

## **Ward Creek West (NFWMD ILF Program Mitigation Project Site)**

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### **Contents:**

- Summary of Twelve Components of the Compensatory Mitigation Plan
- Detailed Mitigation Plan
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## **Summary of Twelve Components of the Compensatory Mitigation Plan**

Northwest Florida Water Management District  
In-Lieu Fee Program

## **Ward Creek West Mitigation Area**

(Summary of 12 Elements Required by § 332.4(c) of the 2008 EPA/USACE Final Compensatory Mitigation Rule for All In-Lieu Fee Program Project Plans; See Attached Ward Creek West Mitigation Documents for Additional Explanation and Detail)

23 September 2014

### **1—Objectives**

Restoration and enhancement of (~724 acres) of wetlands associated with Ward Creek West Mitigation Area.

- Enhancement of ~44 acres of gum swamp with cypress inclusions (FLUCCS 613 and 621)
- Enhancement of ~160 acres of cypress (FLUCCS 621)
- Restoration of ~137 acres of hydric flatwoods and savanna (FLUCCS 625 & 626)
- Restoration of ~334 acres of hydric flatwoods and savanna (FLUCCS 625)
- Restoration of ~49 acres of long leaf pine – xeric oak (FLUCCS 412)

### **2—Site Selection Criteria**

The St. Andrew Bay watershed is the only major estuarine drainage basin entirely within the Florida Panhandle. As a SWIM waterbody, this watershed is defined as incorporating the interconnected St. Andrew, West, East, and North bays; St. Joseph Bay; the Sand Hills lakes region, and Deer Point Lake Reservoir, as well as the respective watersheds of each of these waterbodies. St. Andrew Sound, formed by Crooked Island, is a smaller embayment located between St. Andrew and St. Joseph bays. The overall surface water basin covers approximately 749,663 acres in six Florida counties. Approximately 61 percent of the watershed is located in Bay County, with 20 percent in Gulf County, 9 percent in Washington County, 4 percent in Calhoun County, 4 percent in Walton County, and 2 percent in Jackson County.

Deer Point Lake Reservoir is located at the terminus of Econfinia Creek, approximately eight miles north of Panama City. The lake's major tributary is Econfinia Creek, and it discharges into North Bay. The lake's drainage basin covers 442 square miles within Bay, Washington, Jackson, and Calhoun counties.

St. Andrew, North, West and East bays have a combined surface area of approximately 59,568 acres. Econfinia Creek, through Deer Point Lake, provides the major freshwater inflow into the estuary, along with a number of smaller creeks. East Pass and West Pass have provided surface water communication with the Gulf of Mexico at each end of Shell Island. West Pass was artificially cut in 1934 as the primary navigation channel to the Gulf, while most exchange between the estuary and the Gulf historically occurred through East Pass. Also prominent in the St. Andrew Bay estuary area are Tyndall Air Force Base (AFB) and the cities of Panama City, Panama City Beach, Lynn Haven, Springfield, Callaway, Parker, and Cedar Grove. The primary land cover within the St. Andrew watershed is upland forests and wetlands.

Acquisition of this mitigation site fills a gap in NFWFMD lands ownership near West Bay, and is part of a larger NFWFMD effort to restore and protect aquatic resources within the St. Andrews Bay watershed. This site was set aside as property deemed appropriate for mitigation as part of the Regional General Permit (RGP) and Ecosystem Management Area (EMA) for Bay County. The District acquired the property from The St. Joe Company as part of the mitigation lands for the RGP and as such the property had been deemed appropriate for mitigation, had a comprehensive WRAP analysis conducted and management plan developed as part of the RGP. After mitigation is implemented and success criteria met, this site is expected to be ecologically self-sustaining.

### **3—Site Protection Instrument**

The NFWFMD, a governmental entity created by the Florida Water Resources Act of 1972, given taxing authority by a Florida constitutional amendment in 1973, with jurisdictional boundaries covering 16 counties established in Florida Statutes 373.069, manages over 200,000 acres in the Florida Panhandle for water resources protection and ecosystem integrity. Florida Statutes 373.1391 mandates ecological management of NFWFMD lands, although allowing for multiple uses such as hunting and passive recreation when such uses do not conflict with ecological management goals. It is the policy of the NFWFMD Governing Board to prioritize the conservation, protection and restoration of water resources and natural ecosystems over other uses such as public access.

In accordance with the site protection clauses of the USACE/EPA compensatory mitigation Final Rule, title to the Ward Creek West mitigation area (acquired fee-simple) will be held in perpetuity by the NFWFMD and managed as conservation/mitigation lands, or with USACE approval, transferred to another suitable land stewardship entity.

### **4—Baseline Information**

(See “Ward Creek West Mitigation Area, Supplement Revised April 15, 2008”)

Maps:

- Location within St. Andrews Bay Watershed (Figure 1)
- 2004 DOQ (Figure 2)
- 1994 DOQ (Figure 3)
- 1964 B&W Aerial (Figure 4)
- Ward Creek West WRAP/Restoration Polygons (Figure 5, 6)
- Soils (Figure 7)

At time of acquisition, this mitigation area consisted of degraded forested wetlands due to absence of fire, removal of wire grass and native understory vegetation due to bedding and shading from dense shrub cover and a pine plantation density of over 800 trees per acre. Minor alterations in hydrology were also observed as ponding associated with road and ditch placement.

### **5—Determination of Credits**

In accordance with the USACE Regional General Permit, the WRAP analysis associated with the property generated a total of 173.76 credits. The USACE and RT associated with the FDOT wetland mitigation evaluated the WRAP analysis and management plan for the property contained in the RGP and agreed that the WRAP analysis and management plan were appropriate. The USACE and RT accepted the WRAP credit analysis and management plan.

The District then implemented the approved restoration plan for Ward Creek West. Release of mitigation credits will be determined by the USACE in consultation with the IRT.

## **6—Detailed Work Plan**

Hydric pine flatwoods (FLUCCS 625) and hydric pine savanna (FLUCCS 626) will be restored from existing pine plantation and titi swamp via thinning of slash pine plantation, removal of dense shrub vegetation, hydrologic improvements via culvert replacement and low water crossings where applicable. Wire grass and tooth ache grass will be reintroduced within the wet prairie, and where appropriate within the hydric pine flatwoods, and prescribed fire will be introduced at 3-4 year intervals, subject to on-the-ground conditions. In the hydric pine flatwoods area, the slash pine will be thinned to no more than 112 trees per acre. Slash pine in areas to be restored to hydric pine savanna will be thinned to less than 112 trees per acre. Cypress strands and gum swamp communities will be enhanced through hydrologic improvements and by allowing fire to move into the edges of these systems as occurred historically. Areas determined in the field to be upland will have all slash pine removed and will be replanted with longleaf pine at no more than 200 trees per acre. Initial dormant-season fuel reduction fires will be followed by implementation of growing-season burns on 2 to 3-years cycles, subject to on-the-ground conditions. Nuisance and exotic species will be managed and eradicated as necessary.

Functional wetland lift will be derived from 1) hydrologic improvement due to the installation of low water crossings and culvert replacement as appropriate, 2) thinning of pines to appropriate levels for the target community, 3) shrub reduction to appropriate levels for target communities, 4) re-emergence of hydric pine flatwoods and hydric pine savanna species, re-vegetation with appropriate hydric pine flatwoods or savanna species such as wire grass and tooth ache grass, 5) re-introduction of fire, including a growing-season fire regime within restored hydric pine and hydric pine savanna, and 6) long-term management including control of nuisance and exotic species.

The site will be restored to an integrated matrix of wetland communities including FLUCCS 613 and 621, gum swamp with cypress inclusions, FLUCCS 625/626 – Hydric Pine Flatwoods and Savanna, FLUCCS 621 – Cypress, and hydric pine flatwoods (FLUCCS 625).

Areas targeted for hydric pine flatwoods and hydric pine savanna restoration may be planted with species including cypress, wire grass, tooth ache grass.

Upon completion of restoration activities, long-term ecological management will be implemented seamlessly across Ward Creek West.

### **Sequence of Restoration Activities—**

- Hydrologic improvements (implemented 2009, culverts, low water crossings 2012).
  - Culvert replacement
  - Low water crossings
- Restoration of the wet prairie community (implemented 2008 and ongoing)
- Enhancement of cypress and gum habitat (implemented in 2008 and ongoing)
- Restoration of the hydric pine community (implemented 2009 and ongoing)
- Restoration of the sand hill community (uplands) (implemented in 2009 and ongoing).

## **7—Maintenance Plan**

After implementation of mitigation and meeting of all success criteria, this site will be actively maintained by NFWFMD lands management personnel as part of the District's holdings in the St. Andrews Bay Watershed. Maintenance will include prescribed fire where appropriate, and exotics management. This site is expected to be largely self-sustaining.

## **8—Performance Standards**

- Nuisance vegetation  $\leq$  5% cover of site.
- Exotic vegetation  $\leq$  1% cover of site.
- In the hydric pine flatwoods area, no more than 112 trees per acre.
- In the hydric pine savanna less than 112 trees per acre
- No more than 200 longleaf pine trees per acre in upland areas.
- No observable decline in vegetation community health
- Native groundcover and shrub layer species appropriate for natural community type trending toward increase in diversity and coverage.

## **9—Monitoring**

Monitoring protocols necessary to ensure effective preservation, enhancement, restoration and management will be conducted annually for a minimum of five years from the start of mitigation activities or as required by USACE permit conditions. Monitoring will be performed by NFWFMD staff or qualified consulting firms. Annual reports will be generated and posted at [www.NFWFMDwetlands.com](http://www.NFWFMDwetlands.com) (or any successor website).

### WRAP Analysis

A WRAP analysis was conducted in conjunction with the RGP and WMA. Ward Creek West, as part of lands within the WMA, a WRAP analysis was conducted and approved for this property being included in the RGP. WRAP credit determination developed within the RGP was deemed appropriate, evaluated by the RT and accepted for the lands associated with Ward Creek West.

### Exotic Vegetation

Invasive exotic species cover shall be less than 1% cover in any one acre and nuisance native species will be less than 5% in any one acre at release. Surveys for exotic and nuisance native vegetation will occur annually and percent cover will be recorded and included in the annual report. If observed, exotic vegetation will be eradicated manually or chemically to ensure that the exotic species cover is below desired cover requirements.

### Quantitative Monitoring

Quantitative monitoring will be conducted annually at the end of the growing season. Percent vegetation cover will be monitored at permanent transect locations established for each site and community. One-meter square quadrats will be established along 300' transects at 10' intervals. At least two transects will be established for each restoration community for each site. The presence of any threatened or endangered species will be recorded and highlighted in the annual report, and GPS locations recorded.

Vegetation species coverage statistics will be generated from the recorded coverage of each species (or bare ground or open water) within a given quadrat. The percent coverage for each species (and bare ground or open water) was generated by adding all quadrat observations together, and dividing the total coverage by the cover of each species within each transect. This

represents a modified Daubenmire cover scale where vegetation species statistics are used to determine the percent cover by bare ground, water, individual species and groups, such as wetland species, invasive exotic and nuisance species.

#### Qualitative Monitoring: Materials and Methods

Qualitative vegetation monitoring will include direct observation of habitat health and a record of all species occurring within a given community at the time of the site visit. Pedestrian surveys increase site coverage and include a 30+ minute meandering walk-path intended to provide information useful in management and to determination the success of management activities. Each walk path will traverse as much habitat as possible. A plant species will be recorded along the pedestrian walk-path. The survey will continue until no additional species have been observed for 3 minutes. Representative photos and a community description and health will be included for each walk-path. Fuel load for each habitat was determined and the presence of any threatened or endangered species will be recorded and highlighted in the annual report. Plants will be listed in the annual reports in the following categories (tree, shrub, vine or herbaceous) to give a better understanding of composition of the habitat. Wildlife observations will also be recorded and included in the annual report.

#### Photographic Documentation

##### *Site Photos:*

In conjunction with the pedestrian surveys, representative photos will be taken of restoration communities.

##### *Panoramic photos:*

Panoramic 360 degree photographs will be taken from the permanently established stations.

##### *Oblique aerials:*

Oblique aerials may be acquired.

#### Wildlife Monitoring

During the vegetation monitoring and pedestrian surveys, wildlife observations will be recorded. These observations will consist of direct sightings, scat, tracks, or vocalizations. The presence of any listed species or unique wildlife observation such as a gopher tortoise burrow or wading bird colony will be noted and GPS location recorded.

#### Fuel loads and prescribed fires within pyrogenic communities

Annual status reports will detail the condition of the communities relative to the need and potential for a burn, the conditions required for the next desirable burn, and the anticipated timeframe for the next burn.

### **10—Long-term Management**

Long-term management, including exotics control and limited prescribed fire, will be implemented by the NFWFMD. The NFWFMD is responsible for ensuring the perpetual management of mitigation lands. Florida Statutes sections 373.1391(1)(a) and 373.59(3) mandate the ecological management and restoration, to the extent practicable, of lands owned by the NFWFMD. Mitigation lands owned by the NFWFMD will be managed in perpetuity for ecological integrity.

### **11—Adaptive Management Plan**

If changes in the implementation of this mitigation plan become necessary due to the stochastic nature of ecological processes, the NFWFMD will first obtain approvals from the USACE.

## **12—Financial Assurances**

The NFWFMD is a governmental entity created by the Florida Water Resources Act of 1972 with the mission of protecting water resources protection and ecosystem integrity. Funds are specifically earmarked to implement and maintain mitigation.

As of July, 2014, the NFWFMD had greater than \$15,000,000 available in a dedicated mitigation fund. This fund was established to receive payment from sales of mitigation credits and to ensure adequate funding for the implementation and long-term management of mitigation sites, in accordance with 62-342.850 FAC.

## **Other Information**

Any additional information requested by the USACE to determine the appropriateness, feasibility, and practicability of this compensatory mitigation project will be provided.



## Detailed Mitigation Plan

## **WARD CREEK WEST RESTORATION PLAN**

### **UWRMP Section 5.4.2 Supplement**

**Revised April 15, 2008**

(Minor updates February 2014)

#### **Site Description:**

Ward Creek West is a 724-acre tract located ¼ mile west of SR 79 in Bay Co. within the West Bay subbasin of the St. Andrew Bay watershed. Approximately 675 acres (93%) are wetlands and 49 acres (7%) uplands. Although surface drainage is problematic given the flatness of the landscape, the headwaters of Ward Creek, a first-order stream flowing east to West Bay, occur within this tract.

Currently, this site consists largely of bedded slash pine plantation (FLUCCS 441), titi (FLUCCS 614), and pockets of gum swamp (FLUCCS 613) with cypress inclusions (FLUCCS 621). Historic aeriels suggest this area was once dominated by hydric pine flatwoods (FLUCCS 625) and hydric pine savanna (FLUCCS 626), with conversion to pine plantation occurring sometime after 1964. Impacts to this site include ditching, bedding and other silvicultural activities. Located within the Regional General Permit (RPG) and Ecosystem Management Area (EMA), most of the pine plantation stands in this area have according to St. Joe Co. documents been through one or more rotations. The goal of this project is restoration of hydric pine flatwoods (FLUCCS 625), hydric pine savanna (FLUCCS 626), and pockets of cypress (FLUCCS 621) coupled with enhancement of pockets of gum swamp (FLUCCS 613) and cypress (FLUCCS 621). The restored site will be owned and managed in perpetuity for ecological integrity by the NFWFMD.

#### **Restoration Activities:**

Hydric pine flatwoods (FLUCCS 625) and hydric pine savanna (FLUCCS 626) will be restored from existing pine plantation and titi areas via thinning of bedded slash pine, ditch plugs where applicable, seeding of herbaceous vegetation, prescribed fire and perpetual ecological management. In wet areas, slash pine will be thinned to no more than 112 trees per acre. Slash pine in areas to be restored to hydric pine savanna will be thinned to less than 112 trees per acre. Areas determined in the field to be upland will have all slash pine removed and will be replanted with longleaf pine at no more than 200 trees per acre. Mechanical reduction of shrubs (e.g., gyro-tracking) may be employed. Initial dormant-season fuel reduction fires will be followed by implementation of growing-season burns on 2 to 3-years cycles, subject to on-the-ground conditions. Nuisance and exotic species would be managed and eradicated as necessary. Nuisance/exotic management may include the use of approved herbicides.

#### **Functional UMAM Units:**

Per the USACE/IRT, WRAP values developed for the RGP will be applied to this site for a total of 173.76 credits.

**Success Criteria:**

- Nuisance vegetation  $\leq$  5% cover of site.
- Exotic vegetation  $\leq$  1% cover of site.
- In the hydric pine flatwoods area, no more than 112 trees per acre.
- In the hydric pine savanna less than 112 trees per acre
- No more than 200 longleaf pine trees per acre in upland areas.
- No observable decline in vegetation community health
- Native groundcover and shrub layer species appropriate for natural community type trending toward increase in diversity and coverage.

**Monitoring:**

Monitoring protocols necessary to ensure effective preservation, enhancement and management will be conducted annually for five years from the start of mitigation activities or as required by USACE permit conditions. Photo-points and meandering vegetation surveys by a qualified biologist are expected to comprise the monitoring for this site.

Annual reports will be generated and posted at [www.NWFWMDwetlands.com](http://www.NWFWMDwetlands.com).

**WRAP Analysis**

A WRAP analysis was conducted in conjunction with the RGP and WMA. Ward Creek West, as part of lands within the WMA, a WRAP analysis was conducted and approved for this property being included in the RGP. WRAP credit determination developed within the RGP was deemed appropriate, evaluated by the RT and accepted for the lands associated with Ward Creek West.

**Exotic Vegetation**

Invasive exotic species cover shall be less than 1% cover in any one acre and nuisance native species will be less than 5% in any one acre at release. Surveys for exotic and nuisance native vegetation will occur annually and percent cover will be recorded and included in the annual report. If observed, exotic vegetation will be eradicated manually or chemically to ensure that the exotic species cover is below desired cover requirements.

**Quantitative Monitoring**

Quantitative monitoring will be conducted annually at the end of the growing season. Percent vegetation cover will be monitored at permanent transect locations established for each site and community. One-meter square quadrats will be established along 300' transects at 10' intervals. At least two transects will be established for each restoration community for each site. The presence of any threatened or endangered species will be recorded and highlighted in the annual report, and GPS locations recorded.

Vegetation species coverage statistics will be generated from the recorded coverage of each species (or bare ground or open water) within a given quadrat. The percent coverage for each species (and bare ground or open water) was generated by adding all quadrat observations together, and dividing the total coverage by the cover of each species within each transect. This represents a modified Daubenmire cover scale where vegetation species statistics are used to determine the percent cover by bare ground, water, individual species and groups, such as wetland species, invasive exotic and nuisance species.

### Qualitative Monitoring: Materials and Methods

Qualitative vegetation monitoring will include direct observation of habitat health and a record of all species occurring within a given community at the time of the site visit. Pedestrian surveys increase site coverage and include a 30+ minute meandering walk-path intended to provide information useful in management and to determination the success of management activities. Each walk path will traverse as much habitat as possible. A plant species will be recorded along the pedestrian walk-path. The survey will continue until no additional species have been observed for 3 minutes. Representative photos and a community description and health will be included for each walk-path. Fuel load for each habitat was determined and the presence of any threatened or endangered species will be recorded and highlighted in the annual report. Plants will be listed in the annual reports in the following categories (tree, shrub, vine or herbaceous) to give a better understanding of composition of the habitat. Wildlife observations will also be recorded and included in the annual report.

### Photographic Documentation

#### *Site Photos:*

In conjunction with the pedestrian surveys, representative photos will be taken of each restoration community. These photos will be included following the species lists for each pedestrian survey.

#### *Panoramic photos:*

Panoramic 360 degree photographs will be taken from the permanently established stations at each transect location and will be included in the annual report.

#### *Oblique aerals:*

Annually in the fall, oblique aerals for each restoration site will be flown, starting with a baseline aerial, flown prior to implementing restoration activities. Oblique aerals will be labeled to illustrate the direction and flight path of each photo, as well as labeling any significant features such as lakes, streams and wetlands.

### Wildlife Monitoring

During the vegetation monitoring and pedestrian surveys, wildlife observations will be recorded. These observations will consist of direct sightings, scat, tracks, or vocalizations. The presence of any listed species or unique wildlife observation such as a gopher tortoise burrow or wading bird colony will be noted and GPS location recorded.

### Fuel loads and prescribed fires within pyrogenic communities

Annual status reports will detail the condition of the communities relative to the need and potential for a burn, the conditions required for the next desirable burn, and the anticipated timeframe for the next burn.

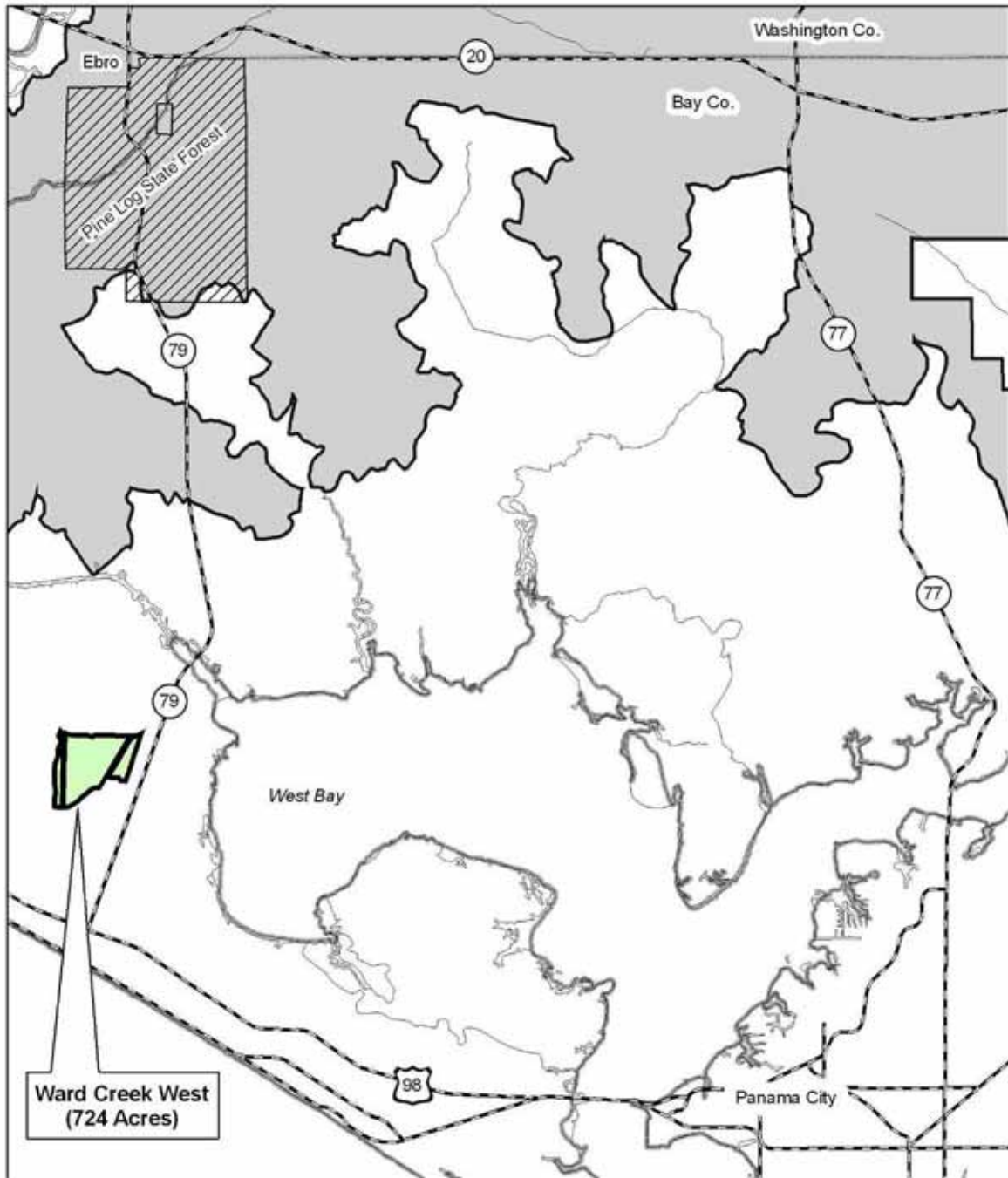
### **Long-term Management:**

Long-term management, including exotics control and limited prescribed fire, will be implemented by the NFWFMD. The NFWFMD is responsible for ensuring the perpetual management of mitigation lands. Florida Statutes sections 373.1391(1)(a) and 373.59(3) mandate the ecological management and restoration, to the extent practicable, of lands owned by the NFWFMD. Mitigation lands owned by the NFWFMD will be managed in perpetuity for ecological integrity in accordance with the "Management Policies for Water Management Areas of the Northwest Florida Water Management District" (NFWFMD 1998).

**Annual Status Reports:**

Detailed annual status reports will be generated for five years following initiation of restoration activities and posted at <http://www.nwfwmdwetlands.com> (or any successor website). A summary status report for all mitigation projects, including cost accounting, will also be provided annually to the USACE.

## Location



 SHLMB Mitigation Service Area

## 2004 DOQ



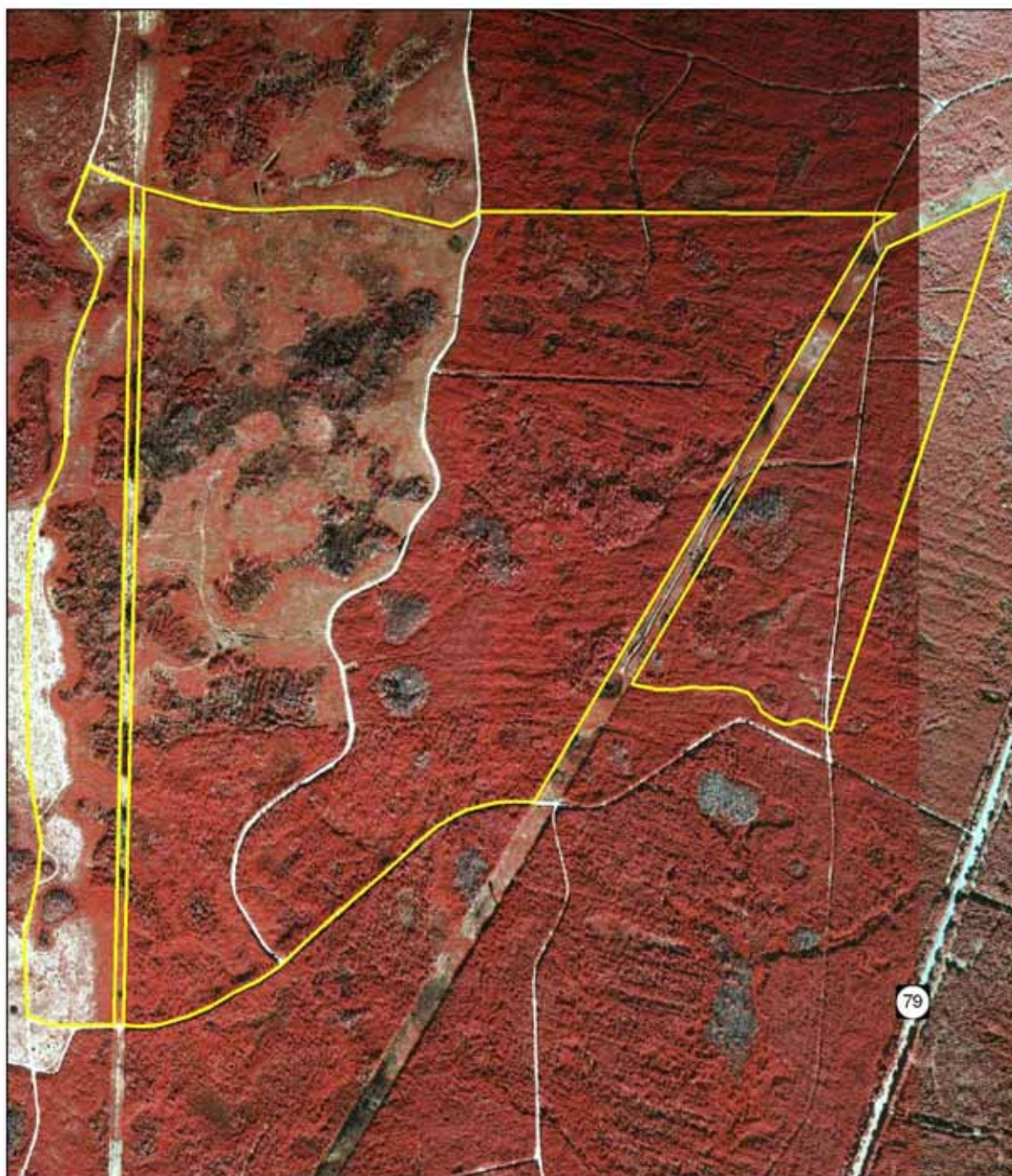
724 Acres

0 0.25 0.5 Miles





# 1994 DOQ



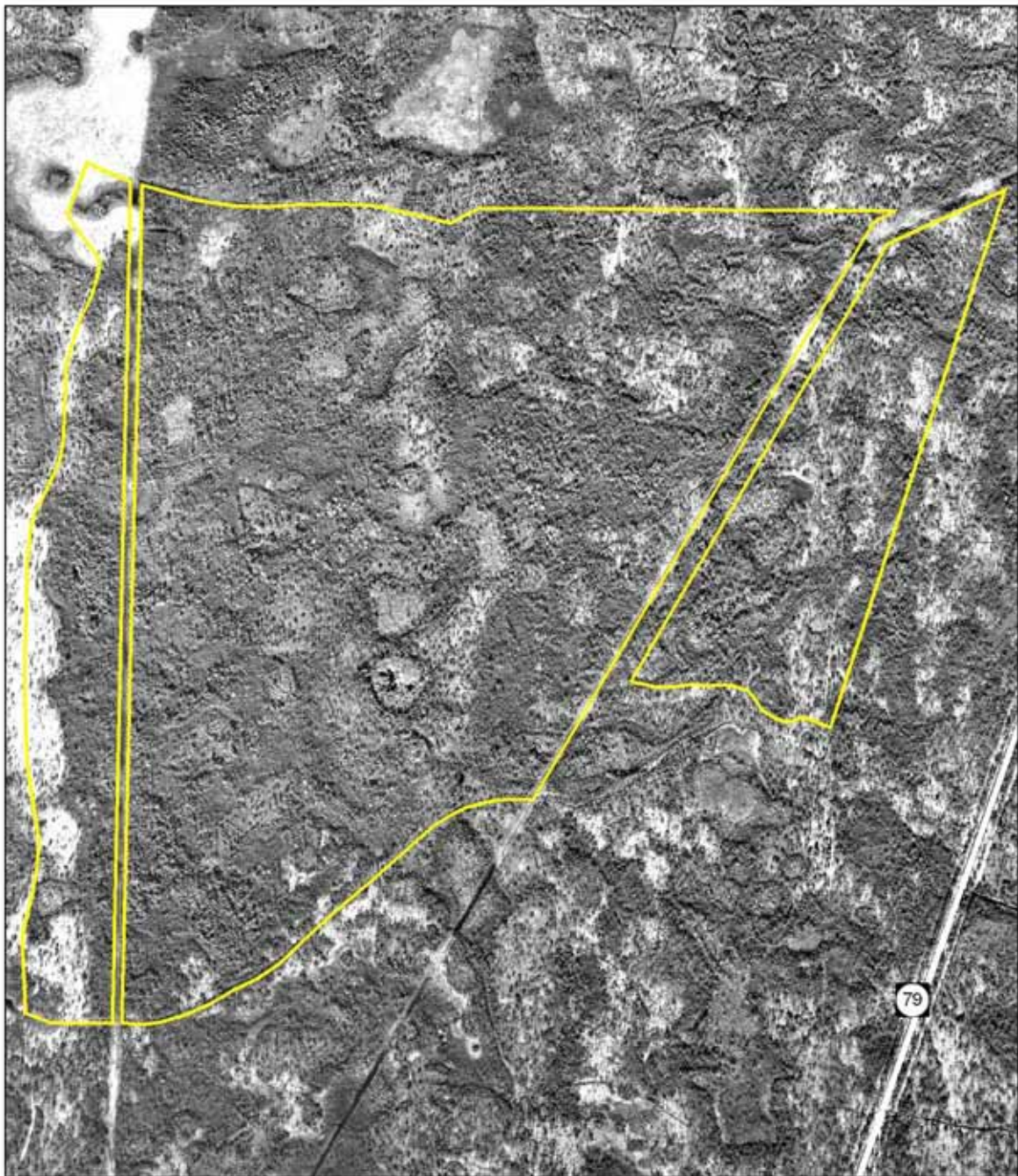
724 Acres

0 0.25 0.5 Miles





# 1964 B&W Aerial

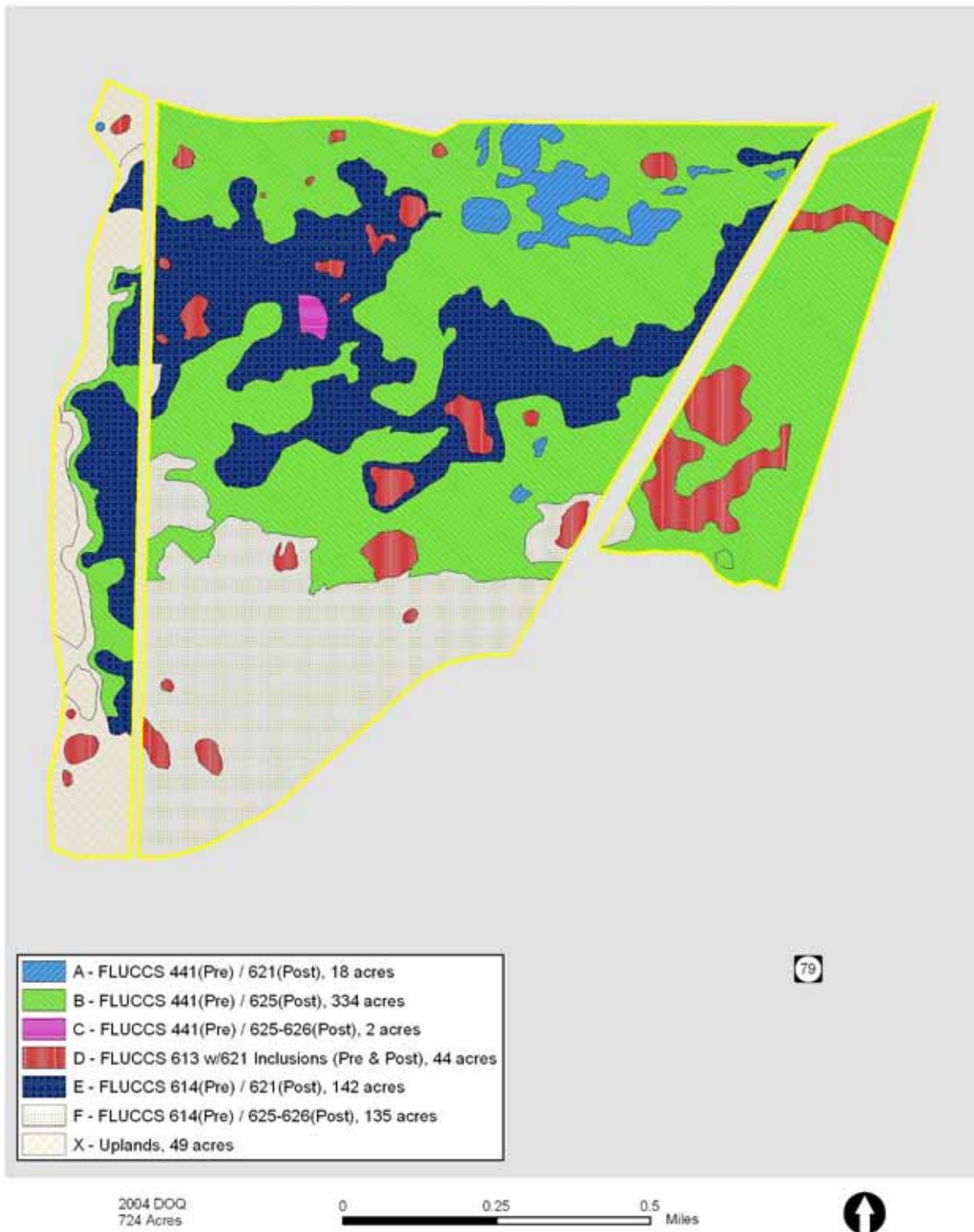


724 Acres

0 0.25 0.5 Miles

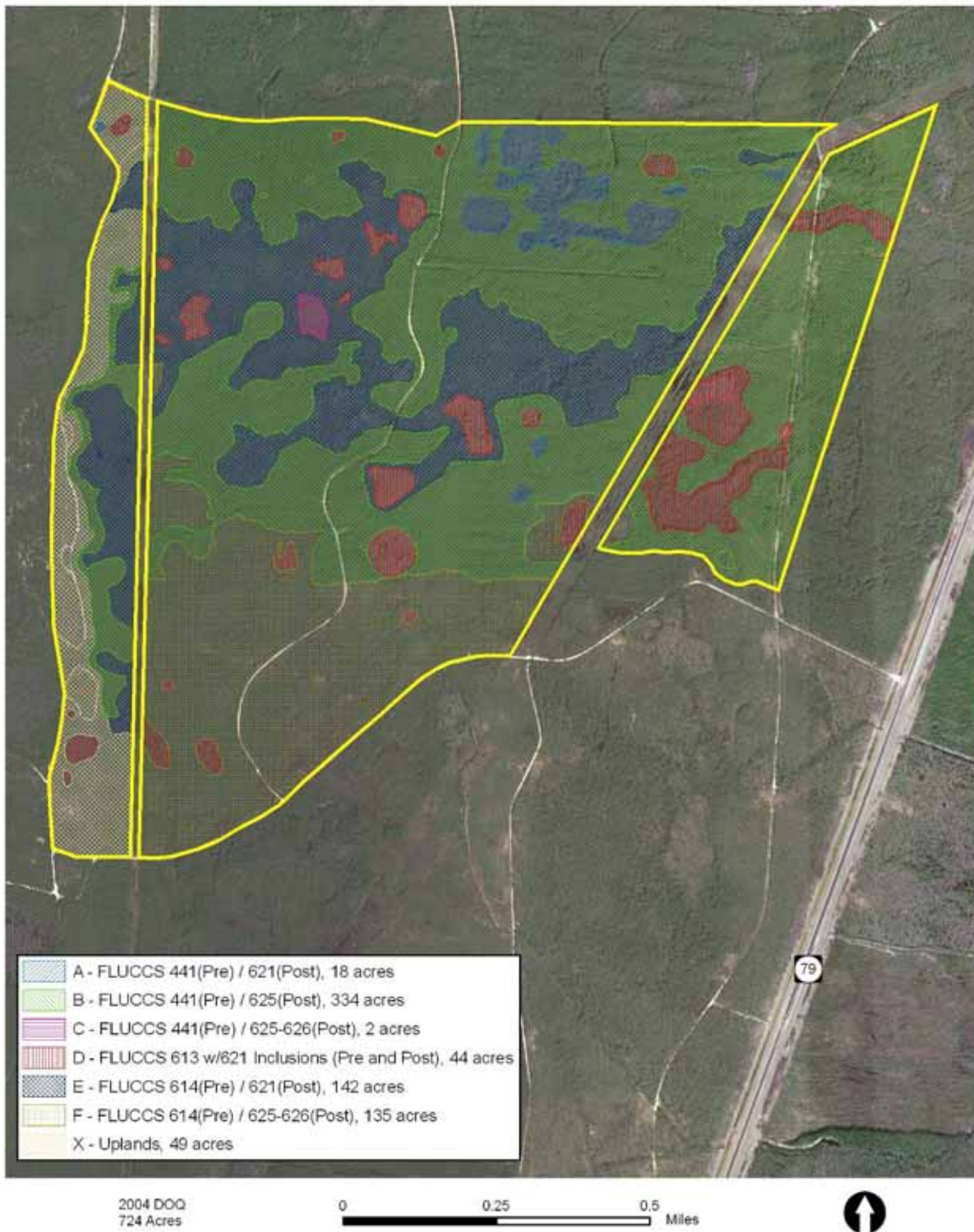


## Ward Creek West - WRAP Polygons





## Ward Creek West - WRAP Polygons



## NRCS (SCS) Soil Survey



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**Ward Creek West WRAP Scores (per RGP/DSMB)**

<b>Polygon</b>	<b>Acres</b>	<b>Existing WRAP Score</b>	<b>Future WRAP Score</b>	<b>Delta</b>	<b>WRAP Credits</b>
<b>A</b>	18	0.65	0.96	0.31	5.58
<b>B</b>	334	0.65	0.96	0.31	103.54
<b>C</b>	2	0.65	0.96	0.31	0.62
<b>D</b>	44	0.92	0.99	0.07	3.08
<b>E</b>	142	0.75	0.97	0.22	31.24
<b>F</b>	135	0.75	0.97	0.22	29.70
<b>Total:</b>	<b>675</b>				<b>173.76</b>

**Compensatory Mitigation Plan Documentation  
Devils Swamp Mitigation Bank**

## **ATTACHMENT B-4 – WRAP ANALYSIS**

The ecological function and estimated environmental lift associated with the proposed restoration on the Devil's Swamp Mitigation Bank (DSMB) property was assessed from spring to winter 2003. This assessment included a site visit followed by several in-office sessions. The October 1998 operational draft of the Wetland Rapid Assessment Procedure (WRAP), as implemented within the RGP and EMA and at the proposed Panama City Airport site, was used to determine the functional value of wetlands at the bank. The "lift" associated with each type of ecological change was then calculated and is displayed below. The credits from that assessment were modified by the Mitigation Bank Site Suitability Index and adjusted for time lag and risk.

### **WRAP Analysis**

The interagency Technical Team met numerous times and agreed on the following scoring scenario, which is further described below:

**Master Credit Table: Expected Lift by Polygon Category:**

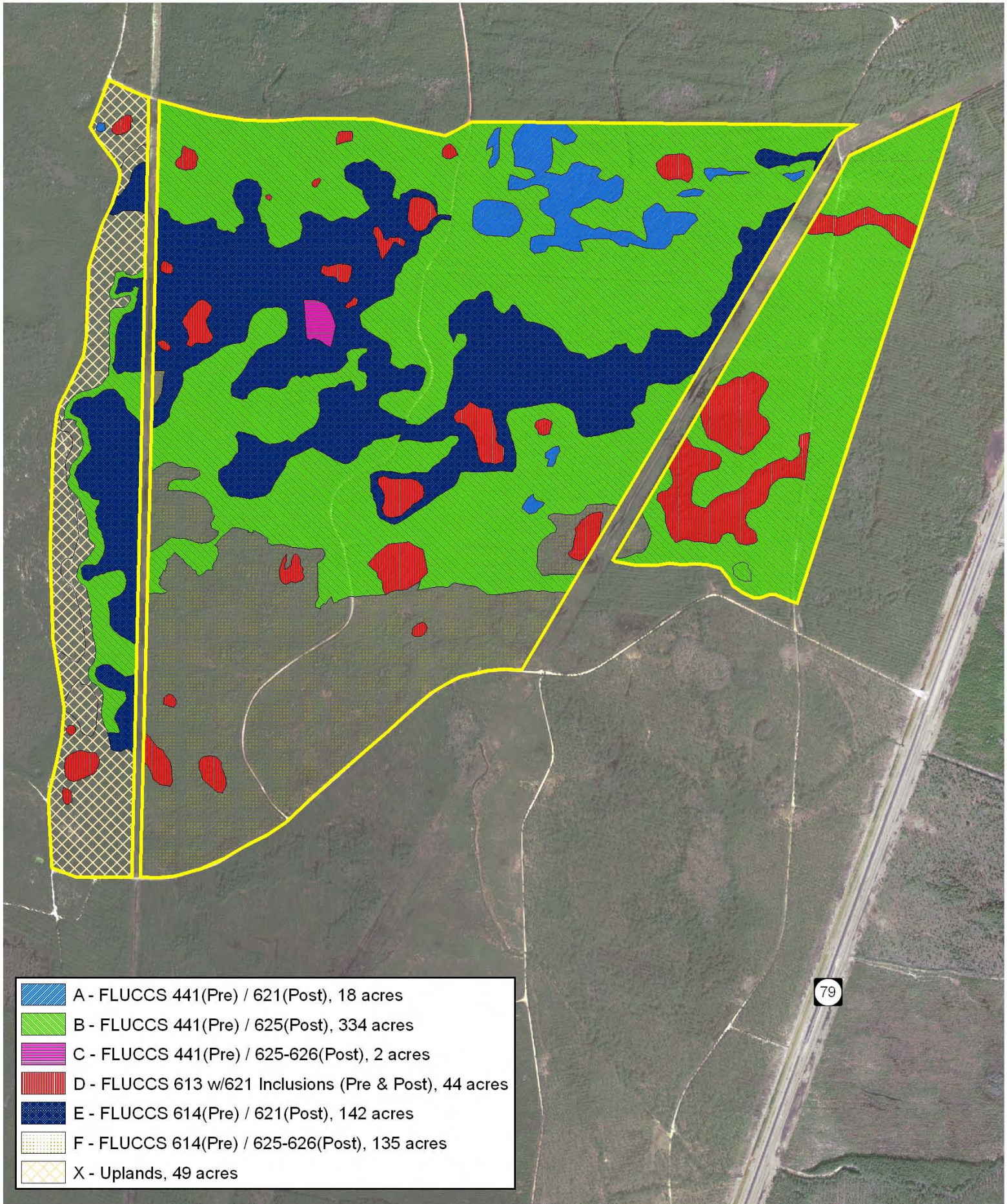
<b>Existing condition</b>	<b>Post restoration condition</b>	<b>Acres</b>	<b>Existing conditions score</b>	<b>With mitigation score</b>	<b>Scoring delta (Lift)</b>	<b>Mitigation Units (credits)</b>
Bedded Pine Plantation	Hydric pine flatwoods	780.80	0.65	0.96	0.31	242.05
Bedded Pine Plantation	Wet prairie/Savannah	295.20	0.65	0.96	0.31	91.51
Bedded Pine Plantation	Cypress Swamp	18.70	0.65	0.96	0.31	5.80
Bedded Pine Plantation	Mixed forested wetland	153.40	0.65	0.96	0.31	47.55
Unplanted wetlands - Titi	Hydric pine flatwoods	48.20	0.75	0.97	0.22	10.60
Unplanted wetlands - Titi	Wet prairie/Savannah	79.40	0.75	0.97	0.22	17.47
Unplanted wetlands - Titi	Cypress Swamp	2.30	0.75	0.97	0.22	0.51
Unplanted wetlands - Titi	Mixed forested wetland	583.60	0.75	0.97	0.22	128.39
Unplanted wetlands-other	Hydric pine flatwoods	9.10	0.92	0.99	0.07	0.64
Unplanted wetlands-other	Wet prairie/Savannah	17.10	0.92	0.99	0.07	1.20
Unplanted wetlands-other	Cypress Swamp	53.40	0.92	0.99	0.07	3.74
Unplanted wetlands-other	Mixed forested wetland	410.00	0.92	0.99	0.07	28.70
Non-bedded pine plantation	Upland pines	545.60	n/a	n/a	0.00	0.00
Roads, waterbodies	Roads, waterbodies	52.40	0	0	0.00	0.00
<b>Total</b>		<b>3,049.20</b>				<b>578.10</b>

#### Existing conditions scores.

Existing condition scores for pine plantation were 0.65, the score assigned to "low quality" wetlands in the RGP/EMA.



# Ward Creek West - WRAP Polygons



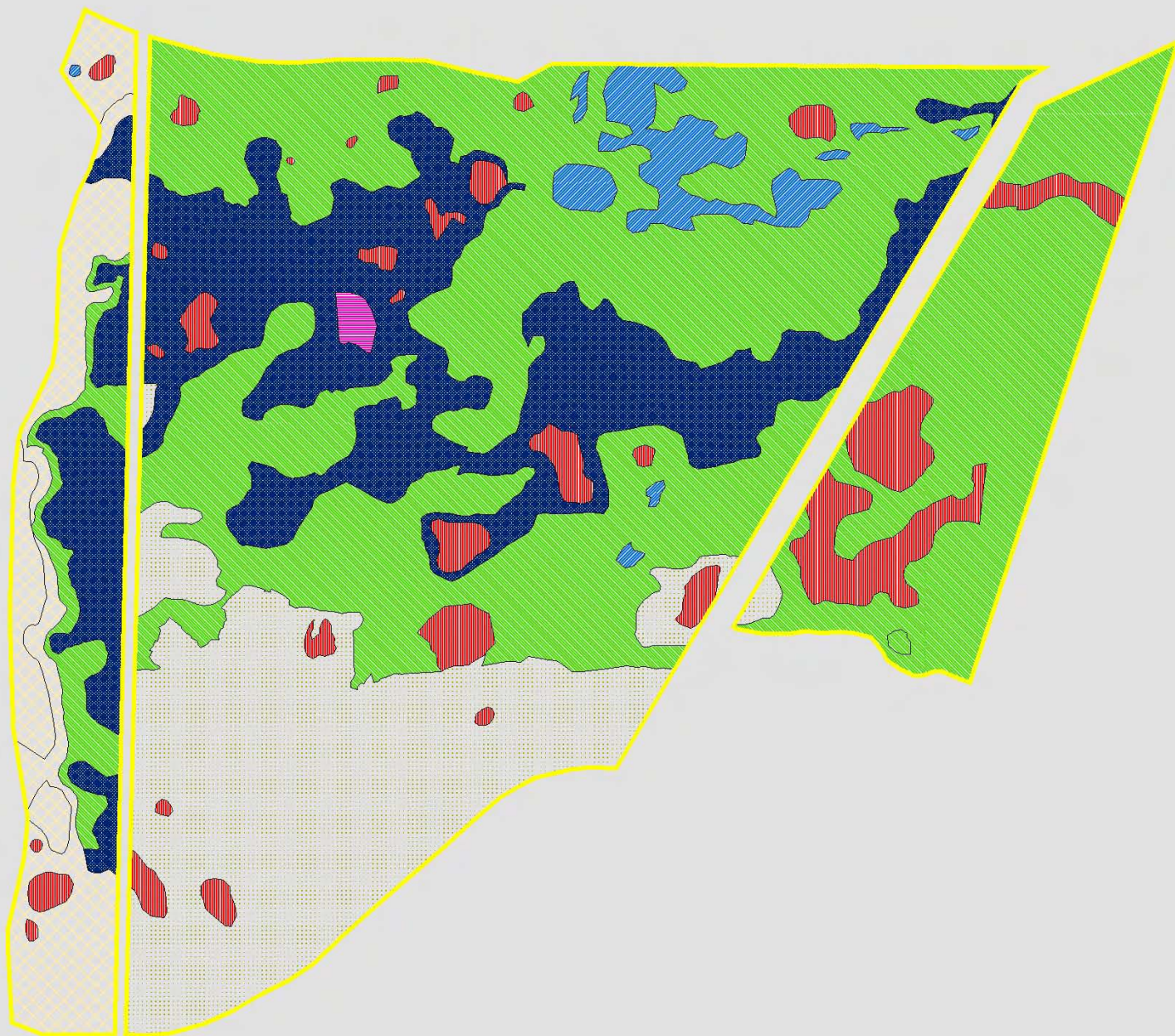
2004 DOQ  
724 Acres

0 0.25 0.5 Miles





# Ward Creek West - WRAP Polygons



79

2004 DOQ  
724 Acres

0 0.25 0.5 Miles





## **USACE Jurisdictional Determination (JD Form)**

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

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

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 10 February 2009**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAJ-RD-NC, FL DOT-Ward Creek West- Umbrella Mitigation Plan,**

**545-209-579**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: Florida County/parish/borough: Bay City:

Center coordinates of site (lat/long in degree decimal format): Lat. 30.2739° **N**, Long. -85.8859° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Ward Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: West Bay

Name of watershed or Hydrologic Unit Code (HUC): 03140101

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

☒ Office (Desk) Determination. Date: 2/9/09

☒ Field Determination. Date(s): spring 2008

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

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

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

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

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 1200 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): .

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: .

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

### SECTION III: CWA ANALYSIS

#### **A. TNWs AND WETLANDS ADJACENT TO TNWs**

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

##### **1. TNW**

Identify TNW: **West Bay.**

Summarize rationale supporting determination: West Bay is part of the Intracoastal Waterway.

##### **2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: Ward Creek and its associated headwater wetlands are a tributary of West Bay.

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

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

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

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

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

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

###### **(i) General Area Conditions:**

Watershed size: 1300 **acres**

Drainage area: **square miles**

Average annual rainfall: 65.06 inches

Average annual snowfall: 0.0 inches

###### **(ii) Physical Characteristics:**

###### **(a) Relationship with TNW:**

☒ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **1-2** river miles from TNW.

Project waters are **1-2** river miles from RPW.

Project waters are **1-2** aerial (straight) miles from TNW.

Project waters are **1-2** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

Identify flow route to TNW<sup>5</sup>: Headwater wetlands discharge to Ward Creek and directly to West Bay.

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

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

Tributary is: ☒ Natural  
☐ Artificial (man-made). Explain: .  
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: 8 feet

Average depth: 2 feet

Average side slopes: **4:1 (or greater)**.

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input checked="" type="checkbox"/> Sands	<input type="checkbox"/> Concrete
<input type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input checked="" type="checkbox"/> Muck
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Vegetation. Type/% cover:	
<input type="checkbox"/> Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Discrete**. Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	
<input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply):	
<input checked="" type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving	<input type="checkbox"/> the presence of wrack line
<input checked="" type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> sediment sorting
<input checked="" type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
<input type="checkbox"/> sediment deposition	<input checked="" type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> water staining	<input checked="" type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	
<input type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input type="checkbox"/> Mean High Water Mark indicated by:
<input type="checkbox"/> oil or scum line along shore objects	<input type="checkbox"/> survey to available datum;
<input type="checkbox"/> fine shell or debris deposits (foreshore)	<input type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: whater color is clear.

Identify specific pollutants, if known: .

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

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

- ☐ Riparian corridor. Characteristics (type, average width):  
☐ Wetland fringe. Characteristics:  
☒ Habitat for:

☐ Federally Listed species. Explain findings:  
☒ Fish/spawn areas. Explain findings: Ward Creek is an open water, tidally influenced system, which directly discharges to West Bay which provides for spawning habitat.  
☐ Other environmentally-sensitive species. Explain findings:  
☐ Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 1200 acres

Wetland type. Explain: Palustrian.

Wetland quality. Explain: medium-high quality - undisturbed except for planted pine.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain:

Surface flow is: **Overland sheetflow**

Characteristics:

Subsurface flow: **Unknown**. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting  
☐ Not directly abutting  
☐ Discrete wetland hydrologic connection. Explain:  
☐ Ecological connection. Explain:  
☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **1-2** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**.

Estimate approximate location of wetland as within the **20 - 50-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- ☐ Riparian buffer. Characteristics (type, average width):  
☐ Vegetation type/percent cover. Explain:  
☒ Habitat for:  
☒ Federally Listed species. Explain findings:  
☐ Fish/spawn areas. Explain findings:  
☐ Other environmentally-sensitive species. Explain findings:  
☒ Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **1**

Approximately ( 1200 ) acres in total are being considered in the cumulative analysis.



For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
y	1200 acres		

Summarize overall biological, chemical and physical functions being performed: The subject wetlands for the headwaters of Ward Creek which discharges to West Bay a subbasin of the St. Andrew Bay watershed. The subject wetlands provides for several important functions including groundwater filtration and recharge, habitat for numerous plan and wildlife species, a source of water for wildlife, nutrient uptake and pollutant attenuation. These functions serve to improve health and water qality of West Bay. Dredge and fill activities combined with pollutant input from agricultural activities in these headwaters will reduce water qality and adversely affect fish and wildlife resouces within West Bay.

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

The subject RPW has a perennial connection however, the panhandle of Florida is in a six year drought leading to a intermittent connection at this time. Flow appears to be greater than 6 month continuous, but not year round. The RPW and its abutting wetlands form the headwaters of Ward Creek. The wetland systems and RPW have been identified on the USGS NHD website as well as USGS quad sheets.

The subject headwater wetlands and RPW provide important ecological functions including controlling the frequency and intensity of downstream flooding, controlling the quality and availability of water in the RPW, controlling sediment retention in headwater channels and downstream sediment transport, contribute to uptake and retention of nutrients and increased downstream transport of nutrients with improved water quality, provides for storage and transformation of excess organic matter. The subject wetlands and RPW provide habitat for aquatic biota which leading to biological diversity. This determination was not coordinated with EPA for significant nexus determinations pursuant to MG Riley's Memorandum dated 28 Jan 08 (Subject: Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the Rapanos and SWANCC Supreme Court Decisions, paragraph 1.a.), as clarified by the EPA/SAD/SAJ email thread dated 28 January to 3 October 2008..

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

**1. TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.  
☐ Wetlands adjacent to TNWs: acres.

**2. RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .  
☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Ward Creek is a small stream which located at the base of a 1300 acre watershed which is comprised mostly of planted pine and dense shrub underlayer. Field observations by NFWMD staff indicate Ward Creek does not flow during the dry season (summer months) but has a continual flow for greater than six months during the year.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: **5000** linear feet **20** width (ft).  
☐ Other non-wetland waters: acres.  
Identify type(s) of waters: .

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).  
☐ Other non-wetland waters: acres.  
Identify type(s) of waters: .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **The subject wetlands are the headwater wetlands of Ward Creek. The approximately 1300 acre drainage area is dominated by planted pine with natural wetland communities intermixed which contribute to the perennial flow of Ward Creek. The panhandle of Florida is currently experiencing a six year drought which has reduced year round continuous flow to more than 6 months but less than 12 months.**  
☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **1200** acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

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

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

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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<sup>8</sup>See Footnote # 3.



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

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain:          .
- ☐ Other factors. Explain:          .

**Identify water body and summarize rationale supporting determination:**          .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters:          linear feet          width (ft).
- ☐ Other non-wetland waters:          acres.  
Identify type(s) of waters:          .
- ☐ Wetlands:          acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams):          linear feet          width (ft).
- ☐ Lakes/ponds:          acres.
- ☐ Other non-wetland waters:          acres. List type of aquatic resource:          .
- ☐ Wetlands:          acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams):          linear feet,          width (ft).
- ☐ Lakes/ponds:          acres.
- ☐ Other non-wetland waters:          acres. List type of aquatic resource:          .
- ☐ Wetlands:          acres.

**SECTION IV: DATA SOURCES.**

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

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:          .
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☐ Office concurs with data sheets/delineation report.

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

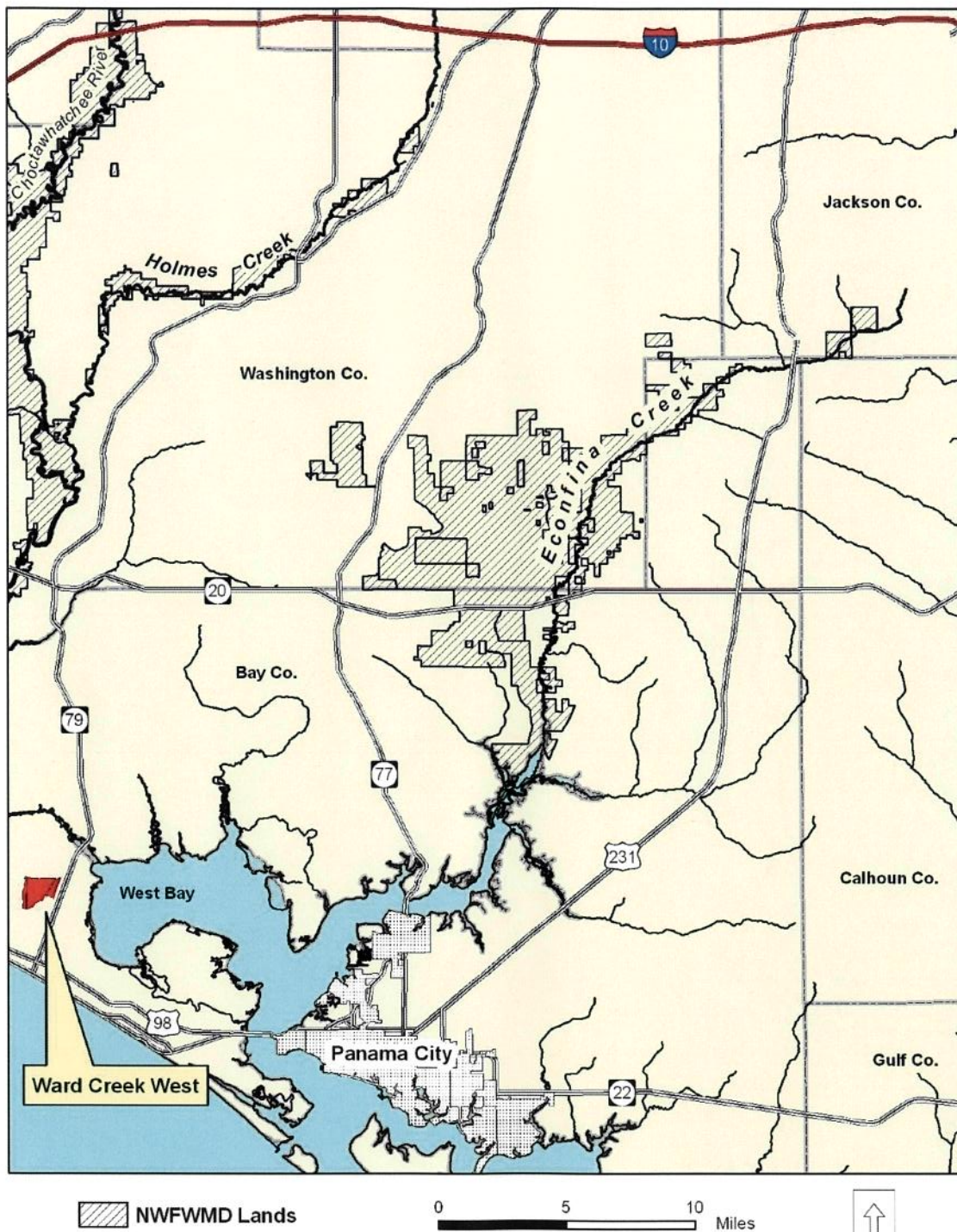
<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.



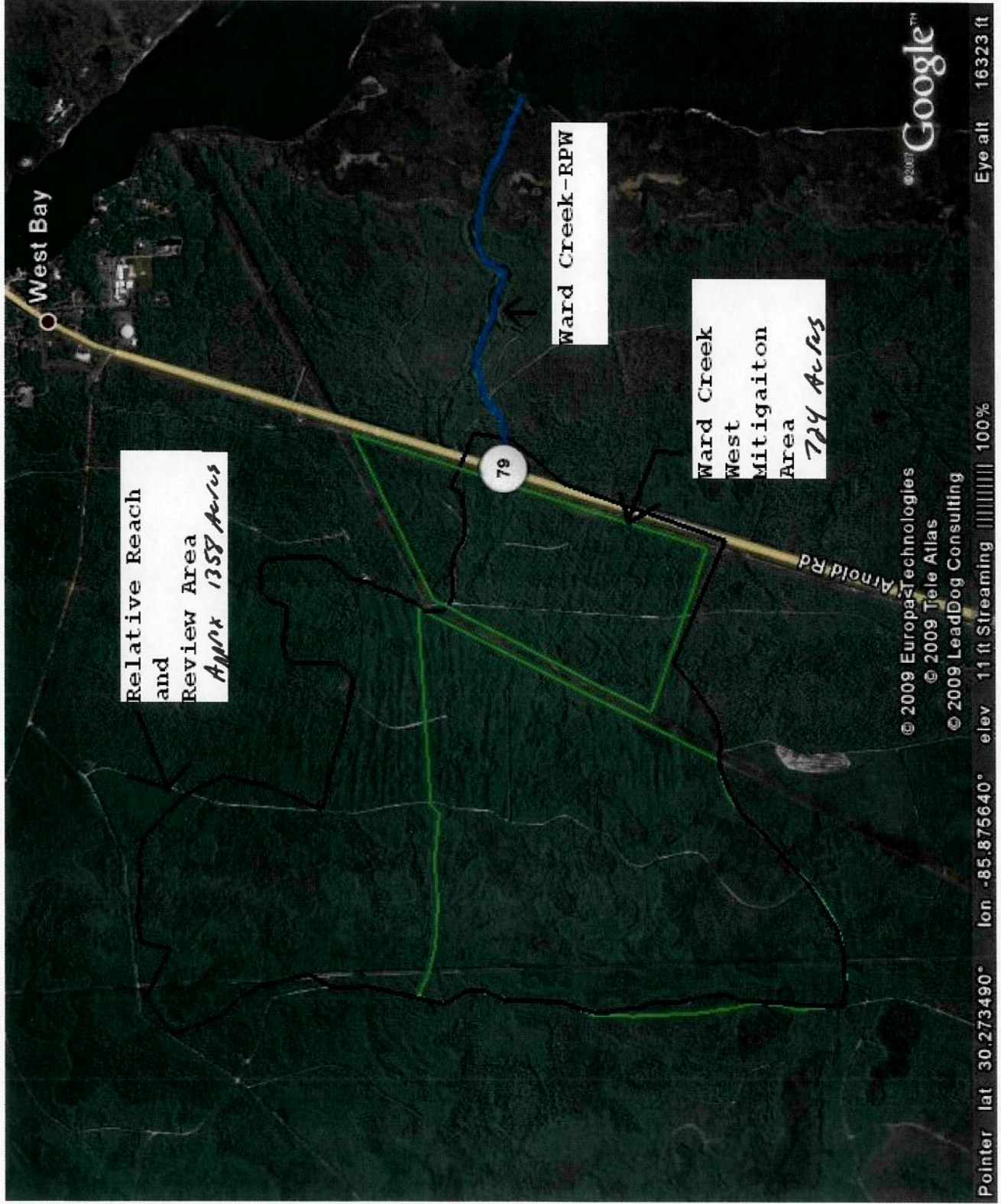
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: .
- ☒ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name:Seminole Hills.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):Google Earth Pro 2008.  
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☒ Other information (please specify):photographs provided by applicant.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

# Location of Ward Creek West

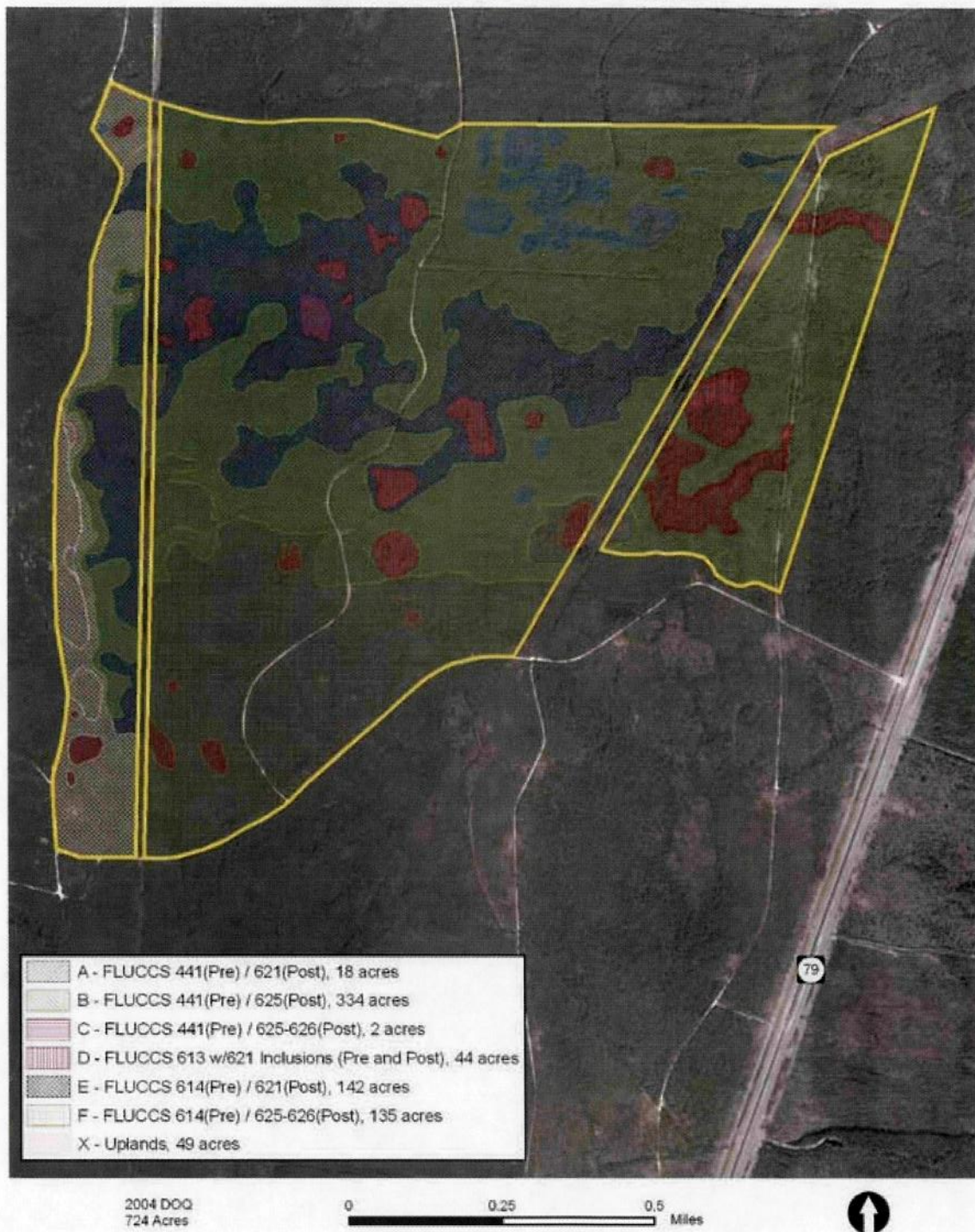








### Ward Creek West - WRAP Polygons

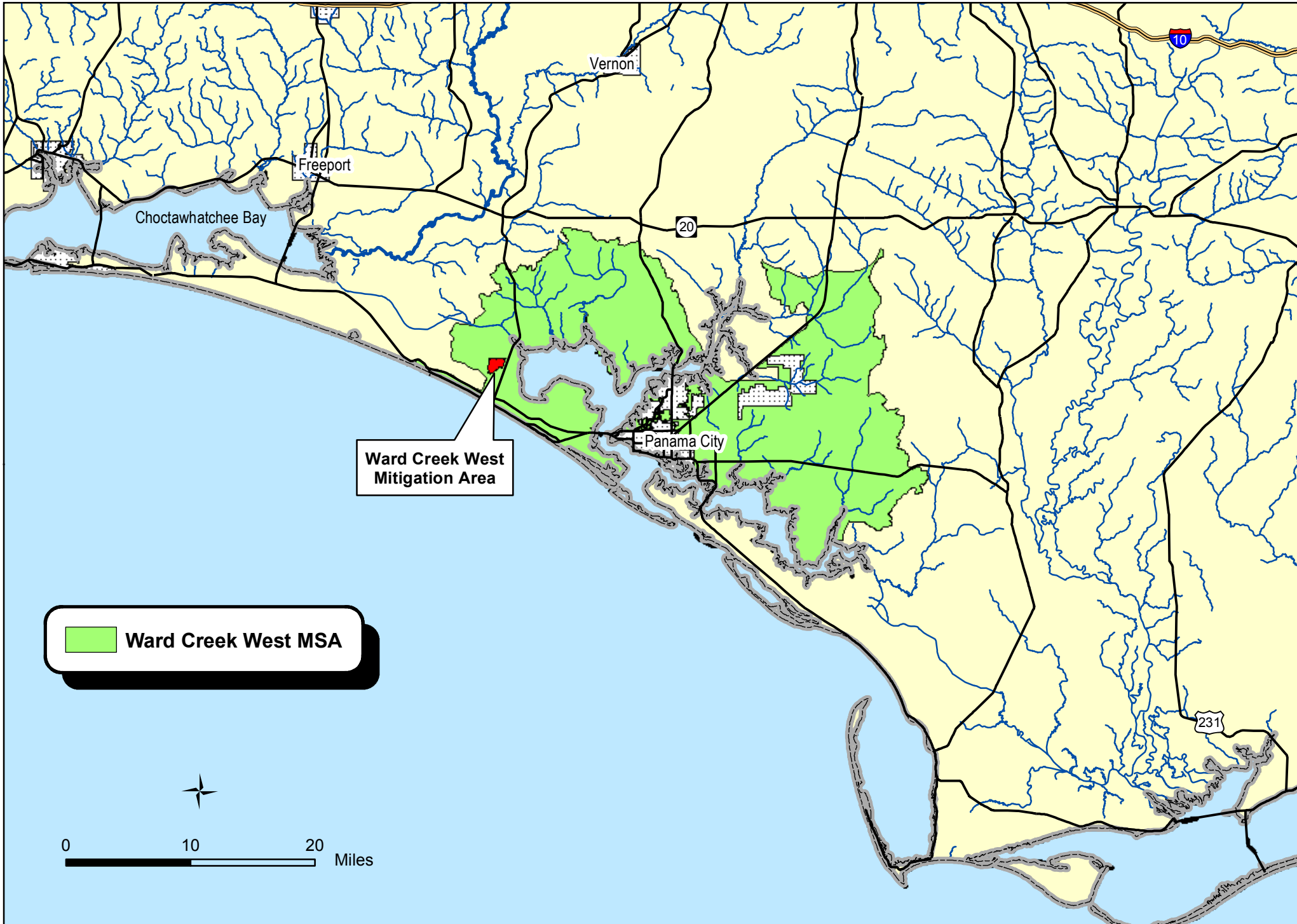




## Mitigation Service Area

The Ward Creek West Mitigation Service Area (MSA) covers approximately 450 mi<sup>2</sup>, and matches the service area approved for the Breakfast Point Mitigation Bank.

# Ward Creek West Mitigation Service Area



**Schedule of Credit Release  
Ward Creek West Mitigation Area**

**Total Potential Credits = 173.76**

<b>Task No.</b>	<b>Performance-based Milestone</b>	<b>% Credit Release</b>	<b>Number of Credits</b>
	CREDITS RELEASED AS OF JUNE 12, 2013	60%	102.77
1	<b>1st Interim Release Criteria</b> - <1% coverage of invasive exotics and <5% coverage of nuisance native and non-native exotic species; completion of 1st prescribed fire in hydric pine flatwoods; completion of 2nd prescribed fire in hydric pine savannah areas; shrub reduction in wet prairie to <25% cover; shrub cover reduced to <50% in hydric pine flatwoods; species diversity is either stable or increasing in each wetland type.	10%	17.75
2	<b>2nd Interim Release Criteria</b> - Maintain invasive exotic species cover to <1% and nuisance species cover to <5% cover i; fire adapted, native wet flatwoods/wet prairie herbaceous species increasing in cover; nuisance shrub cover reduced to <15% cover in the hydric pine savannah and <25% in hydric pine flatwoods; planting of wiregrass on 6' centers in the hydric pine flatwoods; completion of 3rd prescribed fire in hydric pine savanna areas; completion of 2nd prescribed fire in hydric pine flatwoods area.	10%	17.75
3	<b>Final Release Criteria</b> - Maintain invasive exotic species cover to <1% and nuisance species cover to <5% cover ; 4th prescribed fire completed for the wet prairie; 3rd prescribed fire completed for hydric and mesic flatwoods; in the wet prairie area, vegetation dominated by ≥90% wetland grasses, sedges, and forbes; shrub cover <10%; in the hydric pine flatwoods and wet prairie restoration, ≥60% cover by fire adapted, native herbaceous species; shrub cover of titi, gallberry, wax myrtle and other shrubs <15% cover; reduction of pine densities in hydric pine flatwoods to ≤200 per acre; planted wiregrass averaging greater than 1,000 plants per acre; all graded areas stabilized with no erosion; non-nuisance, native vegetation is healthy, reproducing naturally and exhibiting the cover and diversity typical of the surrounding landscape for all vegetation communities.	20%	35.49
Totals:		100%	173.76