

Avenir Conservation Area

A presentation to:

Palm Beach County Water Resources Task Force

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AVENIR

Avenir Conservation Area

By the numbers:

Overall property – 4,763 acres

Conservation Area – Minimum 2,449 acres – 51% of overall property

Approximately 965 acres of existing wetlands in Conservation Area

Avenir Conservation Area

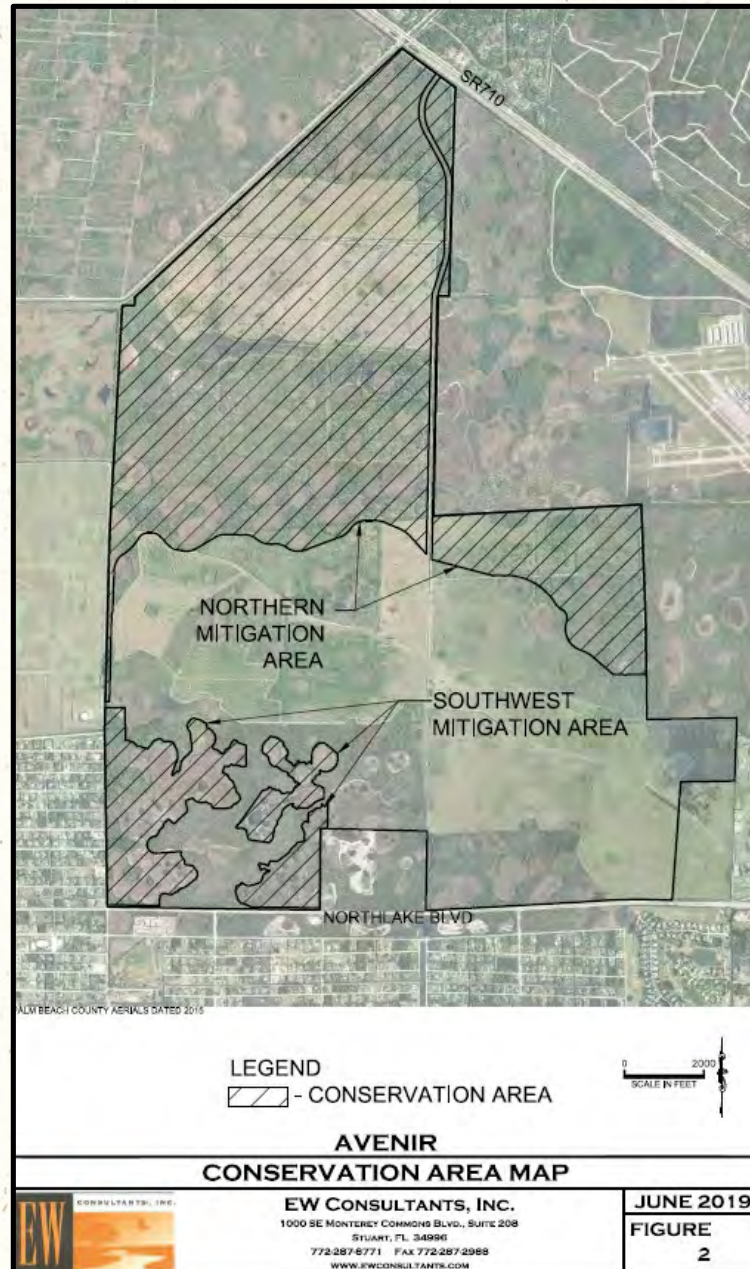
Permit History/Status:

SFWMD Conceptual Permit issued August 17, 2017

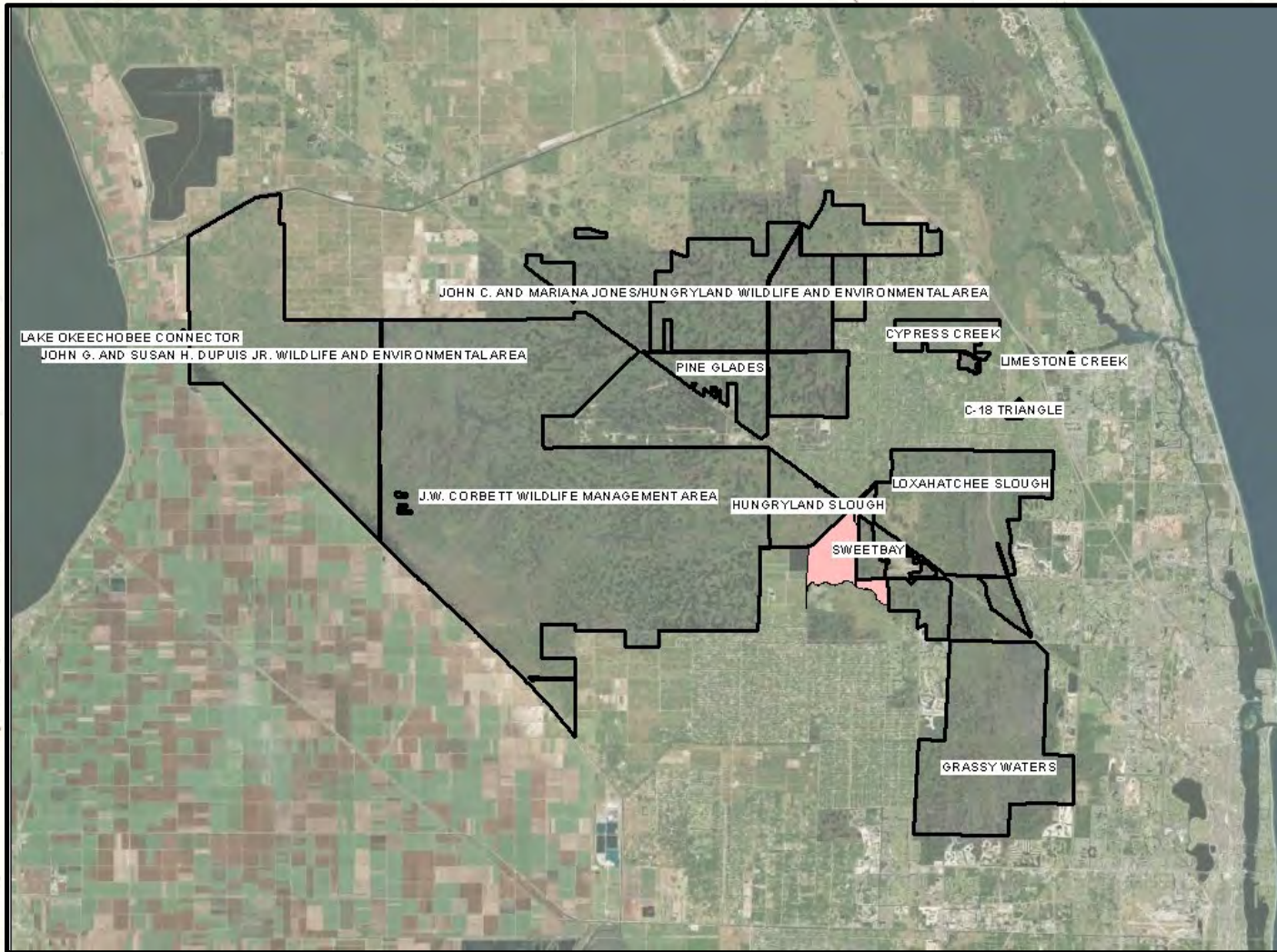
Army Corps of Engineers Section 404 Permit issued May 25, 2018

Land Use approvals ongoing with City of Palm Beach Gardens

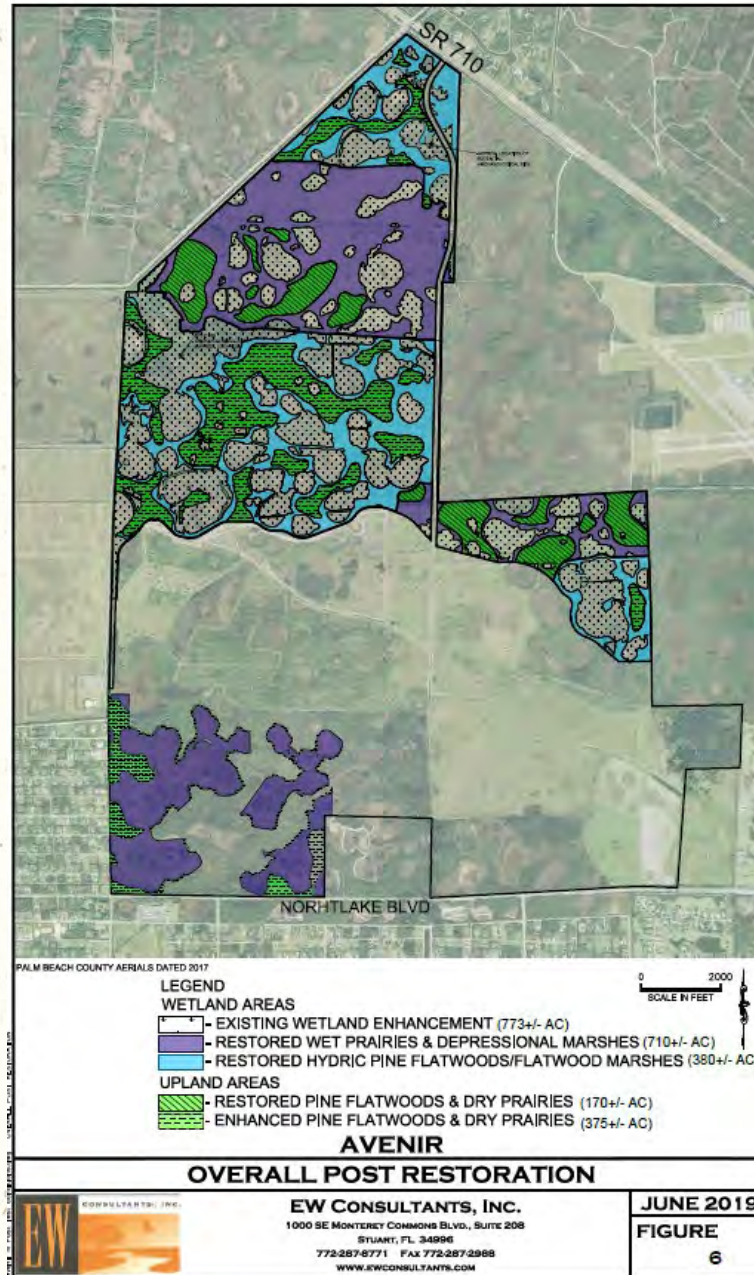
Avenir Conservation Area



Avenir Conservation Area Regional Context



Avenir Conservation Area



Avenir Conservation Area

Restoration Elements

- 1) Conservation Easements
- 2) Invasive Species Eradication
- 3) Hydrologic Restoration
- 4) Native Species Planting
- 5) Prescribed Fire
- 6) Long Term Maintenance and Management

Avenir Conservation Area

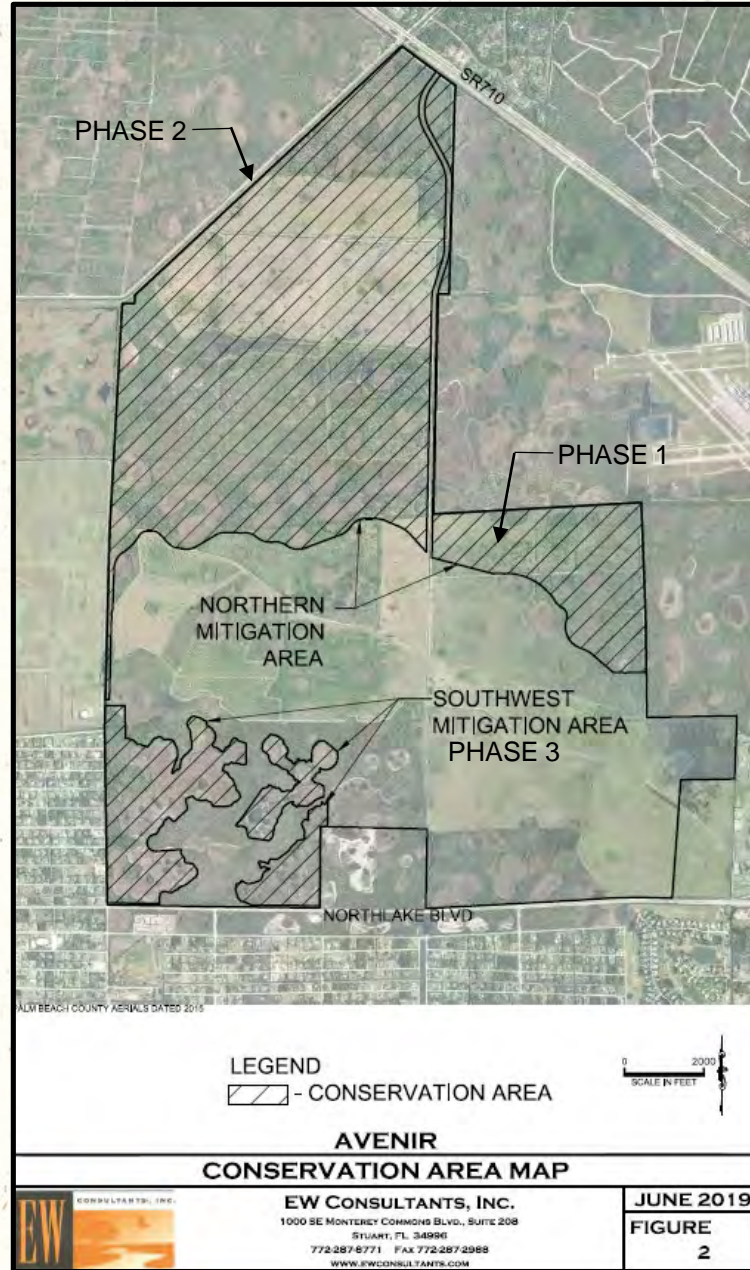
Restoration Phasing

Phase 1 – 303 +/- acres – Restoration process initiated January 2019

Phase 2 – 1,800 +/- acres

Phase 3 – 352 +/- acres

Avenir Conservation Area



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Restoration Elements - Conservation Easements

Approximately 2,125 acres covered by CE recorded April 2018

Approximately 325 acres awaiting final alignment of North-South Road

Recorded in favor of SFWMD with third party enforcement rights to ACOE

A third entity will be added when restoration is completed

Avenir Conservation Area

- Restoration Elements – Invasive Species Eradication
- Existing conditions – Uplands primarily pasture dominated by smutgrass (West Indian dropseed)
- Existing Conditions – Wetlands - variety of invasive non-native species

Existing conditions 2014



Existing conditions 2014



Existing conditions 2014



Existing conditions 2014



Existing conditions 2014



Existing conditions 2014



Wetland conditions January 2019



Pasture Restoration

Stepwise process of eradicating smutgrass and
Brazilian pepper

Step 1 – Mowing senescent above-ground biomass

Mowing process



Completed Mowing



Completed Mowing close up



Pasture Restoration

Step 2 – Herbicide Treatment

Glyphosate application to active growth after mowing

Tractor mounted spray rig application

Application rates based on agricultural research on smutgrass control

Post Herbicide Treatment



Pasture Restoration

Step 3 – Disking of pasture areas

First run to break up rhizomes and existing vegetative material

Second and third runs to expose soil

First run disking March 2019



First run disking March 2019



Second/third disking



Second/third disking



Pasture Restoration

Step 4 – Mechanical Removal of Brazilian pepper

Heavy equipment removes above ground biomass and root system

Trunks and roots mulched in a tub grinder

Mulch spread and disked into soil to add organic material

Mechanical Removal of Brazilian pepper



Mulch Spreading



Disking in mulch



Pasture Restoration

Step 5 – Ground leveling

Laser/GPS guided agricultural leveling equipment

Follow existing ground contours, not altering elevations

Prepares soil surface for native recruitment and planting

Leveling and equipment



Leveled fields May 2019



Pasture Restoration

Step 6 – Native Vegetation Recruitment/Planting

Allow for existing seed bank to germinate

Surveillance of pioneer species, identify non-native species

Intermittent mowing to facilitate diversity and “break out”
for plantings

Pray for rain (but not too much)

Vegetation recruitment June 2019



Vegetation recruitment June 2019



Vegetation recruitment July 2019



Mowing recruited vegetation



Wetland Invasive Species Eradication

Melaleuca with varying coverage

Old world climbing fern

Torpedo grass

Melaleuca head at development boundary



Melaleuca head within wetland



Melaleuca mechanically removed at boundary



Melaleuca cut and mulched for trail



Old World climbing fern treatment



Old World climbing fern treatment



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Questions?