



North Carolina
Coastal Federation

Working Together for a Healthy Coast



Restoring Coastal Hydrology in Hyde Co: Good for Farming, Good For Fisheries

Erin Fleckenstein, NC Coastal Federation

Education • Restoration & Preservation • Advocacy



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Mission: To provide citizens and groups with the assistance they need to take an active role in the stewardship of North Carolina's coastal water quality and natural resources.

www.ncccoast.org



Oyster Benefits

Water Quality

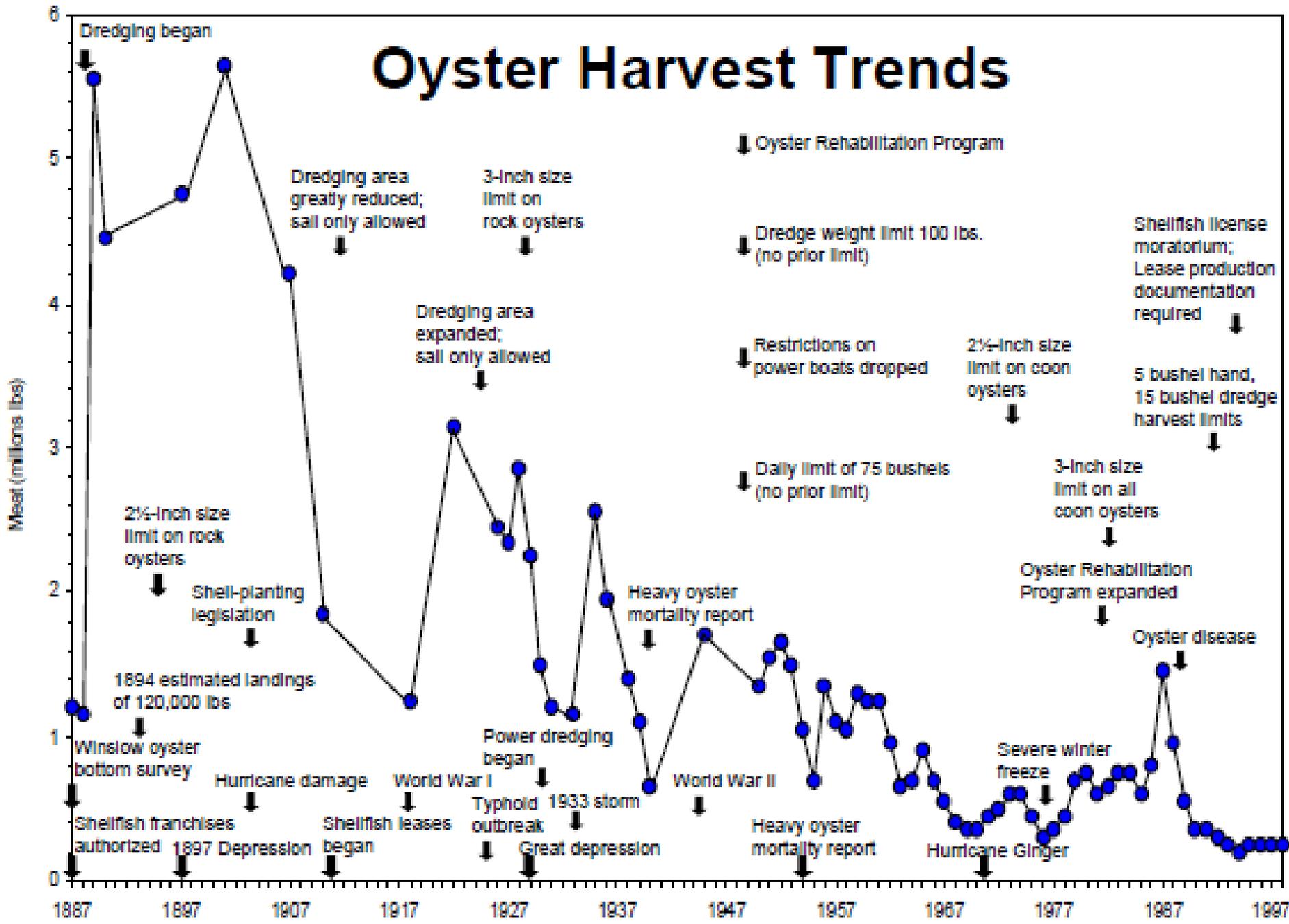
Protect
Shorelines

Economy and
Culture

Habitat



Oyster Harvest Trends



Oyster Cultch Plantings



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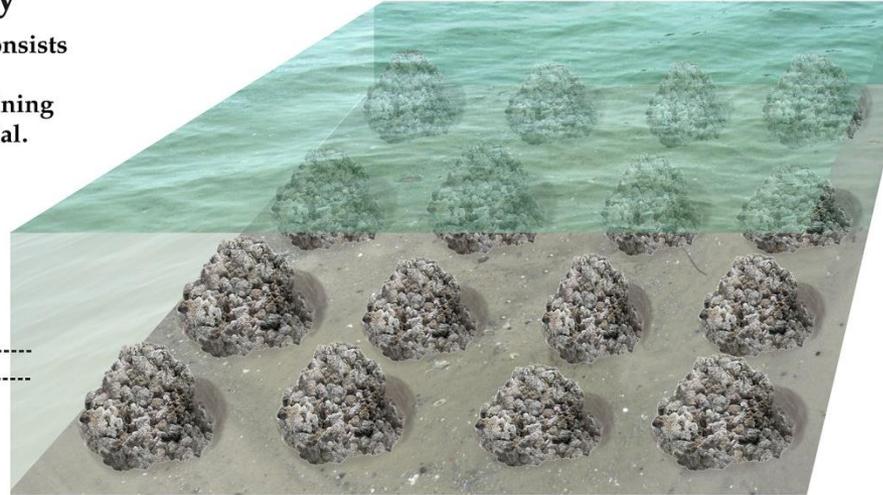
Oyster Sanctuaries

Oyster Sanctuary

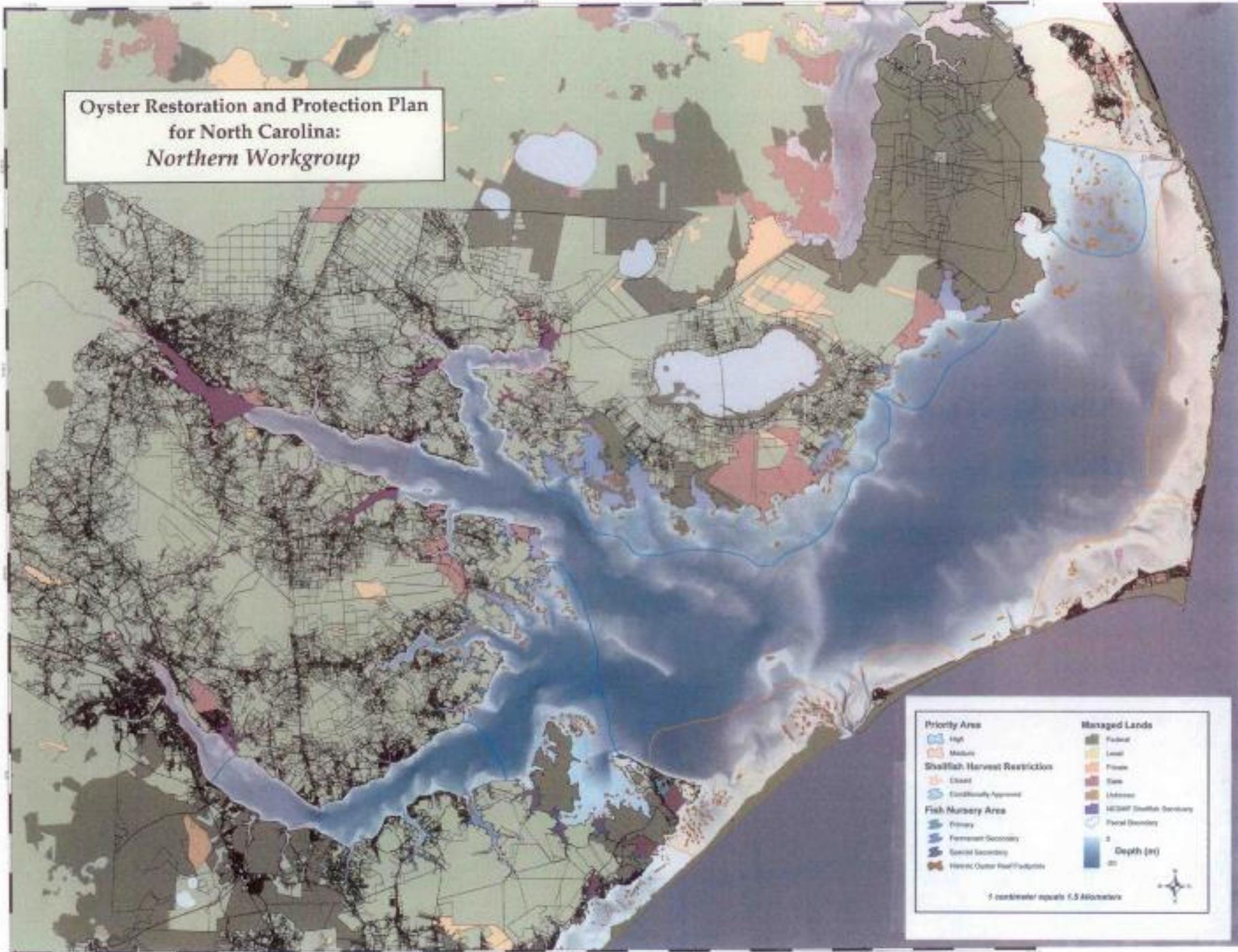
The typical sanctuary consists of mounds of rip rap, with each mound containing about 150 tons of material.

7-foot
clearance

6-foot
mounds
of rip rap



Oyster Restoration and Protection Plan
for North Carolina:
Northern Workgroup



Priority Area

- High
- Medium
- Conditionally Approved

Shellfish Harvest Restriction

- Closed
- Conditionally Approved

Fish Nursery Area

- Primary
- Permanent Secondary
- General Secondary
- Historic Oyster Reef/Footprint

Managed Lands

- Federal
- Local
- Private
- State
- Unknown
- NCEMMP Shellfish Sanctuary
- Fluvial Deposits

Depth (m)

- 0
- 20

1 centimeter equals 1.5 kilometers



Pocosin Swamp













Roanoke Island

Tyrrell

East Lake

Stumpy Point

Dare

Lake Mattamuskeet

Pamlico Sound

Hyde

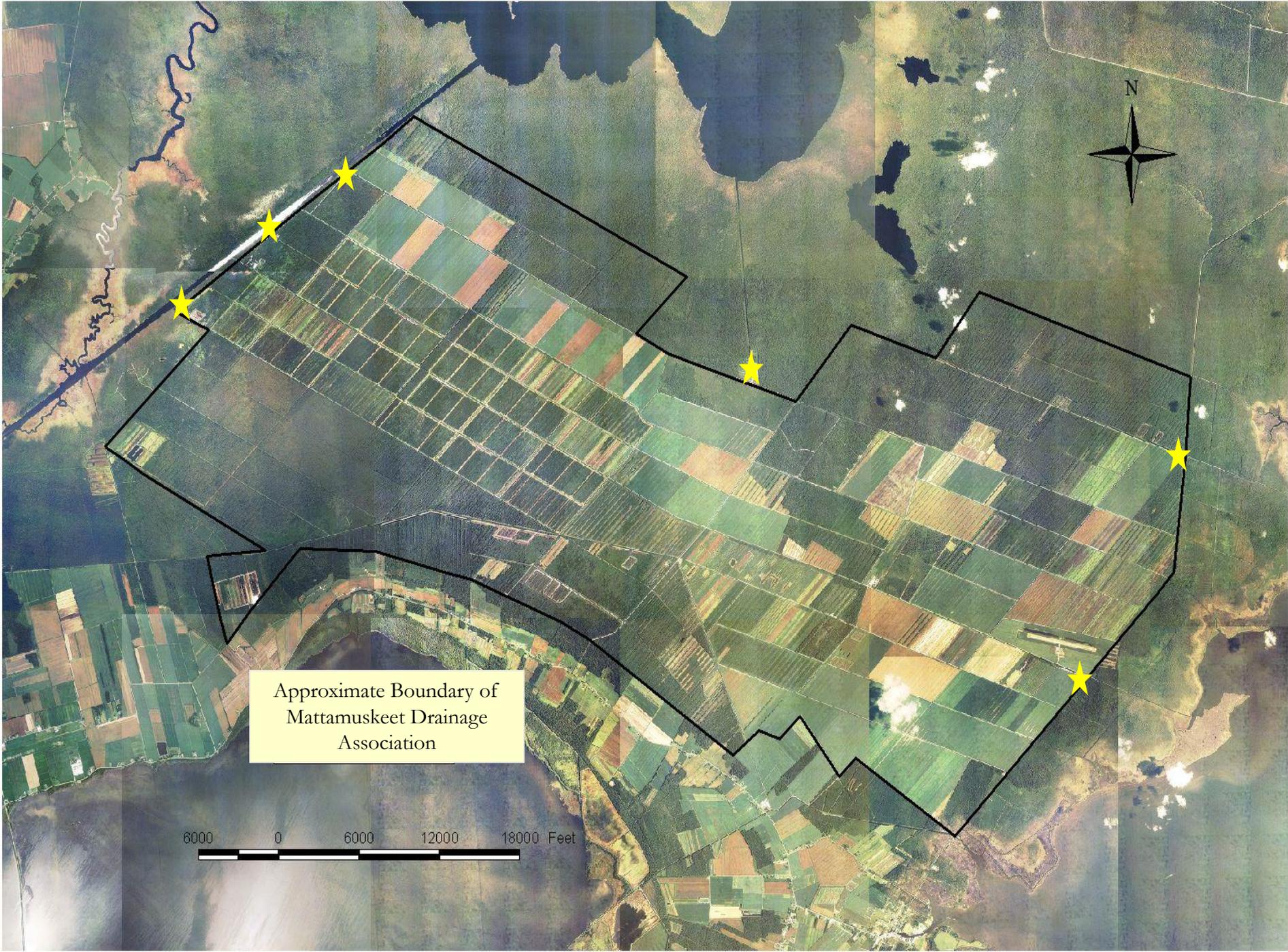
Diamond Shoals

64



Approximate Boundary of
Mattamuskeet Drainage
Association

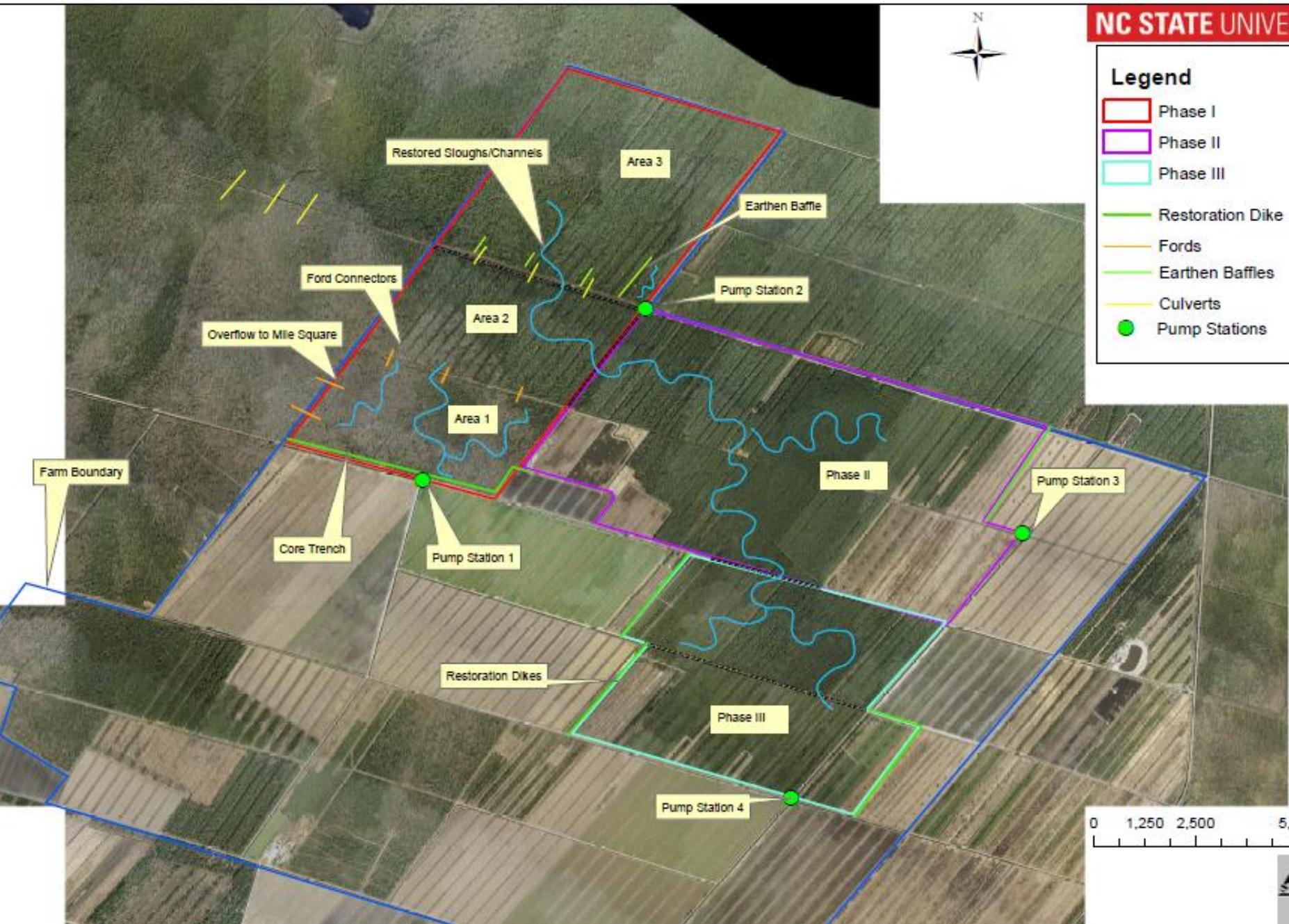
6000 0 6000 12000 18000 Feet





Legend

- Phase I (Red outline)
- Phase II (Purple outline)
- Phase III (Cyan outline)
- Restoration Dike (Green line)
- Fords (Orange line)
- Earthen Baffles (Light Green line)
- Culverts (Yellow line)
- Pump Stations (Green circle)





Alligator River

Intercoastal
Waterway

Swan Lake

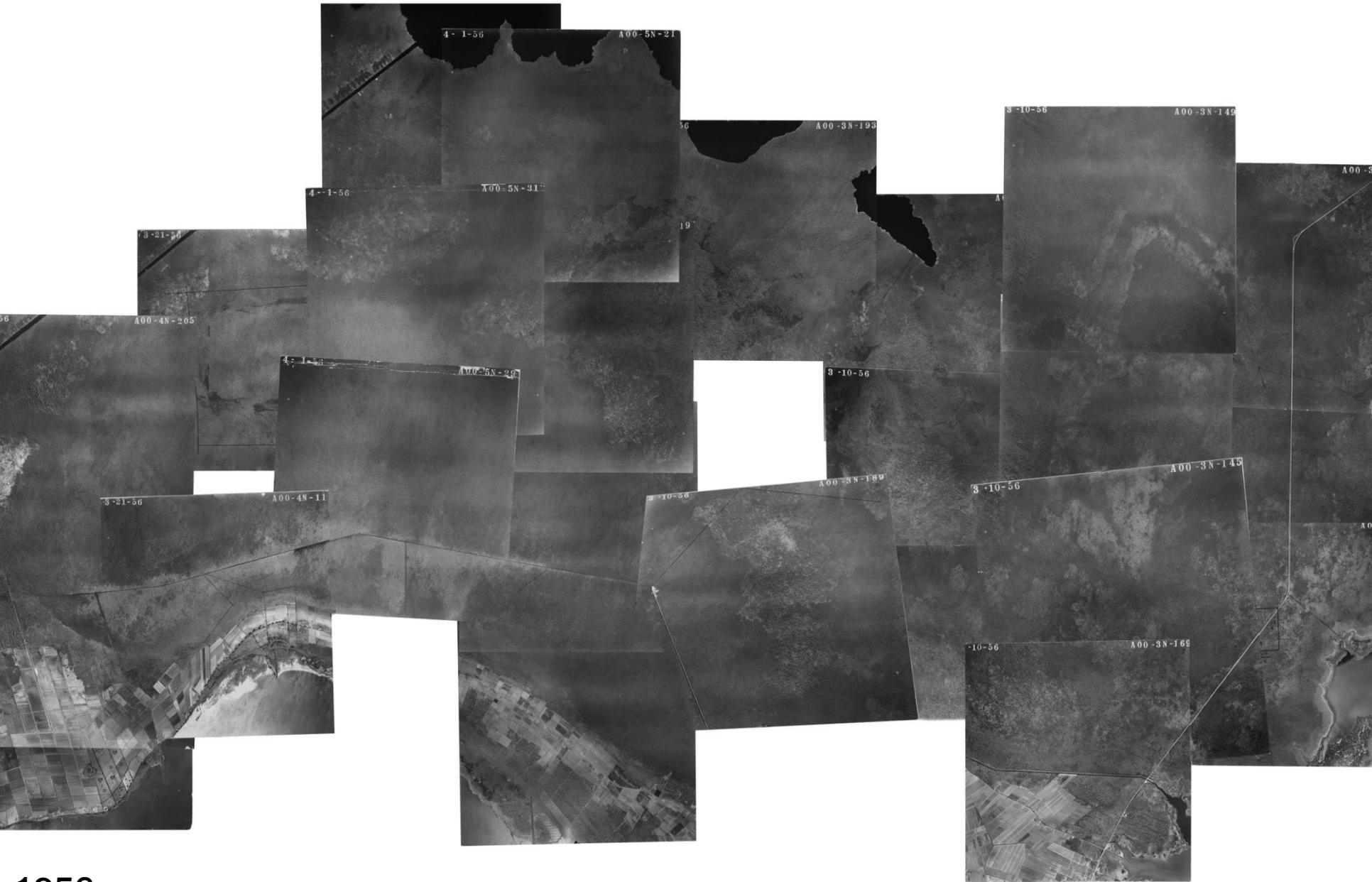
5th Avenue
Pump Station

Long Shoal
River

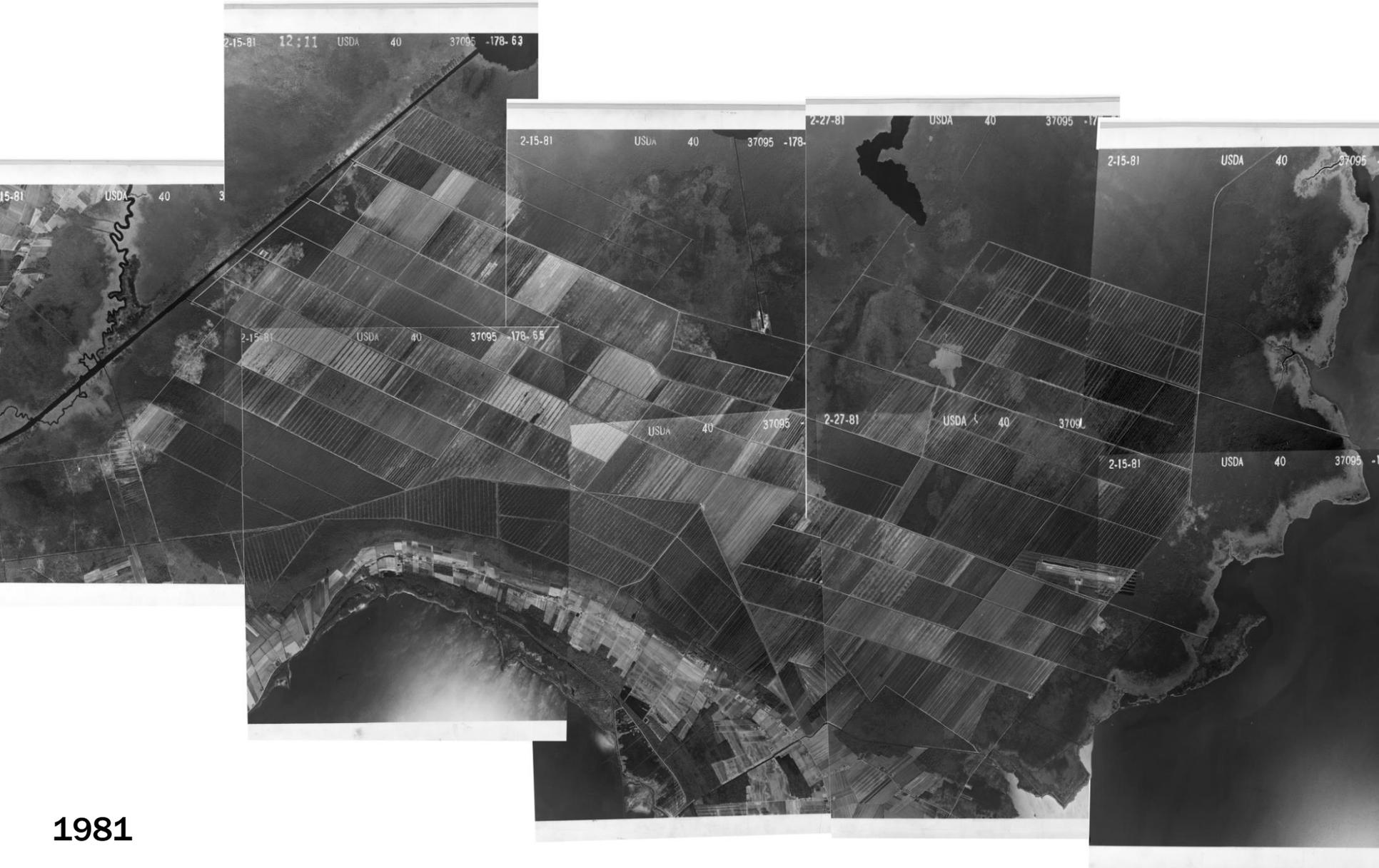
Otter Creek

2nd Avenue
Pump Station

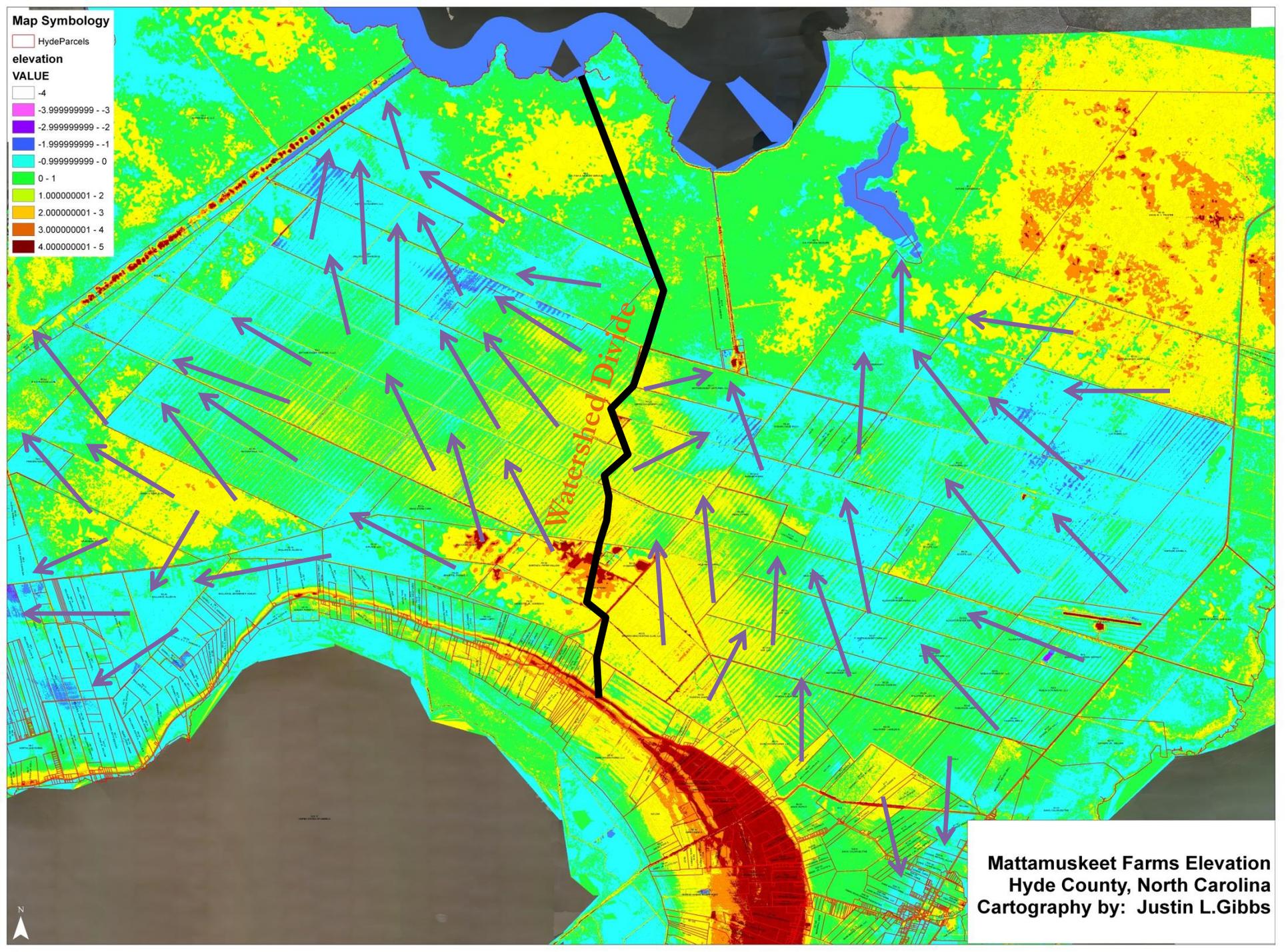
Pamlico Sound



1956

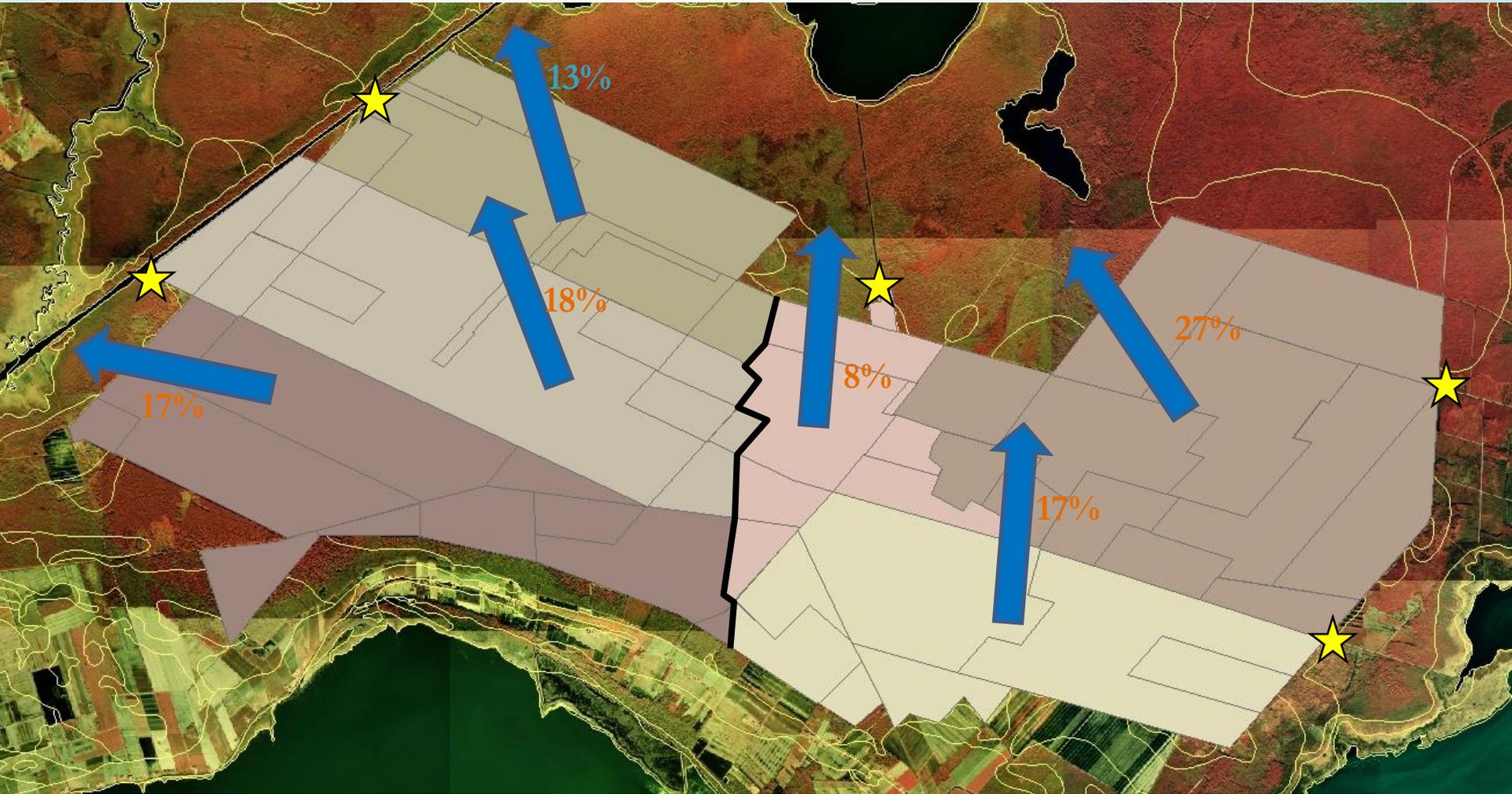


1981



Mattamuskeet Farms Elevation
Hyde County, North Carolina
Cartography by: Justin L.Gibbs

Historic Flow

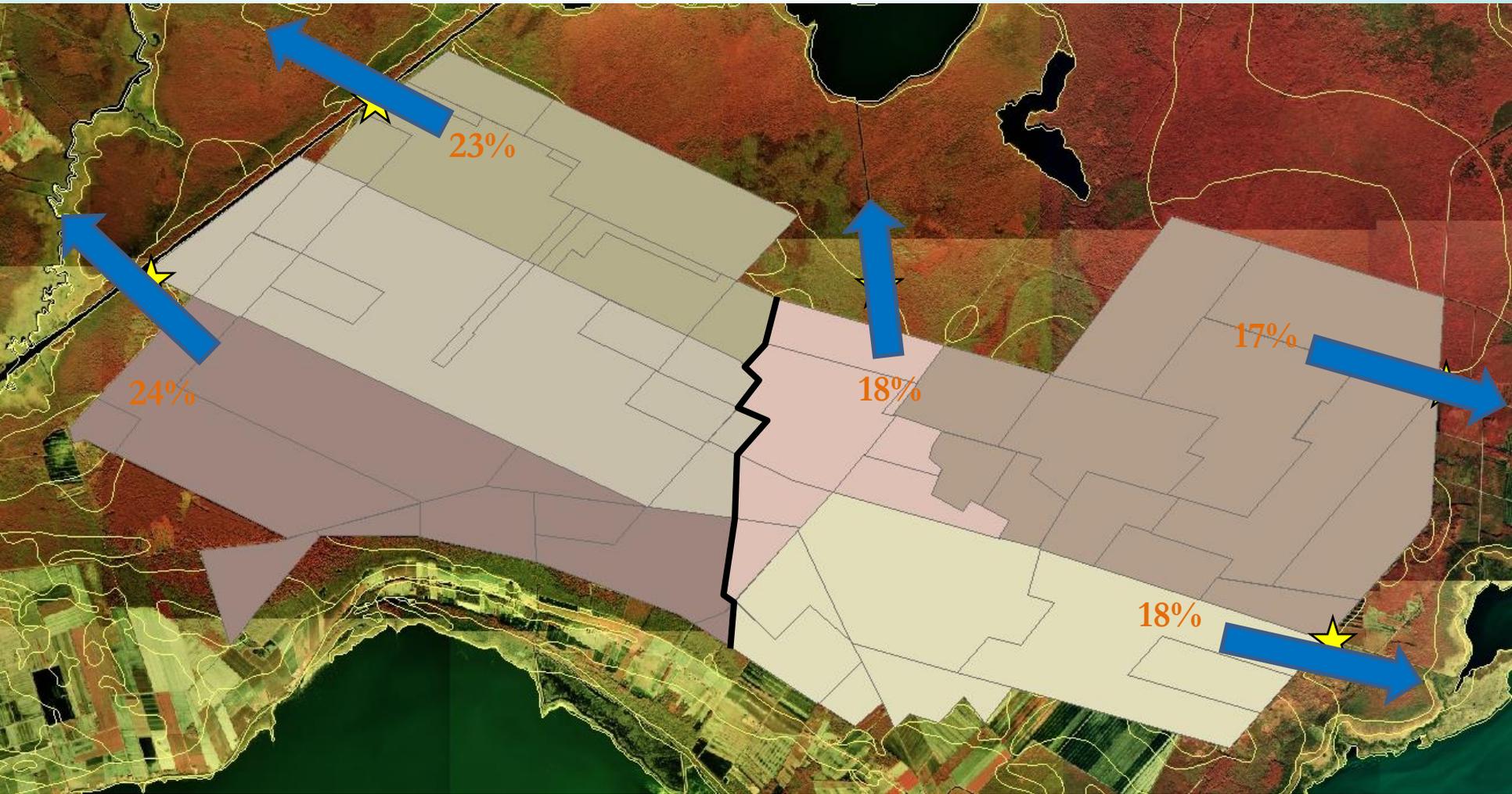


**Flow to Intracoastal Waterway
48%**

**Flow to Swan Lake and Alligator River
52%**

No Flow to Sound

Current Flow



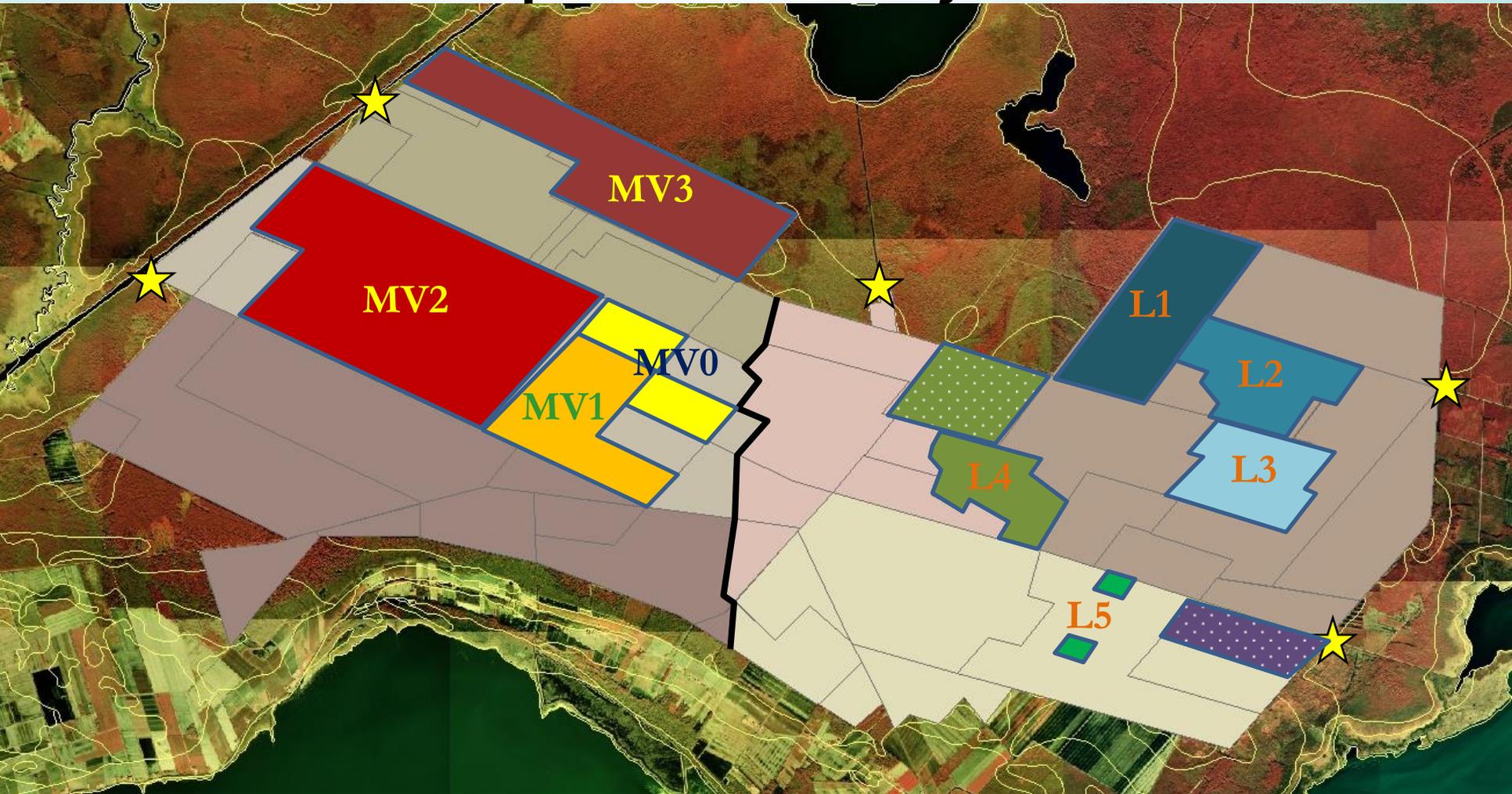
Flow to Intracoastal Waterway
47%

Flow to Swan Lake and Alligator River
18%

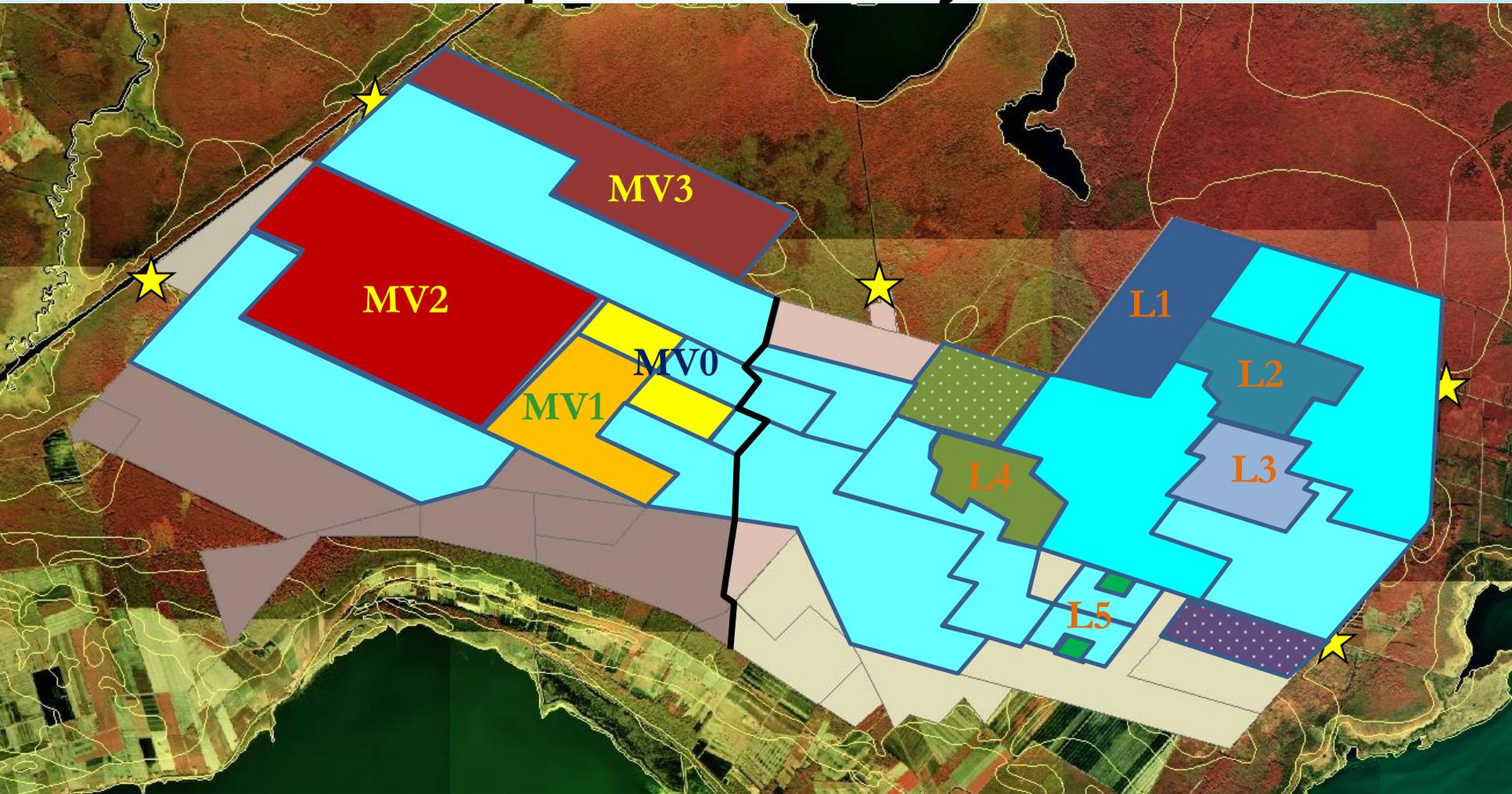
Flow to Sound 35%



Proposed Projects

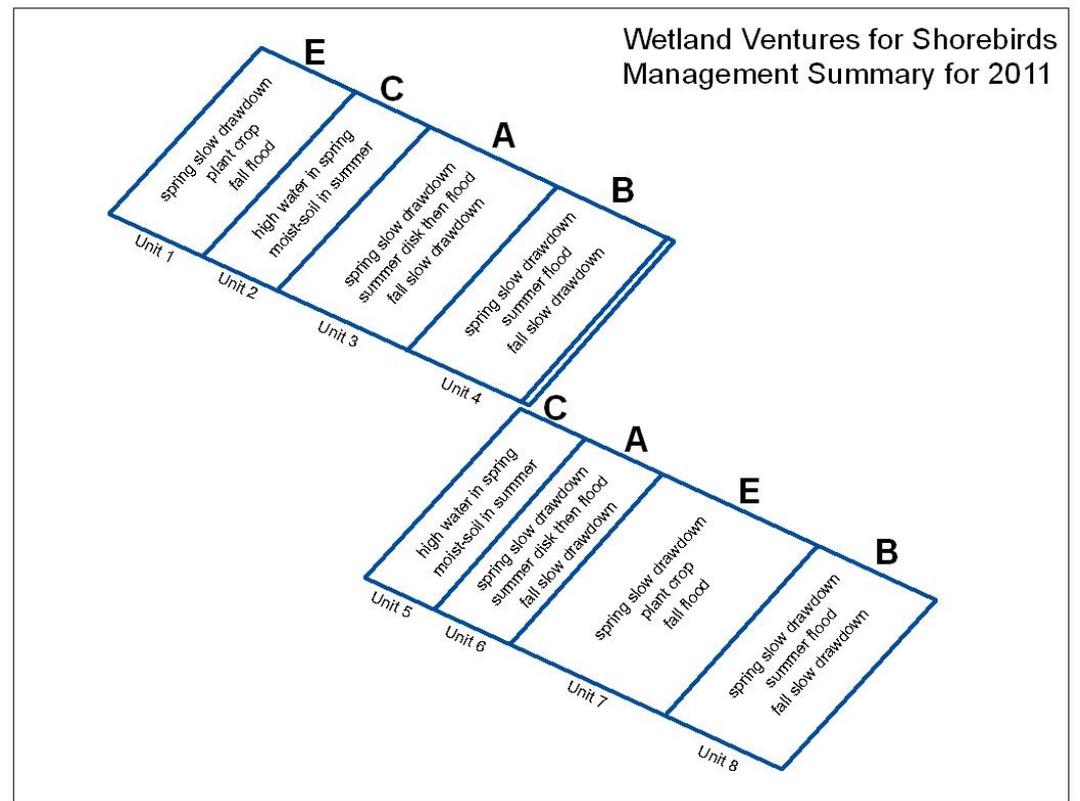


Proposed Projects



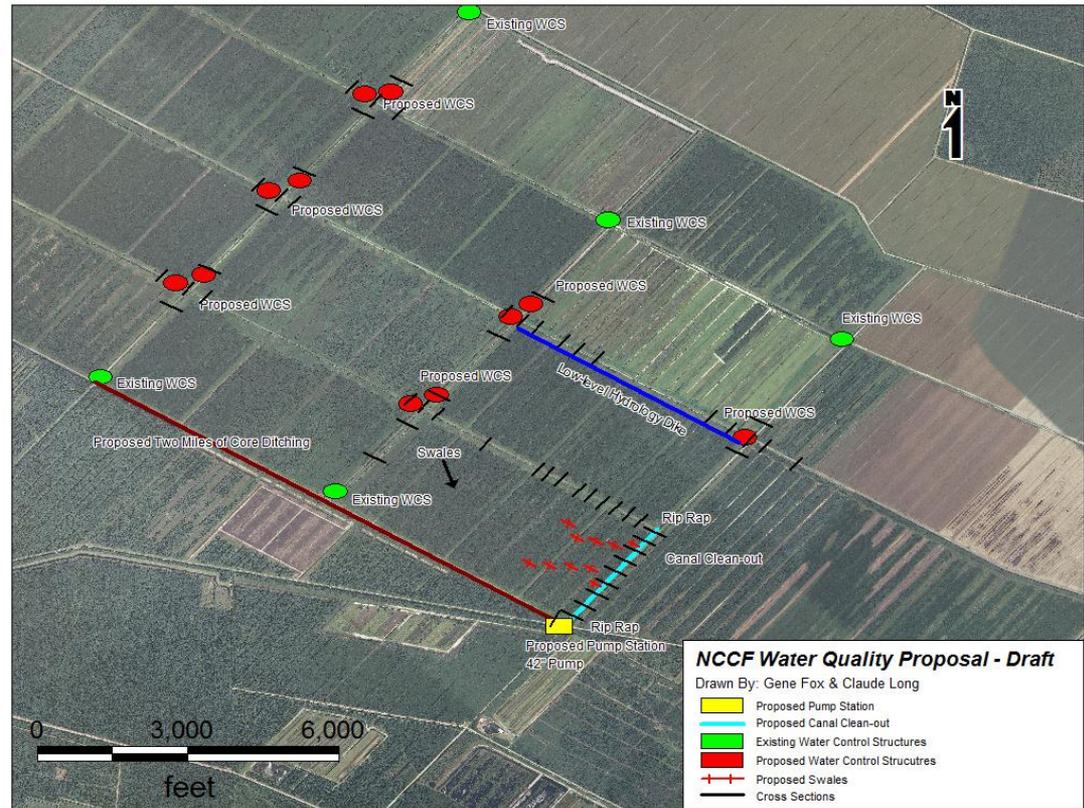
MV0: Shorebird Project

- 600 acres
- Shorebird Habitat Creation
- Funded by NRCS, USFWS and APNEP
- Implemented 2010



MV1: Mattamuskeet Ventures Phase 1

- 1,350 Acres
- Restoring historic habitat & hydrology
- Funded by NRCS, CWMTF and APNEP



Road Coring



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Habitat Improvements



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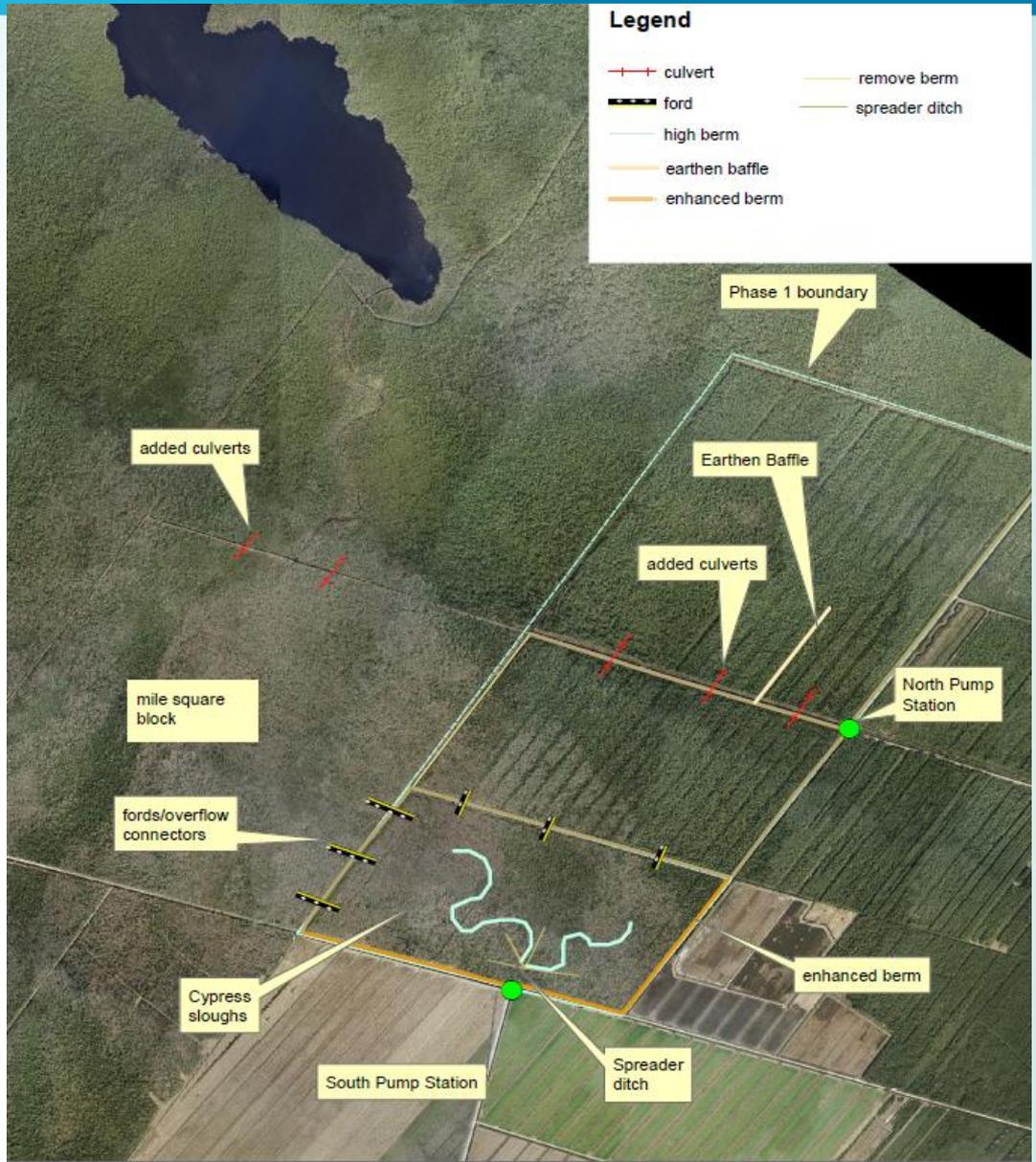
Water Control Structures



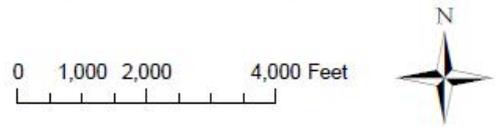
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L1: Lux Phase 1

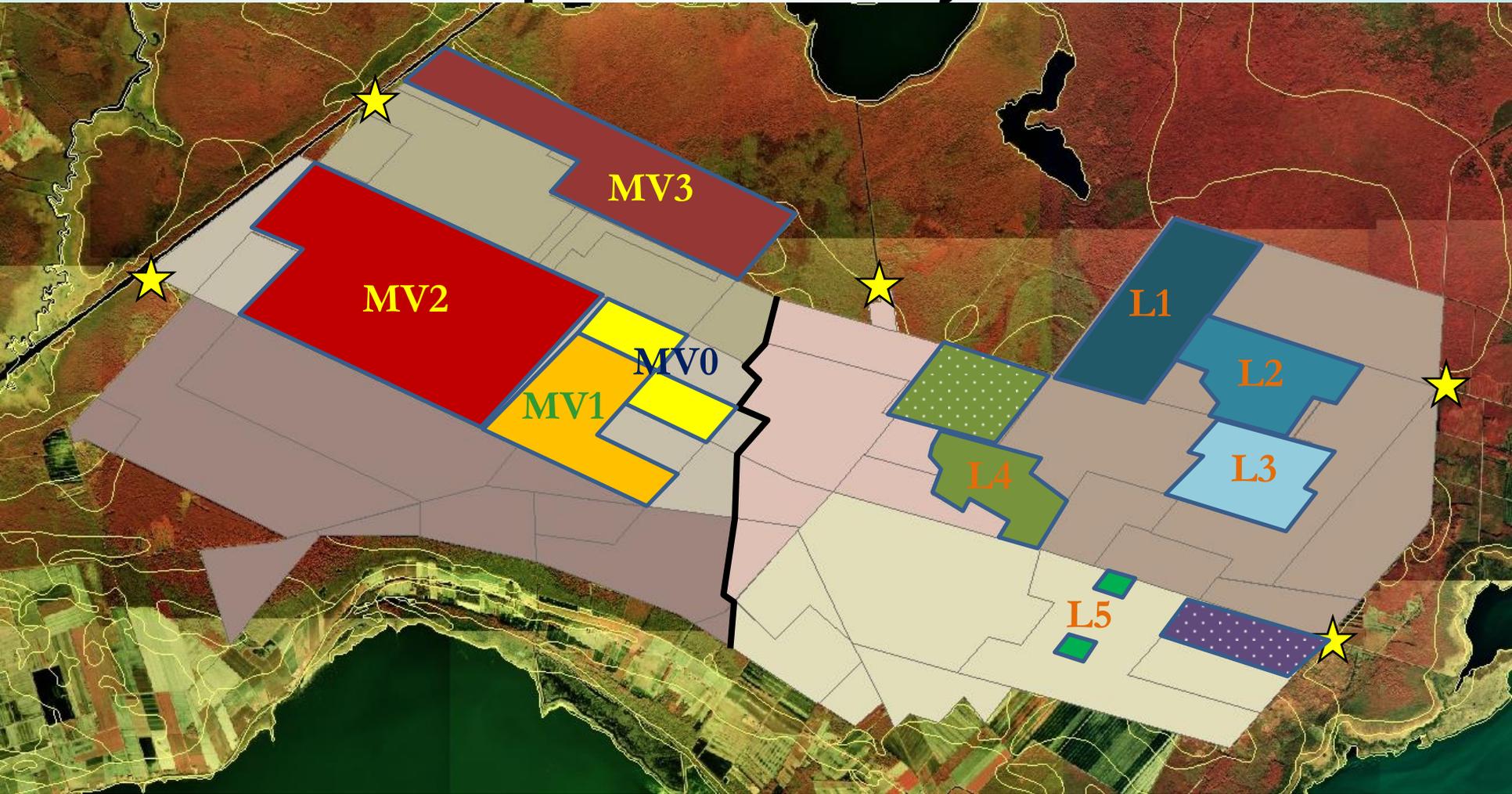
- 1,400 Acres
- Restoring Historic Sloughs and Flow Patterns
- Funded by NRCS and CWMTF



Lux Farms Hydrologic Restoration
Phase 1
Alternate Concept Plan
November 2011



Proposed Projects



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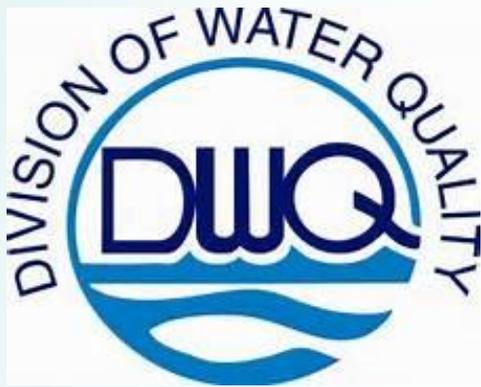
Partners and Funders



United States Department of Agriculture
Natural Resources Conservation Service



Management & Consulting



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