

COASTWIDE

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Project Number	Project Proposals
CW-01	Coastwide Competitive Voluntary Canal Backfilling
CW-02	Coastwide Floating Marsh Restoration

CW-01

Coastwide Competitive Voluntary Canal Backfilling

CW-02

Coastwide Floating Marsh Restoration

PPL22 PROJECT NOMINEE**January 26, 2012****Project Name**

Coastwide Floating Marsh Restoration

Coast 2050 Strategy

Coastwide Strategies: Vegetative Plantings; Terracing

Project Location

Coastwide

Problem

Significant areas of fresh marsh have converted to open water, and vegetation associations have changed from thick-mat maidencane (*Panicum hemitomon*) dominated marsh to thin-mat spikerush (*Eleocharis baldwinii*) dominated marsh. On a coastwide scale, there are about 290,000 acres of fresh interior open water and there are additional acres of thin mat floating marsh. Except for the active deltas receiving high mineral input (Atchafalaya Delta, Wax Lake Delta, Mississippi River Delta), much of this area has a high potential for restoration to a more stable thick-mat maidencane dominated marsh.

Goals

At selected areas across the coast, restore floating marsh using floating mat units using the design developed by the CWPPRA LA-05 Demonstration Project (Sasser et. al 2010). The units will provide and hold in place vegetative source material to create islands and lines of floating vegetation. These islands and lines can be used to 1) divide large areas of open water into smaller compartments, creating smaller water bodies with less wave energy, 2) connect shorelines to isolate existing coves; 3) form grids to establish the nucleus of new marsh that would expand over time and connect and intermesh with other natural or restored marsh units.

Proposed Solution

In each of 5 years (years 1, 3, 5, 7, and 9) install approximately 14,000 floating mat units. The floating mat units will be approximately 4 ft X 8 ft and will be planted with potted maidencane and stems. Nutria control will be provided via an enhanced incentive program in the area that surrounds the floating mat deployment.

For the first year, the floating mat units would be deployed at the Lake Hackberry Northeast site in a configuration that would consist of about 27,500 linear feet of "single row" groups of mat units and about 11,000 feet of "double row" groups.

For subsequent years, a site selection process similar to that used for the Coastwide Plantings Project (LA-39) would be utilized.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly? Once vegetated, the mat units for each year of installations will occupy an estimated 40 acres for a project total of about 200 acres. The mat units will be arranged to reduce wave fetch, which would serve to reduce shoreline erosion and increase submerged aquatic vegetation. At the Lake Hackberry Northeast

site, about 1,000 acres would receive indirect benefits. Similar indirect benefits could be expected at other sites.

2) How many acres of wetlands will be protected/created over the project life? 200 acres created; acres protected has not yet been determined.

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%). Not yet determined

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. The once continuous floating marshes are subject to "float" break-up and transport. The project will serve to create islands and lines of floating vegetation which will "weave" or "knit" together small islands, thereby restoring larger areas of floating marsh.

5) What is the net impact of the project on critical and non-critical infrastructure? With the Lake Hackberry Northeast site, restoration of floating marsh continuity in the vicinity of the GIWW will better allow the GIWW to serve as a conduit of Atchafalaya water to the east. Impacts to infrastructure for other sites has not yet been determined.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects. With the Lake Hackberry Northeast site, this project will contribute to the concept of using the GIWW to serve as a conduit of Atchafalaya water to the east. Synergy associated with other sites has not yet been determined.

Identification of Potential Issues

The proposed project has the following potential issues: no issues presently identified.

Preliminary Construction Costs

\$ 3.2 million (including 25%contingency) X 5 = \$16 million

Preparer of Fact Sheet

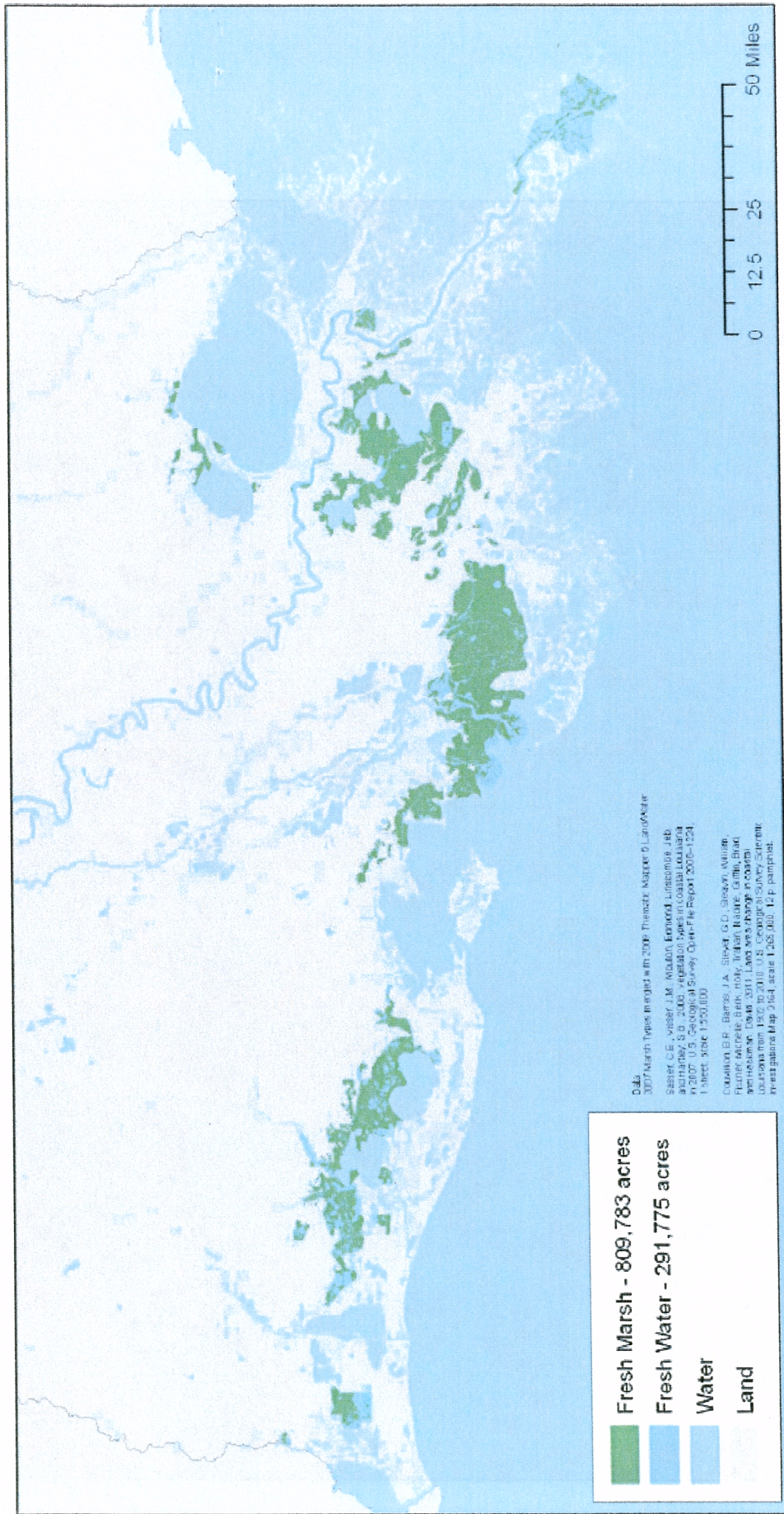
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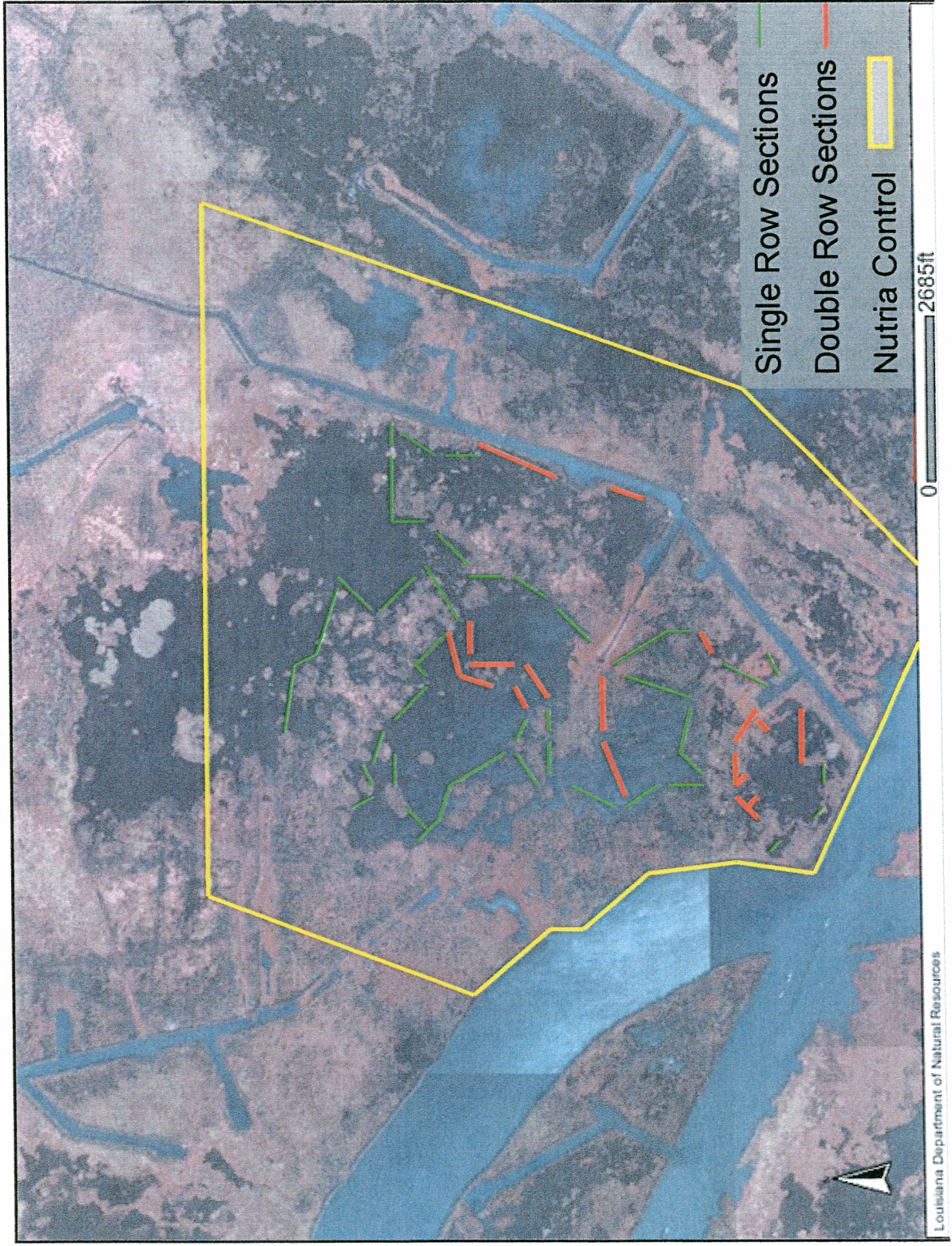
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quin.kinler@la.usda.gov

Sasser, C.E. , J. M. Visser, C. E. Mayence, M.W. Hester, B.J. Milan, J. Gore, L.Stanton,M.D. Materne, E. Evers. 2010. Floating marsh Creation Demonstraion Project (LA-05) Monitoring and Comprehensive Final Project Report 2004-2009. 108pp, plus Appendix.



LAKE HACKBERRY NORTHEAST FLOATING MARSH RESTORATION



PPL 22
Regional Planning Team
January 26, 2012

Region 2
Barataria Basin

Coastwide Floating Marsh
Restoration

**MONITORING AND COMPREHENSIVE FINAL PROJECT REPORT
2004-2009**

FLOATING MARSH CREATION DEMONSTRATION PROJECT (LA-05)

Submitted to:
Office of Coastal Protection and Restoration

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December, 2010



June 2006



September 2006



May 2007

LA-05



October 2007



July 2008



May 2009



June 2006



September 2006



May 2007

LA-05



October 2007

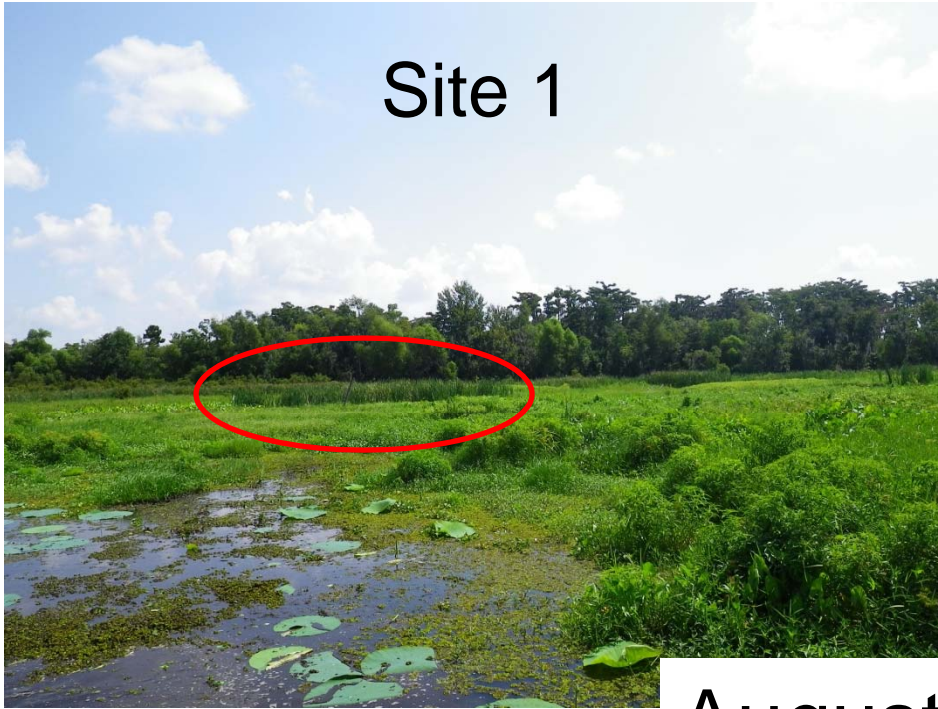


July 2008

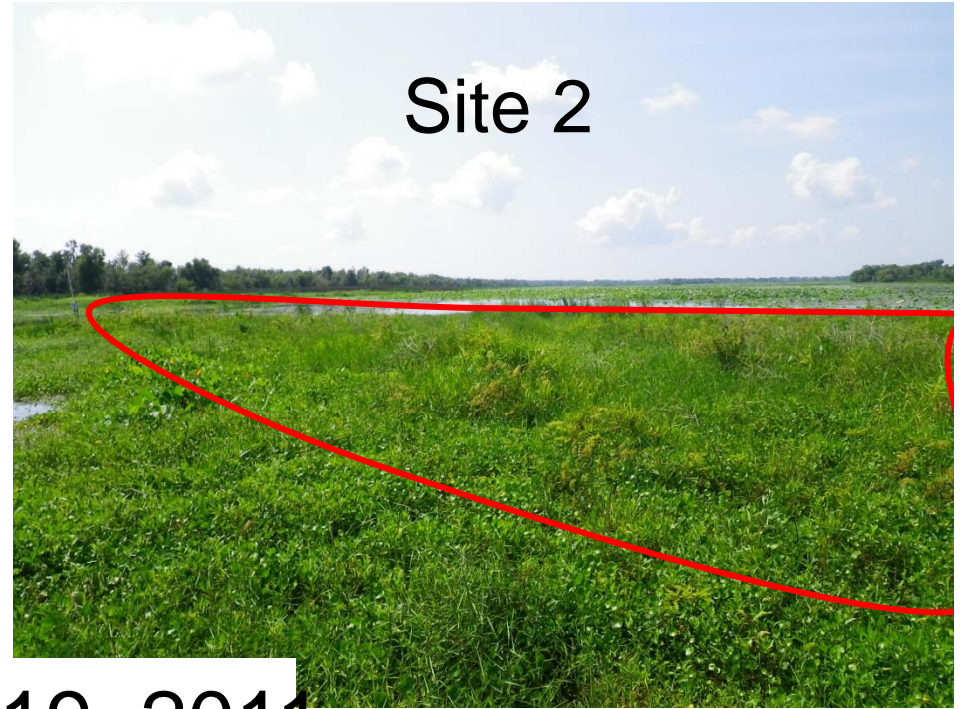


May 2009

Site 1



Site 2



August 19, 2011

Site 3

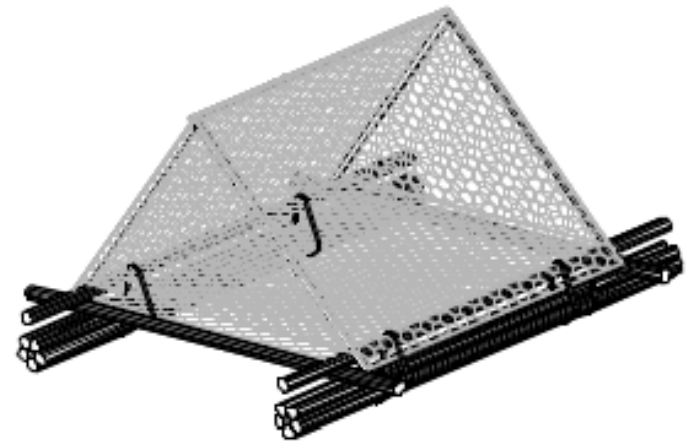
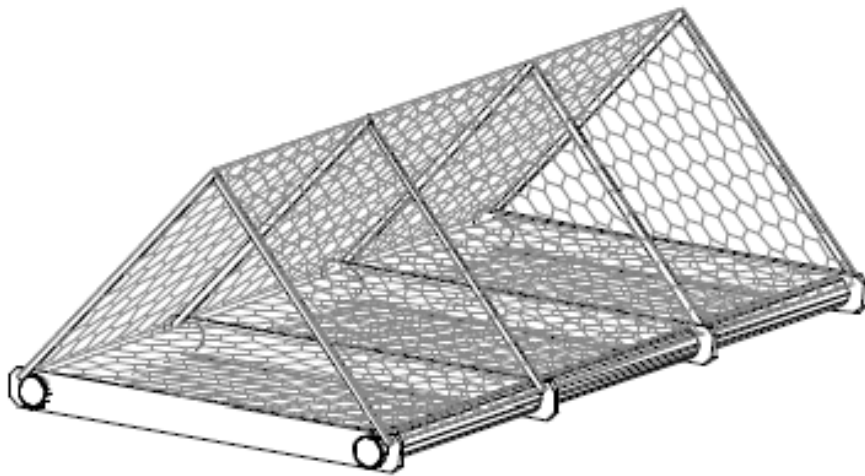


Site 4

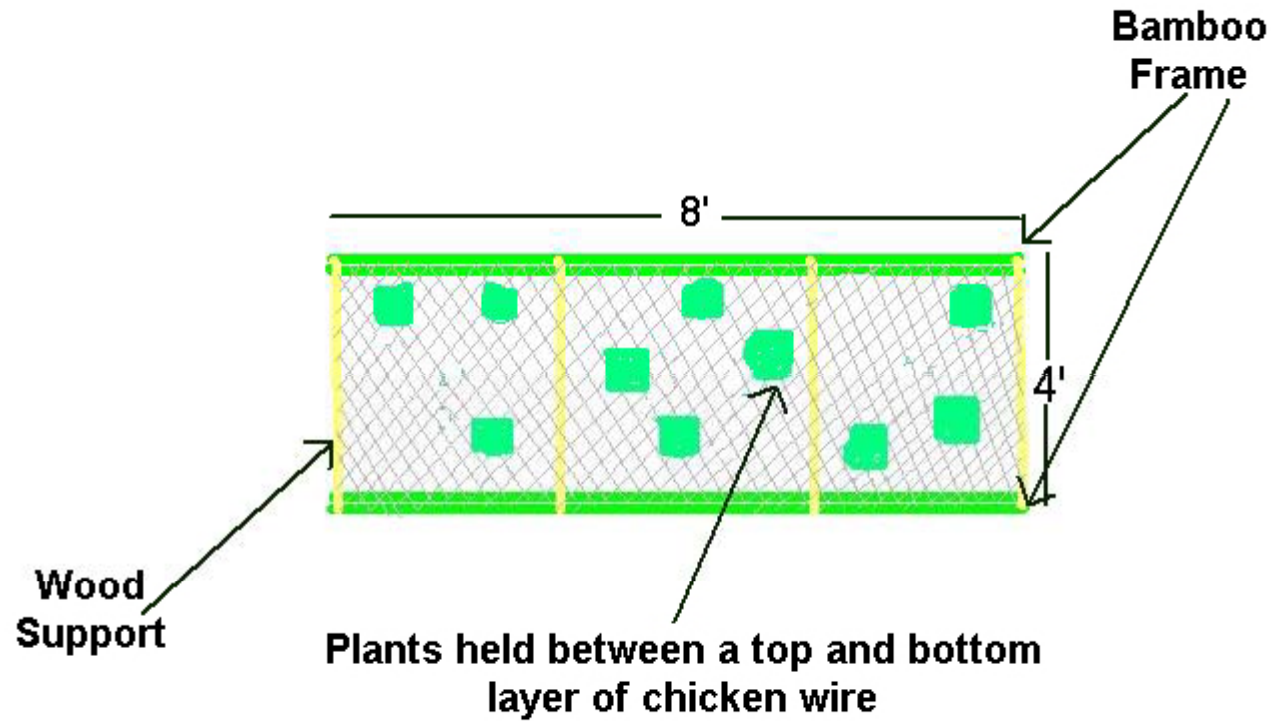


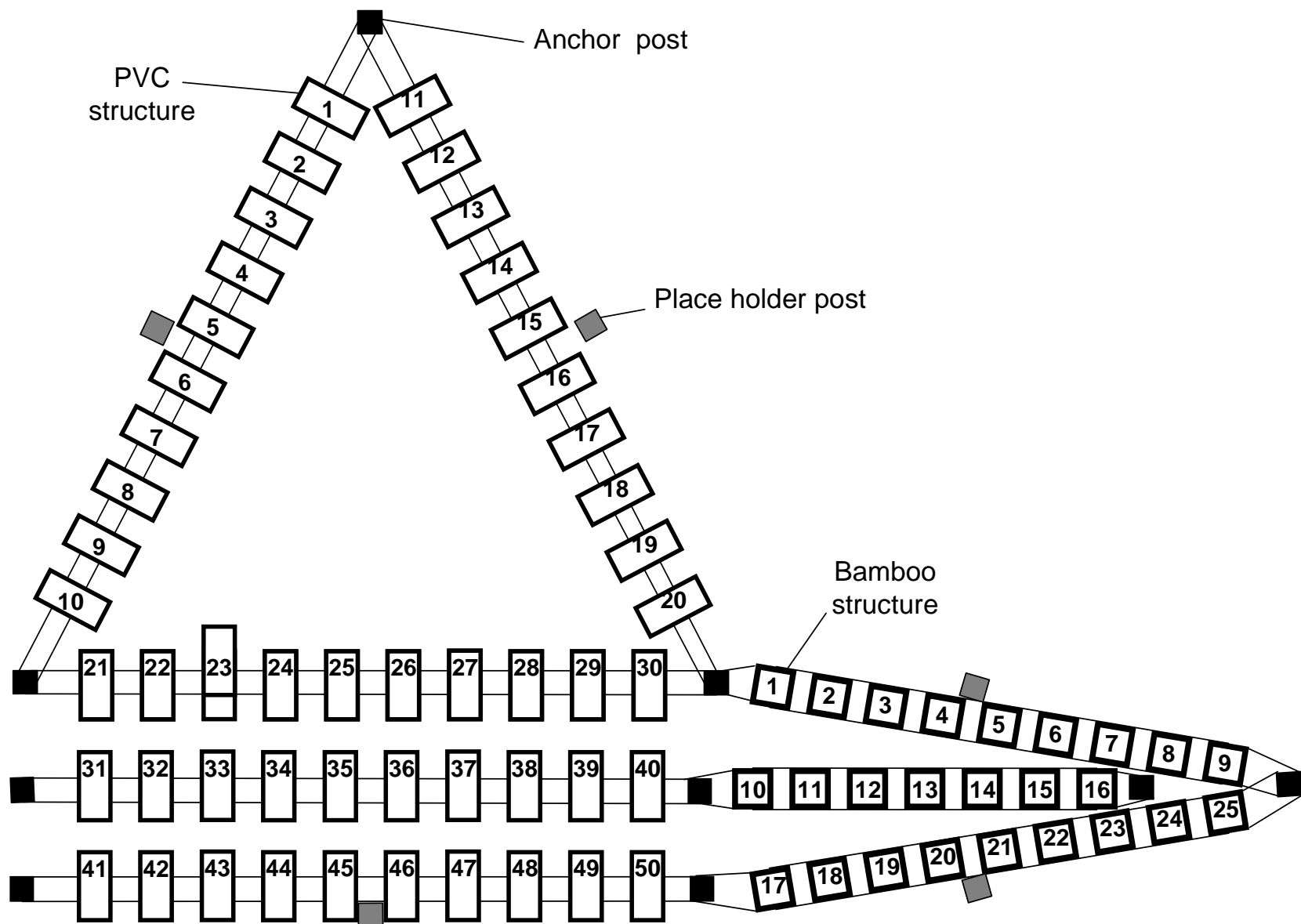
LA-05

Floating Marsh Demo Project

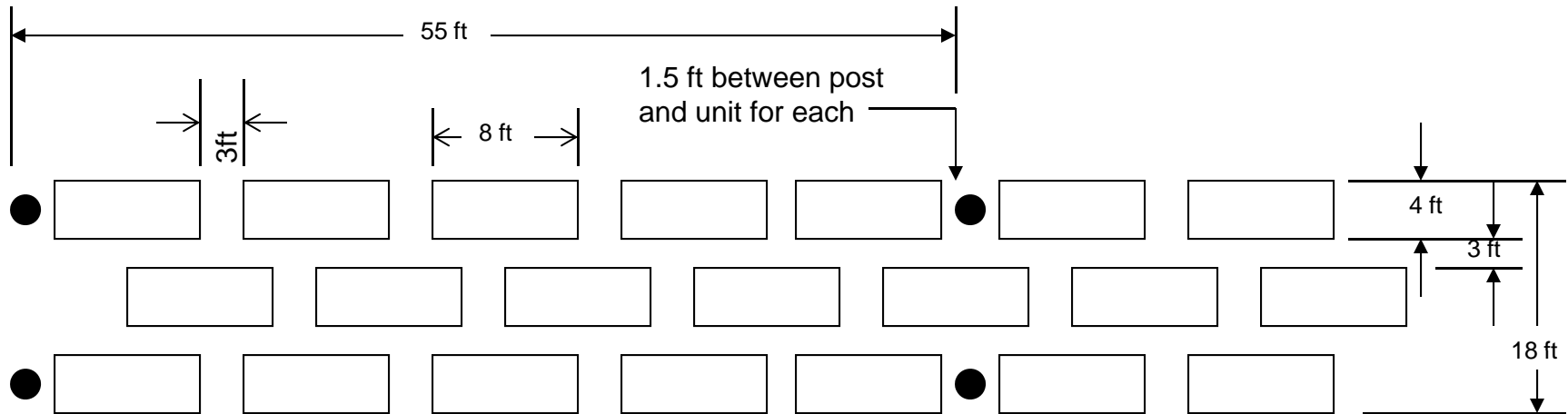


FLOATING MAT UNIT

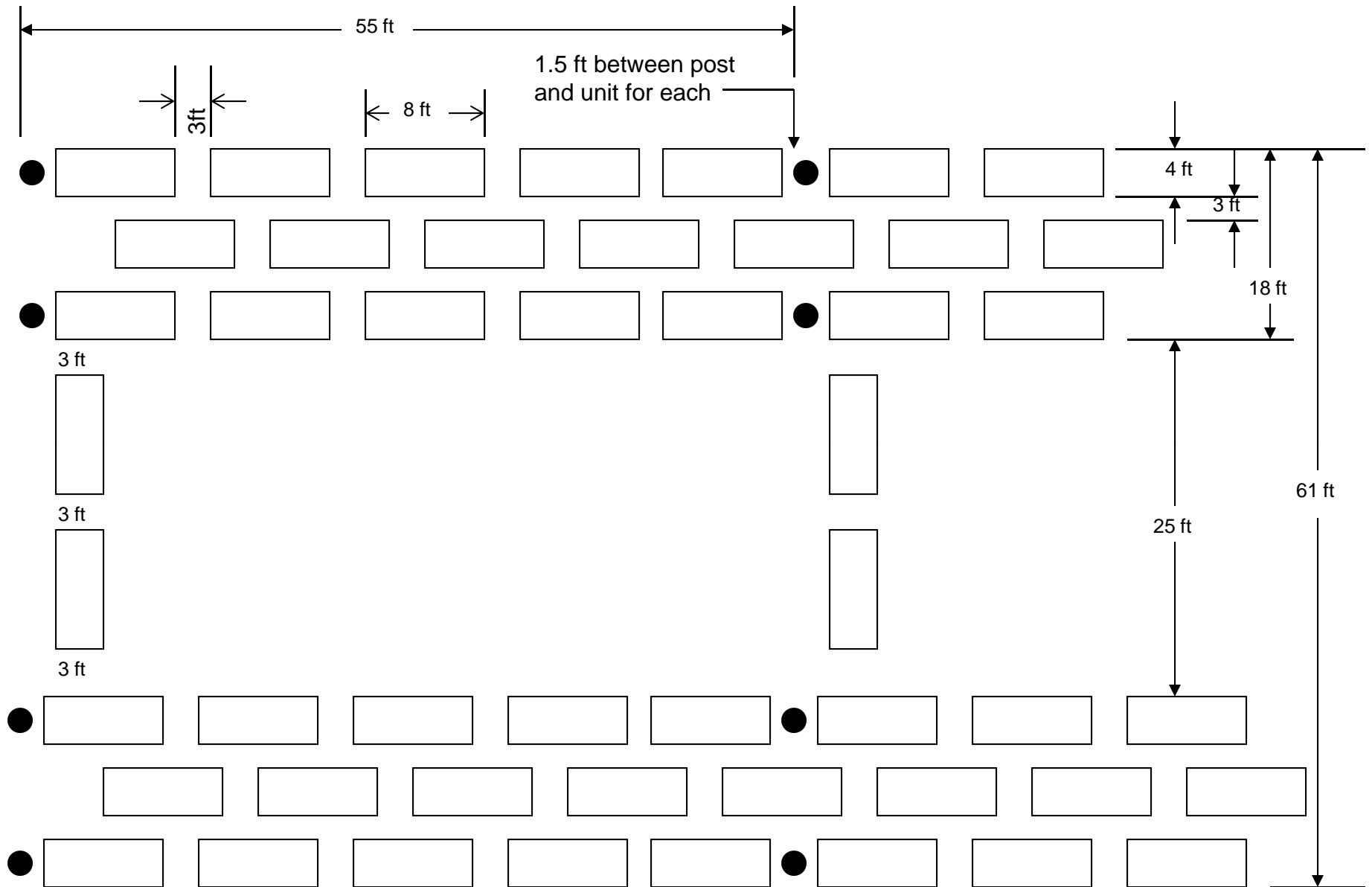




Existing Marsh



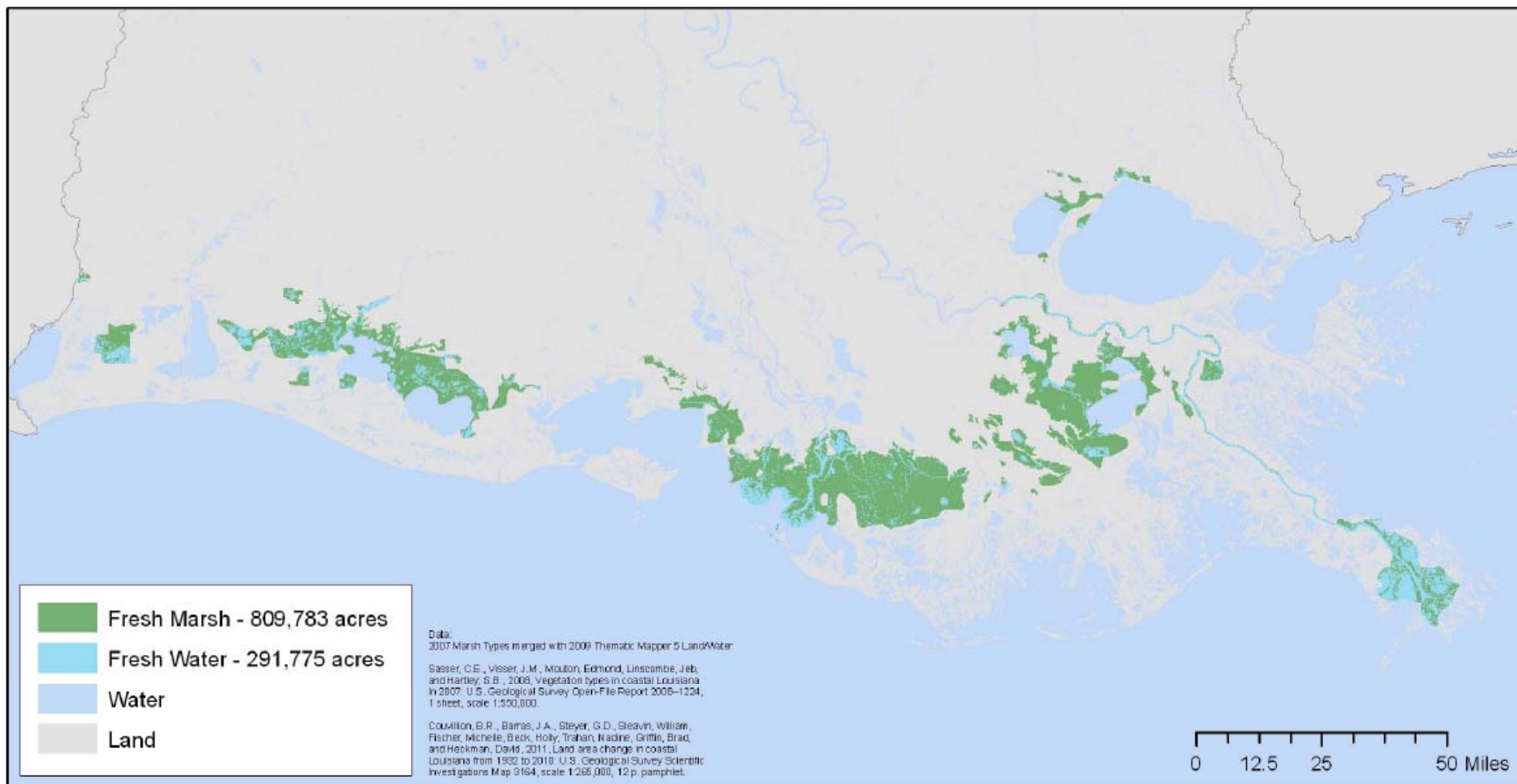
Single Row Floating Mat Section (55 ft X 18 ft)



Double Row Floating Mat Section (55 ft X 61 ft)

Example layout from LA-05 Final Report (Sasser, et. al, 2010)





COASTWIDE FLOATING MARSH RESTORATION

Build on lessons learned in CWPPRA Demo Project (LA-05)

Installations in Years 1, 3, 5, 7, 9

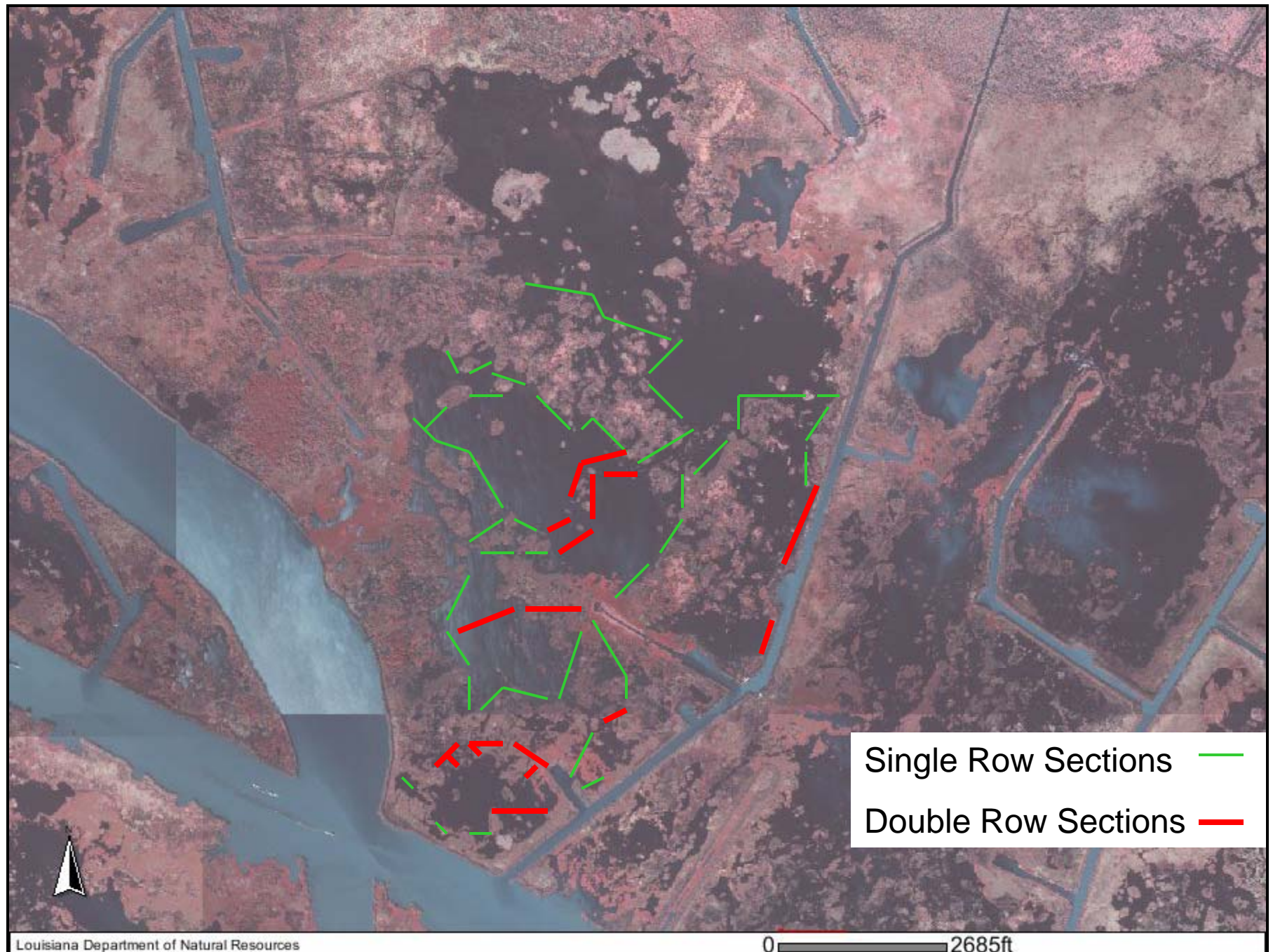
Install approximately 14,000 units in each of those years, some single row, some double row, plus additional incentive for nutria control

$\$3.2\text{M} / \text{installation} \times 5 \text{ installations} = \16M

Year 1 = Lake Hackberry Northeast

Selection Process similar to LA-39 for subsequent years.

LAKE HACKBERRY NORTHEAST FLOATING MARSH RESTORATION



LAKE HACKBERRY NORTHEAST FLOATING MARSH RESTORATION

