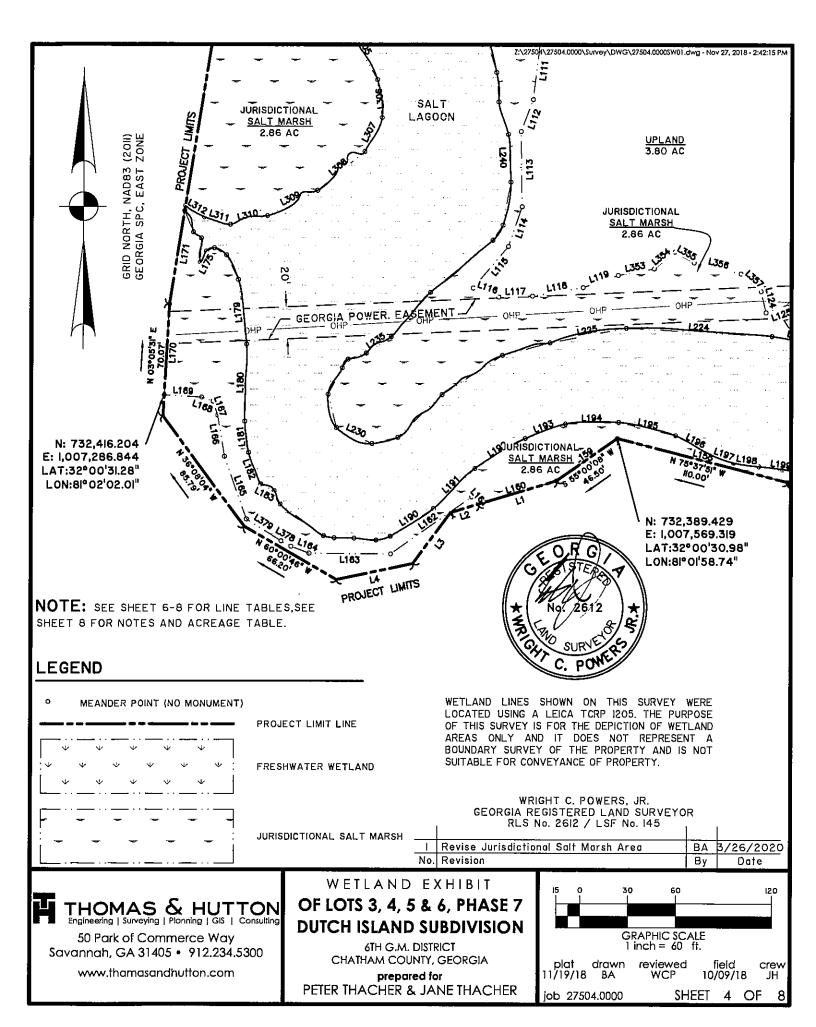
prepared for PETER THACHER & JANE THACHER

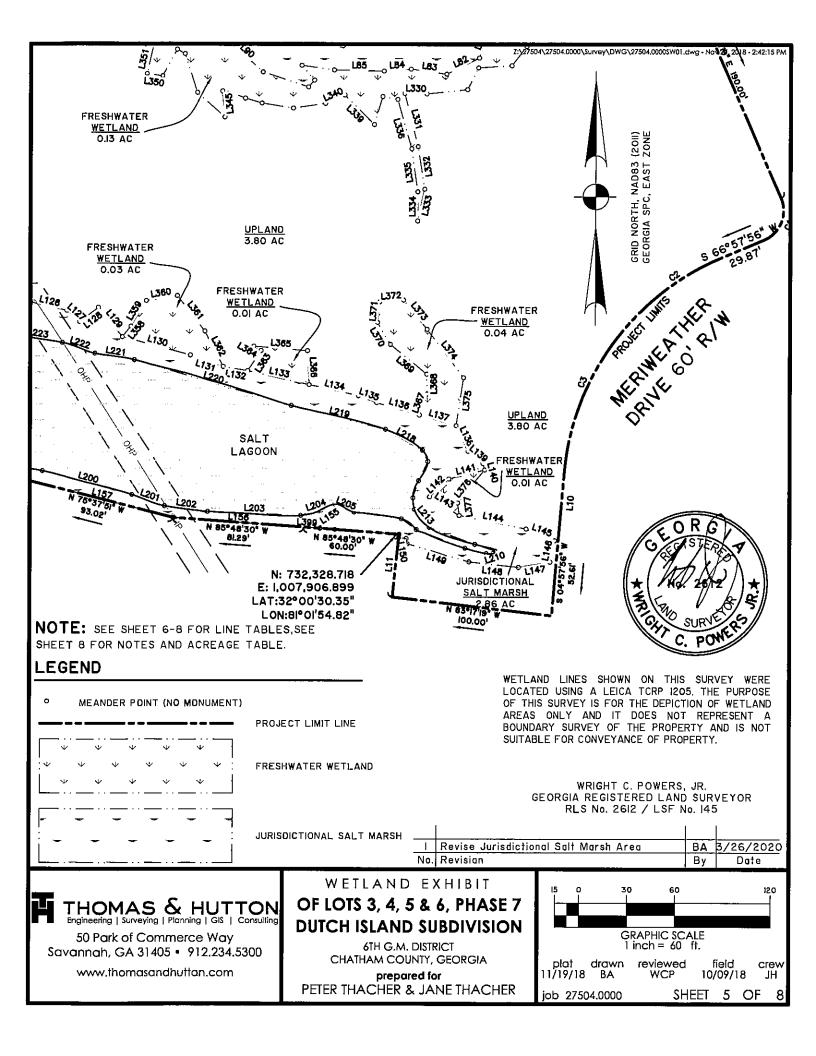


Dote



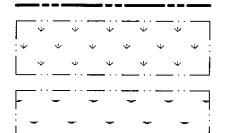






### LEGEND

MEANDER POINT (NO MONUMENT)



PROJECT LIMIT LINE

FRESHWATER WETLAND

JURISDICTIONAL SALT MARSH

**NOTE:** SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

_	Revise Jurisdictional Salt Marsh Area	ВА	3/26/2020
No.	Revision	Ву	Date



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

WRIGHT C. POWERS, JR.
GEORGIA REGISTERED LAND SURVEYOR
RLS No. 2612 / LSF No. 145

LINE TABLE-JURISDICTIONAL SALT MARSH- LINE BEARING LENGTH LIZ S 82°09'10" E 37.58' LI3 S 41°55'57" E 7.22' L14 N 78°26'15" E 23.29' L15 N 43°49'49" E 14.93' L16 N 74°38'42" E 6.00' L17 N 87°14'01" E 81.29' L18 S 72°14'30" E 7.91' L19 S 52°41'36" E 5.94' L20 N 78°10'12" E 4.03' L21 S 72°14'30" E 49.59' L22 N 67°15'24" E 57.48' L23 N 49°34'57" E 10.92' L24 N 55°49'37" E 31.97' L25 N 38°16'35" E 7.74' L26 N 43°4'57" E 2.72' L27 N 34°11'14" E 7.48' L28 N 38°16'35" E 9.06' L29 N 12°20'40" E 1.74' L30 N 34°11'14" E 49.30' L31 N 15°57'37" E 60.33' L31 N 15°57'37" E 60.33' L32 N 49°57'27" E 31.31' L33 S 68°59'58" E 85.99' L34 S 26°39'12" W 42.20' L35 S 26°39'12" W 42.20' L36 S 01°41'32" W 67.50' L39 S 08°31'06" W 18.39' L39 S 08°59'58" W 42.20' L30 S 90'84'32" W 67.50' L40 S 19°37'42" W 33.61' L41 S 45°37'14" W 29.58' L42 S 40°18'25" W 17.00' L43 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 12.72' L44 S 83°13'17" W 12.72' L44 S 83°13'17" W 12.72' L44 S 83°13'17" W 12.72' L45 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 12.57' L49 S 85°44'53" W 29.58' L42 S 40°18'25" W 17.00' L43 S 68°13'17" W 12.72' L44 S 83°3'17" W 12.72' L45 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 21.57' L49 S 85°44'53" W 29.58' L42 S 40°18'25" W 17.00' L51 S 10°29'08" E 17.77' L49 S 85°44'53" W 29.58' L50 S 29°44'48" W 8.00' L51 S 10°29'08" E 17.77' L49 S 85°44'55" E 31.23' L56 S 64°54'24" E 24.82' L57 S 86°55'15" E 20.83' L56 N 86°56'05" E 33.24' L66 N 16°51'44" E 9.59' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L68 S 84°26'05" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 36.39' L70 N 46°52'51" E 36.39' L70 N 46°52'51" W 35.10' L80 S 88°45'				2. (2/004 (2/004.
Li2		LINE TA	BLE-JURISDICTIONA	
Li3		LINE		LENGTH
Li3		LIZ	S 82°08'10" E	
Li4				
LI5				
L16				
Li7				
LiB   S 72°14'30" E   7.91'     Li9   S 52°4 '36" E   5.94'     L20   N 78°10'12" E   4.03'     L21   S 72°14'30" E   4.959'     L22   N 67°15'24" E   57.48'     L23   N 49°34'57" E   10.92'     L24   N 55°49'37" E   31.97'     L25   N 38°16'35" E   17.74'     L26   N 49°34'57" E   2.72'     L27   N 34°11'4" E   7.48'     L28   N 38°16'35" E   9.06'     L29   N 12°20'40" E   1.74'     L30   N 34°11'4" E   49.30'     L31   N 15°57'37" E   60.33'     L32   N 49°57'27" E   31.31'     L33   S 68°59'58" E   85.99'     L34   S 26°39'12" W   42.20'     L35   S 26°39'12" W   42.20'     L36   S 01°41'32" W   67.50'     L37   S 01°0'29" W   10.17'     L38   S 88°31'05" W   24.36'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L42   S 40°16'25" W   17.00'     L43   S 61°11'37" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'18" W   22.51'     L45   S 66°39'59" W   22.51'     L46   N 51°08'46" W   2.57'     L48   S 22°34'33" E   1.77'     L49   S 85°44'53" W   22.51'     L50   S 29°44'48" W   8.00'     L51   S 10°29'08" E   17.79     L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'38" E   52.80'     L55   S 49°44'55" E   24.82'     L57   S 86°55'3" E   20.83'     L66   N 30°44'10" E   24.82'     L57   S 86°55'3" E   20.83'     L61   N 55°13'52" E   20.83'     L62   N 73°15'08" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'0" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 29°23'00" E   35.24'     L70   N 46°52'51" E   30.93'     L70   N 58°13'02" E   44.25'     L71   S 30°36'45" W   27.17'     L65   S 73°45'45" W   27.17'     L61   S 20°06'51" E   30.93'     L70   S 50°20'2				
Li9		LI7	N 87°14'01" E	81.29
Li9		L18	S 72°14'30" E	7.9)
L20			S 52°41'36" F	
L2    S 72°14'30" E	•	-	N 20010/10" C	
L22			N 78-1012 E	
L23				
L24		L22	N 67°15'24" E	57.48
L24		L23	N 49°34'57" E	10.92
L25		L24	N 55°49'37" F	
L26				
L27				
L28				
L29				
L30		L28		
L30		L29	N 12°20'40" E	1.74
L31			N 349114" F	
L32			N 15957'37" C	
L33			N 10 0/ 5/ E	
L34		$\overline{}$	N 49"57"27" E	
L34				85.99
L35		L34		42.20
L36				
L37			ש "פציום ווים	
L38			D 010000001 111	
L39   S 08°59'47" W   24.36'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L42   S 40°18'25" W   17.00'     L43   S 61°11'37" W   12.72'     L44   S 83°13'17" W   16.64'     L45   S 68°39'59" W   19.99'     L46   N 51°08'46" W   4.41'     L47   S 65°08'50" W   21.57'     L48   S 22°34'33" E   1.77'     L49   S 85°44'53" W   22.51'     L50   S 29°44'48" W   6.00'     L51   S 10°29'08" E   17.79     L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L55   S 49°44'55" E   31.23'     L56   S 64°54'53" E   22.08'     L57   S 86°55'13" E   22.08'     L58   N 88°55'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°49'37" E   33.32'     L61   N 55°13'52" E   26.21'     L62   N 73°15'08" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   14.68'     L67   N 29°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   24.25'     L73   S 27°04'57" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 56°13'02" E   44.25'     L71   N 36°26'24" E   30.93'     L72   N 56°13'02" E   44.25'     L73   S 27°04'57" E   30.01'     L74   S 20°06'15" E   39.57'     L75   S 18°29'26" E   43.05'     L76   S 83°36'49" W   27.71'     L77   S 37°54'55" W   33.69'     L79   S 51°29'24" W   35.10'     L83   S 24°52'01" W   33.69'     L79   S 51°29'24" W   35.10'     L83   S 82°00'05" W   22.74'     L83   N 82°00'52" W   22.50'			S 01"01'29" W	
L40 \$ 19°37'42" W 29.58'  L41 \$ 45°37'14" W 29.58'  L42 \$ 40°18'25" W 17.00'  L43 \$ 66"18'37" W 12.72'  L44 \$ 83°13'17" W 16.64'  L45 \$ 66°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 \$ 65°08'50" W 21.57'  L48 \$ 22°34'33" E 1.77'  L49 \$ 85°44'53" W 22.51'  L50 \$ 29°44'48" W 8.00'  L51 \$ 10°29'08" E 17.79'  L52 \$ 17°50'42" E 31.47'  L53 \$ 42°25'04" E 26.90'  L54 \$ 43°49'36" E 52.80'  L55 \$ 49°44'55" E 24.82'  L57 \$ 86°55'13" E 22.08'  L56 \$ 64°54'24" E 24.82'  L57 \$ 86°55'13" E 20.81'  L58 N 86°55'13" E 20.83'  L58 N 86°56'05" E 33.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 26.91'  L60 N 43°48'57" E 26.91'  L60 N 73°15'06" E 20.83'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 \$ 84°12'57" E 24.05'  L64 \$ 67°17'01" E 27.17'  L65 \$ 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°25'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°29'26" E 43.05'  L76 \$ 83°36'45" E 38.57'  L77 \$ \$ 80°29'26" E 43.05'  L78 \$ 20°06'15" E 38.57'  L79 \$ 51°29'24" W 35.10'  L80 \$ 86°45'43" W 22.71'  L81 \$ 20°50'52" W 33.69'  L79 \$ 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'			_ S 88°31'06" W	18.39
L40 \$ 19°37'42" W 29.58'  L41 \$ 45°37'14" W 29.58'  L42 \$ 40°18'25" W 17.00'  L43 \$ 66"18'37" W 12.72'  L44 \$ 83°13'17" W 16.64'  L45 \$ 66°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 \$ 65°08'50" W 21.57'  L48 \$ 22°34'33" E 1.77'  L49 \$ 85°44'53" W 22.51'  L50 \$ 29°44'48" W 8.00'  L51 \$ 10°29'08" E 17.79'  L52 \$ 17°50'42" E 31.47'  L53 \$ 42°25'04" E 26.90'  L54 \$ 43°49'36" E 52.80'  L55 \$ 49°44'55" E 24.82'  L57 \$ 86°55'13" E 22.08'  L56 \$ 64°54'24" E 24.82'  L57 \$ 86°55'13" E 20.81'  L58 N 86°55'13" E 20.83'  L58 N 86°56'05" E 33.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 26.91'  L60 N 43°48'57" E 26.91'  L60 N 73°15'06" E 20.83'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 \$ 84°12'57" E 24.05'  L64 \$ 67°17'01" E 27.17'  L65 \$ 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°25'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°29'26" E 43.05'  L76 \$ 83°36'45" E 38.57'  L77 \$ \$ 80°29'26" E 43.05'  L78 \$ 20°06'15" E 38.57'  L79 \$ 51°29'24" W 35.10'  L80 \$ 86°45'43" W 22.71'  L81 \$ 20°50'52" W 33.69'  L79 \$ 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L39	S 08°59'47" W	
L41			S 19°37'42" W	
L42 S 40°16'25" W 17.00'  L43 S 61°11'37" W 12.72'  L44 S 83°13'17" W 16.64'  L45 S 66°39'59" W 19.99'  L46 N 51°06'46" W 4.41'  L47 S 65°06'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'06" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°56'05" E 23.24'  L59 N 77°35'26" E 26.21'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 S 64°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'53" W 14.49'  L78 S 24°52'01" W 35.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.50'			S 45°37'I4" W	
L43			0.40010105# #	
L44 S 83°13'17" W 16.64'  L45 S 68°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 85°44'53" W 22.51'  L50 S 28°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'38" E 52.80'  L55 S 49°44'55" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°55'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67'17'01" E 27.17'  L65 S 73°49'24" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41' E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 58°13'02" E 35.24'  L73 S 27°04'57" E 30.93'  L70 N 58°13'02" E 30.50'  L72 N 58°13'02" E 42.55'  L73 S 27°04'57" E 30.51'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.71'  L81 S 20°50'52" W 14.49'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.50'			5 40°18 25 W	
L45 S 68°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" € 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" € 17.79'  L52 S 17°50'42" € 31.47'  L53 S 42°25'04" € 26.90'  L54 S 43°49'36" € 52.80'  L55 S 49°44'55" € 31.23'  L56 S 64°54'24" € 24.82'  L57 S 86°55'13" Е 22.08'  L58 N 88°56'05" € 23.24'  L59 N 77°35'26" € 21.27'  L60 N 43°48'57" € 33.32'  L61 N 55°13'52" € 26.21'  L62 N 73°15'08" € 20.83'  L63 S 84°12'57" € 24.05'  L64 S 67°17'01" € 27.17'  L65 S 73°49'24" € 16.39'  L66 N 30°44'10" € 14.68'  L67 N 29°23'00" € 35.24'  L68 N 16°51'44" € 30.93'  L70 N 46°52'51" € 14.00'  L71 N 36°26'24" € 20.30'  L72 N 58°13'02" € 44.25'  L73 S 27°04'57" € 30.93'  L70 N 46°52'51" € 14.00'  L71 N 36°26'24" € 20.30'  L72 N 58°13'02" € 44.25'  L75 S 18°29'26" € 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'59" W 14.49'  L79 S 51°29'24" W 33.69'  L79 S 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'			S 6141/37" W	
L46 N 5 °06'46" W 4.4 ¹  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 68°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 64°12'57" E 34.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 31.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 44.25'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'33" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L44		16.64
L46 N 5 °06'46" W 4.4 ¹  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 68°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 64°12'57" E 34.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 31.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 44.25'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'33" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L45	S 68°39'59" W	19.99
L47				
L48 S 22°34°33" E 1.77'  L49 S 85°44'53" W 22.51'  L50 S 25°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'38" E 52.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°55'05" E 23.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 20.83'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 20.83'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41' E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 56°13'02" E 44.25'  L73 S 27°04'57" E 30.30'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'55" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.71'  L81 S 20°50'52" W 17.97'  L82 S 63°26'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'				21.57
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L50   S 29°44'48" W   B.00'				
L51				
L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'36" E   25.80'     L55   S 49°44'55" E   31.23'     L56   S 64°54'24" E   24.82'     L57   S 86°55'13" E   22.08'     L58   N 88°56'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°48'57" E   20.83'     L61   N 55°13'52" E   26.21'     L62   N 73°15'06" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 28°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   20.30'     L72   N 58°13'02" E   44.25'     L73   S 27°04'57" E   30.93'     L74   S 20°06'15" E   38.57'     L75   S 18°29'26" E   43.05'     L79   S 51°29'24" W   35.60'     L79   S 51°29'24" W   35.60'     L80   S 68°45'43" W   22.17'     L81   S 20°50'52" W   22.50'     L82   S 63°26'00" W   22.74'     L83   N 82°00'52" W   22.50'		L50	S 29°44'48" W	8.00'
L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'36" E   25.80'     L55   S 49°44'55" E   31.23'     L56   S 64°54'24" E   24.82'     L57   S 86°55'13" E   22.08'     L58   N 88°56'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°48'57" E   20.83'     L61   N 55°13'52" E   26.21'     L62   N 73°15'06" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 28°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   20.30'     L72   N 58°13'02" E   44.25'     L73   S 27°04'57" E   30.93'     L74   S 20°06'15" E   38.57'     L75   S 18°29'26" E   43.05'     L79   S 51°29'24" W   35.60'     L79   S 51°29'24" W   35.60'     L80   S 68°45'43" W   22.17'     L81   S 20°50'52" W   22.50'     L82   S 63°26'00" W   22.74'     L83   N 82°00'52" W   22.50'		L5I	S 10°29'08" E	17.79
L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 52.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 86°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°46'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'55" W 14.49'  L79 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 86°45'43" W 22.71'  L81 S 20°06'52" W 22.74'  L83 N 82°00'52" W 22.74'				
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L57 S 86°55'13" E 22.08'  L58 N 86°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°46'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 S 88°35'02" E 43.05'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'48" W 27.71'  L77 S 37°54'55" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°26'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.50'	١	L55		
L57	١	L56	\$ 64°54'24" E	24.82'
L58 N 88°56'05" E 23.24' L59 N 77°35'26" E 21.27' L60 N 43°48'57" E 33.32' L61 N 55°13'52" E 26.21' L62 N 73°15'08" E 20.83' L63 S 84°12'57" E 24.05' L64 S 67°17'01" E 27.17' L65 S 73°49'24" E 16.39' L66 N 30°44'10" E 14.68' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 38.57' L75 S 18°29'26" E 43.05' L76 S 83°36'49" W 27.71' L77 S 37°54'59" W 14.49' L79 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	ı	L57	S 86°55'13" E	
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L74   S 20°06'15" E   38.57'	ļ	LIZ		44.25
L75 \$ 18°29'26" E 43.05' L76 \$ 83°36'49" W 27.71' L77 \$ 37°54'59" W 14.49' L78 \$ 24°52'01" W 33.69' L79 \$ 51°29'24" W 35.10' L80 \$ 88°45'43" W 22.17' L81 \$ 20°50'52" W 17.97' L82 \$ 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	ļ			
L75 \$ 18°29'26" E 43.05' L76 \$ 83°36'49" W 27.71' L77 \$ 37°54'59" W 14.49' L78 \$ 24°52'01" W 33.69' L79 \$ 51°29'24" W 35.10' L80 \$ 88°45'43" W 22.17' L81 \$ 20°50'52" W 17.97' L82 \$ 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	1	L74	5 20°06'15" E	38.57'
L76         \$ 83°36'49" W         27.71'           L77         \$ 37°54'55" W         14.49'           L78         \$ 24°52'01" W         33.69'           L79         \$ 51°29'24" W         35.10'           L80         \$ 68°45'43" W         22.17'           L81         \$ 20°50'52" W         17.97'           L82         \$ 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ı	L75	S 18°29'26" E	
L77 \$ 37°54′59" W   I4.49'   L78 \$ 24°52′0" W   33.69'   L79 \$ 51°29′24" W   35.10'   L80 \$ 88°45′43" W   22.17'   L81 \$ 20°50′52" W   17.97'   L82 \$ 63°28′00" W   22.74'   L83 N 82°00′52" W   22.50'	ŀ			
L78   \$ 24°52'0 " W   33.69' L79   \$ 51°29'24" W   35.10' L80   \$ 68°45'43" W   22.17' L81   \$ 20°50'52" W   17.97' L82   \$ 63°28'00" W   22.74' L83   N 82°00'52" W   22.50'	ŀ			
L79   \$5 °29'24" W   35,10'	ŀ			
L60         S 88°45'43" W         22.17'           L81         S 20°50'52" W         17.97'           L82         S 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ļ	L/8		
L60         S 88°45'43" W         22.17'           L81         S 20°50'52" W         17.97'           L82         S 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	1	L79	S 51°29'24" W	
L81         \$ 20°50'52" W         17.97'           L82         \$ 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ſ	LBO	S 68°45'43" W	22.171
L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	t	-		17.971
L83 N 82°00'52" W 22.50'	ŀ			
	ł			
L84   \$ 85°49'20" W   16.98'	ŀ			
	l	L84	5 85°49'20" W	16,98
	_			

ey\DWG\27504.0000SW01.dwg - Nov 27, 2018 - 2:42:15 P/				
LINE TA	BLE-JURISDICTIONA	L SALT MARSH		
LINE	BEARING	LENGTH		
L85	N 88°46'58" W	31.20'		
L86	N 82°08'00" W	20.49		
	\$ 40°36'51" E			
L87	5 40° 36 31 E	12.11		
L88	5 40°54'51" W	5.62'		
L89	N 7(°50'59" W	29.97'		
L90	N 48°37'33" W	31.85		
L9I	N 82°36'44" W	33.16'		
L92		16.31		
L93	S 83°15'28" W	19.67'		
L94	N 70°33'25" W	29.28'		
L,95	N 59°00'07" W	25.08'		
L96	N 50°24'51" W	54.82		
L97	N 47°53'15" W	27.78'		
L98				
	N 16°21'54" W	28.89		
L99	N 15°40'13" W	43.82'		
LIOO	N 52°02'37" W	6.171		
LIOI	S 66°55'06" W	18,191		
LIO2	S 47°39'38" W	17.47'		
L103	S 26°43'57" W			
		35,90'		
L104	S 83°15'02" W	10.991		
L105	S 41º17'05" ₩	32.27		
LI06	S 19°52'45" E	34.161		
L107	S 09°06'21" E	21.06'		
LIOB	S 85°27'16" W	20.89'		
L109	S 64°31'10" W	4.38'		
LIIO	\$ 31°07'00" E	31.13		
LIII	S 06°53'02" W	34.72		
LII2	\$ 20°28'18" W	21.38		
LII3	S 00°54'II* E	47.00'		
	S 18°44'36" W			
LII4	3 18 44 36 W	26.28'		
L(I5	S 39°55'43" W	33,89'		
LII6	S 70°27'50" E	16.91		
LII7	N 88°17'55" E	20.90'		
LII8	N 80°18'40" E	32.10'		
LII9	\$ 70°37'33" W			
		23.25		
LIZO	OMITTED			
LI2I	OMITTED			
LI22	OMITTED			
LI23	OMITTED			
LI24	S 13°20'21" €	13,57		
_				
L125	N 69°46'33" E	15.71		
LI26	S 76°40'32" E	22.92'		
LI27	\$ 48°34'58" E	10.731		
L128	N 52°17'05" E	14.65		
LI29	5 39°19'03" E	23.63'		
		20.00		
LI30	S 75°05'15" E	44.12'		
LI31	S 70°33'14" E	21.60'		
LI32	S 80°16'48" E	15,22'		
LI33	S 77°17'33" E	39.39		
LI34	S 77°30'15" E	31.66'		
	S 69°03'12" E	10.00		
LI35		12.23'		
LI36	\$ 73°52'06" E	27.86		
L137	S 73°58'43" E	23.96'		
L138	S 24°51'53" E	17.60'		
L139	S 50°22'49" E	12.21		
L140	S 14°39'25" E	4.101		
1-	\$ 75°52'40" W			
L141		23.03'		
L142	\$ 46°44'42" W	16.50¹		
L143	5 58°06'48" E	21.89		
LI44	S 78°32'37" E	42.39'		
LI45		10 20' 1		
L145	S 67°32'28" E	19.29		
LI46	S 67°32'28" E S 12°09'21" W	13.72		
L146 L147	S 67°32'26" E S 12°09'21" W S 80°33'18" W	13.72° 19.89°		
LI46 LI47 LI48	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W	13.72° 19.89° 30.90°		
L146 L147	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W	13.72° 19.89°		
L146 L147 L148 L149	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W	13.72 <sup>t</sup> 19.89 <sup>t</sup> 30.90 <sup>t</sup> 40.29 <sup>t</sup>		
LI46 LI47 LI48 LI49 LI50	S 67°32'26" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W	13.72 <sup>1</sup> 19.89 <sup>1</sup> 30.90 <sup>1</sup> 40.29 <sup>1</sup> 3.33 <sup>1</sup>		
L146 L147 L148 L149 L150 L151	S 67°32'26" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 82°48'55" W	13.72° 19.89' 30.90' 40.29' 3.33' 4.68'		
L146 L147 L148 L149 L150 L151 L152	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E	13.72' 19.89' 30.90' 40.29' 3.33' 4.68'		
L146 L147 L148 L149 L150 L151	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 63°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.II' 40.38'		
L146 L147 L148 L149 L150 L151 L152	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E	13.72' 19.89' 30.90' 40.29' 3.33' 4.68'		
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 63°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W	13.72 <sup>1</sup> 19.89 <sup>1</sup> 30.90 <sup>1</sup> 40.29 <sup>1</sup> 3.33 <sup>1</sup> 4.68 <sup>1</sup> 2.11 <sup>1</sup> 40.38 <sup>1</sup>		
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55	S 67°32'26" E S 12°09'21" W S 60°33'16" W N 83°41'56" W N 10°33'33" W N 10°33'33" W N 62°46'55" W N 66°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W	13.72'   19.89'   30.90'   40.29'   3.33'   4.68'   2.11'   40.38'   8.80'   0.78'		
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W N 85°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.11' 40.38' 8.80' 0.78' 10.21'		
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399 LI56	\$ 67°32'26" E \$ 12°09'21" W \$ 80°33'18" W \$ 80°33'18" W \$ 10°33'33" W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33' W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.II' 40.38' 8.80' 0.78' 10.21' 81.29'		
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W N 85°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.11' 40.38' 8.80' 0.78' 10.21'		

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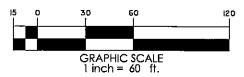
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WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 DUTCH ISLAND SUBDIVISION

6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER



plat drawn reviewed field 11/19/18 BA WCP 10/D9/18

job 27504.0000

CP 10/D9/18 JH SHEET 6 OF 8

crew

LINE TABLE-JURISDICTIONAL SALT MARSH

### **LEGEND**

MEANDER POINT (NO MONUMENT)

PROJECT LIMIT LINE

FRESHWATER WETLAND

JURISDICTIONAL SALT MARSH

NOTE: SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

_	Revise Jurisdictional Salt Marsh Area	BA	3/26/2020
No.	Revision	Ву	Date

LINE	BEARING	LENGTH
LI58	N 75°37'51" W	110.00'
LI59 LI60	S 55°00'08" W S 73°08'07" W	46.50' 50.48'
F161	N 43°20'50" W	6.20'
L162	S 54°45'40" W	61.97
L163	N 89°37'40" W	51.15
LI64	N 69°00'35" W	12.00
L378	N 61°28'17" W N 57°35'15" W	7.12'
L379 LI65	N 18°57'19" W	25.54' 4l.49'
L166	N 09°24'30" W	26.11
LI67	N 18°54'56" W	9.24'
LIGB	N 69°38'52" W	7.45
L169	N 86°49'45" W	23.35
L170	N 03°05'31" E	56.98'
L171	N 08°59'43" E S 22°31'24" E	59.08' (4.39'
L173	S 52°34'19" E	6.17
LI74	S 02°14'11" W	15.00'
LI75	N 28°25'53" E	7.82'
LI76	N 68°08'40" E	5,32
L177	S 59°28'37" E	8.72'
L178	\$ 25°44'08" E \$ 07°13'08" E	16.98' 40.77'
L180	S 01° 05'33" W	48.30
LIBI	S 06°48'59" E	19.70
LIB2	S 21°07'14" E	21.22
LIB3	S 64°15'36" E	9.38'
LIB4	\$ 23°49'II" E	9.13'
LI85	\$ 53°45'52" E \$ 78°51'38" E	33.65' 6.68'
LI87	S 89°09'18" E	12.52
LI88	S 85°08'49" E	13.87
LI89	N 74°55'12" E	9.24'
LI90	N 57°16'29" E	32.23'
LI9I LI92	N 45°39'34" E N 58°53'17" E	35.98'
LI93	N 69°53'04" E	36.39' 26.66'
L194	N 88°13'45" E	33.35
LI95	S 76°58'II" E	36.59
L196	S 6 °55'02" E	25.77'
LI97	S 70°29'00" E	14.53
L198 L199	S 81°47'12" E S 81°54'03" E	15.86 <sup>1</sup> 26.80 <sup>1</sup>
L200	S 75°01'20" E	57.59'
L201	\$ 71°10'43" E	21,59'
L202	S 82°36'48" E	27.23
L203	S 87°33'00" E	57.74
L204 L205	N 71º 43'07" E S 67º 42'46" E	22.58° 12.88°
L206	S 82°00'37" E	30.07
L207	\$ 54°06'44" E	11.52'
L208	\$ 69°00'41" E	32.53
L209	S 75°59'49" E	13.65
L210	N 72°46'15" E N 72°15'36" W	5.76'
L2II L2I2	N 69°38'47" W	13.22 <sup>1</sup> 30.33 <sup>1</sup>
L213	N 39°21'02" W	14.65
L214	N 07°53'35" W	7.34
L215	N 18°09'46" E	11.22
L216	N 25°38'12" E	13.34
L217 L218	N 25°36'40" W	7.79' 26.66'
1219	N 75°53'24" W	60.88
L220	N 73°44'24" W	101.91
L22I	N 80°51'21" W	24.90'
L222	N 71°41'43" W	21.32
L223	N 80°27'14" W	30.96
L224 L225	N 86°55'08" W S 79°02'39" W	91.32' 48.60'
L226	S 75°02'39 W	30.62
L227	S 56°38'05" W	44.83
L228	S 45°50'33" W	38.48

LINE TABLE-JURISDICTIONAL SALT MARSH

	BLE-JURISDICTIONA	
LINE	BEARING	LENGTH
L229	S 76°34'38" W	16.70
L230	N 65°56'26" W	24.49
L231	N 14°07'03" W	21.47
L232	N 28°03'52" E	18.85
L233	N 33°26'17" E	6.35
L234	N 71°05'48" E	12.20
L235	N 56°55'09" E	¦8.59¹
L236	N 41°17'08" E	37.0
L237	N 49°56'30" E	50.62
L238	N 33°27'37" E	11.41
L239	N 09°59'58" E	27.35
L240	N 03°02'09" W	29.86
L241	N 16°20'53" W	21,12'
L242	N 04°23'30" W	<u>1</u> 8.44
L243	N 17°01'32" W	27.82
L244	N 42°55'55" W	11.70
L245	N 20°39'06" W	15.59
L246	N 55°51'44" W	9.19'
L247	N 06°31'11" E	[4.88]
L248	N 18°25'10" W	8,82'
L249	N 62°37'00" W	14.83
L250	N 16°17'41" E	12.52
L251	N 06°17'45" W	42.34
L252	N 36°26'26" E	8.07
L253	N 51°24'40" E	45,(6)
L254	N 13°15'33" E	11,131
L255	\$ 72°35'16" E	9.69'
L256	N 72°58'01" E	32.85
L257	N 87°48'19" E	19.83
L258	N 81°35'43" E	16.71
L259	S 83°23'58" E	23.61
L260		
		34.48
L261	N 73°07'42" E	62.56
L262	N 59°48'46" E	29.41
L263	N 23°14'20" E	23.67
L264	N 03°25'32" E	28.75
L265	N 09°46'55" W	16.41
L266	N 38°28'04" W	17.40
L267	N 77°55'36" W	16.74
L268	S 65°56'30" W	21.52
L269	S 52°16'58" W	32.99'
L270	S 43°02'16" W	31.49
L271	S 50°16'55" W	17.20
L272	S 67°33'43" W	8.06
L273	\$ 82°57'08" W	9.50'
L274	\$ 70°27'00" W	14.70
		14.70
L275	S 87°15'04" W	6.17
L276	N 78°46'01" W	14.81
L277	S 48°19'14" W	9.60'
L278	S 83°23'24" W	13.74
L279	N 57°12'31" W	11.94
L280	N 78°24'09" W	
		14.16'
L261	N 72°22'46" W	15.57'
L282	S 42°50'16" W	13.19
L283	S 55°16'10" W	15.81
L284	S 73°36'49" W	12.08'
1,285	S 41°46'52" W	
		10.08
L286	N 77°12'01' W	14.69
L287	N 16°17'25" E	5.74'
L288	N 27°18'36" W	10.43'
L289	N 53°09'45" E	12.96'
	S 65"28'06" E	12.70
L290		2,87'
L291	N 23°50'47" W	4.33'
L292	\$ 77°13'15" W	7.68
L293	S 39°46'35" W	7.45'
L294	S 84°47'39" W	
		11.20'
L295	S 06"19'53" W	16.46
L296	\$ 43°00'32" W	14.91
L297	S 66°45'37" W	4.08'
L298	N 74°48'01" W	5.11
L299	S 00°38'00" W	20.40
L300	S 05°29'53" W	31.19
L30J	\$ 26°36'06" W	29.43'



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

> WRIGHT C. POWERS, JR. GEORGIA REGISTERED LAND SURVEYOR RLS No. 2612 / LSF No. 145

> > WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 **DUTCH ISLAND SUBDIVISION**

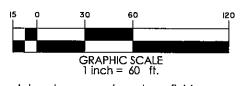
6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER

THOMAS & HUTTON Engineering | Surveying | Planning | GIS | Consulting

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plat drawn reviewed 11/19/18 BA WCP field crew 10/09/18 JΗ job 27504.0000 SHEET 7 OF

PROJECT LIMIT LINE



FRESHWATER WETLAND



JURISDICTIONAL SALT MARSH

9.16 AC.

### ACREAGE TABLE

JURISDICTIONAL SALT MARSH	2.86 AC
FRESH WATER WETLANDS	0.25 AC
SALT MARSH LAGOON & POND	2.25 AC
UPLAND	3.80 AC

NOTES

TOTAL PROJECT LIMITS

- WETLANDS DELINEATED BY RLC CONSULTANTS, OCTOBER 2018.
- FRESHWATER WETLAND/JURISDICTIONAL SALT MARSH LINE TAGS ARE SEQUENTIAL. SOME HAVE BEEN REMOVED FOR CLARITY.

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LINE TA	BLE-JURISDICTIONA	L SALT MARSH		LINE T	ABLE - FRESHWAT	R WETLANDS
LINE	BEARING	LENGTH		LINE	BEARING	LENGTH
L302	S 01°17'06" W	32.29 <sup>1</sup>		L315	N 08°25'20" E	8.37
L303	S 13°26'27" E	40.70		L316	N 05°15'58" W	17.93
L304	S II°50'55" E	23.56'		L317	S 83°06'58" E	19.53
L305	S 29°27'38" E	45.88'		L318	N 49°51'22" E	21.62'
L306	S 07°13'21" E	23.89'		L319	S 74°28'18" E	22.31
L307	S 26°56'17" W	23.82'		L320	S 52°00'21" E	21.17
L308	S 50°28'24" W	38.35'		L321	N 73°48'29" E	5.55'
L309	S 63°06'II" W	35,00'		L322	\$ 31°00'32" E	6.70'
L310	S 76°34'45" W	23,55		L323	\$ 50°51'50" E	10.31
L3II	N 73°49'53" W	16.80'		L324	S 25°14'56" W	19.56
L3I2	N 59°42'39" W	13.53		L325	S 52°09'24" W	23.18'
L313	N 08°59'43" E	271.23		L326	S 37°21'38" W	15.14'
L314	N 18°24'52" W	141.38		L327	S 86°15'10" W	20.78

·	LINE TABLE - SALT POND			
LINE	BEARING	LENGTH		
L380	S 43°52'27" E	8.39'		
L381	N 37°26'42" E	18.29		
L382	N 47°10'42" E	12.95		
L383	N 64°38'44" E	7.41		
L384	S 81°30'28" E	10.91		
L385	S 55°48'16" E	6.39		
L386	S 29°33'16" E	10.56		
L387	S IIº32'42" E	13.06		
L388	S 01°45'42" W	21.66'		
L389	S 10°10'20" W	10.51		
L390	S 22°50'09" W	16,771		
L391	\$ 40°53'06" W	12.04		
L392	S 64°51'16" W	9.75'		
L393	N 86°55'01" W	11.82		
L394	พ "01'05°65 ห	10.08		
L395	N_45°56'23" W	17.59		
L396	N 22°02'31" W	9.81		
L397	N 07°16'27" E	(1.50)		
L398	N 23°14'33" E	24.95		

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LINE T	ABLE - FRESHWAT	ER WETLANDS
LINE	BEARING	LENGTH
L315	N 08°25'20" E	8.37
L316	N 05°15'58" W	17.93
L317	S 83°06'58" E	19.53
L318	N 49°51'22" E	21.62
L319	S 74°28'18" E	22.31
L320	S 52°00'21" E	21.17
L321	N 73°48'29" E	5.55'
[ L322	S 31º00'32" E	6.70
L323	\$ 50°51'50" E	10.31
L324	S 25°14'56" W	19.56
L325	S 52°09'24" W	23.18
	S 37°21'38" W	
L326		15.14
L327	S 86°15'10" W	20.78
L328	S 26°16'13" W	15,22
L329	S 83°57'05" W	25,63'
L330	N 89°06'25" W	13.76
L33I	S 14°16'45" E	
		34.19
L332	S 08°53'54" E	26.94
L333	S 12°27'46" W	20.33
L334	N 00°12'15" E	18.26
L335	N 08°11'03" W	27.14
L336	N 15°56'16" W	32.06
L337	N 79°29'23" W	9.57'
		3.31
L338	S 16°44'21" W	18.27
L339	N 45°08'07" W	26.(3
L340	S 66°26'25" W	13.27'
L341	S 81°53'31" W	20.32
L342	N 80°59'09" W	19.80
L343	N 74°II'04" W	10.71
L344	N 72°14'10" W	
	0.0500455#.5	14.78'
L345	S 05°04'55" E	16.291
L346	N 47°58'08" W	22.92'
L347	N 17°57'59" W	25.50'
L348	N 61°46'37" W	5.57'
L349	S 28°36'01" W	18.85
L350	N 82°05'37" W	9.99'
L351	N 13°07'36" E	22.12'
L352		10.90
L353	N 79°41'55" E	22.94'
L354	N 50°48'17" E	16.59'
L355	S 61°12'33" E	13.98'
L356	S 76°49'31" E	30.08
L357	S 48°40'53" E	16.60'
L358	N 38°05'10" E	8.40'
	N 30°48'19" E	
L359		18.75
L360	N 80°58'26" E	19.78
L36I	S 37°55'41" E	28.07
L362	S 27°13'28" E	24.99'
L363	N 33°15'41" E	15.14
L364	N 59°12'45" W	5,28'
L365	S 85°13'41" E	33,66'
_	S 02°59'37" E	
L366	N 20°00'04" E	21.25'
L367		13.97
L368	N 00°49'03" W	12.48
L369	N 50°52'36" W	29.46
L370	N 30°41'15" W	15.97 <sup>'"</sup>
L371	N 05°53'45" E	12.96
L372	N 85°31'08" E	14.98
L373	\$ 39°03'17" E	23.51
-	S 37°05'38" E	
L374		37.96'
L375	S 08°35'37" W	30.41
L376	S 39°01'21" W	26.65
L377	S 07°24'52" E	7.85



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

> WRIGHT C. POWERS, JR. GEORGIA REGISTERED LAND SURVEYOR RLS No. 2612 / LSF No. 145

L LR	LINE TABLE - PROJECT LIMITS		
LINE	BEARING	LENGTH	
LI .	\$ 73°08'07" W	50.64	
L2	S 73°08'07" W	18.06	
L3	S 36°18'03" W	39.66'	
L4	S 78°05'52" W	48.99'	
1.5	S 82°08'10" E	38.51	
L6	N 49°57'27" E	31.31	
L7	S 26°39'12" W	14.00'	
L8	S 01°01'29" W	18.00	
L9	S 52°00'21" E	48.00	
LIO	S 04°57'56" W	38.00'	
LII	N 06°03'53" E	39.53'	

CURVE TABLE - PROJECT LIMITS					
CURVE	RADIUS	LENGTH	CH BEARING	CH LENGTH	DELTA
CI	20.00'	31.51	S 21°35'27" W	28.35	90°(6'58"
C2	160.22'	60.10	S 56°15'15" W	59.75	21°29'32"
C3	160.221	113.38	\$ 25°14'10" W	111.03	40°32'38"

No Devision		Jurisdictional Salt Marsh Area E	ВА	3/26/2020
No.  Revision   By   Date	No.	n 8	Ву	Date

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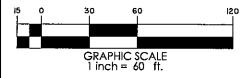
www.thomasandhuttan.com

WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 **DUTCH ISLAND SUBDIVISION**

6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER



plat drawn reviewed 11/19/18 BA WCP

field crew 10/09/18 JΗ

iob 27504.0000

SHEET 8 OF

8





# DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT 100 W. OGLETHORPE AVENUE SAVANNAH, GEORGIA 31401-3604

April 4, 2020

Regulatory Division SAS-2019-00900

Ms. Jane Thacher 119 Meriweather Drive Savannah, Georgia 31406

Dear Ms. Thacher:

I refer to a letter received December 19, 2019, submitted on your behalf by Russell Parr of Resource and Land Consultants, requesting a delineation of aquatic resources for your 9.16-acre site located at 119 Meriweather Drive in the City of Savannah, Chatham County, Georgia (Latitude 32.0088, Longitude -81.0315). This project has been assigned number SAS-2019-00900 and it is important that you refer to this number in all communication concerning this matter.

The enclosed survey entitled "Wetland Exhibit of Lots 3, 4, 5 & 6, Phase 7 Dutch Island Subdivision", dated "March 26, 2020", and signed by Registered Land Surveyor Wright C. Powers, Jr., identifies the delineation limits of all aquatic resources within the project area. Additionally, the aquatic resources delineated within the project area are displayed on the enclosed exhibit entitled, "Aquatic Resource Exhibit" and dated March 27 2020. The wetlands were delineated in accordance with criteria contained in the 1987 "Corps of Engineers Wetland Delineation Manual," as amended by the most recent regional supplements to the manual. This delineation will remain valid for a period of 5-years unless new information warrants revision prior to that date.

If you intend to sell property that is part of a project that requires Department of the Army Authorization, it may be subject to the Interstate Land Sales Full Disclosure Act. The Property Report required by Housing and Urban Development Regulation must state whether, or not a permit for the development has been applied for, issued or denied by the U.S. Army Corps of Engineers (Part 320.3(h) of Title 33 of the Code of Federal Regulations).

This communication does not relieve you of any obligation or responsibility for complying with the provisions of any other laws or regulations of other federal, state or local authorities. It does not affect your liability for any damages or claims that may arise as a result of the work. It does not convey any property rights, either in real estate or material, or any exclusive privileges. It also does not affect your liability for any interference with existing or proposed federal projects. If the information you have

submitted and on which the Corps bases its determination is later found to be in error, this determination may be subject to modification, suspension, or revocation.

Thank you in advance for completing our on-line Customer Survey Form located at <a href="http://corpsmapu.usace.army.mil/cm\_apex/f?p=regulatory\_survey">http://corpsmapu.usace.army.mil/cm\_apex/f?p=regulatory\_survey</a>. We value your comments and appreciate your taking the time to complete a survey each time you have interaction with our office.

If you have any questions, please contact Mr. Ross Sullivan, Project Manager, Coastal Branch, via telephone at 912-652-5618 or email at roscoe.l.sullivan@usace.army.mil.

Sincerely,

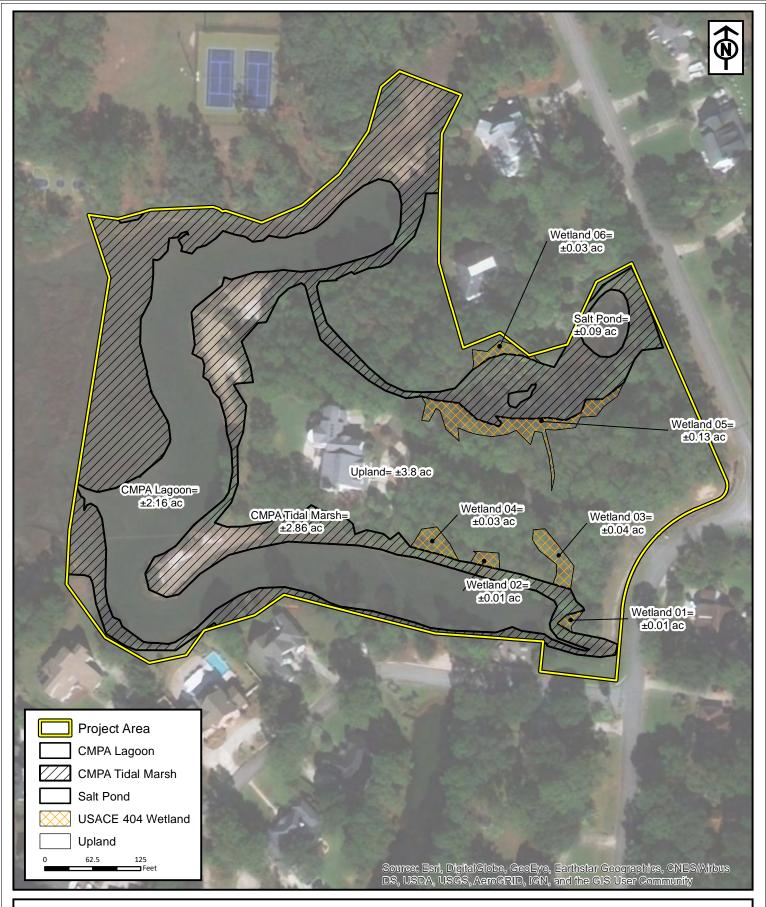
Roscoe L. Sullivan, III

Project Manager, Coastal Branch

Copy Furnished:

Russell Parr, Resource and Land Consultants

**Enclosures** 



 RLC Project No.:
 18-209

 Figure No.:
 1

 Prepared By:
 RP

 Sketch Date:
 3/27/2020

 Map Scale:
 1 inch = 125 feet

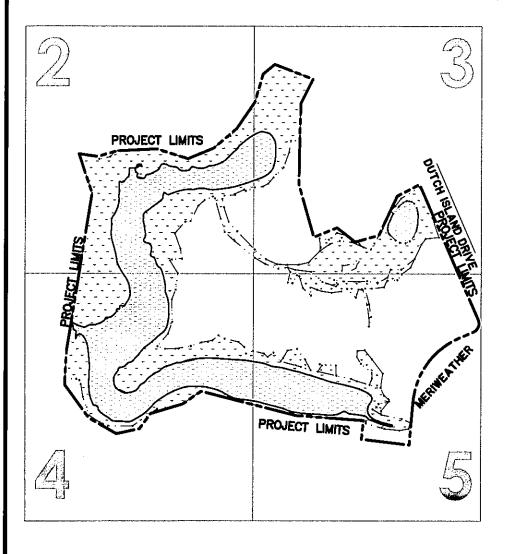
### Vaden-Thacher Dutch Island Tract

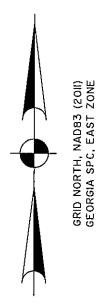
Chatham County, Georgia

## Aquatic Resource Exhibit

Prepared For: Thomas & Hutton





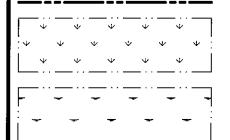




NOTE: SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

### **LEGEND**

MEANDER POINT (NO MONUMENT)



PROJECT LIMIT LINE

FRESHWATER WETLAND

WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

WRIGHT C. POWERS, JR.
GEORGIA REGISTERED LAND SURVEYOR
RLS No. 2612 / LSF No. 145

JURISDICTIONAL SALT MARSH

	Revise Jurisdictional Solt Marsh Area	ВА	3/26/2020
N٥.	Revision	Ву	Dote

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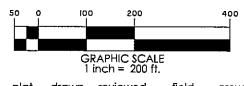
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### OF LOTS 3, 4, 5 & 6, PHASE 7 DUTCH ISLAND SUBDIVISION

WETLAND EXHIBIT

6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER

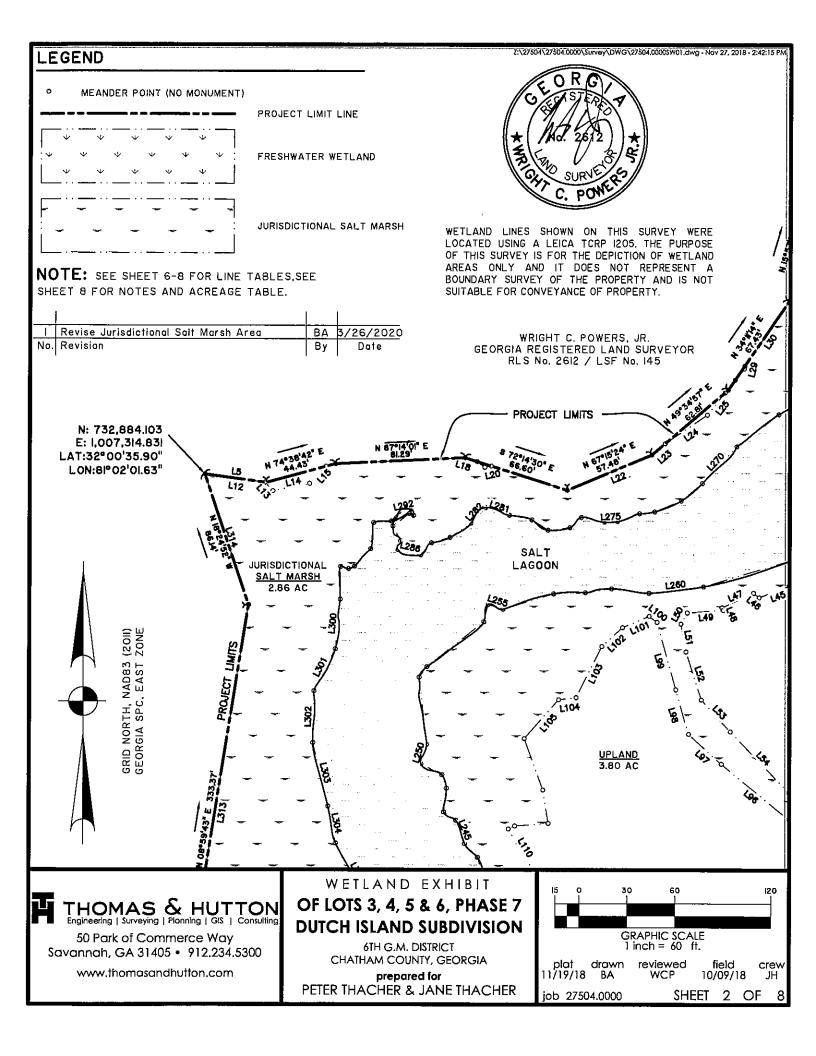


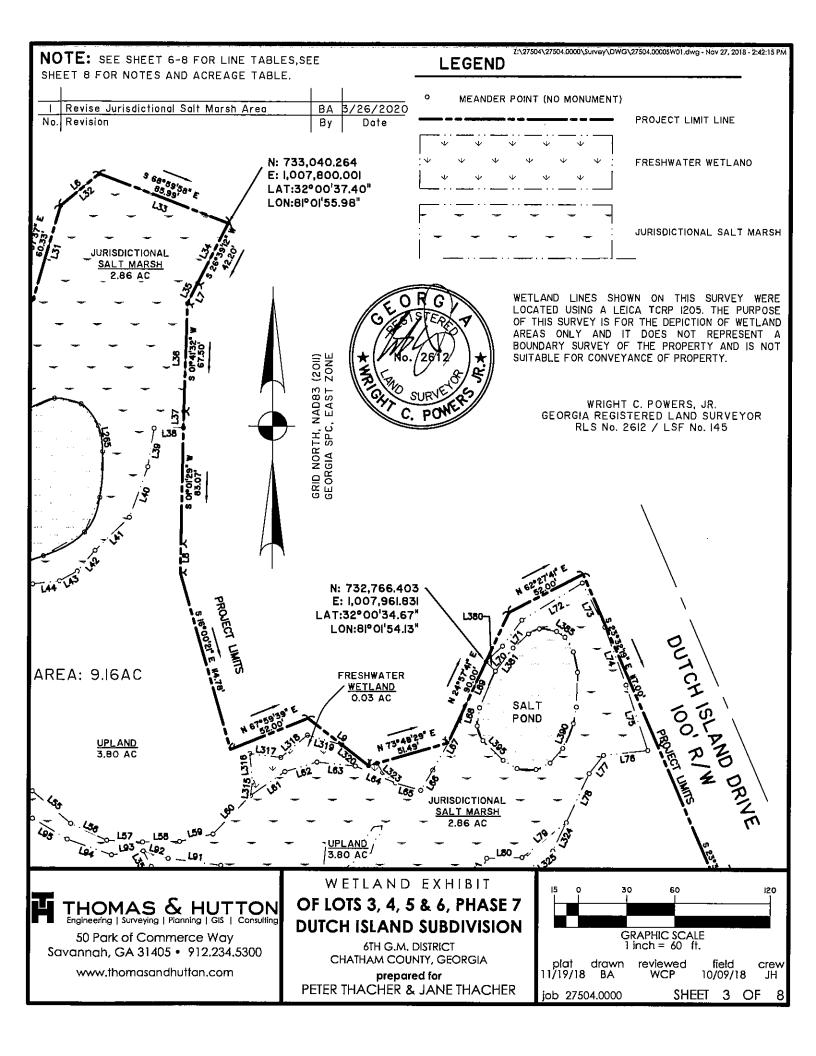
plat drawn reviewed 11/19/18 BA WCP

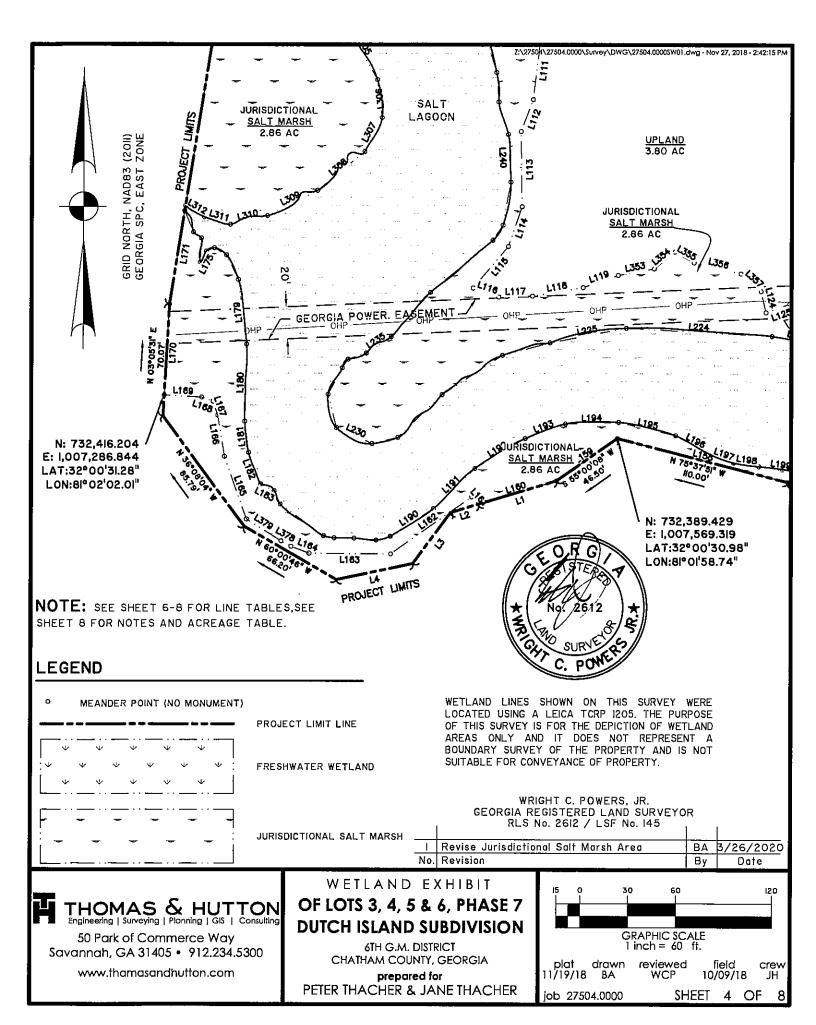
field crew 10/09/18 JH

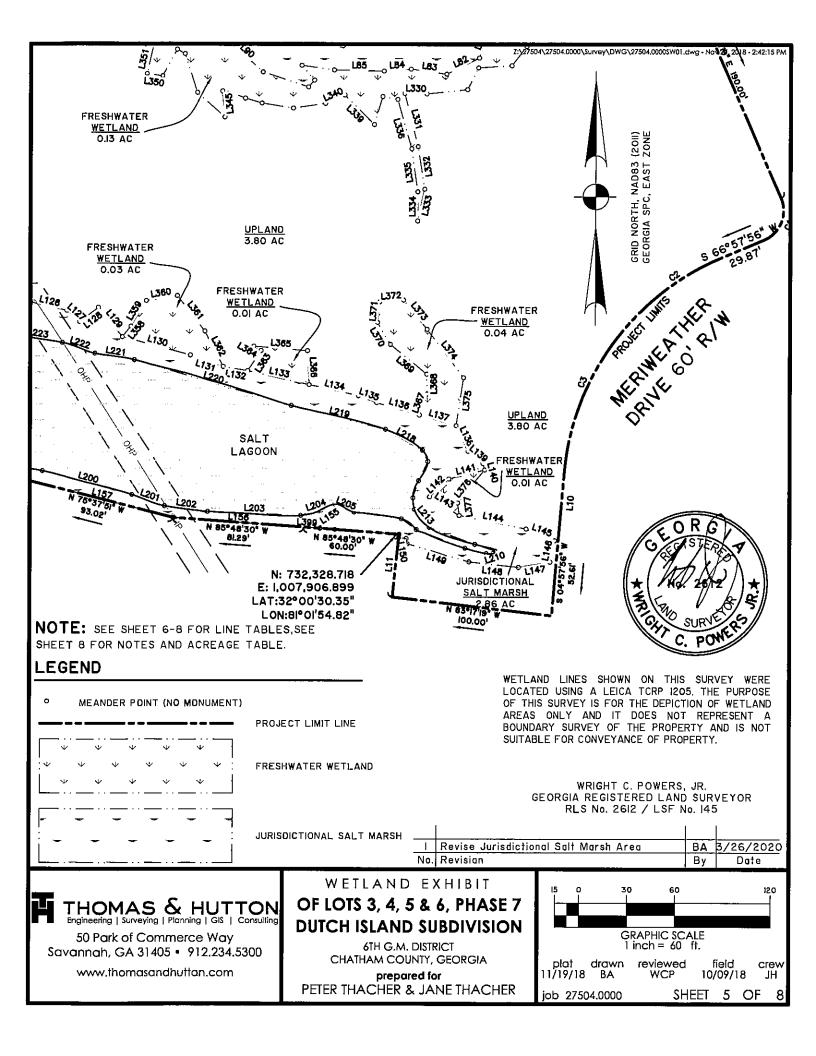
job 27504.0000

SHEET 1 OF



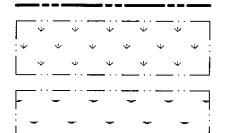






### LEGEND

MEANDER POINT (NO MONUMENT)



PROJECT LIMIT LINE

FRESHWATER WETLAND

JURISDICTIONAL SALT MARSH

**NOTE:** SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

_	Revise Jurisdictional Salt Marsh Area	ВА	3/26/2020
No.	Revision	Ву	Date



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

WRIGHT C. POWERS, JR.
GEORGIA REGISTERED LAND SURVEYOR
RLS No. 2612 / LSF No. 145

LINE TABLE-JURISDICTIONAL SALT MARSH- LINE BEARING LENGTH LIZ S 82°09'10" E 37.58' LI3 S 41°55'57" E 7.22' L14 N 78°26'15" E 23.29' L15 N 43°49'49" E 14.93' L16 N 74°38'42" E 6.00' L17 N 87°14'01" E 81.29' L18 S 72°14'30" E 7.91' L19 S 52°41'36" E 5.94' L20 N 78°10'12" E 4.03' L21 S 72°14'30" E 49.59' L22 N 67°15'24" E 57.48' L23 N 49°34'57" E 10.92' L24 N 55°49'37" E 31.97' L25 N 38°16'35" E 7.74' L26 N 43°4'57" E 2.72' L27 N 34°11'14" E 7.48' L28 N 38°16'35" E 9.06' L29 N 12°20'40" E 1.74' L30 N 34°11'14" E 49.30' L31 N 15°57'37" E 60.33' L31 N 15°57'37" E 60.33' L32 N 49°57'27" E 31.31' L33 S 68°59'58" E 85.99' L34 S 26°39'12" W 42.20' L35 S 26°39'12" W 42.20' L36 S 01°41'32" W 67.50' L39 S 08°31'06" W 18.39' L39 S 08°59'58" W 42.20' L30 S 90'84'32" W 67.50' L40 S 19°37'42" W 33.61' L41 S 45°37'14" W 29.58' L42 S 40°18'25" W 17.00' L43 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 12.72' L44 S 83°13'17" W 12.72' L44 S 83°13'17" W 12.72' L44 S 83°13'17" W 12.72' L45 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 12.57' L49 S 85°44'53" W 29.58' L42 S 40°18'25" W 17.00' L43 S 68°13'17" W 12.72' L44 S 83°3'17" W 12.72' L45 S 68°39'59" W 19.99' L46 N 51°08'48" W 4.41' L47 S 65°08'50" W 21.57' L49 S 85°44'53" W 29.58' L42 S 40°18'25" W 17.00' L51 S 10°29'08" E 17.77' L49 S 85°44'53" W 29.58' L50 S 29°44'48" W 8.00' L51 S 10°29'08" E 17.77' L49 S 85°44'55" E 31.23' L56 S 64°54'24" E 24.82' L57 S 86°55'15" E 20.83' L56 N 86°56'05" E 33.24' L66 N 16°51'44" E 9.59' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L68 S 84°26'05" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 36.39' L70 N 46°52'51" E 36.39' L70 N 46°52'51" W 35.10' L80 S 88°45'				2. (2/004 (2/004.
Li2		LINE TA	BLE-JURISDICTIONA	
Li3		LINE		LENGTH
Li3		LIZ	S 82°08'10" E	
Li4				
LI5				
L16				
Li7				
LiB   S 72°14'30" E   7.91'     Li9   S 52°4 '36" E   5.94'     L20   N 78°10'12" E   4.03'     L21   S 72°14'30" E   4.959'     L22   N 67°15'24" E   57.48'     L23   N 49°34'57" E   10.92'     L24   N 55°49'37" E   31.97'     L25   N 38°16'35" E   17.74'     L26   N 49°34'57" E   2.72'     L27   N 34°11'4" E   7.48'     L28   N 38°16'35" E   9.06'     L29   N 12°20'40" E   1.74'     L30   N 34°11'4" E   49.30'     L31   N 15°57'37" E   60.33'     L32   N 49°57'27" E   31.31'     L33   S 68°59'58" E   85.99'     L34   S 26°39'12" W   42.20'     L35   S 26°39'12" W   42.20'     L36   S 01°41'32" W   67.50'     L37   S 01°0'29" W   10.17'     L38   S 88°31'05" W   24.36'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L42   S 40°16'25" W   17.00'     L43   S 61°11'37" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'17" W   12.72'     L44   S 83°13'18" W   22.51'     L45   S 66°39'59" W   22.51'     L46   N 51°08'46" W   2.57'     L48   S 22°34'33" E   1.77'     L49   S 85°44'53" W   22.51'     L50   S 29°44'48" W   8.00'     L51   S 10°29'08" E   17.79     L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'38" E   52.80'     L55   S 49°44'55" E   24.82'     L57   S 86°55'3" E   20.83'     L66   N 30°44'10" E   24.82'     L57   S 86°55'3" E   20.83'     L61   N 55°13'52" E   20.83'     L62   N 73°15'08" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'0" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 29°23'00" E   35.24'     L70   N 46°52'51" E   30.93'     L70   N 58°13'02" E   44.25'     L71   S 30°36'45" W   27.17'     L65   S 73°45'45" W   27.17'     L61   S 20°06'51" E   30.93'     L70   S 50°20'2				
Li9		LI7	N 87°14'01" E	81.29
Li9		L18	S 72°14'30" E	7.9)
L20			S 52°41'36" F	
L2    S 72°14'30" E	•	-	N 20010/10" C	
L22			N 78-1012 E	
L23				
L24		L22	N 67°15'24" E	57.48
L24		L23	N 49°34'57" E	10.92
L25		L24	N 55°49'37" F	
L26				
L27				
L28				
L29				
L30		L28		
L30		L29	N 12°20'40" E	1.74
L31			N 349114" F	
L32			N 15957'37" C	
L33			N 10 0/ 5/ E	
L34		$\overline{}$	N 49"57"27" E	
L34				85.99
L35		L34		42.20
L36				
L37			ש "פציום ווים	
L38			D 010000001 111	
L39   S 08°59'47" W   24.36'     L40   S 19°37'42" W   33.61'     L41   S 45°37'14" W   29.58'     L42   S 40°18'25" W   17.00'     L43   S 61°11'37" W   12.72'     L44   S 83°13'17" W   16.64'     L45   S 68°39'59" W   19.99'     L46   N 51°08'46" W   4.41'     L47   S 65°08'50" W   21.57'     L48   S 22°34'33" E   1.77'     L49   S 85°44'53" W   22.51'     L50   S 29°44'48" W   6.00'     L51   S 10°29'08" E   17.79     L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L55   S 49°44'55" E   31.23'     L56   S 64°54'53" E   22.08'     L57   S 86°55'13" E   22.08'     L58   N 88°55'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°49'37" E   33.32'     L61   N 55°13'52" E   26.21'     L62   N 73°15'08" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   14.68'     L67   N 29°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   24.25'     L73   S 27°04'57" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 46°52'51" E   30.93'     L70   N 56°13'02" E   44.25'     L71   N 36°26'24" E   30.93'     L72   N 56°13'02" E   44.25'     L73   S 27°04'57" E   30.01'     L74   S 20°06'15" E   39.57'     L75   S 18°29'26" E   43.05'     L76   S 83°36'49" W   27.71'     L77   S 37°54'55" W   33.69'     L79   S 51°29'24" W   35.10'     L83   S 24°52'01" W   33.69'     L79   S 51°29'24" W   35.10'     L83   S 82°00'05" W   22.74'     L83   N 82°00'52" W   22.50'			S 01"01'29" W	
L40 \$ 19°37'42" W 29.58'  L41 \$ 45°37'14" W 29.58'  L42 \$ 40°18'25" W 17.00'  L43 \$ 66"18'37" W 12.72'  L44 \$ 83°13'17" W 16.64'  L45 \$ 66°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 \$ 65°08'50" W 21.57'  L48 \$ 22°34'33" E 1.77'  L49 \$ 85°44'53" W 22.51'  L50 \$ 29°44'48" W 8.00'  L51 \$ 10°29'08" E 17.79'  L52 \$ 17°50'42" E 31.47'  L53 \$ 42°25'04" E 26.90'  L54 \$ 43°49'36" E 52.80'  L55 \$ 49°44'55" E 24.82'  L57 \$ 86°55'13" E 22.08'  L56 \$ 64°54'24" E 24.82'  L57 \$ 86°55'13" E 20.81'  L58 N 86°55'13" E 20.83'  L58 N 86°56'05" E 33.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 26.91'  L60 N 43°48'57" E 26.91'  L60 N 73°15'06" E 20.83'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 \$ 84°12'57" E 24.05'  L64 \$ 67°17'01" E 27.17'  L65 \$ 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°25'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°29'26" E 43.05'  L76 \$ 83°36'45" E 38.57'  L77 \$ \$ 80°29'26" E 43.05'  L78 \$ 20°06'15" E 38.57'  L79 \$ 51°29'24" W 35.10'  L80 \$ 86°45'43" W 22.71'  L81 \$ 20°50'52" W 33.69'  L79 \$ 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'			_ S 88°31'06" W	18.39
L40 \$ 19°37'42" W 29.58'  L41 \$ 45°37'14" W 29.58'  L42 \$ 40°18'25" W 17.00'  L43 \$ 66"18'37" W 12.72'  L44 \$ 83°13'17" W 16.64'  L45 \$ 66°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 \$ 65°08'50" W 21.57'  L48 \$ 22°34'33" E 1.77'  L49 \$ 85°44'53" W 22.51'  L50 \$ 29°44'48" W 8.00'  L51 \$ 10°29'08" E 17.79'  L52 \$ 17°50'42" E 31.47'  L53 \$ 42°25'04" E 26.90'  L54 \$ 43°49'36" E 52.80'  L55 \$ 49°44'55" E 24.82'  L57 \$ 86°55'13" E 22.08'  L56 \$ 64°54'24" E 24.82'  L57 \$ 86°55'13" E 20.81'  L58 N 86°55'13" E 20.83'  L58 N 86°56'05" E 33.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 26.91'  L60 N 43°48'57" E 26.91'  L60 N 73°15'06" E 20.83'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 \$ 84°12'57" E 24.05'  L64 \$ 67°17'01" E 27.17'  L65 \$ 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°25'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L75 \$ 88°29'26" E 43.05'  L76 \$ 83°36'45" E 38.57'  L77 \$ \$ 80°29'26" E 43.05'  L78 \$ 20°06'15" E 38.57'  L79 \$ 51°29'24" W 35.10'  L80 \$ 86°45'43" W 22.71'  L81 \$ 20°50'52" W 33.69'  L79 \$ 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L39	S 08°59'47" W	
L41			S 19°37'42" W	
L42 S 40°16'25" W 17.00'  L43 S 61°11'37" W 12.72'  L44 S 83°13'17" W 16.64'  L45 S 66°39'59" W 19.99'  L46 N 51°06'46" W 4.41'  L47 S 65°06'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'06" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°56'05" E 23.24'  L59 N 77°35'26" E 26.21'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'06" E 20.83'  L63 S 64°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'53" W 14.49'  L78 S 24°52'01" W 35.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.50'			S 45°37'I4" W	
L43			0.40010105# #	
L44 S 83°13'17" W 16.64'  L45 S 68°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 85°44'53" W 22.51'  L50 S 28°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'38" E 52.80'  L55 S 49°44'55" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°55'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67'17'01" E 27.17'  L65 S 73°49'24" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41' E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 46°52'51" E 30.93'  L70 N 58°13'02" E 35.24'  L73 S 27°04'57" E 30.93'  L70 N 58°13'02" E 30.50'  L72 N 58°13'02" E 42.55'  L73 S 27°04'57" E 30.51'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.71'  L81 S 20°50'52" W 14.49'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.50'			5 40°18 25 W	
L45 S 68°39'59" W 19.99'  L46 N 51°08'46" W 4.41'  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" € 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" € 17.79'  L52 S 17°50'42" € 31.47'  L53 S 42°25'04" € 26.90'  L54 S 43°49'36" € 52.80'  L55 S 49°44'55" € 31.23'  L56 S 64°54'24" € 24.82'  L57 S 86°55'13" Е 22.08'  L58 N 88°56'05" € 23.24'  L59 N 77°35'26" € 21.27'  L60 N 43°48'57" € 33.32'  L61 N 55°13'52" € 26.21'  L62 N 73°15'08" € 20.83'  L63 S 84°12'57" € 24.05'  L64 S 67°17'01" € 27.17'  L65 S 73°49'24" € 16.39'  L66 N 30°44'10" € 14.68'  L67 N 29°23'00" € 35.24'  L68 N 16°51'44" € 30.93'  L70 N 46°52'51" € 14.00'  L71 N 36°26'24" € 20.30'  L72 N 58°13'02" € 44.25'  L73 S 27°04'57" € 30.93'  L70 N 46°52'51" € 14.00'  L71 N 36°26'24" € 20.30'  L72 N 58°13'02" € 44.25'  L75 S 18°29'26" € 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'59" W 14.49'  L79 S 51°29'24" W 33.69'  L79 S 51°29'24" W 35.10'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'			S 6141/37" W	
L46 N 5 °06'46" W 4.4 ¹  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 68°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 64°12'57" E 34.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 31.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 44.25'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'33" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L44		16.64
L46 N 5 °06'46" W 4.4 ¹  L47 S 65°08'50" W 21.57'  L48 S 22°34'33" E 1.77'  L49 S 65°44'53" W 22.51'  L50 S 29°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 22.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 68°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 64°12'57" E 34.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 31.01'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 44.25'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 35.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		L45	S 68°39'59" W	19.99
L47				
L48 S 22°34°33" E 1.77'  L49 S 85°44'53" W 22.51'  L50 S 25°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'38" E 52.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 88°55'05" E 23.24'  L59 N 77°35'26" E 20.83'  L60 N 43°48'57" E 33.32'  L61 N 55°13'52" E 20.83'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 20.83'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41' E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 56°13'02" E 44.25'  L73 S 27°04'57" E 30.30'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'55" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.71'  L81 S 20°50'52" W 17.97'  L82 S 63°26'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'				21.57
L49 S 85°44'53" W 22.51'  L50 S 23°44'48" W 8.00'  L51 S 10°29'08" E 17.79'  L52 S 17°50'42" E 31.47'  L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 52.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 86°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°46'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 23°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 30.93'  L70 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.51'  L74 S 20°06'15' E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 33°36'49" W 27.71'  L77 S 37°54'59" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 86°45'43" W 22.77'  L81 S 20°50'52" W 17.97'  L82 S 53°28'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.74'		140	0 00 00 00 0	21.01
L50   S 29°44'48" W   B.00'				
L51				
L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'36" E   25.80'     L55   S 49°44'55" E   31.23'     L56   S 64°54'24" E   24.82'     L57   S 86°55'13" E   22.08'     L58   N 88°56'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°48'57" E   20.83'     L61   N 55°13'52" E   26.21'     L62   N 73°15'06" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 28°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   20.30'     L72   N 58°13'02" E   44.25'     L73   S 27°04'57" E   30.93'     L74   S 20°06'15" E   38.57'     L75   S 18°29'26" E   43.05'     L79   S 51°29'24" W   35.60'     L79   S 51°29'24" W   35.60'     L80   S 68°45'43" W   22.17'     L81   S 20°50'52" W   22.50'     L82   S 63°26'00" W   22.74'     L83   N 82°00'52" W   22.50'		L50	S 29°44'48" W	8.00'
L52   S 17°50'42" E   31.47'     L53   S 42°25'04" E   26.90'     L54   S 43°49'36" E   25.80'     L55   S 49°44'55" E   31.23'     L56   S 64°54'24" E   24.82'     L57   S 86°55'13" E   22.08'     L58   N 88°56'05" E   23.24'     L59   N 77°35'26" E   21.27'     L60   N 43°48'57" E   20.83'     L61   N 55°13'52" E   26.21'     L62   N 73°15'06" E   20.83'     L63   S 84°12'57" E   24.05'     L64   S 67°17'01" E   27.17'     L65   S 73°49'24" E   16.39'     L66   N 30°44'10" E   14.68'     L67   N 28°23'00" E   35.24'     L68   N 16°51'44" E   9.59'     L69   N 24°57'41' E   30.93'     L70   N 46°52'51" E   14.00'     L71   N 36°26'24" E   20.30'     L72   N 58°13'02" E   44.25'     L73   S 27°04'57" E   30.93'     L74   S 20°06'15" E   38.57'     L75   S 18°29'26" E   43.05'     L79   S 51°29'24" W   35.60'     L79   S 51°29'24" W   35.60'     L80   S 68°45'43" W   22.17'     L81   S 20°50'52" W   22.50'     L82   S 63°26'00" W   22.74'     L83   N 82°00'52" W   22.50'		L5I	S 10°29'08" E	17.79
L53 S 42°25'04" E 26.90'  L54 S 43°49'36" E 52.80'  L55 S 49°44'55" E 31.23'  L56 S 64°54'24" E 24.82'  L57 S 86°55'13" E 22.08'  L58 N 86°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°46'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'55" W 14.49'  L79 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 86°45'43" W 22.71'  L81 S 20°06'52" W 22.74'  L83 N 82°00'52" W 22.74'				
L54				
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L56				
L57 S 86°55'13" E 22.08'  L58 N 86°56'05" E 23.24'  L59 N 77°35'26" E 21.27'  L60 N 43°46'57" E 33.32'  L61 N 55°13'52" E 26.21'  L62 N 73°15'08" E 20.83'  L63 S 84°12'57" E 24.05'  L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 30.93'  L70 S 88°35'02" E 43.05'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'48" W 27.71'  L77 S 37°54'55" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°26'00" W 22.74'  L83 N 82°00'52" W 22.74'  L83 N 82°00'52" W 22.50'	١	L55		
L57	١	L56	\$ 64°54'24" E	24.82'
L58 N 88°56'05" E 23.24' L59 N 77°35'26" E 21.27' L60 N 43°48'57" E 33.32' L61 N 55°13'52" E 26.21' L62 N 73°15'08" E 20.83' L63 S 84°12'57" E 24.05' L64 S 67°17'01" E 27.17' L65 S 73°49'24" E 16.39' L66 N 30°44'10" E 14.68' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 38.57' L75 S 18°29'26" E 43.05' L76 S 83°36'49" W 27.71' L77 S 37°54'59" W 14.49' L79 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	ı	L57	S 86°55'13" E	
L59	ı			
L60 N 43°48'57" E 33.32' L61 N 55°13'52" E 26.21' L62 N 73°15'08" E 20.83' L63 S 84°12'57" E 24.05' L64 S 67°17'01" E 27.17' L65 S 73°49'24" E 16.39' L66 N 30°44'10" E 14.68' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 31.01' L74 S 20°06'15' E 38.57' L75 S 18°29'26" E 43.05' L76 S 83°36'49" W 27.71' L77 S 37°54'59" W 14.49' L78 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°5'29' W 17.97' L82 S 53°28'00" W 22.74' L83 N 82°00'52" W 22.50'	1			01021
L61	ŀ			21.21
L62	ļ			
L63	Į			
L63	I	L62	N 73°15'08" E	20,83
L64 S 67°17'01" E 27.17'  L65 S 73°49'24" E 16.39'  L66 N 30°44'10" E 14.68'  L67 N 29°23'00" E 35.24'  L68 N 16°51'44" E 9.59'  L69 N 24°57'41" E 30.93'  L70 N 46°52'51" E 14.00'  L71 N 36°26'24" E 20.30'  L72 N 58°13'02" E 44.25'  L73 S 27°04'57" E 38.57'  L74 S 20°06'15" E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 53°28'00" W 22.74'  L83 N 82°00'52" W 22.50'	1	L63	S 84°12'57" E	
L65 S 73°49'24" E 16.39' L66 N 30°44'10" E 14.68' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41" E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 31.01' L74 S 20°06'15" E 38.57' L75 S 18°29'26" E 43.05' L77 S 37°54'59" W 27.71' L77 S 37°54'59" W 14.49' L78 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 53°28'00" W 22.74' L83 N 82°00'52" W 22.50'	1		S 67°17'01" F	
L66 N 30°44'10" E 14.68' L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41' E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 31.01' L74 S 20°06'15" E 38.57' L75 S 18°29'26" E 43.05' L76 S 83°36'49" W 27.71' L77 S 37°54'59" W 14.49' L78 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 63°26'00" W 22.74' L83 N 82°00'52" W 22.50'	I		S 73940'04" F	
L67 N 29°23'00" E 35.24' L68 N 16°51'44" E 9.59' L69 N 24°57'41' E 30.93' L70 N 46°52'51" E 14.00' L71 N 36°26'24" E 20.30' L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 31.01' L74 S 20°06'15' E 38.57' L75 S 18°29'26" E 43.05' L76 S 33°36'45" W 27.71' L77 S 37°54'59" W 14.49' L78 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	I		N 30944101 C	10.39
L68	ļ			
L69	ļ		N 29°23'00" E	
L69	J	L68		9.59
L70	ļ	L69		
L71	1			
L72 N 58°13'02" E 44.25' L73 S 27°04'57" E 31.0! L74 S 20°06'15' E 38.57' L75 S 18°29'26" E 43.05' L76 S 83°36'49" W 27.7! L77 S 37°54'59" W 14.49' L78 S 24°52'01" W 33.69' L79 S 51°29'24" W 35.10' L80 S 88°45'43" W 22.17' L81 S 20°50'52" W 17.97' L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	ŀ			
L73 S 27°04'57" E 31.01'  L74 S 20°06'15' E 38.57'  L75 S 18°29'26" E 43.05'  L76 S 83°36'49" W 27.71'  L77 S 37°54'59" W 14.49'  L78 S 24°52'01" W 33.69'  L79 S 51°29'24" W 35.10'  L80 S 88°45'43" W 22.17'  L81 S 20°50'52" W 17.97'  L82 S 63°28'00" W 22.74'  L83 N 82°00'52" W 22.50'	ŀ	170		
L74   S 20°06'15" E   38.57'	ļ	LIZ		44.25
L75 \$ 18°29'26" E 43.05' L76 \$ 83°36'49" W 27.71' L77 \$ 37°54'59" W 14.49' L78 \$ 24°52'01" W 33.69' L79 \$ 51°29'24" W 35.10' L80 \$ 88°45'43" W 22.17' L81 \$ 20°50'52" W 17.97' L82 \$ 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	ļ			
L75 \$ 18°29'26" E 43.05' L76 \$ 83°36'49" W 27.71' L77 \$ 37°54'59" W 14.49' L78 \$ 24°52'01" W 33.69' L79 \$ 51°29'24" W 35.10' L80 \$ 88°45'43" W 22.17' L81 \$ 20°50'52" W 17.97' L82 \$ 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	1	L74	5 20°06'15" E	38.57'
L76         \$ 83°36'49" W         27.71'           L77         \$ 37°54'55" W         14.49'           L78         \$ 24°52'01" W         33.69'           L79         \$ 51°29'24" W         35.10'           L80         \$ 68°45'43" W         22.17'           L81         \$ 20°50'52" W         17.97'           L82         \$ 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ı	L75	S 18°29'26" E	
L77 \$ 37°54′59" W   I4.49'   L78 \$ 24°52′0" W   33.69'   L79 \$ 51°29′24" W   35.10'   L80 \$ 88°45′43" W   22.17'   L81 \$ 20°50′52" W   17.97'   L82 \$ 63°28′00" W   22.74'   L83 N 82°00′52" W   22.50'	ŀ			
L78   \$ 24°52'0 " W   33.69' L79   \$ 51°29'24" W   35.10' L80   \$ 68°45'43" W   22.17' L81   \$ 20°50'52" W   17.97' L82   \$ 63°28'00" W   22.74' L83   N 82°00'52" W   22.50'	ŀ			
L79   \$5 °29'24" W   35,10'	ŀ			
L60         S 88°45'43" W         22.17'           L81         S 20°50'52" W         17.97'           L82         S 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ļ	L/8		
L60         S 88°45'43" W         22.17'           L81         S 20°50'52" W         17.97'           L82         S 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	1	L79	S 51°29'24" W	
L81         \$ 20°50'52" W         17.97'           L82         \$ 63°28'00" W         22.74'           L83         N 82°00'52" W         22.50'	ſ	LBO	S 68°45'43" W	22.171
L82 S 63°28'00" W 22.74' L83 N 82°00'52" W 22.50'	t	-		17.971
L83 N 82°00'52" W 22.50'	ŀ			
	ł			
L84   \$ 85°49'20" W   16.98'	ŀ			
	l	L84	5 85°49'20" W	16,98
	_			

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LINE TA	BLE-JURISDICTIONA	L SALT MARSH			
LINE	BEARING	LENGTH			
L85	N 88°46'58" W	31.20'			
L86	N 82°08'00" W	20.49			
	\$ 40°36'51" E				
L87	5 40° 36 31 E	12.11			
L88	5 40°54'51" W	5.62'			
L89	N 7(°50'59" W	29.97'			
L90	N 48°37'33" W	31.85			
L9I	N 82°36'44" W	33.16			
L92		16.31			
L93	S 83°15'28" W	19.67'			
L94	N 70°33'25" W	29.28'			
L,95	N 59°00'07" W	25.08'			
L96	N 50°24'51" W	54.82			
L97	N 47°53'15" W	27.78'			
L98					
	N 16°21'54" W	28.89			
L99	N 15°40'13" W	43.82'			
LIOO	N 52°02'37" W	6.171			
LIOI	S 66°55'06" W	18,191			
LIO2	S 47°39'38" W	17.47'			
L103	S 26°43'57" W				
		35,90'			
L104	S 83°15'02" W	10.991			
L105	S 41º17'05" ₩	32.27			
LI06	S 19°52'45" E	34.161			
L107	S 09°06'21" E	21.06'			
LIOB	S 85°27'16" W	20.89'			
L109	S 64°31'10" W	4.38'			
LIIO	\$ 31°07'00" E	31.13			
LIII	S 06°53'02" W	34.72			
LII2	\$ 20°28'18" W	21.38			
LII3	S 00°54'II* E	47.00'			
	S 18°44'36" W				
LII4	3 18 44 36 W	26.28'			
L(I5	S 39°55'43" W	33,89'			
LII6	S 70°27'50" E	16.91			
LII7	N 88°17'55" E	20.90'			
LII8	N 80°18'40" E	32.10'			
LII9	\$ 70°37'33" W				
		23.25			
LIZO	OMITTED				
LI2I	OMITTED				
LI22	OMITTED				
LI23	OMITTED				
LI24	S 13°20'21" €	13,57			
_					
L125	N 69°46'33" E	15.71			
LI26	S 76°40'32" E	22.92'			
LI27	\$ 48°34'58" E	10.731			
L128	N 52°17'05" E	14.65			
LI29	5 39°19'03" E	23.63'			
		20.00			
LI30	S 75°05'15" E	44.12'			
LI31	S 70°33'14" E	21.60'			
LI32	S 80°16'48" E	15,22'			
LI33	S 77°17'33" E	39.39			
LI34	S 77°30'15" E	31.66'			
	S 69°03'12" E	10.00			
LI35		12.23'			
LI36	\$ 73°52'06" E	27.86			
L137	S 73°58'43" E	23.96'			
L138	S 24°51'53" E	17.60'			
L139	S 50°22'49" E	12.21			
L140	S 14°39'25" E	4.101			
1-	\$ 75°52'40" W				
L141		23.03'			
L142	\$ 46°44'42" W	16.50¹			
L143	5 58°06'48" E	21.89			
LI44	S 78°32'37" E	42.39'			
LI45		10 20' 1			
L145	S 67°32'28" E	19.29			
LI46	S 67°32'28" E S 12°09'21" W	13.72			
L146 L147	S 67°32'26" E S 12°09'21" W S 80°33'18" W	13.72° 19.89°			
LI46 LI47 LI48	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W	13.72° 19.89° 30.90°			
L146 L147	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W	13.72° 19.89°			
L146 L147 L148 L149	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W	13.72 <sup>t</sup> 19.89 <sup>t</sup> 30.90 <sup>t</sup> 40.29 <sup>t</sup>			
LI46 LI47 LI48 LI49 LI50	S 67°32'26" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W	13.72 <sup>1</sup> 19.89 <sup>1</sup> 30.90 <sup>1</sup> 40.29 <sup>1</sup> 3.33 <sup>1</sup>			
L146 L147 L148 L149 L150 L151	S 67°32'26" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 82°48'55" W	13.72° 19.89' 30.90' 40.29' 3.33' 4.68'			
L146 L147 L148 L149 L150 L151 L152	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E	13.72' 19.89' 30.90' 40.29' 3.33' 4.68'			
L146 L147 L148 L149 L150 L151	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 63°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.II' 40.38'			
L146 L147 L148 L149 L150 L151 L152	S 67°32'28" E S 12°09'21" W S 80°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E	13.72' 19.89' 30.90' 40.29' 3.33' 4.68'			
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 63°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W	13.72 <sup>1</sup> 19.89 <sup>1</sup> 30.90 <sup>1</sup> 40.29 <sup>1</sup> 3.33 <sup>1</sup> 4.68 <sup>1</sup> 2.11 <sup>1</sup> 40.38 <sup>1</sup>			
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55	S 67°32'26" E S 12°09'21" W S 60°33'16" W N 83°41'56" W N 10°33'33" W N 10°33'33" W N 62°46'55" W N 66°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W	13.72'   19.89'   30.90'   40.29'   3.33'   4.68'   2.11'   40.38'   8.80'   0.78'			
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W N 85°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.11' 40.38' 8.80' 0.78' 10.21'			
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399 LI56	\$ 67°32'26" E \$ 12°09'21" W \$ 80°33'18" W \$ 80°33'18" W \$ 10°33'33" W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33'33' W \$ 10°33' W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.II' 40.38' 8.80' 0.78' 10.21' 81.29'			
LI46 LI47 LI48 LI49 LI50 LI51 LI52 LI53 LI54 LI55 L399	S 67°32'26" E S 12°09'21" W S 60°33'18" W N 83°41'56" W N 73°41'07" W N 10°33'33" W N 62°46'55" W N 06°03'53" E N 65°46'30" W N 62°46'55" W S 57°55'06" W N 85°46'30" W	13.72' 19.89' 30.90' 40.29' 3.33' 4.68' 2.11' 40.38' 8.80' 0.78' 10.21'			

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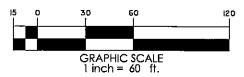
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WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 DUTCH ISLAND SUBDIVISION

6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER



plat drawn reviewed field 11/19/18 BA WCP 10/D9/18

job 27504.0000

CP 10/D9/18 JH SHEET 6 OF 8

crew

LINE TABLE-JURISDICTIONAL SALT MARSH

### **LEGEND**

MEANDER POINT (NO MONUMENT)

PROJECT LIMIT LINE

FRESHWATER WETLAND

JURISDICTIONAL SALT MARSH

NOTE: SEE SHEET 6-8 FOR LINE TABLES, SEE SHEET 8 FOR NOTES AND ACREAGE TABLE.

_	Revise Jurisdictional Salt Marsh Area	BA	3/26/2020
No.	Revision	Ву	Date

LINE	BEARING	LENGTH
LI58	N 75°37'51" W	110.00'
LI59 LI60	S 55°00'08" W S 73°08'07" W	46.50' 50.48'
F161	N 43°20'50" W	6.20'
L162	S 54°45'40" W	61.97
L163	N 89°37'40" W	51.15
LI64	N 69°00'35" W	12.00
L378	N 61°28'17" W N 57°35'15" W	7.12'
L379 LI65	N 18°57'19" W	25.54' 4l.49'
L166	N 09°24'30" W	26.11
LI67	N 18°54'56" W	9.24'
LIGB	N 69°38'52" W	7.45
L169	N 86°49'45" W	23.35
L170	N 03°05'31" E	56.98'
L171	N 08°59'43" E S 22°31'24" E	59.08' (4.39'
L173	S 52°34'19" E	6.17
LI74	S 02°14'11" W	15.00'
LI75	N 28°25'53" E	7.82'
LI76	N 68°08'40" E	5,32
L177	S 59°28'37" E	8.72'
L178	\$ 25°44'08" E \$ 07°13'08" E	16.98' 40.77'
L180	S 01° 05'33" W	48.30
LIBI	S 06°48'59" E	19.70
LIB2	S 21°07'14" E	21.22
LIB3	S 64°15'36" E	9.38'
LIB4	\$ 23°49'II" E	9.13'
LI85	\$ 53°45'52" E \$ 78°51'38" E	33.65' 6.68'
LI87	S 89°09'18" E	12.52
LI88	S 85°08'49" E	13.87
LI89	N 74°55'12" E	9.24'
LI90	N 57°16'29" E	32.23'
LI9I LI92	N 45°39'34" E N 58°53'17" E	35.98'
LI93	N 69°53'04" E	36.39' 26.66'
L194	N 88°13'45" E	33.35
LI95	S 76°58'II" E	36.59
L196	S 6 °55'02" E	25.77'
LI97	S 70°29'00" E	14.53
L198 L199	S 81°47'12" E S 81°54'03" E	15.86 <sup>1</sup> 26.80 <sup>1</sup>
L200	S 75°01'20" E	57.59'
L201	\$ 71°10'43" E	21,59'
L202	S 82°36'48" E	27.23
L203	S 87°33'00" E	57.74
L204 L205	N 71º 43'07" E S 67º 42'46" E	22.58° 12.88°
L206	S 82°00'37" E	30.07
L207	\$ 54°06'44" E	11.52'
L208	\$ 69°00'41" E	32.53
L209	S 75°59'49" E	13.65
L210	N 72°46'15" E N 72°15'36" W	5.76'
L2II L2I2	N 69°38'47" W	13.22 <sup>1</sup> 30.33 <sup>1</sup>
L213	N 39°21'02" W	14.65
L214	N 07°53'35" W	7.34
L215	N 18°09'46" E	11.22
L216	N 25°38'12" E	13.34
L217 L218	N 25°36'40" W	7.79' 26.66'
1219	N 75°53'24" W	60.88
L220	N 73°44'24" W	101.91
L22I	N 80°51'21" W	24.90'
L222	N 71°41'43" W	21.32
L223	N 80°27'14" W	30.96
L224 L225	N 86°55'08" W S 79°02'39" W	91.32 <sup>1</sup> 48.60 <sup>1</sup>
L226	S 75°02'39 W	30.62
L227	S 56°38'05" W	44.83
L228	S 45°50'33" W	38.48

LINE TABLE-JURISDICTIONAL SALT MARSH

	BLE-JURISDICTIONA	
LINE	BEARING	LENGTH
L229	S 76°34'38" W	16.70
L230	N 65°56'26" W	24.49
L231	N 14°07'03" W	21.47
L232	N 28°03'52" E	18.85
L233	N 33°26'17" E	6.35
L234	N 71°05'48" E	12.20
L235	N 56°55'09" E	¦8.59¹
L236	N 41°17'08" E	37.0
L237	N 49°56'30" E	50.62
L238	N 33°27'37" E	11.41
L239	N 09°59'58" E	27.35
L240	N 03°02'09" W	29.86
L241	N 16°20'53" W	21,12'
L242	N 04°23'30" W	<u>1</u> 8.44
L243	N 17°01'32" W	27.82
L244	N 42°55'55" W	11.70
L245	N 20°39'06" W	15.59
L246	N 55°51'44" W	9.19'
L247	N 06°31'11" E	[4.88]
L248	N 18°25'10" W	8,82'
L249	N 62°37'00" W	14.83
L250	N 16°17'41" E	12.52
L251	N 06°17'45" W	42.34
L252	N 36°26'26" E	8.07
L253	N 51°24'40" E	45,(6)
L254	N 13°15'33" E	11,131
L255	\$ 72°35'16" E	9.69'
L256	N 72°58'01" E	32.85
L257	N 87°48'19" E	19.83
L258	N 81°35'43" E	16.71
L259	S 83°23'58" E	23.61
L260		
		34.48
L261	N 73°07'42" E	62.56
L262	N 59°48'46" E	29.41
L263	N 23°14'20" E	23.67
L264	N 03°25'32" E	28.75
L265	N 09°46'55" W	16.41
L266	N 38°28'04" W	17.40
L267	N 77°55'36" W	16.74
L268	S 65°56'30" W	21.52
L269	S 52°16'58" W	32.99'
L270	S 43°02'16" W	31.49
L271	S 50°16'55" W	17.20
L272	S 67°33'43" W	8.06
L273	\$ 82°57'08" W	9.50'
L274	\$ 70°27'00" W	14.70
		14.70
L275	S 87°15'04" W	6.17
L276	N 78°46'01" W	14.81
L277	S 48°19'14" W	9.60'
L278	S 83°23'24" W	13.74
L279	N 57°12'31" W	11.94
L280	N 78°24'09" W	
		14.16'
L261	N 72°22'46" W	15.57'
L282	S 42°50'16" W	13.19
L283	S 55°16'10" W	15.81
L284	S 73°36'49" W	12.08'
1,285	S 41°46'52" W	
		10.08
L286	N 77°12'01' W	14.69
L287	N 16°17'25" E	5.74'
L288	N 27°18'36" W	10.43'
L289	N 53°09'45" E	12.96'
	S 65"28'06" E	12.70
L290		2,87'
L291	N 23°50'47" W	4.33'
L292	\$ 77°13'15" W	7.68
L293	S 39°46'35" W	7.45'
L294	S 84°47'39" W	
		11.20'
L295	S 06°19'53" W	16.46
L296	\$ 43°00'32" W	14.91
L297	S 66°45'37" W	4.08'
L298	N 74°48'01" W	5.11
L299	S 00°38'00" W	20.40
L300	S 05°29'53" W	31.19
L30J	\$ 26°36'06" W	29.43'



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

> WRIGHT C. POWERS, JR. GEORGIA REGISTERED LAND SURVEYOR RLS No. 2612 / LSF No. 145

> > WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 **DUTCH ISLAND SUBDIVISION**

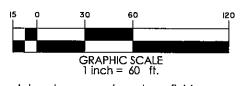
6TH G.M. DISTRICT CHATHAM COUNTY, GEORGIA

prepared for PETER THACHER & JANE THACHER

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PROJECT LIMIT LINE



FRESHWATER WETLAND



JURISDICTIONAL SALT MARSH

9.16 AC.

### ACREAGE TABLE

JURISDICTIONAL SALT MARSH	2.86 AC
FRESH WATER WETLANDS	0.25 AC
SALT MARSH LAGOON & POND	2.25 AC
UPLAND	3.80 AC

NOTES

TOTAL PROJECT LIMITS

- WETLANDS DELINEATED BY RLC CONSULTANTS, OCTOBER 2018.
- FRESHWATER WETLAND/JURISDICTIONAL SALT MARSH LINE TAGS ARE SEQUENTIAL. SOME HAVE BEEN REMOVED FOR CLARITY.

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LINE TA	BLE-JURISDICTIONA	L SALT MARSH		LINE T	ABLE - FRESHWAT	R WETLANDS
LINE	BEARING	LENGTH		LINE	BEARING	LENGTH
L302	S 01°17'06" W	32.29 <sup>1</sup>		L315	N 08°25'20" E	8.37
L303	S 13°26'27" E	40.70		L316	N 05°15'58" W	17.93
L304	S II°50'55" E	23.56'		L317	S 83°06'58" E	19.53
L305	S 29°27'38" E	45.88'		L318	N 49°51'22" E	21.62'
L306	S 07°13'21" E	23.89'		L319	S 74°28'18" E	22.31
L307	S 26°56'17" W	23.82'		L320	S 52°00'21" E	21.17
L308	S 50°28'24" W	38.35'		L321	N 73°48'29" E	5.55'
L309	S 63°06'II" W	35,00'		L322	\$ 31°00'32" E	6.70'
L310	S 76°34'45" W	23,55		L323	\$ 50°51'50" E	10.31
L3II	N 73°49'53" W	16.80'		L324	S 25°14'56" W	19.56
L3I2	N 59°42'39" W	13.53		L325	S 52°09'24" W	23.18'
L313	N 08°59'43" E	271.23		L326	S 37°21'38" W	15.14'
L314	N 18°24'52" W	141.38		L327	S 86°15'10" W	20.78

·	LINE TABLE - SAL	T POND
LINE	BEARING	LENGTH
L380	S 43°52'27" E	8.39'
L381	N 37°26'42" E	18.29
L382	N 47°10'42" E	12.95
L383	N 64°38'44" E	7.41
L384	S 81°30'28" E	10.91
L385	S 55°48'16" E	6.39
L386	S 29°33'16" E	10.56
L387	S IIº32'42" E	13.08
L388	S 01°45'42" W	21.66'
L389	S 10°10'20" W	10.51
L390	S 22°50'09" W	16,771
L391	\$ 40°53'06" W	12.04
L392	S 64°51'16" W	9.75'
L393	N 86°55'01" W	11.82
L394	พ "01'05°e5 ห	10.08'
L395	N_45°56'23" W	17.59
L396	N 22°02'31" W	9.81
L397	N 07°16'27" E	(1.50)
L398	N 23°14'33" E	24.95

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LINE T	ABLE - FRESHWAT	ER WETLANDS
LINE	BEARING	LENGTH
L315	N 08°25'20" E	8.37
L316	N 05°15'58" W	17.93
L317	S 83°06'58" E	19.53
L318	N 49°51'22" E	21.62
L319	S 74°28'18" E	22.31
L320	S 52°00'21" E	21.17
L321	N 73°48'29" E	5.55'
[ L322	S 31º00'32" E	6.70
L323	\$ 50°51'50" E	10.31
L324	S 25°14'56" W	19.56
L325	S 52°09'24" W	23.18
	S 37°21'38" W	
L326		15.14
L327	S 86°15'10" W	20.78
L328	S 26°16'13" W	15,22
L329	S 83°57'05" W	25,63'
L330	N 89°06'25" W	13.76
L33I	S 14°16'45" E	
		34.19
L332	S 08°53'54" E	26.94
L333	S 12°27'46" W	20.33
L334	N 00°12'15" E	18.26
L335	N 08°11'03" W	27.14
L336	N 15°56'16" W	32.06
L337	N 79°29'23" W	9.57'
		3.31
L338	S 16°44'21" W	18.27
L339	N 45°08'07" W	26.(3'
L340	S 66°26'25" W	13.27'
L341	S 81°53'31" W	20.32
L342	N 80°59'09" W	19.80
L343	N 74°II'04" W	10.71
L344	N 72°14'10" W	
	0.0500455#.5	14.78'
L345	S 05°04'55" E	16.291
L346	N 47°58'08" W	22.92'
L347	N 17°57'59" W	25.50'
L348	N 61°46'37" W	5.57'
L349	S 28°36'01" W	18.85
L350	N 82°05'37" W	9.99'
L351	N 13°07'36" E	22.12'
L352		10.90
L353	N 79°41'55" E	22.94'
L354	N 50°48'17" E	16.59'
L355	S 61°12'33" E	13.98'
L356	S 76°49'31" E	30.08
L357	S 48°40'53" E	16.60'
L358	N 38°05'10" E	8.40'
	N 30°48'19" E	
L359		18.75
L360	N 80°58'26" E	19.78
L36I	S 37°55'41" E	28.07
L362	S 27°13'28" E	24.99'
L363	N 33°15'41" E	15.14
L364	N 59°12'45" W	5,28'
L365	S 85°13'41" E	33,66'
_	S 02°59'37" E	
L366	N 20°00'04" E	21.25'
L367		13.97
L368	N 00°49'03" W	12.48
L369	N 50°52'36" W	29.46
L370	N 30°41'15" W	15.97 <sup>'"</sup>
L371	N 05°53'45" E	12.96
L372	N 85°31'08" E	14.98
L373	\$ 39°03'17" E	23.51
-	S 37°05'38" E	
L374		37.96'
L375	S 08°35'37" W	30.41
L376	S 39°01'21" W	26.65
L377	S 07°24'52" E	7.85



WETLAND LINES SHOWN ON THIS SURVEY WERE LOCATED USING A LEICA TCRP 1205. THE PURPOSE OF THIS SURVEY IS FOR THE DEPICTION OF WETLAND AREAS ONLY AND IT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY AND IS NOT SUITABLE FOR CONVEYANCE OF PROPERTY.

> WRIGHT C. POWERS, JR. GEORGIA REGISTERED LAND SURVEYOR RLS No. 2612 / LSF No. 145

L LR	LINE TABLE - PROJECT LIMITS		
LINE	BEARING	LENGTH	
LI .	\$ 73°08'07" W	50.64	
L2	S 73°08'07" W	18.06	
L3	S 36°18'03" W	39.66'	
L4	S 78°05'52" W	48.99'	
1.5	S 82°08'10" E	38.51	
L6	N 49°57'27" E	31.31	
L7	S 26°39'12" W	14.00'	
L8	S 01°01'29" W	18.00	
L9	S 52°00'21" E	48.00	
LIO	S 04°57'56" W	38.00'	
LII	N 06°03'53" E	39.53'	

CURVE TABLE - PROJECT LIMITS					
CURVE	RADIUS	LENGTH	CH BEARING	CH LENGTH	DELTA
CI	20.00'	31.51	S 21°35'27" W	28.35'	90°(6'58"
C2	160.22'	60.10	S 56°15'15" W	59.75'	21°29'32"
C3	160.221	113.38	\$ 25°14'10" W	111.03'	40°32'38"

1	Revise Jurisdictional Salt Marsh Area	ВА	3/26/2020
No.	Revision	8у	Date
		,	

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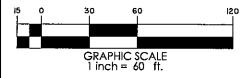
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WETLAND EXHIBIT

### OF LOTS 3, 4, 5 & 6, PHASE 7 **DUTCH ISLAND SUBDIVISION**

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prepared for PETER THACHER & JANE THACHER



plat drawn reviewed 11/19/18 BA WCP

field crew 10/09/18 JΗ

iob 27504.0000

SHEET 8 OF

8





RESOURCE+LAND

### APPENDIX J:

**GNAHRGIS** Database Exhibit



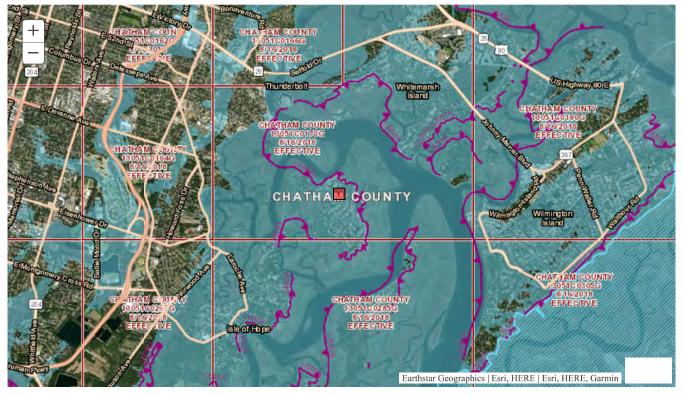


RESOURCE+LAND

# **APPENDIX K:**GA DFIRM

9/21/22, 5:00 PM Risk Snapshot

### 111 Dutch Island Dr, Savannah, Georgia, 31406



### **Legend with Flood Zone Designations**





#### **High Risk Zone AE**

	AE	Current Flood Zone:
Not Available	Not Available	*Probabibility of Flooding: (30-Year Period)
	Not Available	Base Flood Elevation:
Not Available	Not Available	Lowest Adj Grade:
New Assettable	Not Available	Preliminary Flood Zone:
Not Available	Not Available	Flood Zone Change Type:

#### **Location Information**

Panel:	13051C0170G
Watershed:	Ogeechee Coastal
County:	CHATHAM
Community ID:	13051C
Map Status:	EFFECTIVE

<sup>\*</sup> Flood Depths shown on this report are derived from FEMA RiskMAP products and are rounded to the nearest tenth of a foot. These depths are calculated from HEC-RAS modeling and represent the best available data. Only areas within a RiskMAP studied watershed will have this data available. Please check back if your area is not currently available. For more information, please visit the FEMA Map Service Center at

### **Nature Doesn't Read Flood Maps**

Many people don't understand just how risky the floodplain can be. There is a greater than 26% chance that a non-elevated home in the SFHA will be flooded during a 30-year mortgage period.

The chance that a major fire will occur during the same period is less than 10%!

FOR MORE INFORMATION VISIT, PLEASE VISIT:



Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s)