Yellow River Ranch
(NWFWMD ILF Program Mitigation Project Site)

Contents:

Summary of Twelve Components of the Compensatory Mitigation Plan

Northwest Florida Water Management District
In-Lieu Fee Program

Yellow River Ranch 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 Yellow River Ranch Mitigation Documents for Additional Explanation and Detail)

24 September 2014

1—Objectives

Restoration (~115 acres) and preservation (~160 acres) of approximately 275 wetland acres on the Yellow River floodplain.

- Preservation of ~160 acres of bottomland (FLUCCS 615)
- Restoration of ~27 acres of bottomland (FLUCCS 615)
- Restoration of ~9 acres of cypress (FLUCCS 621)
- Restoration of ~60 acres of hydric flatwoods and savanna (FLUCCS 625 & 626)
- Restoration of ~19 acres of non-forested wetlands (FLUCCS 640)

2—Site Selection Criteria

Acquisition of this mitigation site fills a gap in NWFWMD lands ownership along the Yellow River, and is part of a larger NWFWMD effort to restore and protect aquatic resources within the Pensacola Bay System watershed. After mitigation is implemented and success criteria met, this site is expected to be ecologically self-sustaining.

3—Site Protection Instrument

The NWFWMD, 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 NWFWMD 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 NWFWMD 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 Yellow River Ranch mitigation area (acquired fee-simple) will be held in perpetuity by the NWFWMD and managed as conservation/mitigation lands.

4—Baseline Information

(See "Yellow River Ranch Mitigation Area, Revised Mitigation Plan, 9/24/2014")

Maps

- Location within Pensacola Bay System Watershed (Figure 3)
- Directions (Figure 4)
- 2007 DOQ (Figure 5)
- 1946 B&W Aerial (Figure 6)
- 1966 B&W Aerial (Figure 7)
- 1978 B&W Aerial (Figure 8)
- 1988 B&W Aerial (Figure 9)
- LiDAR (Figure 10)
- USGS Quad (Figure 11)
- 100-Year Flood Zone (Figure 12)
- Soils (Figure 13)
- Hydrologic Restoration (Figure 14)
- UMAM Mitigation Polygons (Figure 15)

At time of acquisition, this mitigation area consisted of high-quality bottomland wetland forest (~160 acres, FLUCCS 615), and improved pasture (~115 acres, FLUCCS 211) that had been converted from mostly forested wetlands. A large dike system blocked normal hydrologic connections with the Yellow River floodplain, and internal ditches drained the improved pasture. There was extensive cattle grazing, and exotic pasture grasses dominated much of the site.

5—Determination of Credits

Mitigation credits are estimated by the Uniform Mitigation Assessment Method (UMAM). USACE assessments of the site indicate that 33.88 UMAM wetland credits will be generated by restoration of 60.95 acres of improved pasture. Preservation and restoration activities on the remainder of the Yellow River Ranch site was previously used (in accordance with the Umbrella Plan) to offset FDOT impacts to 16.75 acres of wetlands.

6—Detailed Work Plan

Conversion from high-quality forested wetlands to improved pasture was accomplished by the removal of forest vegetation (canopy, shrub layer and groundcover), severe hydrologic alteration from ditching and dike construction, and the establishment and maintenance of exotic pasture grasses. Decades of cattle grazing operations followed and ceased only with NWFWMD acquisition. Functional wetland lift will be derived from 1) elimination of drainage ditches, 2) breaching of the dike, 3) eradication of non-native pasture grasses including Bahia grass and other nuisance exotic species, 4) revegetation with appropriate wetland species, 5) implementation of a growing-season fire regime within restored flatwood areas, and 6) long-term management including control of nuisance and exotic species.

The pasture will be restored to a mix of FLUCCS 615 – Bottomland, FLUCCS 621 – Cypress, FLUCCS 625/626 – Hydric Pine Flatwoods and Savanna, and FLUCCS 640 – Non-Forested Wetlands.

For portions of the pasture to be restored as bottomland hardwood forest, vegetation to be planted may include a mixture of Atlantic white cedar, possum haw, black gum, laurel oak, cypress, or American elm. Vegetation planted will depend on site conditions and availability of plants.

Areas targeted for hydric pine flatwoods restoration may be planted with species including slash pine, cypress, myrtle leaf holly, appropriate hydric flatwoods groundcover seed, and possibly wiregrass tubelings. Site conditions and availability of plants will be considered when determining actual plantings.

Upon completion of restoration activities, long-term ecological management will be implemented seamlessly across the Yellow River Ranch.

Sequence of Restoration Activities—

- Cessation of cattle operations (accomplished with acquisition in 2005).
- Hydrologic restoration (implemented 2009).
    - Elimination of ditches
    - Breaching of dike
- Eradication of exotic pasture grasses including Bahia grass and other nuisance exotic species such as Chinese tallow via multiple applications of herbicides over multiple growing-seasons (implemented 2006 – Present).
- Planting of forested wetland and flatwood species (first implemented in 2010, additional plantings followed).
- Implementation of long-term ecological management including exotics control and eventual prescribed fire in restored flatwood areas where/when appropriate.

7—Maintenance Plan

After implementation of mitigation and meeting of all success criteria, this site will be actively maintained by NWFWMD lands management personnel as part of extensive holdings along the Yellow River. Maintenance may include ensuring that breaches in the dike remain open (e.g., beaver management), prescribed where appropriate, and exotics management. This site is expected to be largely self-sustaining.

8—Performance Standards

- Nuisance vegetation ≤ 5% cover of site.
- Exotic vegetation ≤ 1% cover of site.
- Tree density of 352-440 trees/acre in bottomland restoration areas and 88-110 trees/acre in hydric pine flatwood restoration areas after five years.
- Native groundcover and shrub layer species appropriate for natural community type trending toward increase in diversity and coverage.

Performance standards may be modified, with approvals by the USACE in consultation with an Interagency Review Team, if on-the-ground conditions warrant.

9—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 (or any successor website). Monitoring for this site may include:

1. UMAM reassessment conducted 5 years and 10 years after initiation of restoration.
2. Annual pedestrian surveys; number of survey paths to be determined in field.
3. Permanent 360^{o} photographic stations; number of photo-points to be determined in the field.

Vegetation transects, quadrats or similar quantitative sampling methods may be conducted if deemed necessary by NWFWMD or required by the USACE.

10—Long-term Management

The NWFWMD 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 NWFWMD. Mitigation lands owned by the NWFWMD will be managed in perpetuity for ecological integrity in accordance with NWFWMD policies. Long-term management is expected to include exotics control and prescribed fire where appropriate.

11—Adaptive Management Plan

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

12—Financial Assurances

The NWFWMD 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 NWFWMD had greater than $15,000,000 available in a dedicated mitigation fund account. 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 the bank, 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

YELLOW RIVER RANCH MITIGATION AREA

(NWFWMD In-Lieu Fee Program – UWRMP 5.5.1)

Revised Mitigation Plan

September 24, 2014

This revision supersedes the approved Yellow River Ranch mitigation plan included as an attachment to US Army Corps Permit SAJ-2004-2643 IP-EPS (SR 87 from Five Forks Road to Eglin AFB, issued 2/7/2006). It differs from the original plan in that vegetation restoration targets for the pasture area have been modified to better reflect existing soil and hydrologic conditions.

As initially proposed, the pasture area (FLUCCS 211 – Improved Pasture) was to be restored to FLUCCS 615 – Bottomland and FLUCCS 625 – Hydric Pine Flatwoods. Under this revision, the pasture area will be restored to a mix of FLUCCS 615 – Bottomland, FLUCCS 621 – Cypress, FLUCCS 625/626 – Hydric Pine Flatwoods and Savanna, and FLUCCS 640 – Non-Forested Wetlands (Figure 1, Table 1).

Table 1: Changes in Vegetation Community Restoration Targets (Original Plan versus Revised Plan)[1]

Mitigation Category	Initial FLUCCS	Target FLUCCS	Original Plan (Acres)	Revised Plan (Acres)
Restoration	211 – Improved Pasture	615 – Bottomland	50	27
Restoration	211 – Improved Pasture	621 – Cypress	0	9
Restoration	211 – Improved Pasture	625/626 – Flatwoods	65	60
Restoration	211 – Improved Pasture	640 – Non-Forested	0	19
Preservation	615 – Bottomland	615 – Bottomland	160	160
		(Totals)	275	275

[1] Acreages are approximate and may vary slightly from the original mitigation plan.

Background:

In December, 2005, the NWFWMD acquired the approximately 275-acre Yellow River Ranch property (30° 35' 30" N / 86° 54' 10" W) for use as mitigation for FDOT wetland impacts. Located on the Yellow River floodplain in Santa Rosa County within the Pensacola Bay System watershed, it is 1½ miles east of SR 87 and is bordered on three sides by extensive forested floodplain wetlands acquired in the 1990s by the NWFWMD. A cattle ranch is adjacent to the northern boundary.

Approximately 160 acres of the Yellow River Ranch consist of intact forested wetlands (FLUCCS 615 – Bottomland). Historic aerials and other data (e.g., soils, elevation) suggest that the remaining 115± acres were also mostly forested wetlands (FLUCCS 625 – Hydric Pine Flatwoods? FLUCCS 630 – Mixed Forested Wetlands?) before being converted to pasture (FLUCCS 211 – Improved Pasture).

Interpretation of historic aerials (1946, 1966, 1978, and 1988) indicates that much of the pasture area was timbered before 1946. This timbered area had recovered to a "regrowth" forest, apparently via natural regeneration, by 1966. Aerials from 1978 show the timbered area converted to improved pasture with a ditch/dike system in place. The pasture area and ditch/dike system was substantially expanded after the 1978 aerials were flown, with its current extent clearly shown in the 1988 aerial.

As mitigation for two US Army Corps permits associated with SR 87, the NWFWMD is preserving the 160± acres of intact forested wetlands and restoring wetland function to ~55 acres of the pasture.[2] These "permittee-responsible" permits issued to FDOT predate establishment of the NWFWMD Umbrella Plan and In-Lieu Fee Program. No wetland functional assessments, for either the impacts or mitigation site, are associated with these permits.

Approximately 61 acres of converted wetlands (i.e., the pasture) at the Yellow River Ranch are unencumbered by any existing permit mitigation requirements (Figure 2). Mitigation credits generated from restoration of this remaining area will incorporated into the NWFWMD In-Lieu Fee Program.

In the original mitigation plan, an inaccurate GIS property line along the northern boundary was used to delineate the UMAM polygons, which totaled 65 acres. In this revision, using a corrected property line, the area of the pasture for which UMAM credits will be generated is reduced to 60.95 acres.

The Yellow River Ranch has been inspected by the USACE multiple times since NWFWMD acquisition in 2005. Based on a 9/25/07 visit and subsequent discussions, the USACE, in consultation with an Umbrella Plan Review Team, determined that restoration of ~65 acres of the pasture to FLUCCS 615 – Bottomland and FLUCCS 625 – Hydric Pine Flatwoods, would generate 34.65 UMAM credits. Under this revised plan, based on restoring 60.95 acres of pasture to a mix of FLUCCS 615 – Bottomland, FLUCCS 625/626 – Hydric Pine Flatwoods and

[2] USACE Permit SAJ-2000-02363 IP-CP, SR 87 from US 98 to Five Forks Road, 5.68-acre impact; USACE Permit SAJ-2004-2643 IP-EPS, SR 87 from Five Forks Road to Eglin AFB, 12.07-acre impact.

Savanna, FLUCCS 621 – Cypress, and FLUCCS 640 – Non-Forested Wetlands, it is estimated that 33.88 UMAM credits will be generated.

Objective:

Restoration and preservation of approximately 275 wetland acres on the Yellow River floodplain.

- Preservation of ~160 acres of bottomland (FLUCCS 615)
- Restoration of ~27 acres of bottomland (FLUCCS 615)
- Restoration of ~9 acres of cypress (FLUCCS 621)
- Restoration of ~60 acres of hydric flatwoods and savanna (FLUCCS 625 & 626)
- Restoration of ~19 acres of non-forested wetlands (FLUCCS 640)

Site Selection Criteria:

Acquisition of this mitigation site fills a gap in NWFWMD lands ownership along the Yellow River, and is part of a larger NWFWMD effort to restore and protect aquatic resources within the Pensacola Bay System watershed. After mitigation is implemented and success criteria met, this site is expected to be ecologically self-sustaining.

Site Protection Instrument:

The NWFWMD, 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 approximately 216,000 acres in the Florida Panhandle for water resources protection and ecosystem integrity. Florida Statutes 373.1391 mandates ecological management of NWFWMD 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 NWFWMD 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 § 332.7(a) and § 230.97(a) (i.e., site protection clauses) of the USACE/EPA compensatory mitigation Final Rule, title to the Yellow River Ranch mitigation area (acquired fee-simple) will be held in perpetuity by the NWFWMD and managed as conservation/mitigation lands.

Baseline Information:

Maps

- Location within Pensacola Bay System Watershed (Figure 3)
- Directions (Figure 4)
- 2007 DOQ (Figure 5)
- 1946 B&W Aerial (Figure 6)
- 1966 B&W Aerial (Figure 7)
- 1978 B&W Aerial (Figure 8)
- 1988 B&W Aerial (Figure 9)
- LiDAR (Figure 10)
- USGS Quad (Figure 11)
- 100-Year Flood Zone (Figure 12)
- Soils (Figure 13)
- Hydrologic Restoration (Figure 14)
- UMAM Mitigation Polygons (Figure 15)

At time of acquisition, this mitigation area consisted of high-quality bottomland wetland forest (~160 acres, FLUCCS 615), and improved pasture (~115 acres, FLUCCS 211) that had been converted from mostly forested wetlands. A large dike system blocked normal hydrologic connections with the Yellow River floodplain, and internal ditches drained the improved pasture. There was extensive cattle grazing, and exotic pasture grasses dominated much of the site.

Determination of Credits:

Mitigation credits are estimated by the Uniform Mitigation Assessment Method (UMAM). Based on previous IRT assessments of the site, the NWFWMD estimates that 33.88 UMAM wetland credits will be generated by restoration of 60.95 acres of improved pasture.

Detailed Work Plan:

Conversion from high-quality forested wetlands to improved pasture was accomplished by the removal of forest vegetation (canopy, shrub layer and groundcover), severe hydrologic alteration from ditching and dike construction, and the establishment and maintenance of exotic pasture grasses. Decades of cattle grazing operations followed and ceased only with NWFWMD acquisition. Functional wetland lift will be derived from 1) elimination of drainage ditches, 2) breaching of the dike, 3) eradication of non-native pasture grasses including Bahia grass and other nuisance exotic species, 4) revegetation with appropriate wetland species, 5) implementation of a growing-season fire regime within restored flatwood areas, and 6) long-term management including control of nuisance and exotic species.

The pasture will be restored to a mix of FLUCCS 615 – Bottomland, FLUCCS 621 – Cypress, FLUCCS 625/626 – Hydric Pine Flatwoods and Savanna, and FLUCCS 640 – Non-Forested Wetlands.

For portions of the pasture to be restored as bottomland hardwood forest, vegetation to be planted may include a mixture of Atlantic white cedar, possum haw, black gum, laurel oak, cypress and American elm. Site conditions and plant availability will be considered when determining actual plantings.

Areas targeted for hydric pine flatwoods restoration may be planted with species including slash pine, cypress, myrtle leaf holly, appropriate hydric flatwoods groundcover seed, and possibly wiregrass tubelings. Site conditions and plant availability will be considered when determining actual plantings.

Upon completion of restoration activities, long-term ecological management will be implemented seamlessly across the Yellow River Ranch.

Sequence of Restoration Activities—

- Cessation of cattle operations (accomplished with acquisition in 2005).
- Hydrologic restoration (implemented 2009).
    - Elimination of ditches
    - Breaching of dike
- Eradication of exotic pasture grasses including Bahia grass and other nuisance exotic species such as Chinese tallow via multiple applications of herbicides over multiple growing-seasons (ongoing since 2006).
- Planting of forested wetland and flatwood species (ongoing since 2010).
- Implementation of long-term ecological management including exotics control and prescribed fire where appropriate.

Maintenance Plan:

After implementation of mitigation and meeting of all success criteria, this site will be actively maintained by NWFWMD lands management personnel as part of extensive holdings along the Yellow River. Maintenance may include ensuring the breaches in the dike remain open (e.g., beaver management), prescribed fire where appropriate, and exotics management. This site is expected to be largely self-sustaining.

Performance Standards:

- Nuisance vegetation $\leq$ 5% cover of site.
- Exotic vegetation $\leq$ 1% cover of site.
- Tree density of 352-440 trees/acre in bottomland restoration areas and 88-110

trees/acre in hydric pine flatwood restoration areas after five years.
- 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 (or any successor website). Specific monitoring for at this site may include:

1. UMAM reassessment between 5 and 10 years after initiation of restoration.
2. Annual 15+ minute pedestrian surveys; number of survey paths to be determined in field.
3. Permanent 360^{o} photographic stations; number of photo-points to be determined in the field.

Vegetation transects, quadrats or similar quantitative sampling methods may be conducted annually if deemed necessary by NWFWMD or specified by USACE.

Long-term Management:

The NWFWMD 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 NWFWMD. Mitigation lands owned by the NWFWMD will be managed in perpetuity for ecological integrity in accordance with NWFWMD policies. Long-term management will include exotics control and prescribed fire where appropriate.

Adaptive Management Plan:

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

Financial Assurances:

The NWFWMD 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.

Other Information:

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

Credit Release:

Credit release schedules will be developed in consultation with the USACE.

USACE/Umbrella Plan Review Team inspecting Yellow River Ranch pasture and dike (9/25/07)

Yellow River Ranch Soils

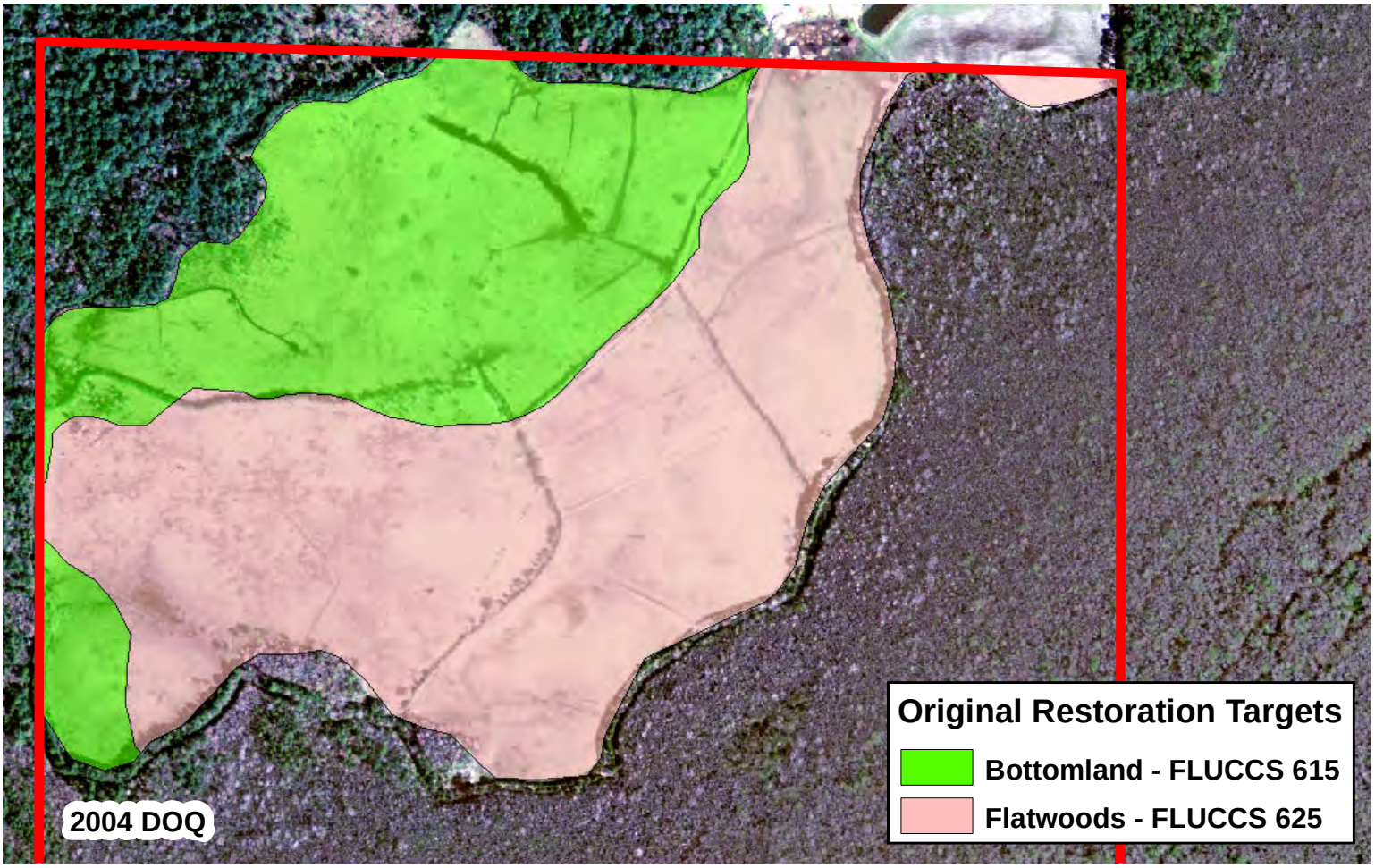
Bibb-Kinston Association. These are floodplain soils subject to frequent flooding. Natural vegetation consists of "gum, bay, cypress, juniper, oak, and a few scattered longleaf pine. The dense understory consists of tit, wax myrtle, ferns, and other water-tolerant shrubs" (NRCS, 5/1980).

Goldhead Fine Sand. Typical tree species includes slash pine, loblolly pine, longleaf pine, and blackgum with cypress occurring in the wettest places. The understory includes inkberry, waxmyrtle, pineland threeawn, pitcher plants, and bracken fern (NRCS, 7/1999).

Meadowbrook Fine Sand. Typical vegetation includes mixed stands of slash pine, loblolly pine, and longleaf pine with live laurel, and water oaks, blackgum, sweetgum, red maple and cypress in wetter areas. The understory includes gallberry, waxmyrtle, wiregrass, pitcher plants, and bracken fern (NRCS, 7/2007).

Mulat Loamy Fine Sand. Typical natural vegetation is slash and longleaf pine, gallberry, waxmyrtle, pineland threeawn, dwarf huckleberry, and bluestems. Wetter areas contain baldcypress and pitcher plants (NRCS, 9/2002).

Figure 1: Original and Revised Community Restoration Targets



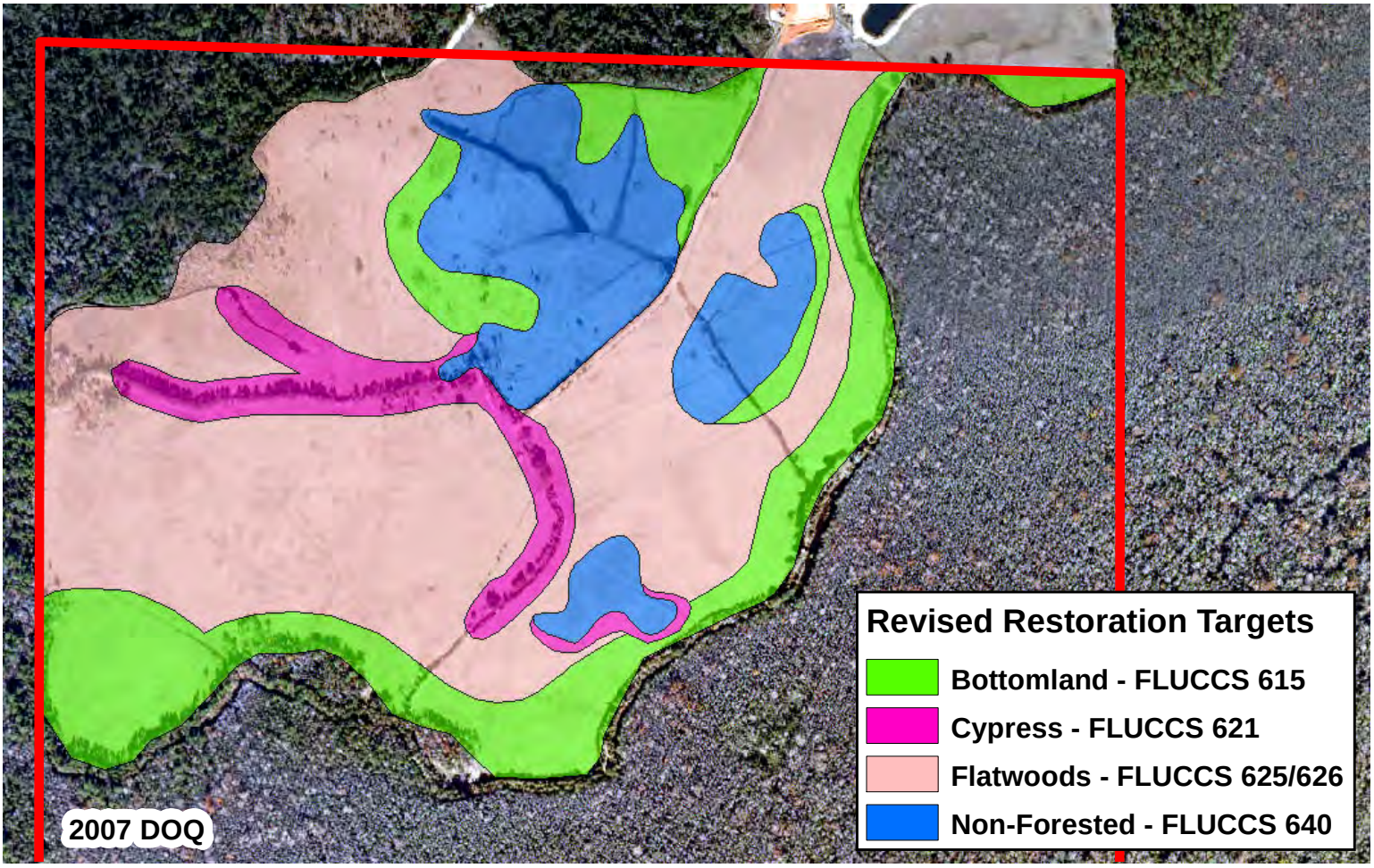


Figure 2: ILF Program / Pre-ILF Program

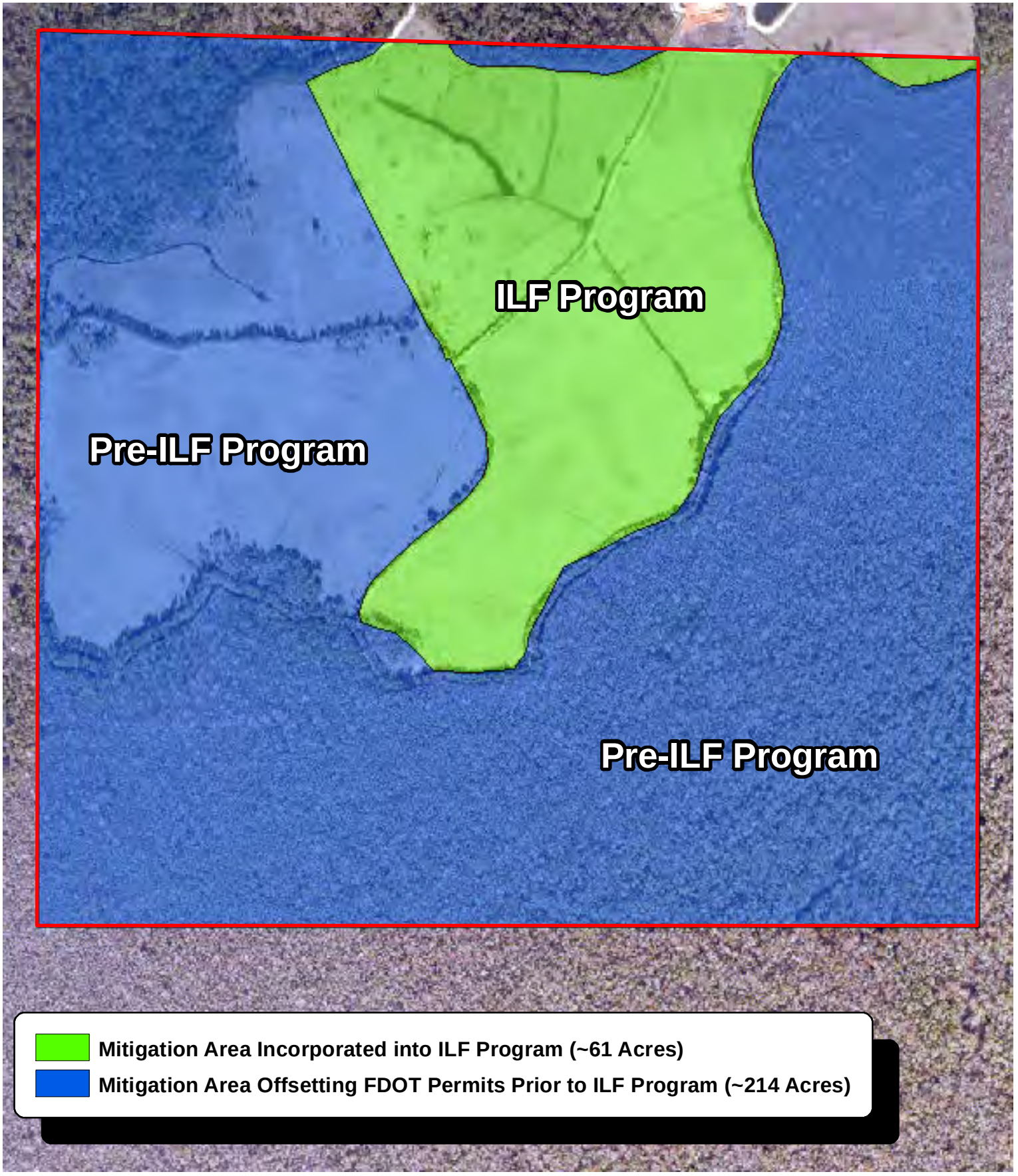


Figure 3: Yellow River Ranch within Pensacola Bay System Watershed

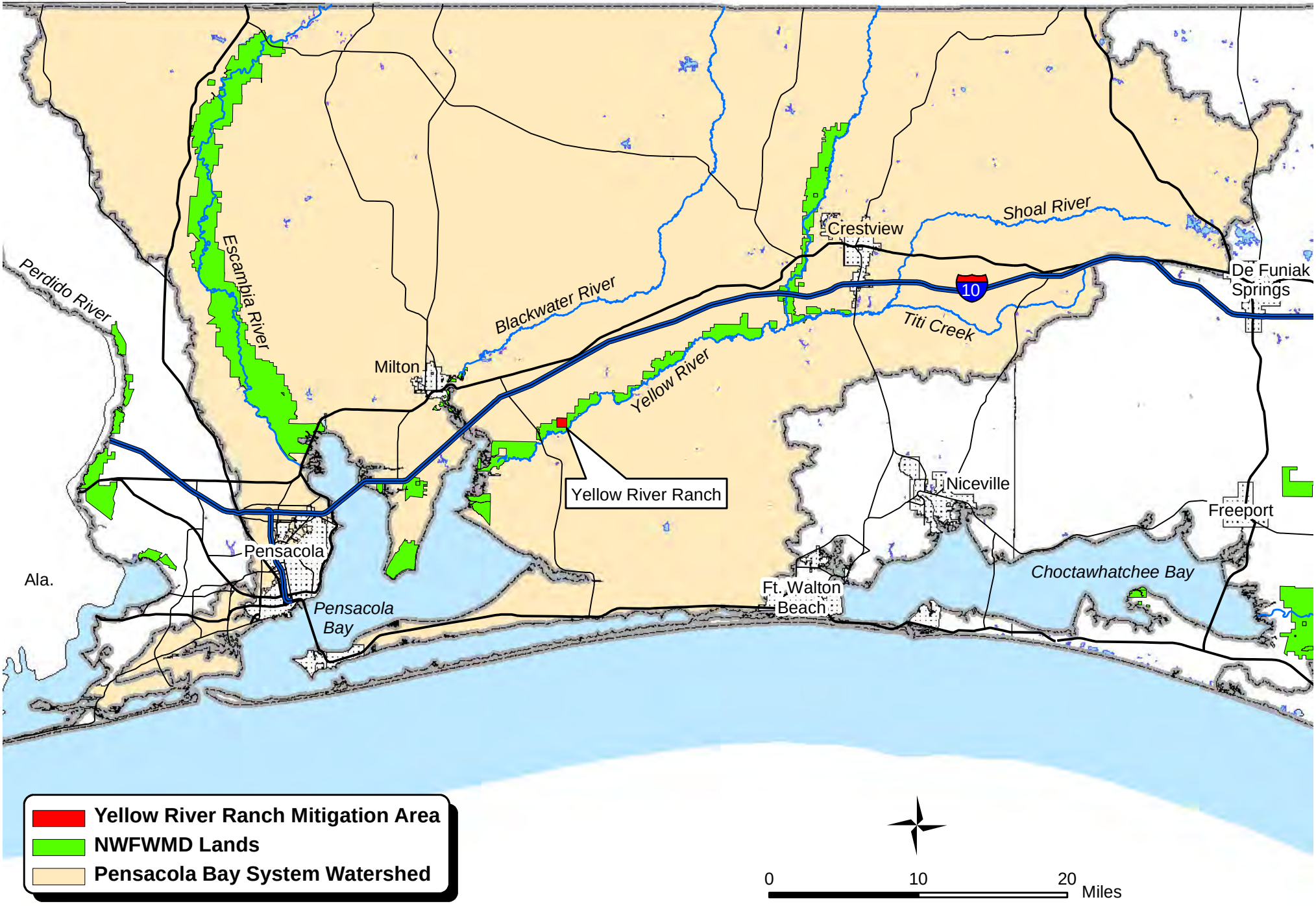


Figure 4: Directions to Yellow River Ranch

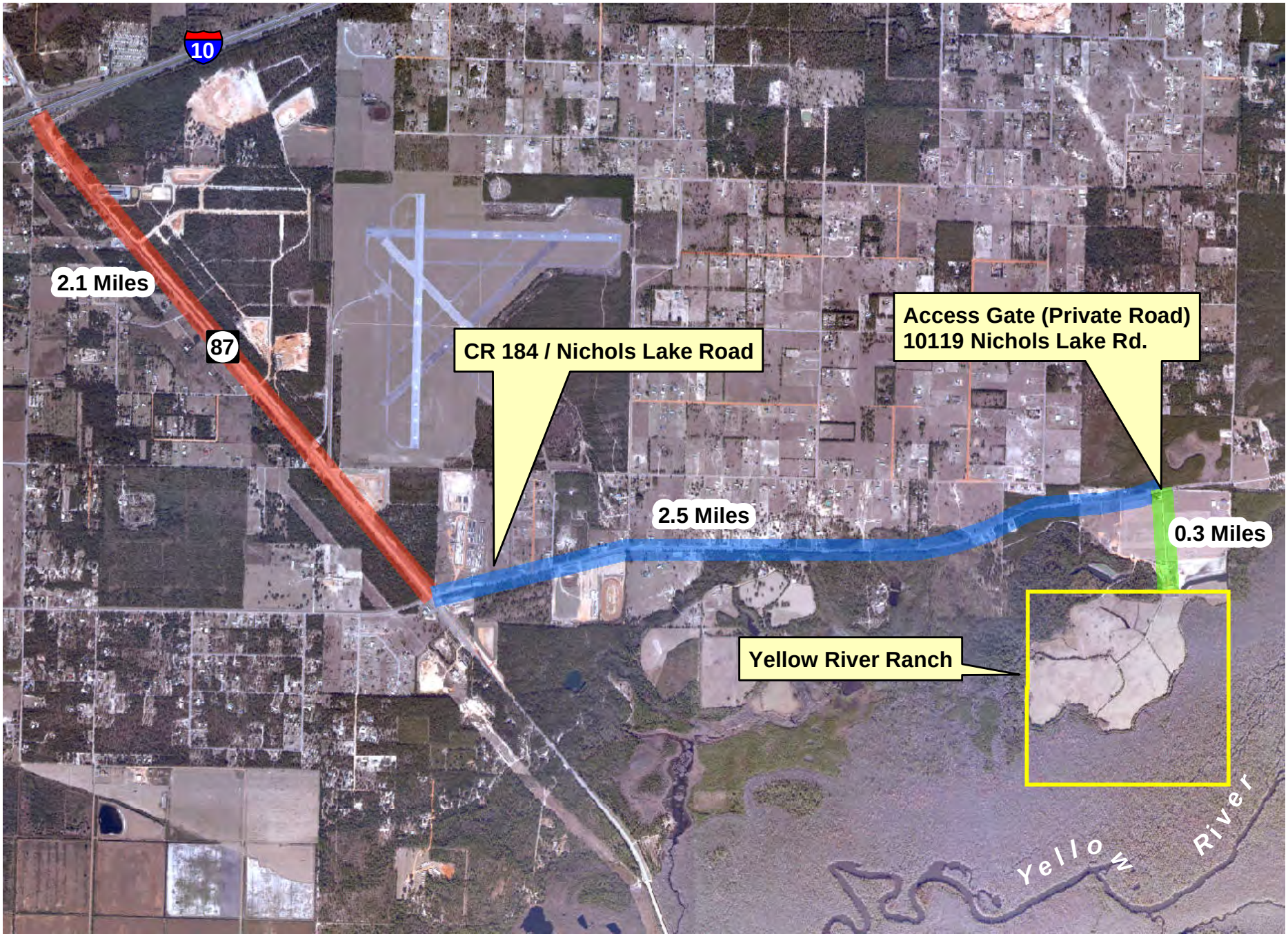


Figure 5: 2007 DOQ

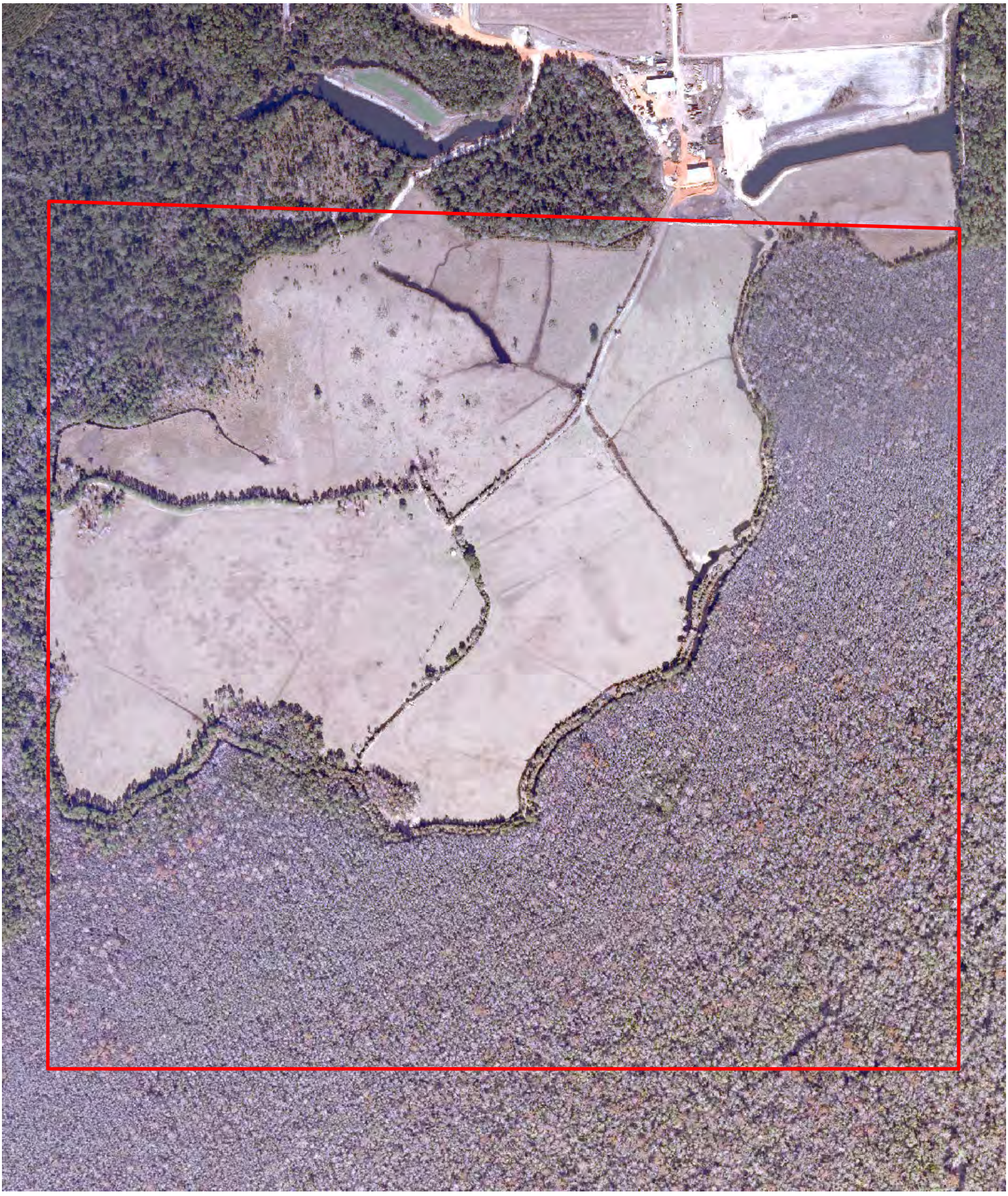


Figure 6: 1946 B&W Aerial

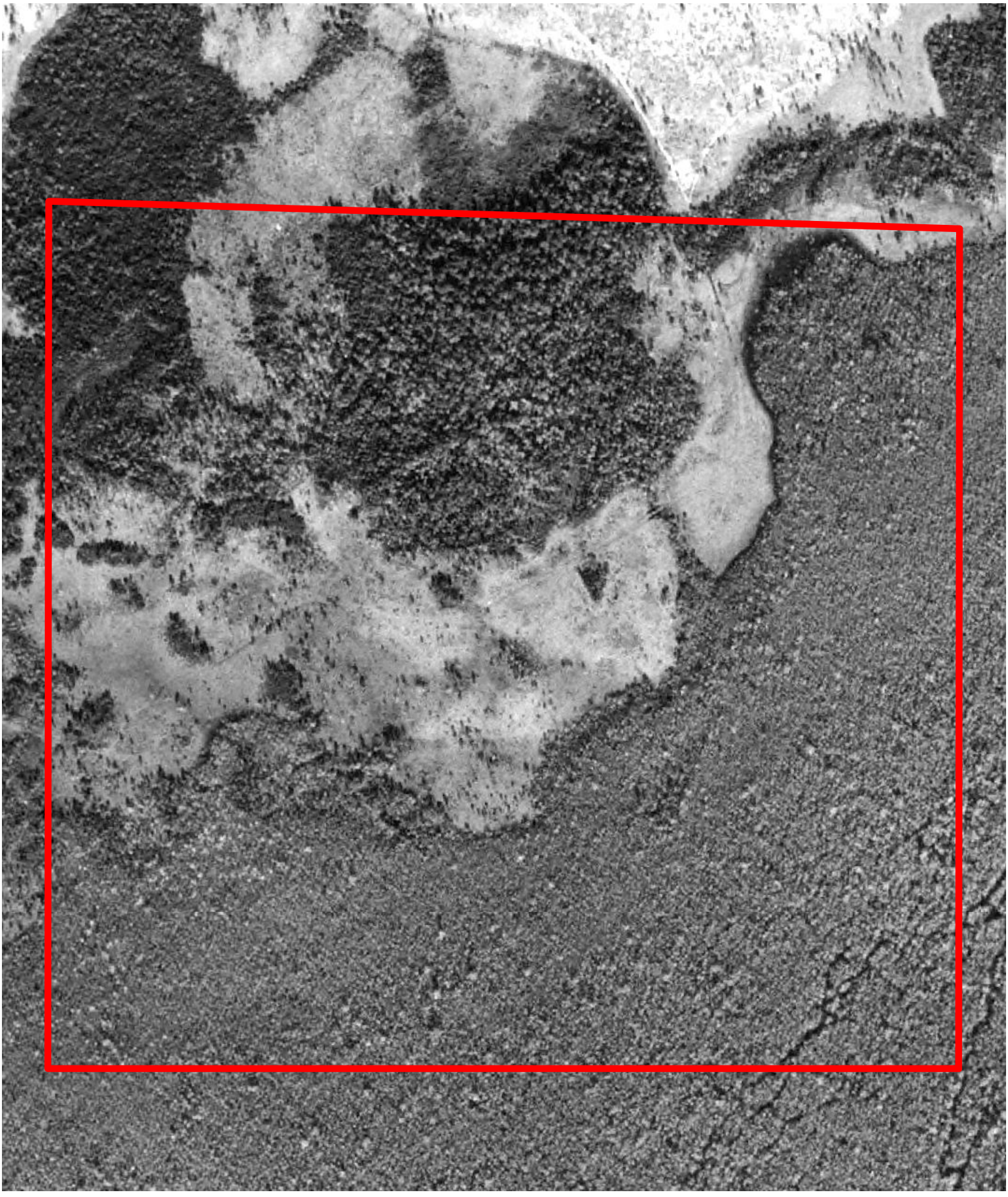


Figure 7: 1966 B&W Aerial

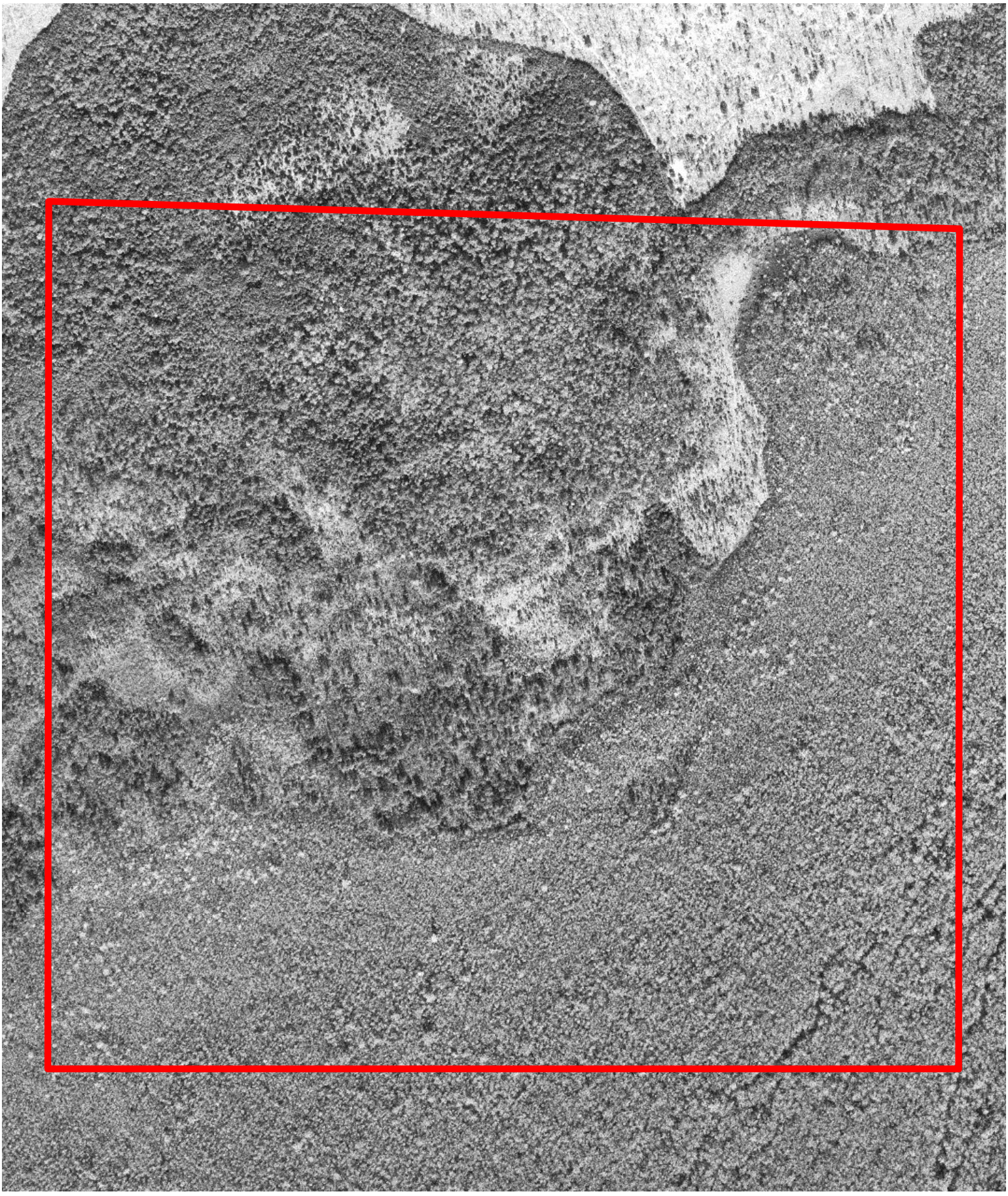


Figure 8: 1978 B&W Aerial

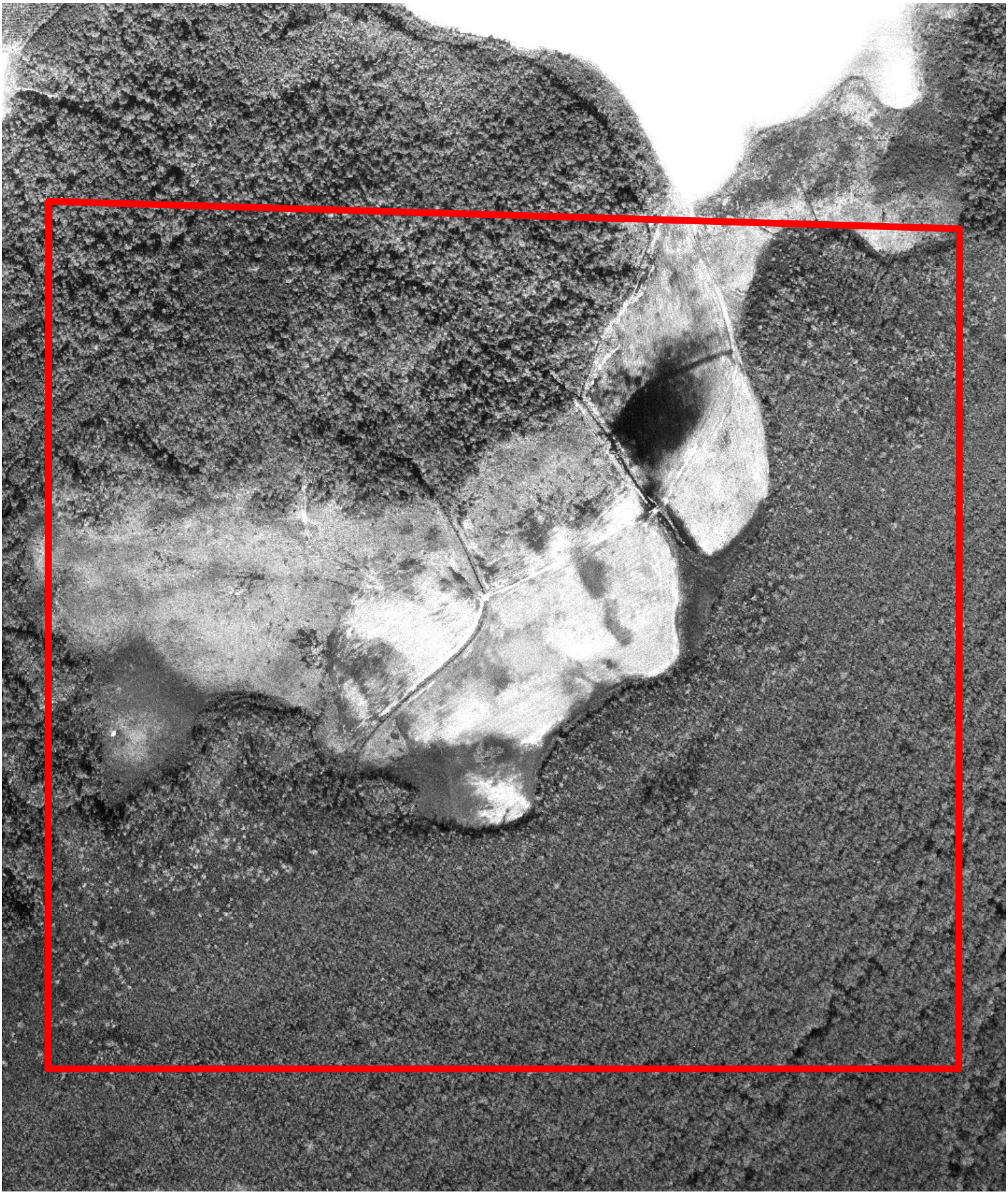


Figure 9: 1988 B&W Aerial

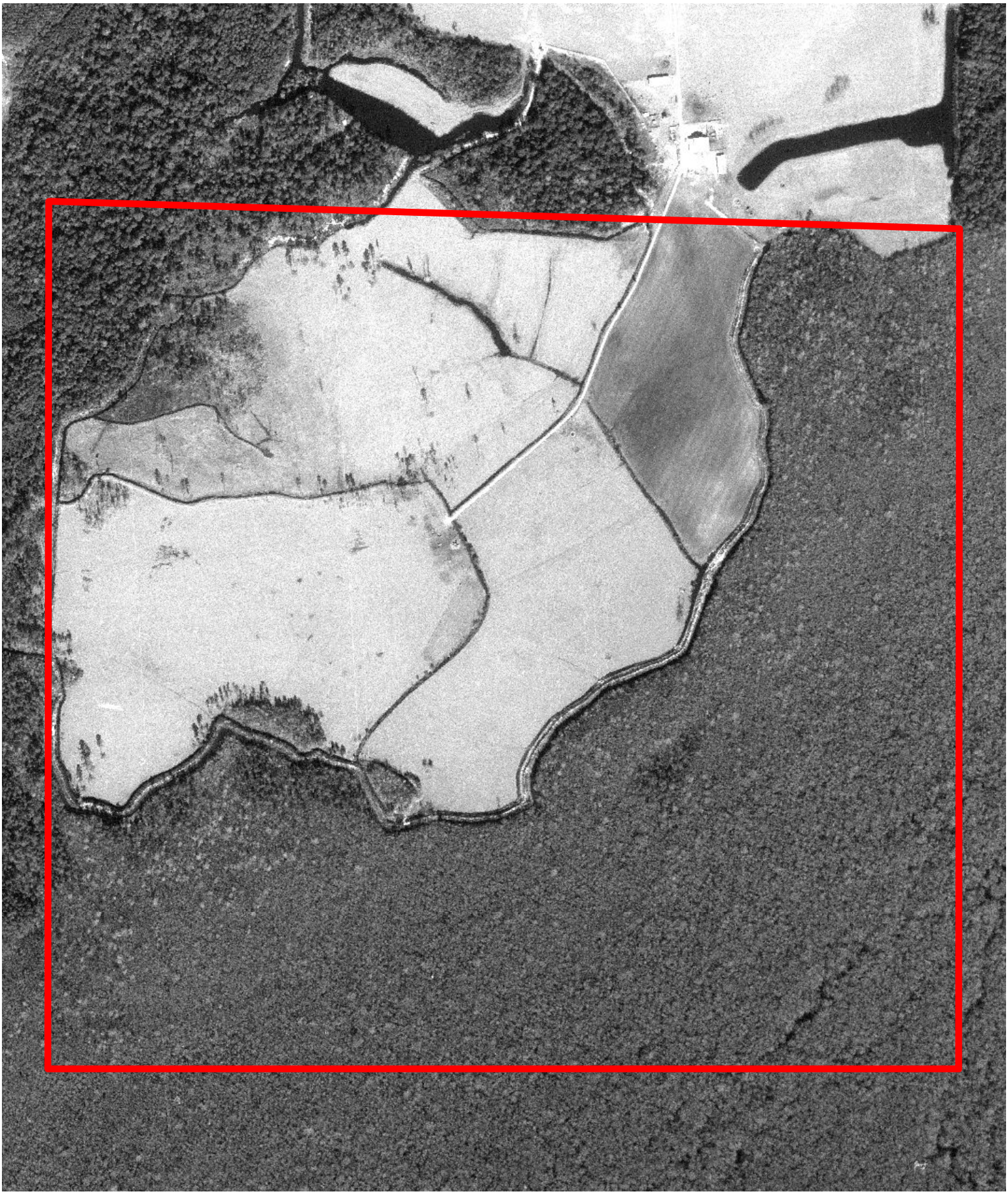


Figure 10: LiDAR

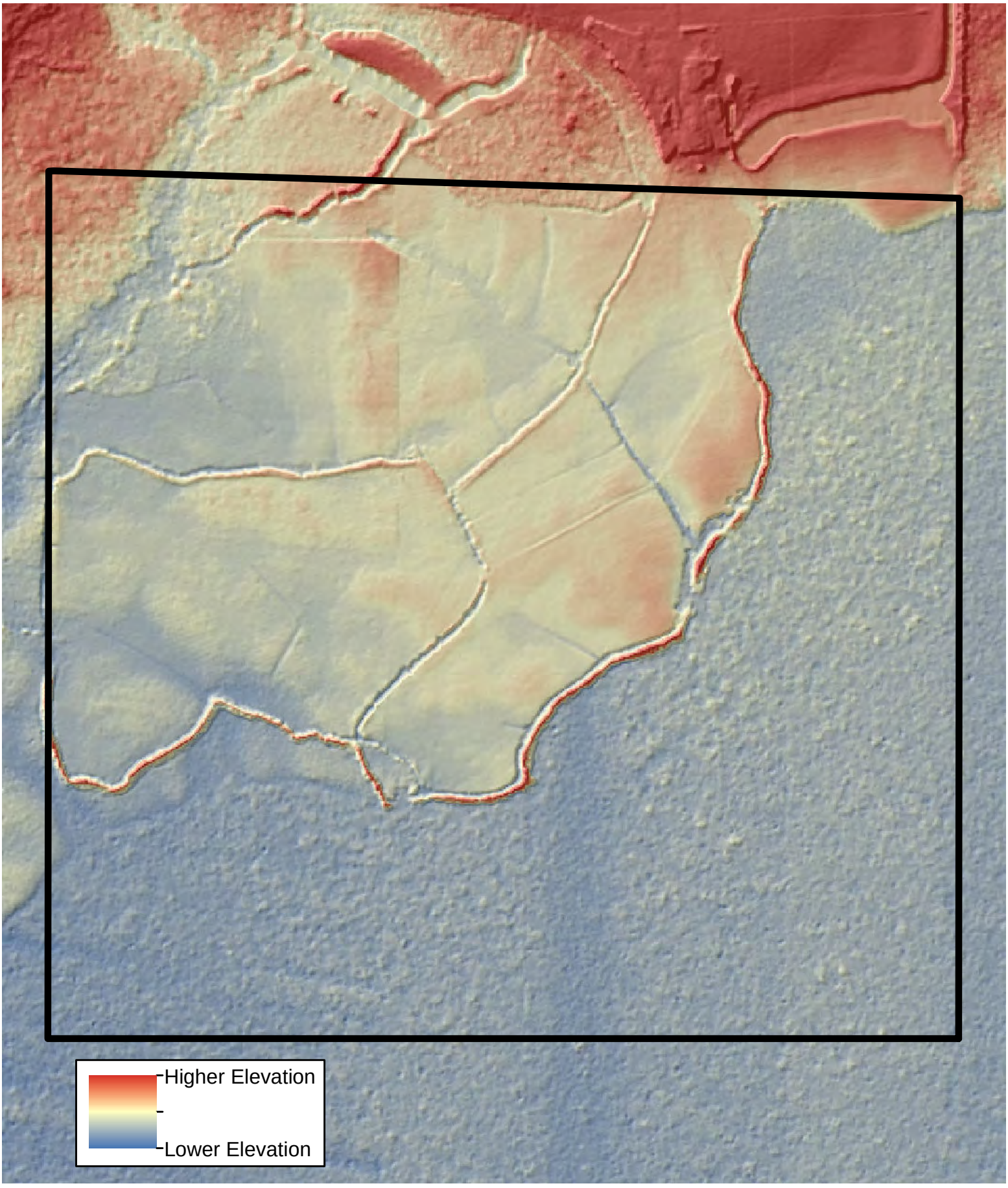
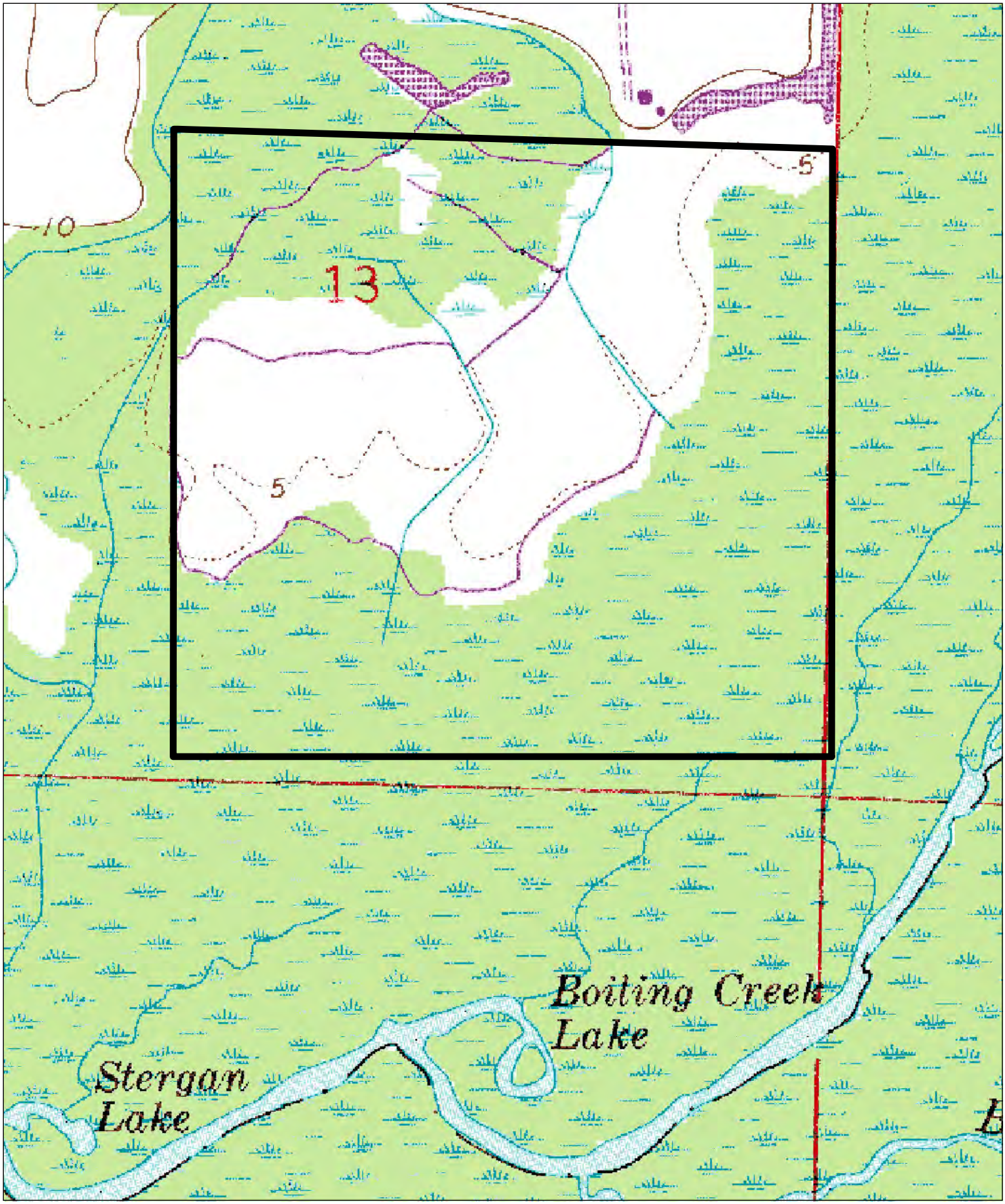


Figure 11: USGS Quad Map



Contour Interval in Feet AMSL

0 1,000 2,000 Feet

Figure 12: 100-Year Flood Zone (FEMA)

Figure 13: Soils (NRCS)

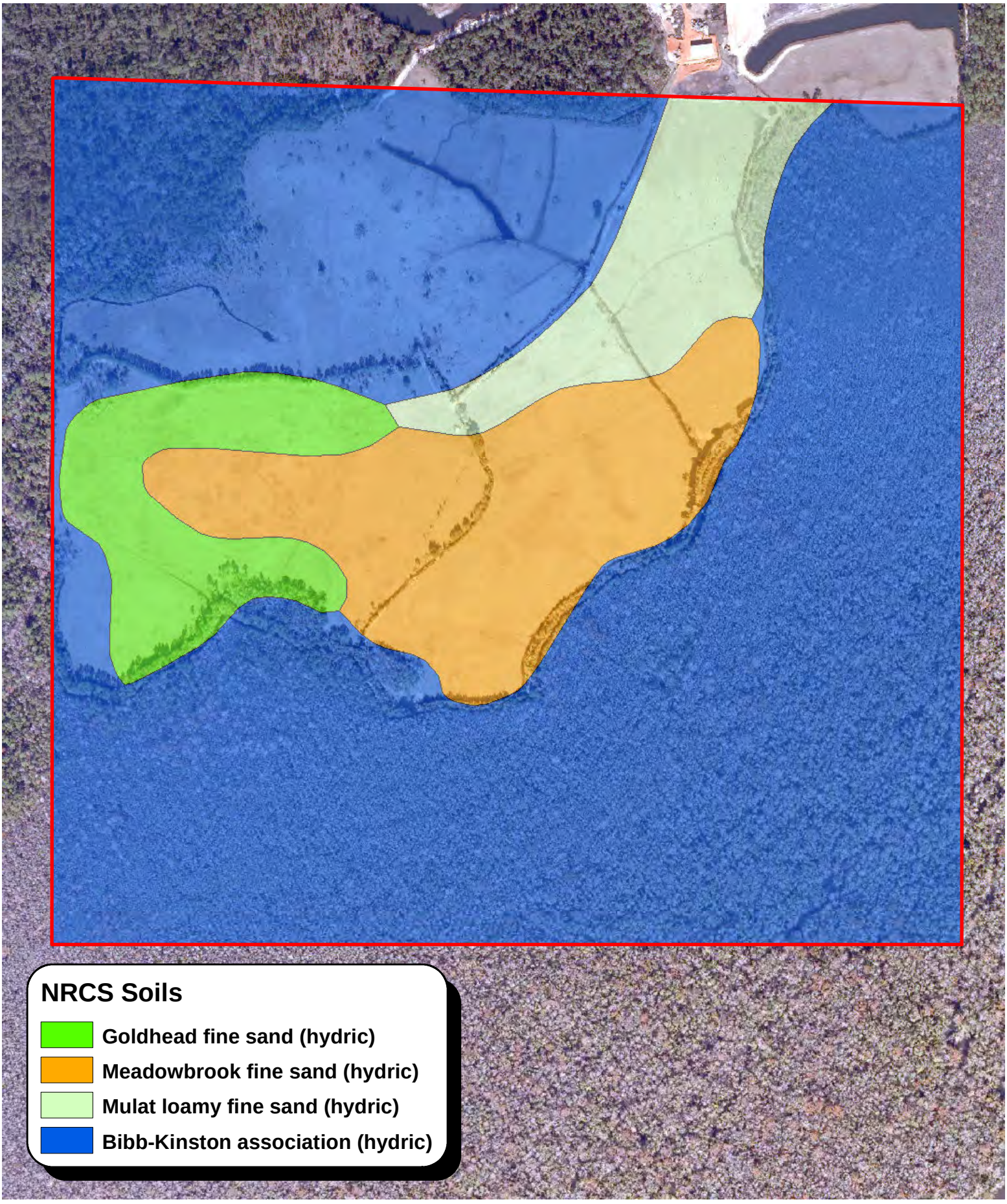
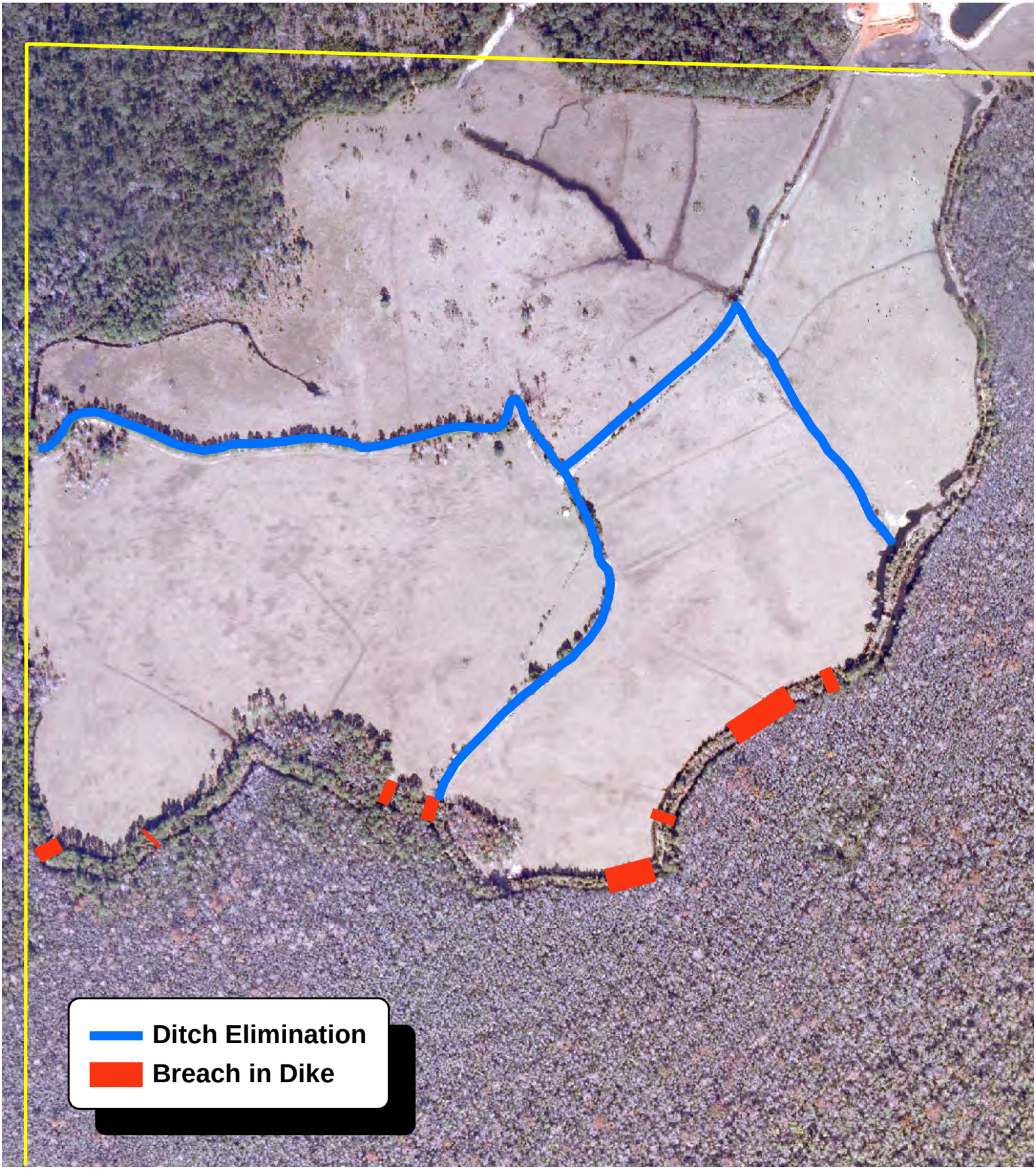


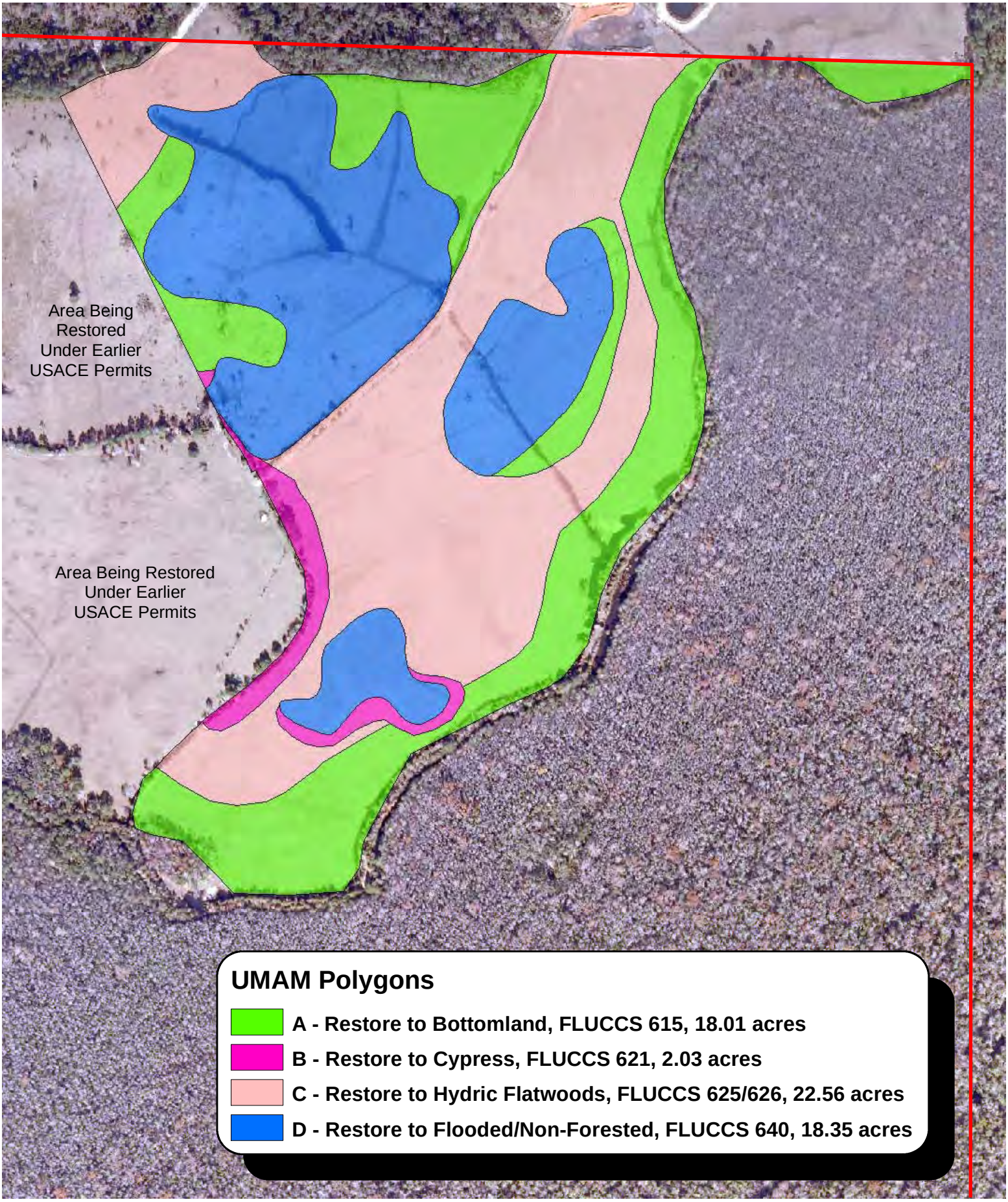
Figure 14: Hydrologic Restoration



2007 DOQ

0 500 1,000 Feet

Figure 15: UMAM Polygons



Yellow River Ranch
(Estimated UMAM Credits)

27-Sep-07

Polygon	Acres	L1	L2	W1	W1	C1	C2	W/Out Score	With Score	Raw Delta	Time Lag	PF Factor	Risk	Adjusted Delta	UMAM Credits
Polygon A	18.01	0	9	0	8	0	9	0.00	0.87	0.87	1.68	1	1.25	0.41	7.43
Polygon B	2.03	0	9	0	8	0	9	0.00	0.87	0.87	1.68	1	1.25	0.41	0.84
Polygon C	22.56	0	9	0	8	0	9	0.00	0.87	0.87	1.14	1	1.25	0.61	13.72
Polygon D	18.35	0	9	0	8	0	9	0.00	0.87	0.87	1.07	1	1.25	0.65	11.89
	---														---
	60.95														**33.88**

L1/L2 - Location and Landscape Support (L1 = Without Mitigation / L2 = W/Mitigation)

W1/ W2 - Water Environment (W1 = Without Mitigation / W2 = With Mitigation)

C1/C2 - Community Structure (C1 = Without Mitigation / C2 = With Mitigation)

Raw Delta = w/Mitigation Score - Without Mitigation Score

P = Preservation Factor (0 to 1; value is less than 1 ONLY for preservation-only mitigation)

Time Lag (T) = 1 (none) to 3.91 (>55 years)

Risk (R) = 1 (minimal) to 3 (high)

Adjusted Delta = (Raw Delta * PF) / (Time Lag * Risk)

UMAM Functional Gain = * Adjusted Delta * Acres

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon A**

FLUCCS code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
211 - Improved Pasture (Current) **615 - Bottomland (Target)**	**---**	**Mitigation**	**18.01 Acres**

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Pensacola Bay System	**III**	**---**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Part of Yellow River floodplain swamp. NWFWMD lands border three sides of Yellow River Ranch. A cattle ranch borders the northern side.

Assessment area description

Former forested wetlands converted to improved pasture. Impacts include removal of native vegetation, ditching, dike construction, erosion, cattle grazing, and establishment of exotic pasture grasses.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Yellow River WMA; Eglin AFB.	**Not unique.**

Functions	Mitigation for previous permit/other historic use
Water storage; water quality; floral and faunal habitat.	**None**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Mamals such as shrew, beaver, opossum, squirrel, bobcat, deer, rice rat, cotton mouse, raccoon, fox, black bear. Birds such as wood duck, owl, hawk, pileated woodpecker. Herpetofauna such as frog, alligator, salamander, toad, cottonmouth and other snakes.	**Black Bear, American Kestral, White Ibis**

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

Additional relevant factors

Assessment conducted by	Assessment date(s)
USACE in Consultation with Umbrella Plan Review Team	**9/27/2007**

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon A**
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation	**NWFWMD Staff in Consultation with IRT**	**9/27/2007**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/out mit	w/mit	
.500(6)(a) Location and Landscape Support	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetland. **With Mitigation** - Restored forested wetlands provide habitat and water quality benefits to hydrologically connected forested wetlands.
.500(6)(b)Water Environment (N/A for Uplands)	0	8	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Appropriate hydrologic regime restored by elmination of ditches, breaching of dike, and reestablishment of forest cover.
.500(6)(c)Community structure Vegetation and/or Benthic Community	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Reestablishment of forested wetlands, eradication of exotic pastures grasses.

Score = sum of above scores/30 (if uplands, divide by 20)	w/out mit	w/mit
	0.00	0.87

Raw Delta = [w/mit - w/out mit]
0.87

Preservation Adjustment Factor (PF) =	**1**
Time Lag Factor (16-20 Years) =	**1.68**
Risk Factor =	**1.25**
Adjusted Delta [(Raw Delta * PF) / (T * R)] =	**0.41**

UMAM Functional Assessment	
Polygon Acreage =	**18.01**
Functional Gain w/Mitigation (Adjusted Delta * Acres) =	**7.43**

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon B**

FLUCCS code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
211 - Improved Pasture (Current) **621 - Cypress (Target)**	**---**	**Mitigation**	**2.03 Acres**

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Pensacola Bay System	**III**	**---**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Part of Yellow River floodplain swamp. NWFWMD lands border three sides of Yellow River Ranch. A cattle ranch borders the northern side.

Assessment area description

Former forested wetlands converted to improved pasture. Impacts include removal of native vegetation, ditching, dike construction, erosion, cattle grazing, and establishment of exotic pasture grasses.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Yellow River WMA; Eglin AFB.	**Not unique.**

Functions	Mitigation for previous permit/other historic use
Water storage; water quality; floral and faunal habitat.	**None**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Mamals such as shrew, beaver, opossum, squirrel, bobcat, deer, rice rat, cotton mouse, raccoon, fox, black bear. Birds such as wood duck, owl, hawk, pileated woodpecker. Herpetofauna such as frog, alligator, salamander, toad, cottonmouth and other snakes.	**Black Bear, American Kestral, White Ibis**

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

Additional relevant factors

Assessment conducted by	Assessment date(s)
USACE in Consultation with Umbrella Plan Review Team	**9/27/2007**

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon B**
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation	**NWFWMD Staff in Consultation with IRT**	**9/27/2007**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/out mit	w/mit	
.500(6)(a) Location and Landscape Support	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetland. **With Mitigation** - Restored forested wetlands provide habitat and water quality benefits to hydrologically connected forested wetlands.
.500(6)(b)Water Environment (N/A for Uplands)	0	8	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Appropriate hydrologic regime restored by elmination of ditches, breaching of dike, and reestablishment of forest cover.
.500(6)(c)Community structure Vegetation and/or Benthic Community	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Reestablishment of forested wetlands, eradication of exotic pastures grasses.

Score = sum of above scores/30 (if uplands, divide by 20)	w/out mit	w/mit
	0.00	0.87

Raw Delta = [w/mit - w/out mit]
0.87

Preservation Adjustment Factor (PF) =	**1**
Time Lag Factor (16-20 Years) =	**1.68**
Risk Factor =	**1.25**
Adjusted Delta [(Raw Delta * PF) / (T * R)] =	**0.41**

UMAM Functional Assessment	
Polygon Acreage =	**2.03**
Functional Gain w/Mitigation (Adjusted Delta * Acres) =	**0.84**

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon C**

FLUCCS code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
211 - Improved Pasture (Current) 625/626 - Flatwoods (Target)	**---**	**Mitigation**	**22.56 Acres**

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Pensacola Bay System	**III**	**---**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Part of Yellow River floodplain swamp. NWFWMD lands border three sides of Yellow River Ranch. A cattle ranch borders the northern side.

Assessment area description

Former forested wetlands converted to improved pasture. Impacts include removal of native vegetation, ditching, dike construction, erosion, cattle grazing, and establishment of exotic pasture grasses.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Yellow River WMA; Eglin AFB.	**Not unique.**

Functions	Mitigation for previous permit/other historic use
Water storage; water quality; floral and faunal habitat.	**None**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Mamals such as shrew, beaver, opossum, squirrel, bobcat, deer, rice rat, cotton mouse, raccoon, fox, black bear. Birds such as wood duck, owl, hawk, pileated woodpecker. Herpetofauna such as frog, alligator, salamander, toad, cottonmouth and other snakes.	**Black Bear, American Kestral, White Ibis**

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

Additional relevant factors

Assessment conducted by	Assessment date(s)
USACE in Consultation with Umbrella Plan Review Team	**9/27/2007**

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon C**
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation	**NWFWMD Staff in Consultation with IRT**	**9/27/2007**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/out mit	w/mit	
.500(6)(a) Location and Landscape Support	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetland. **With Mitigation** - Restored forested wetlands provide habitat and water quality benefits to hydrologically connected forested wetlands.
.500(6)(b)Water Environment (N/A for Uplands)	0	8	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Appropriate hydrologic regime restored by elmination of ditches, breaching of dike, and reestablishment of forest cover.
.500(6)(c)Community structure Vegetation and/or Benthic Community	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Reestablishment of forested wetlands, eradication of exotic pastures grasses.

Score = sum of above scores/30 (if uplands, divide by 20)	w/out mit	w/mit
	0.00	0.87

Raw Delta = [w/mit - w/out mit]
0.87

Preservation Adjustment Factor (PF) =	**1**
Time Lag Factor (5 Years) =	**1.14**
Risk Factor =	**1.25**
Adjusted Delta [(Raw Delta * PF) / (T * R)] =	**0.61**

UMAM Functional Assessment	
Polygon Acreage =	**22.56**
Functional Gain w/Mitigation (Adjusted Delta * Acres) =	**13.72**

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon D**

FLUCCS code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
211 - Improved Pasture (Current) **640 - Non-Forested (Target)**	**---**	**Mitigation**	**18.35**

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Pensacola Bay System	**III**	**---**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Part of Yellow River floodplain swamp. NWFWMD lands border three sides of Yellow River Ranch. A cattle ranch borders the northern side.

Assessment area description

Former forested wetlands converted to improved pasture. Impacts include removal of native vegetation, ditching, dike construction, erosion, cattle grazing, and establishment of exotic pasture grasses.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Yellow River WMA; Eglin AFB.	**Not unique.**

Functions	Mitigation for previous permit/other historic use
Water storage; water quality; floral and faunal habitat.	**None**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Mamals such as shrew, beaver, opossum, squirrel, bobcat, deer, rice rat, cotton mouse, raccoon, fox, black bear. Birds such as wood duck, owl, hawk, pileated woodpecker. Herpetofauna such as frog, alligator, salamander, toad, cottonmouth and other snakes.	**Black Bear, American Kestral, White Ibis**

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

Additional relevant factors

Assessment conducted by	Assessment date(s)
USACE in Consultation with Umbrella Plan Review Team	**9/27/2007**

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Yellow River Ranch	**Not Applicable**	**Polygon D**
Impact or Mitigation	Assessment conducted by:	Assessment date:
Mitigation	**NWFWMD Staff in Consultation with IRT**	**9/27/2007**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/out mit	w/mit	
.500(6)(a) Location and Landscape Support	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetland. **With Mitigation** - Restored wetlands provide habitat and water quality benefits to hydrologically connected wetlands.
.500(6)(b)Water Environment (N/A for Uplands)	0	8	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Appropriate hydrologic regime restored by elmination of ditches, breaching of dike, and reestablishment of native vegetation.
.500(6)(c)Community structure Vegetation and/or Benthic Community	0	9	**Without Mitigation** - Existing pasture does not meet federal criteria for jurisdictional wetlands. **With Mitigation** - Reestablishment of wetlands, eradication of exotic pastures grasses.

Score = sum of above scores/30 (if uplands, divide by 20)	w/out mit	w/mit
	0.00	0.87

Raw Delta = [w/mit - w/out mit]
0.87

Preservation Adjustment Factor (PF) =	**1**
Time Lag Factor (3 Years) =	**1.07**
Risk Factor =	**1.25**
Adjusted Delta [(Raw Delta * PF) / (T * R)] =	**0.65**

UMAM Functional Assessment	
Polygon Acreage =	**18.35**
Functional Gain w/Mitigation (Adjusted Delta * Acres) =	**11.89**

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): 9 February 2009

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAJ-RD-NC, FL DOT-Yellow River Ranch- Umbrella Mitigaiton Plan SAJ-2009-579

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:Florida County/parish/borough: Santa Rosa City:
Center coordinates of site (lat/long in degree decimal format): Lat. 30.5920° N, Long. -85.9027° W.
Universal Transverse Mercator:
Name of nearest waterbody: Yellow River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Black Water River
Name of watershed or Hydrologic Unit Code (HUC): 03140103
☒ 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: 9 February 2009
☒ Field Determination. Date(s): 25 September 2007

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):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: 320 acres.

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

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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

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: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

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

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

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

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

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

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

   (i) General Area Conditions:
   Watershed size: **acres**
   Drainage area: **square miles**
   Average annual rainfall: inches
   Average annual snowfall: 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 **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(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: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

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

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

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

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

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

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

---

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

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

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: Ward Creek is an open water tidaly influenced system which directly discharges to West Bay which allows 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: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. 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 **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** 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: **Pick List**

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

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

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

4. The subject RPW has an inttermittent connection but flows 8-10 months continously. The RPW and its abutting wetlands are located within the floodlpain of the Yellow River and become inundated during major storm events. The wetland systems and RPW have been idenfited on the USGS NHD website as well as USGS quad sheets. 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: The subject RPWs orginates within a wet pasture. The pasture has been converted from bottomland hardwoods part of the Yellow River floodplain. The RPW receive runoff from the pastures and carry it to Yellow River. Field observations by NWFWMD staff indicate the RPW does not flow during the dry season, but flows for more than 8-10 months during the wet season.

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

☒ Tributary waters: **4000** linear feet **5** width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

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

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

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

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

☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☒ 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: The subject wetlands are located within the floodplain of Yellow River. The wetlands become inundated during the wetseason.

Provide acreage estimates for jurisdictional wetlands in the review area: **270** acres.

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

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

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

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

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

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

7. Impoundments of jurisdictional waters.[9]

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

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

---

[8]See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

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

Identify water body and summarize rationale supporting determination: .

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

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

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

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

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

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: 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.
  - ☐ 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:Ward Basin.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .

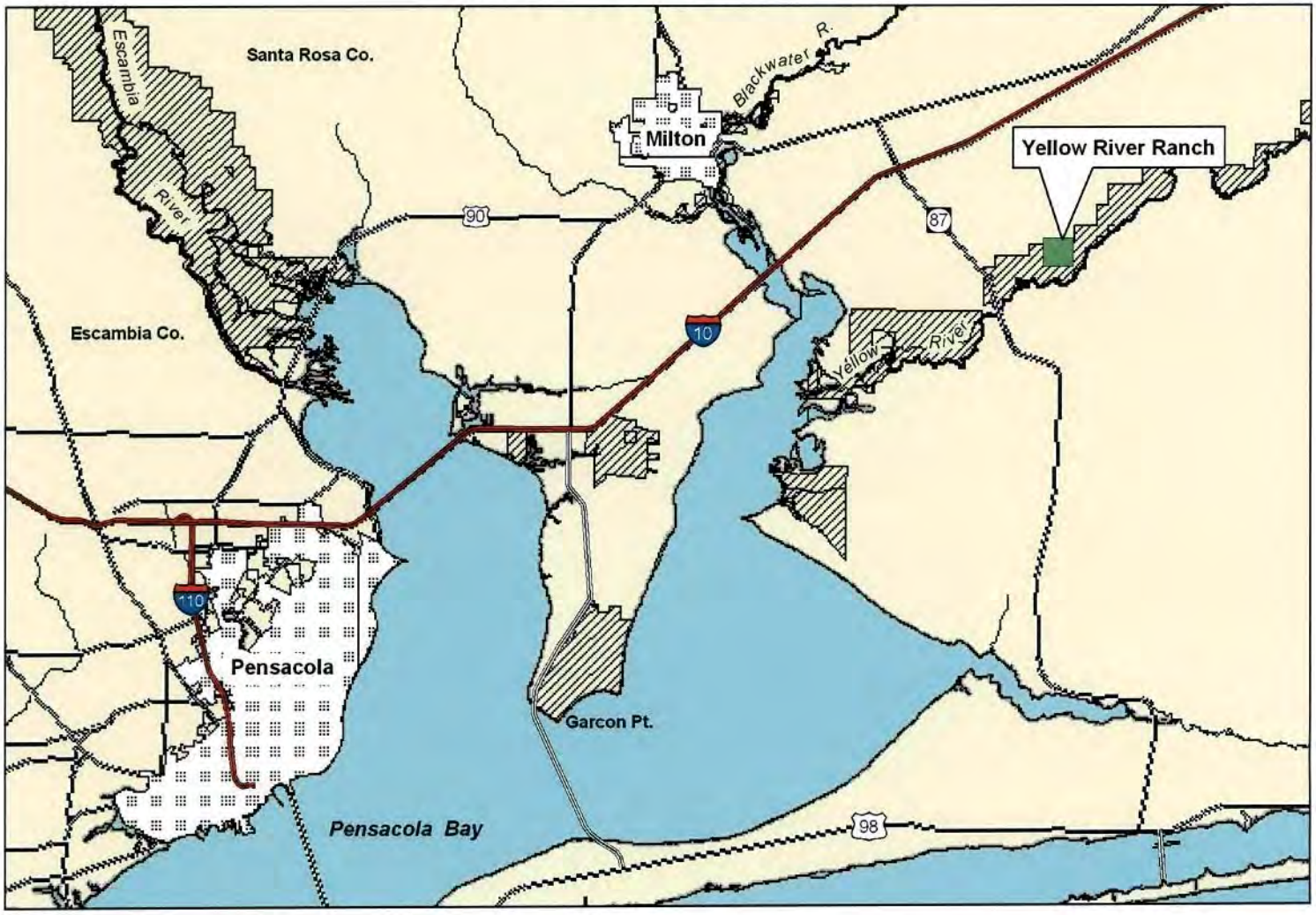
---

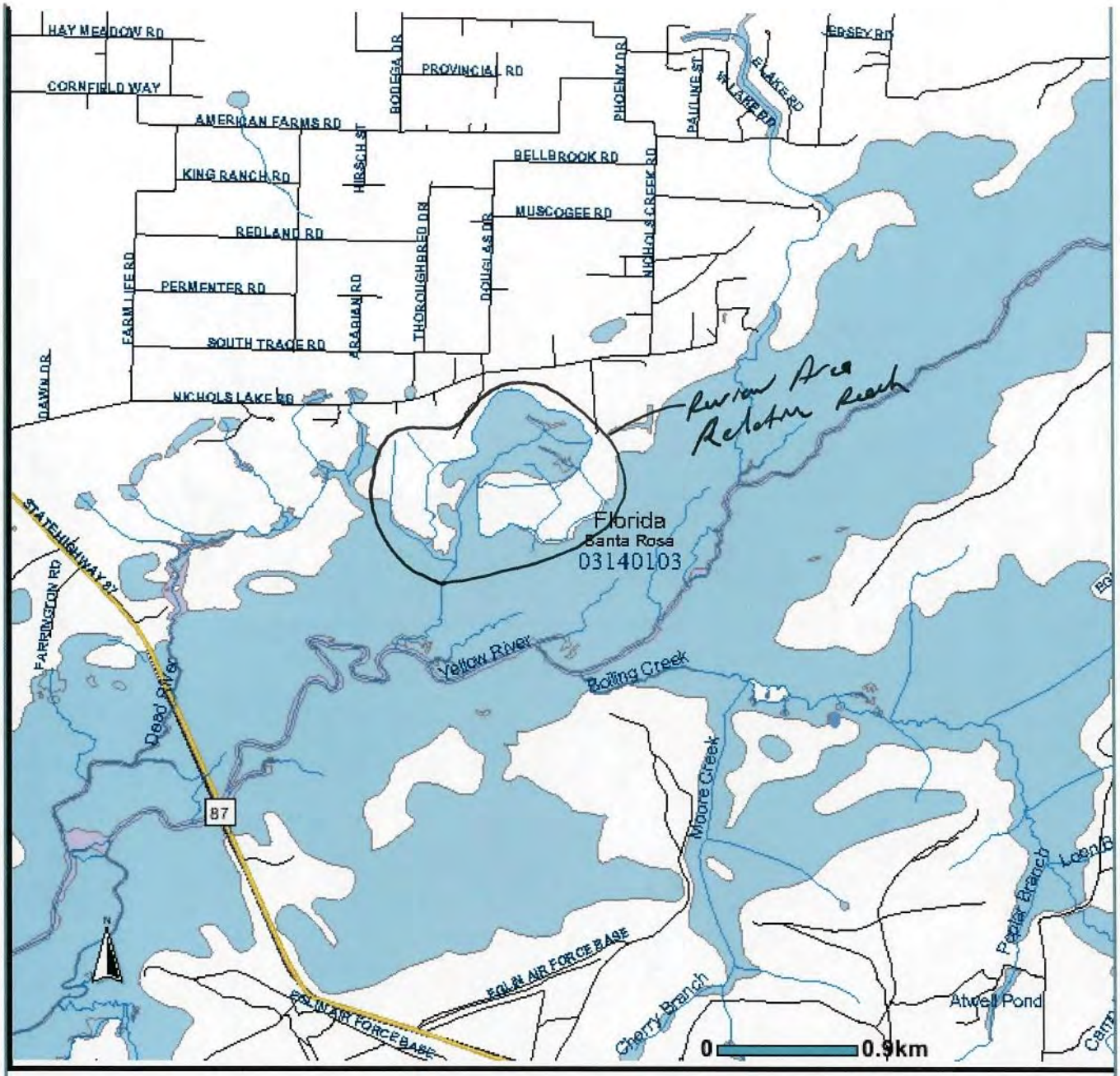
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic 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.

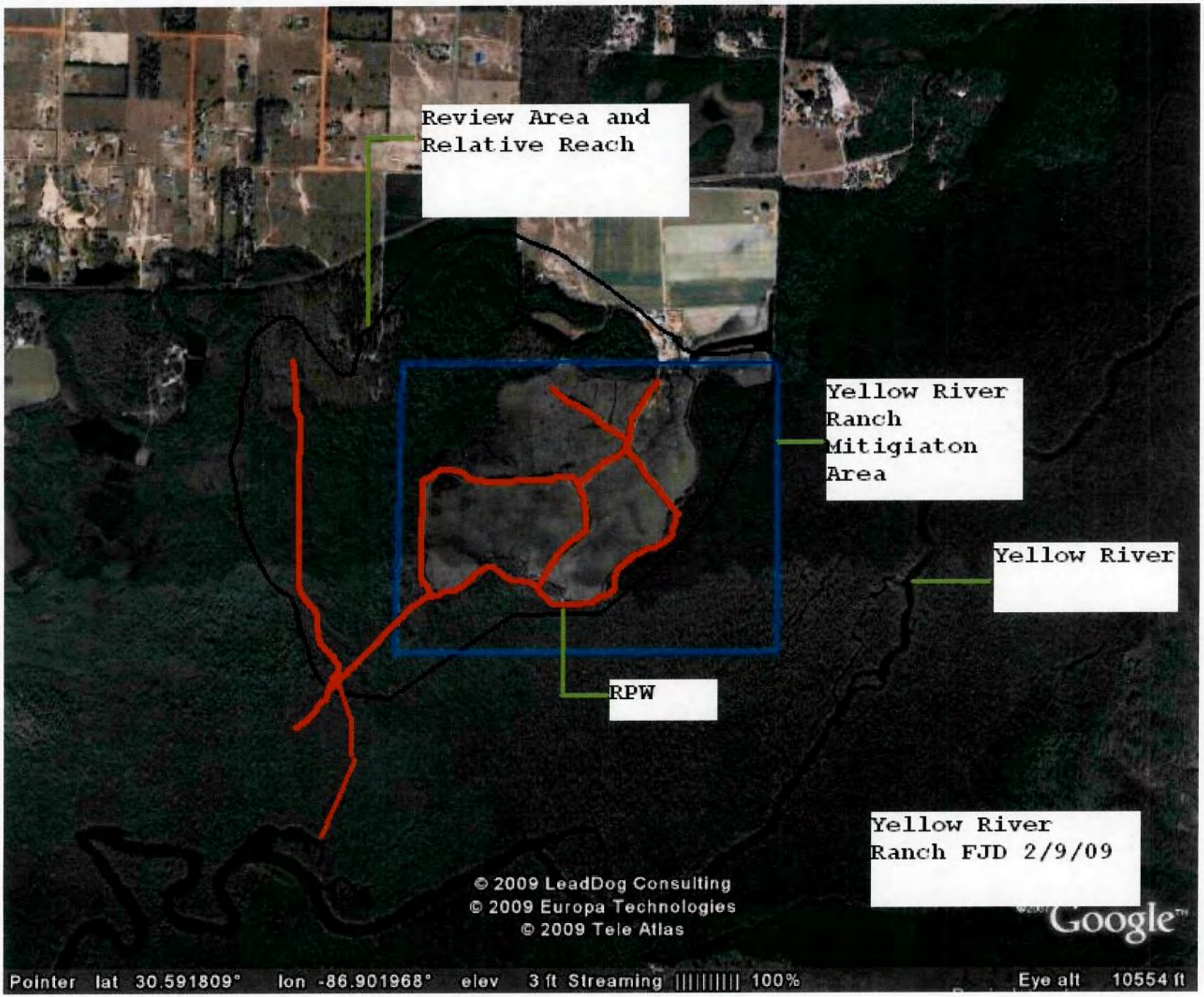
B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Location of Yellow River Ranch





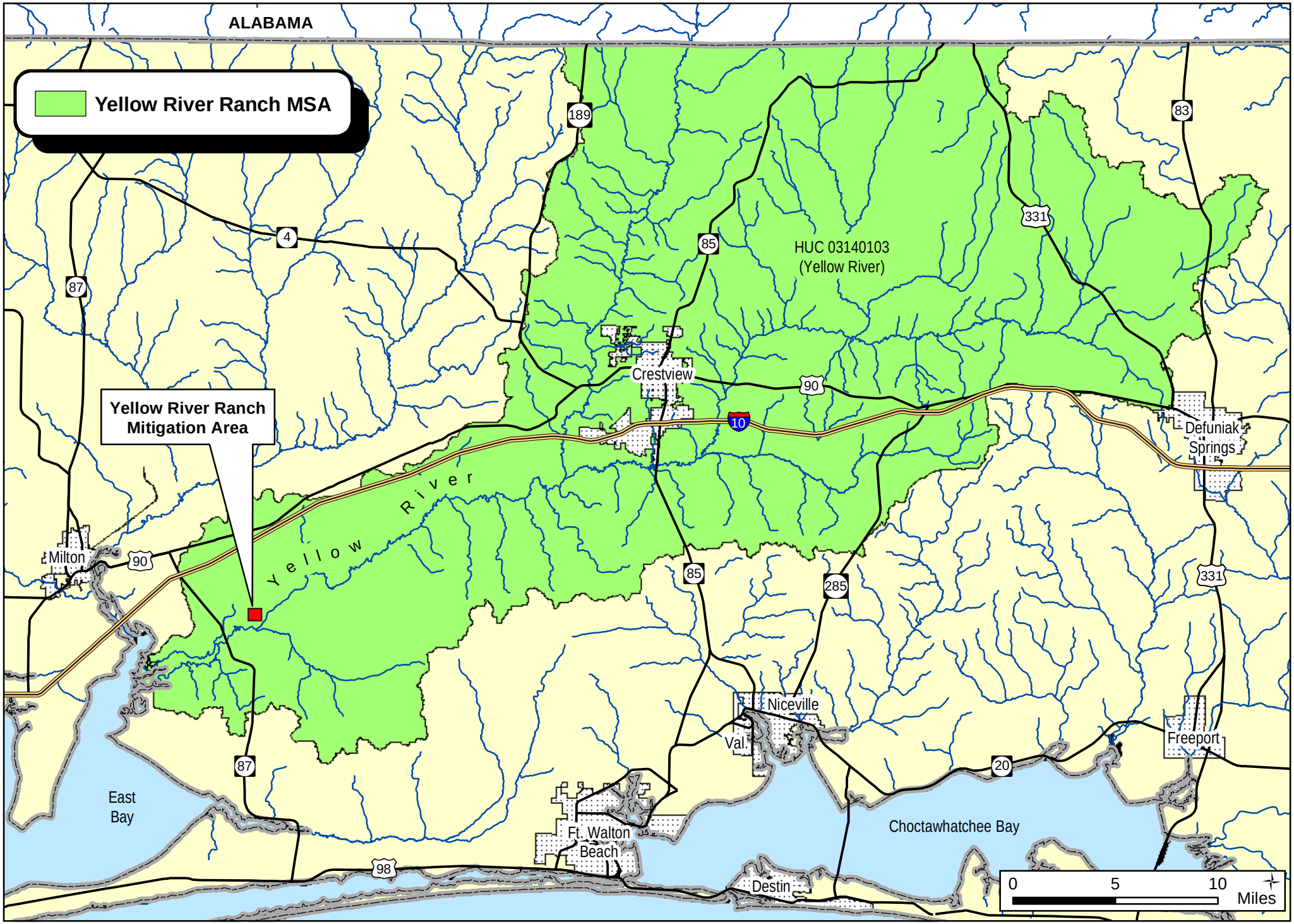
RR/RR
365 acres


Review Area and Relative Reach
Yellow River Ranch Mitigiaton Area
Yellow River
RPW
Yellow River Ranch FJD 2/9/09
© 2009 LeadDog Consulting
© 2009 Europa Technologies
© 2009 Tele Atlas
Google
Pointer lat 30.591809° lon -86.901968° elev 3 ft Streaming 100%
Eye alt 10554 ft

Mitigation Service Area

The Yellow River Ranch Mitigation Service Area (MSA) covers approximately 860 mi^2, and is defined as the portion of the 8-digit Hydrologic Unit Code (HUC) 03140103 (i.e., the Yellow River watershed) occurring in Florida. Total area for HUC 03140103 is approximately 1,375 mi^2; ~60% of the watershed occurs in Florida, with the remainder in Alabama.

Yellow River Ranch Mitigation Service Area



Schedule of Credit Release
Yellow River Ranch Mitigation Area

Total Potential Credits = 50.63

Task No.	Performance-based Milestone	% Credit Release	Number of Credits
	CREDITS RELEASED AS OF JUNE 12, 2013	58%	29.29
1	**1st Interim Success Criteria** - Maintain invasive exotic species cover to <1% and nusiance species cover to <5% cover; fire adapted, native wet flatwoods/wet prairie herbaceous species increasing in cover; planted tree density of 352-440 trees/acre in bottomland restoration areas and 88-110 trees/acre in hydric pine flatwood restoration; completion of 1st prescribed fire of the entire 65 acres of hydric pine flatwoods (portions burned 3x); planting of wiregrass on 3' centers in hydric pine flatwoods.	10%	5.06
2	**2nd Interim Success Criteria** - Maintain invasive exotic species cover to <1% and nusiance species cover to <5% cover; fire adapeted, native wet flatwoods/wet prairie herbaceous species increasing in cover; completion of 2nd prescribed fire in hydric flatwoods; planting of s cypress, at a density of 436 trees per acre (spacing will be on 10' centers).	10%	5.06
3	**Final Success Criteria** - Maintain invasive exotic species cover to <1% and nusiance species cover to <5% cover; hydrologic improvements maintained and functioning; in the hardwood restoration areas, planted trees averaging 300 in hardwood area and at least 200 in the hydric pine savannah. Trees at least 20' in height with a canopy starting to develop; 3rd prescribed fire completed for hydric pine flatwoods; wiregrass and or native grasses and forbes capable of carrying fire across the site; all graded areas stabilized with no erosion; non-nuisance, native vegetation is healthy, reproducing naturally and exibiting the cover and diversity typical of hydric pine flatwoods adjacent to the floodplain of the Yellow River for all vegetation communities.	22%	11.22
	Totals:	100%	50.63