

Meginniss Arm Shoreline Restoration Second Annual Monitoring Report (2008)
I-10, LEON CO.
SAJ – 2005 – 1406 IP – SEC Issued: 4/7/06

Impact: I-10 in Leon Co.—1.90 Acre

Mitigation: Lake Jackson

PROPOSED MITIGATION

To compensate for the loss of 1.9-0 acres of wetland function associated with the I-10 widening, the NFWFMD proposes restoration of 17 acres of native shoreline vegetation and eradication of extensive infestations of exotic and invasive plant species on the western side of Meginniss Arm at Lake Jackson (Figure 1). The mitigation site is primarily on state lands, with upslope portions possibly occurring on county-owned property. Historically, much of this site was managed as improved pasture for cattle grazing, and continues to be dominated by exotic and invasive vegetation. Restoration consists of eradication and management of Chinese tallow (*Sapium sebiferum*), wild taro (*Colocasia esculenta*), purple sesban (*Sesbania puncea*) and other exotic and/or invasive species using approved herbicides and application methods, followed by the planting of appropriate wetland species (marsh species with inclusions of cypress where appropriate).



Figure 1. Meginniss Arm Restoration Location Map



Figure 2. Meginniss Arm Restoration Site Map

WRAP analyses conducted by NFWFMD staff indicate that restoration of 17 acres of shoreline wetland communities will more than offset functional losses associated with the 1-10 widening. Coordination of exotic eradication efforts and shoreline restoration has been implemented in coordination with Lake Jackson Mounds Archaeological State Park and the FDEP Bureau of Invasive Plant Management.

Work Completed:

To date herbicide treatment for the eradication of popcorn tree (2006-2007) purple sesban and wild taro (2007) have been completed for the 17 acres. Trunks of the trees were hand cut and the stems painted with a systemic herbicide. During 2008, the NFWFMD contracted with Biological Research Associates (BRA) to follow up on the initial herbicide leading to the eradication of popcorn tree, wild taro and purple sesban. A total of five treatments were conducted in May, June, July, August and September of 2008. All herbicides were labeled for aquatic systems and administered by licensed pesticide applicator(s) (Figure 3). The limits of the mitigation area were identified using sub-meter GPS and permanently marked. Site monitoring occurred on October 31, 2008. The exotic species cover was reduced to near 0% cover. The site will be planted in the spring of 2009 with appropriate wetland species.

SUCCESS CRITERIA

- 80% survival of planted wetland vegetation: **Vegetation planting will occur in 2009**
- Exotic species \leq 1% of vegetation cover: **Treatments completed in 2007 and 2008. Exotic species cover is well below 1% cover.**
- Invasive species \leq 5% of vegetation cover. **No potential invasive native species have been observed.**

WORK SCHEDULE

- Within two years of permit issuance, eradication of exotic / invasive species and planting of native wetland shoreline species: **Completed in 2008, though additional spot treatments will continue as needed.**
- Annual monitoring (photo-documentation and inspection of mitigation site by a qualified biologist or wetland scientist to estimate survival of planted vegetation and percent cover of any exotic / invasive plant species), if required, for five years after shoreline restoration or duration of permit. **First and second annual monitoring complete.**
- Annual reports after exotic / invasive eradication and shoreline restoration, if required, for five years or duration of permit. **First and second Annual Monitoring complete.**
- Additional exotic / invasive eradication and planting of shoreline vegetation if success criteria are not met.
- Wetland species will be planted in spring of 2009.

Meginnis Arm
Before/After Treatment
May/June 2008



Photo Location 1 - Before Treatment (arrows point to sagebrush & Tallow)



Photo Location 1 - After Treatment



Photo Location 2 - Before Treatment



Photo Location 2 - After Treatment (Brown plants are *Juncus* sp.)

Meginniss Arm
Photo
September 2008



Photo 1: Meginniss shoreline



Photo 2: Taro treatment



Photo 3: Dead tallow resprout from last treatment



Photo 4: Taro treatment