

**Yellow River Ranch Restoration Second Annual Report (2008)**  
**ACOE Permit No. SAJ-2000-02363 (IP-CP) Issued : 4/10/02**  
**ACOE Permit No. SAJ-2004-02643 (IP-CP) Issued : 2/7/04, modified in 2006**

**Impact: SR 87 (CR 399 – Eglin AFB – 5.68 acres (Santa Rosa County))**  
**SR 87 (US 98 – Eglin AFB – 12.07 acres (Santa Rosa County))**

**Mitigation: Yellow River Ranch**  
**Monitoring date: September 26, 2008**

### SCOPE

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In 2002, the ACOE issued a permit for wetland impacts associated with the widening of SR 87 from CR 399 to Eglin AFB. A total of 5.68 acres of low quality wet flatwoods will be impacted. Later in 2004, the ACOE issued an addition permit for 12.07 acres of wetland impacts to moderate to high quality stream and bottomland swamp. Both of these impacts will be mitigated at the Yellow River Ranch.

### PROPOSED MITIGATION

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To compensate for the proposed wetland impacts, in December, 2005, the NFWFMD acquired the 275-acre Yellow River Ranch parcel for use as mitigation for FDOT wetlands mitigation (Figure 1 and 2). Located on the Yellow River floodplain in Santa Rosa Co., it is 1.5 miles east of SR 87 and is bordered on three sides by extensive forested floodplain wetlands acquired by the District in the 1990's by the NFWFMD. Approximately 155 acres of the Yellow River Ranch consists of 155 acres of intact forested wetlands (FLUCCS 615 – Bottomland Floodplain Forest), with the remaining 120 acres converted to pasture from (FLUCCS 615 – Bottomland Floodplain Forest), and FLUCCS 625 – Hydric Pine Flatwoods. As mitigation for current CORPS permit associated with SR 87", the NFWFMD has preserved the 155 acres of FLUCCS 615, Bottomland Floodplain Forest and restoring ~ 55 acres of pasture back to forested wetlands. Approximately 65 acres of prior converted wetlands (ie., the pasture) remain available for future restoration and mitigation needs (Figure 3).

Restoration activities will be consistent within the entire 120 acres and will be accomplished concurrently. Prior to implementation of a hydrologic restoration plan. In 2006 Light Detecting and Ranging (LIDAR) analysis was conducted for the Yellow River Ranch Site. In 2007, NFWFMD staff performed a detailed hydrologic study of the site with recommendations to implement the hydrologic restoration. Numbers and placement of breaches and ditch plugs were included in the results.

Functional wetland lift will be derived from 1) filling in or blocking of drainage ditches, breaching of the dike, 3) eradication of non-native pasture grasses including Bahia grass and popcorn tree, 4) re-vegetation with bottomland hardwood forest and hydric pine

flatwood species including the appropriate ground cover, 5) implementation of a growing –season fire regime with the restored flatwoods area, and 6) long term management including control of nuisance and exotic species.

The pasture will be restored as a mixture of bottomland floodplain forest (FLUCCS 615) and, where appropriate, hydric pine flatwoods (FLUCCS 625). For the portion of the pasture to be restored to bottomland hardwood forest, vegetation to be planted includes a mixture of Atlantic White Cedar, possum haw, black gum, laurel oak, cypress and American elm. Areas targeted for hydric pine flatwoods restoration will be planted with species such as slash pine, cypress, myrtle leaf holly, understory will be planted with appropriate groundcover seed and potentially wire grass tublings.

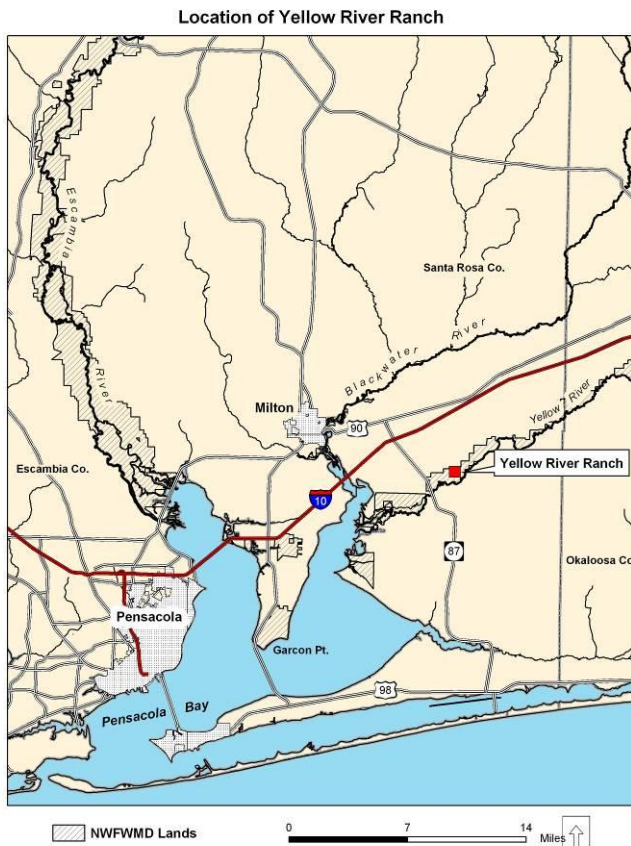


Figure 1. Yellow River Ranch Location Map.

# Yellow River Ranch - 2004 DOQ

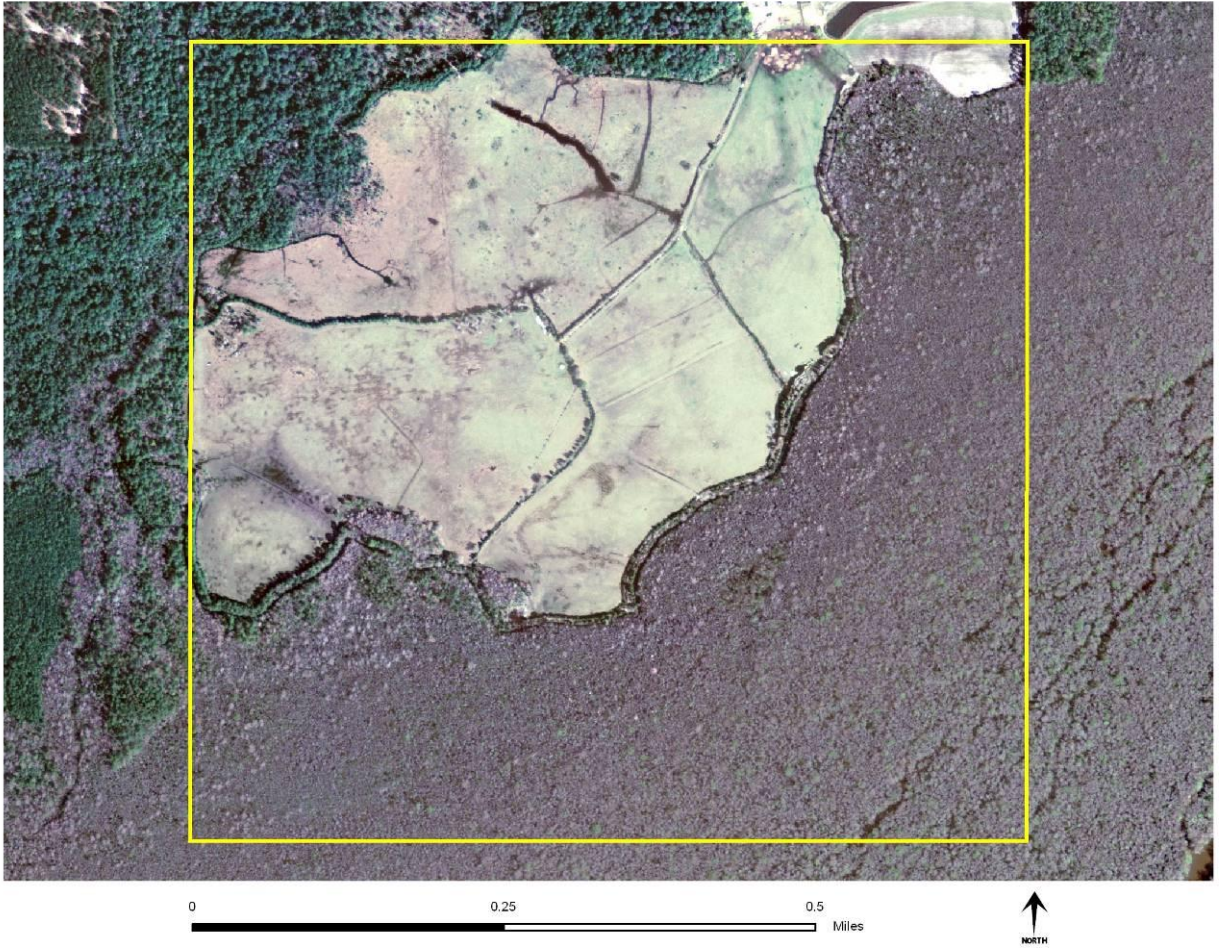
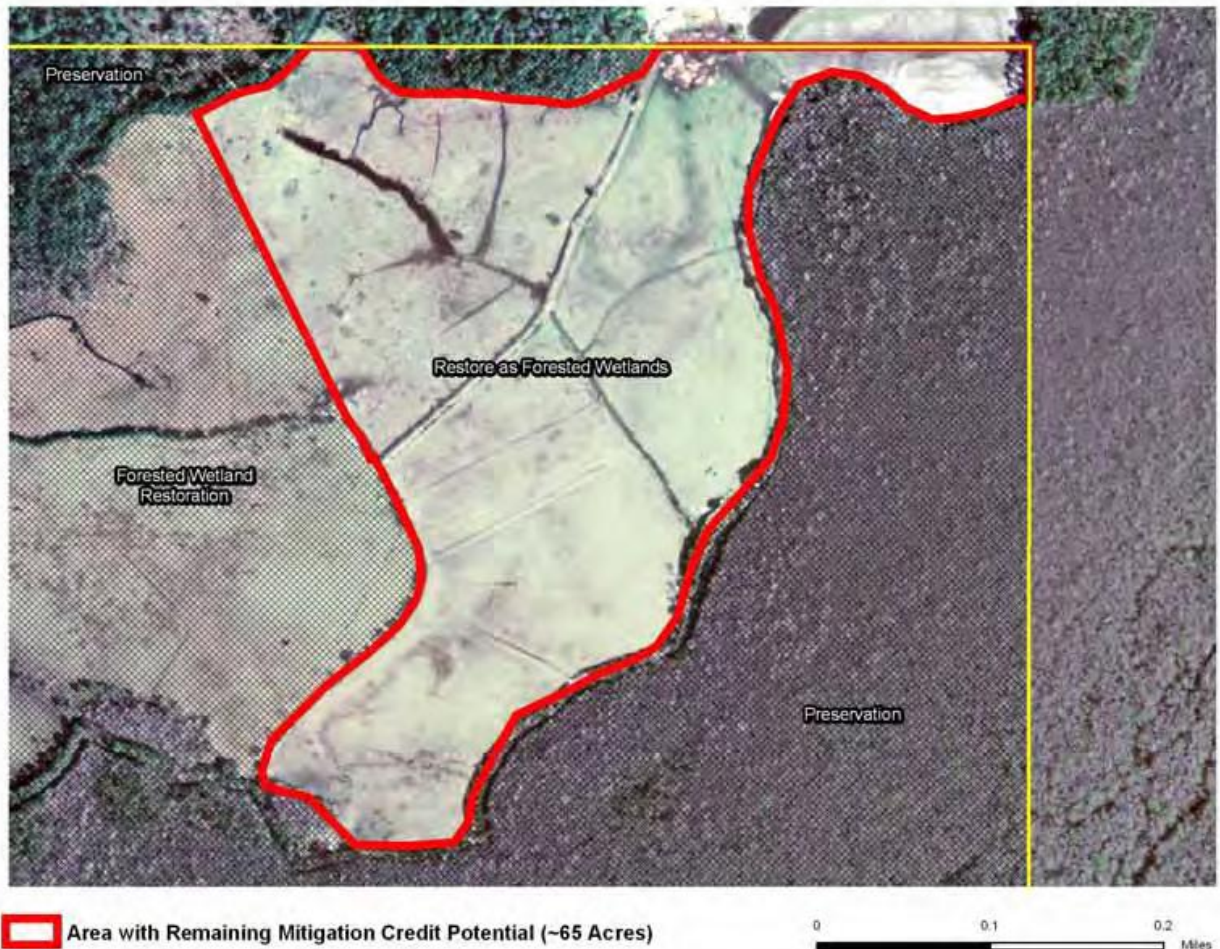


Figure 2. Yellow River Ranch Restoration Site Map.

### Yellow River Ranch - Remaining Mitigation Area



**Figure 3. Yellow River Ranch Mitigation Areas**

#### **Mitigation Accomplishments:**

- Acquisition of the 275 acre Yellow River Ranch in 12/05
- Preservation of 155 acres of high quality bottomland hardwood forest
- Cessation of Cattle operations – **Completed 2005**
- Hydrologic Study – **Completed 2007**
- Hydrologic restoration – **Initiated in April 2008**
- Eradication of exotic pasture grasses and other nuisance and exotic species such as Chinese Tallow – **Will be initiated in May 2008**
- Re-vegetation of forested wetland and flatwood species
- Re-introduction of fire within the wet flatwoods
- Implementations of long term management

## SUCCESS CRITERIA

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- Nuisance vegetation less than 5% cover over the site;
- Exotic vegetation less than 1% cover over the site;
- Tree density of 352-440 trees per acre in bottomland hardwood and 88-110 trees per acre in hydric pine flatwoods;
- Native ground cover and shrub layer species appropriate for natural community type trending toward increase in diversity and coverage.

The majority of the work on the Yellow River Ranch has just begun. As the restoration continues it is expected that the success criteria will be met in the near future.

## FUTURE WORK SCHEDULE

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In 2009, the remaining hydrologic analysis will be completed for the site including additional berm breaches, and the removal of selected ditches. A cool season fire is planned for late January/February for 35 acres of wet pine flatwoods area that is responding from the seed bank since the cattle have been removed. Extensive herbicide work will be initiated in 2009 to remove the exotic pasture grass and popcorn tree. Wire grass seed will be harvested for direct seeding once the pasture grass has been eradicated. In addition, bottomland hardwood seedlings will be ordered for the bottomland hardwood restoration areas.



Yellow River Ranch: remnant wet flatwoods



Yellow River Ranch: Remnant cypress slough



Yellow River Ranch: Pasture with remnant pine flatwoods in distance



Yellow River Ranch: Adjacent to perimeter ditch



Yellow River Ranch: pasture with floodplain forest in background