



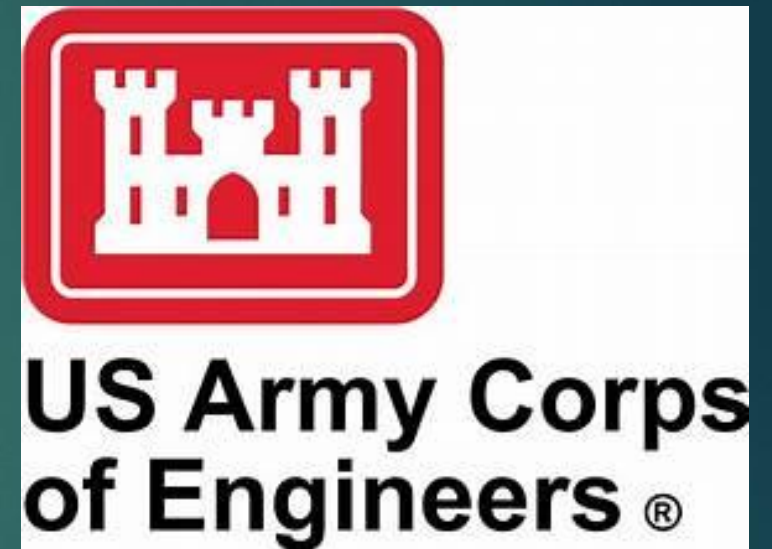
USACE Invasive Operations in Florida

JAKE EDWARDS

JACKSONVILLE DISTRICT

Who are we

- ▶ A component of Department of Defense
 - ▶ Jacksonville is one of many districts
- ▶ Founded in 1775, tasked with fortifications
- ▶ 1820's movement into internal transportation improvement
- ▶ 1890's begin Removal of Aquatic Growth
- ▶ 1945 USACE debuts atom bomb



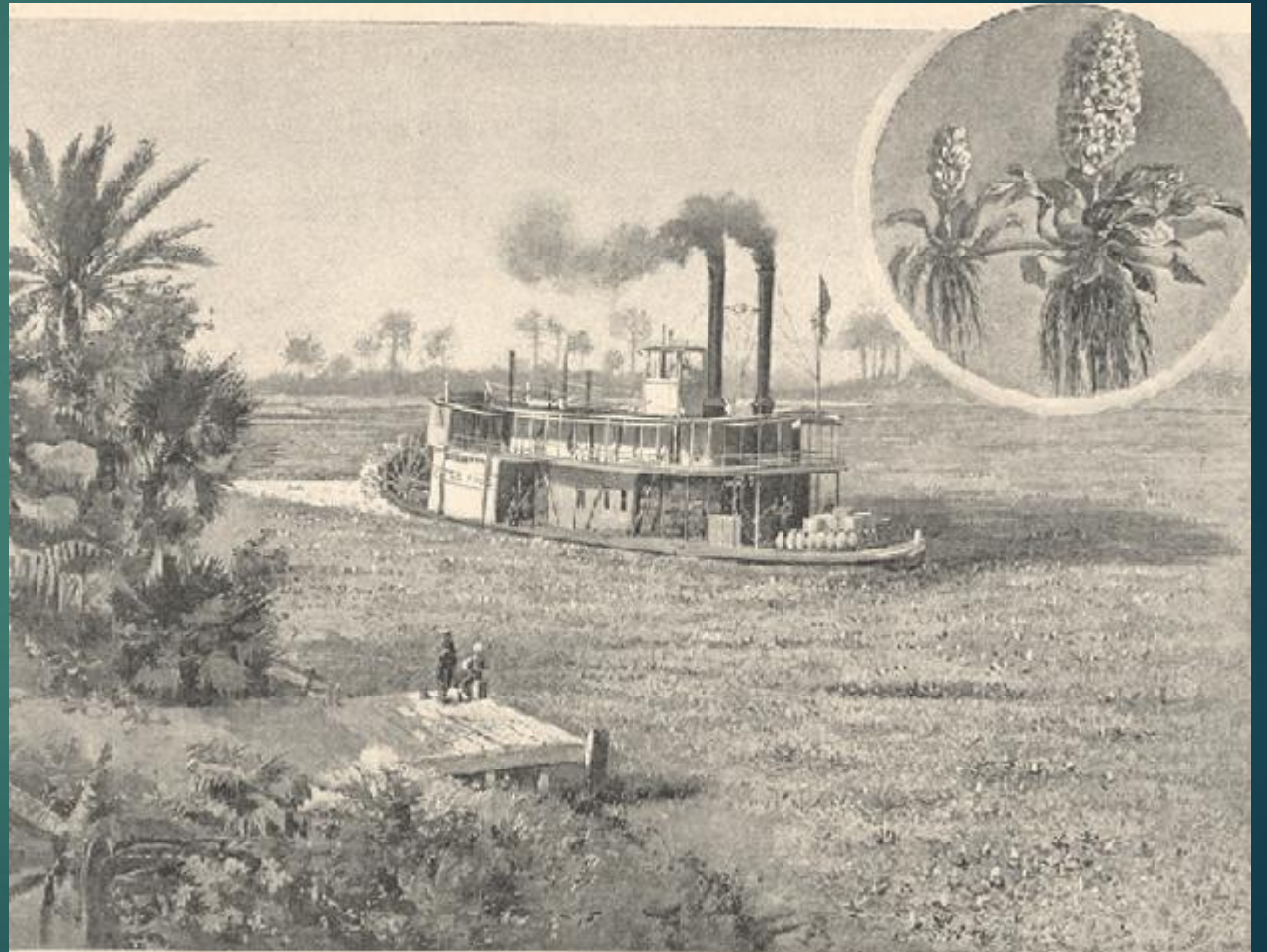
Today's Focus



- ▶ Flood risk management
- ▶ Navigation
- ▶ Ecosystem restoration
- ▶ Military construction
- ▶ Emergency management

RAG History (Removal of Aquatic Growth)

- ▶ A component of navigation
- ▶ Water hyacinth overpowered St. Johns River
- ▶ Jacksonville District tasked with ensuring free navigation
- ▶ Water hyacinth overgrowth in St. Johns River. Illustration from March 19, 1898 edition of Harper's Weekly



RAG-St.Johns River

- ▶ Original project of USACE in Invasive Management
- ▶ In-house applicator crews in Palatka
- ▶ Collab with FWC

▶ **RECORD LOW**
ACREAGE



RAG-Lake Okeechobee

- ▶ Ensure unobstructed navigation of Okeechobee Waterway
- ▶ Target Species:
 - ▶ Water hyacinth
 - ▶ Water lettuce
 - ▶ Tussock material
- ▶ Overall joint mission between USACE and FWC
- ▶ IPM strategy



APC Partnership

- ▶ Water Resources Development Act authorizes cost share for AIS species with state/non-federal governments
- ▶ Florida has been largest participant for invasive plants
- ▶ Popular with watercraft inspection stations out West
- ▶ Agreement in process for Santee Cooper system in SC
- ▶ Big Change!!! All AIS taxa

North Florida workings

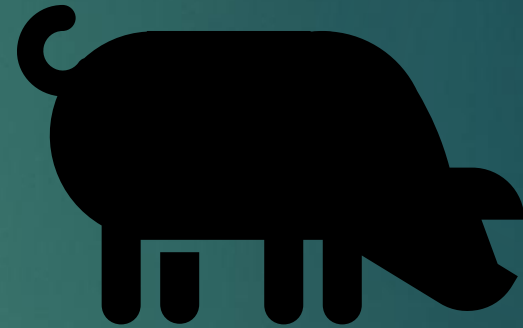
- ▶ Giant Salvinia
 - ▶ Spearheaded effort along with FWC to detect and remove any possible Giant Salvinia
 - ▶ Over 721 waterbodies were surveyed to verify no spread
- ▶ Beach Vitex
 - ▶ Duval County (Jacksonville) detection
 - ▶ Management underway, 2024 initial effort
 - ▶ Nexus of beach renourishment and invasive species control

Flood Risk Management- Vegetation



Flood Risk Management- Invasive Wildlife

- Goal: prevent burrowing rooting damage to levees
- Utilize USDA WS and volunteer trappers
- Biggest risk:
 - Iguanas
 - Feral Swine
 - Red-headed agamas
 - Loose cattle
- Dedicated USDA technician is a gamechanger
- 2024- 2,113 invasives removed
- ~20k since program inception



Alligatorweed Flea Beetles



CERP

EVERGLADES

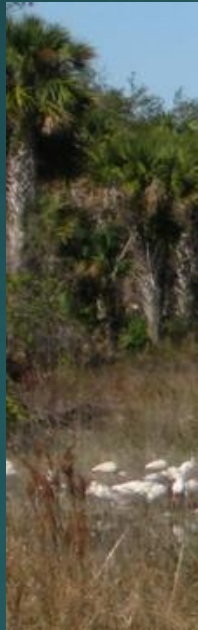
Restoration Projects Since 2011



USDA Biocontrol Facility



Picayun



© Maggie Steber/National Geographic

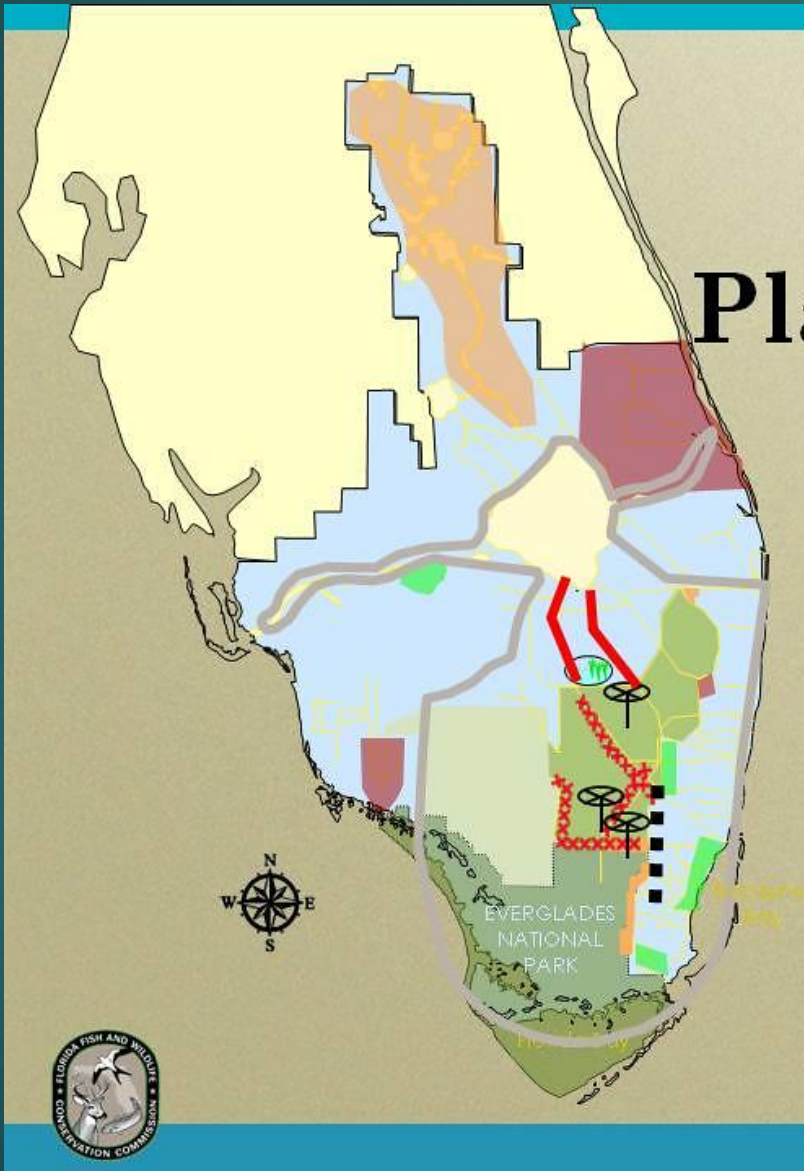
Biscayne Bay Coastal Wetlands



CEPP

The Central Everglades Planning Project

- Restore habitat in the central Everglades, focusing on the “River of Grass”
- Deliver “new” sources of clean water to the Central Everglades and Everglades National Park
- Reduce damaging discharges to east and west coast estuaries



Planning Assistance to Tribes



Asian Swamp Eels



Monopterus albus



Opportunities and Interests

- ▶ Addition of all AIS taxa to APC program
- ▶ Futures of Everglades Restoration
 - ▶ Significant funds and direction included in recent plans
- ▶ Increased interests in fish
 - ▶ Asian Swamp eel summit, ERDC participation, RECOVER

Challenges

- ▶ Uncertainty in funding
- ▶ Internal processes
- ▶ Public perception
- ▶ Environmental uncertainties



Future

- ▶ Appreciate the fundamentals (RAG)
- ▶ Explore additional business lines (Coastal Work)
- ▶ Look outside our borders (Other district support)
- ▶ Tackle the giant (CERP)
- ▶ Embrace the unknown (Invasive Fish)

Questions/Comments

- ▶ Contact: Jon Lane for Overall
- ▶ RAG Lake O – Jessica Martin
- ▶ RAG St Johns- Tyler Green
- ▶ CERP- Ian Markovich
- ▶ Biocontrol- Chelsea Bohaty
- ▶ Plant extraordinaire (salvinia and vitex)- Jessica Spencer
- ▶ Invasive Wildlife Agreements/CERP- Joshua Bauer
- ▶ Invasive Fish and Wildlife- Jake Edwards