



Naval Station Mayport

Sustainable Dune Restoration

PRESENTER: **Pete Johnson**

GOOD MIND ■ GOOD HEART ■ STRONG FIRE



Company Mission and Vision

Our mission is to preserve, restore and enhance the natural and constructed environment for future generations through successful project delivery for our customers.

“Everything we do makes the world a better place.”



Oneida Nation History

- **Original Member of the Iroquois Confederacy**
 - *The Great Law of Peace*
 - *Blueprint for the US Constitution*
- **Revolutionary War – sided with the Colonist**
 - *Corn for Washington's Starving Troops*
- **Moved to WI in 1821**
- **Constitutional Government in 1936**
- **Economic Self-Determination in the 1970's**



The Great Law of Peace

The Seven Generations Philosophy guides long-term decision-making based on the impact of the past seven generations, the current generation, and the seven generations yet to come.

Any decision made today should take into consideration:

- **How similar actions** in the past influenced Oneida people
- **How it will affect children and grandchildren** for the next seven generations.

Only in this way will the Oneida be sure of clean air and safe water and useable natural resources.



Oneida Nation - A Good Mind, A Good Heart, A Strong Fire

- **17,300+ Enrolled Members**

- *3,500 live within the Oneida Reservation*
- *2018 study; \$744M impact and 5,465 Jobs*
- *In the mid 1960's, the Tribal budget was \$360, by 2018 about \$120M*

- **Cradle to Grave services**

- *Education, Social Services, Housing, Health Care, Jobs, Natural Resources, Construction, Engineering, Environmental, UXO*
- *Employs 2,700 people, about 55% are Oneida*
- *CEO Oneida Nation member – Jeff House*

- **65,000 Acre Reservation**

- *Own approximately 50%*
- *2 counties, 3 townships, 1 city, 1 village and 6 school districts overlap the Oneida Reservation*



Oneida ESC Group Companies



ENGINEERING & DESIGN

Oneida Total Integrated Enterprises (OTIE)

- Infrastructure and Facility Engineering
- Civil, Mechanical, Electrical, and Structural Design Engineering
- Water and Wastewater Systems Engineering
- Remediation and Restoration
- Environmental Services and Engineering
- Construction Support Services
- Asset Management and Assessment

Oneida Engineering Solutions (OES)

- Transportation Engineering Design
- Transportation Safety Analysis and Studies
- Traffic and Highway Feasibility Studies
- Environmental Permits and Documentation
- Construction Management
- Utility Coordination
- Survey

CONSTRUCTION

Mission Support Services (MS2)

- Design-Build Construction and Construction Management
- Sustainment, Restoration, and Modernization
- Engineering and Support Services
- Asset Management and Assessment

General Mechanical Corporation (GMC)

- Mechanical Construction Management
- Design-Build Project Delivery
- Construction, Renovation, and Construction Management
- Hospital and Clinic Specialized Construction
- School and Campus Construction and Renovation

Oneida Construction Services (OCS)

- Design Build Construction
- Construction Management/Owner Rep
- General Contractor with self performance: Rough and Finish Carpentry, Painting, Demolition
- Sustainment, Restoration and Modernization
- Infrastructure Construction Services

ENVIRONMENTAL

Sustainment and Restoration Services (SRS)

- Site Investigation, Remediation, and Restoration
- Environmental Services and Engineering
- Munitions Response Services
- Environmental Compliance Support
- Response and Recovery Services
- Construction Support Services
- Professional Services

Oneida Environmental (OE)

- Environmental Compliance and Permitting
- Cultural and Natural Resource Surveys
- National Environmental Policy Act Studies
- Environmental Restoration and Remediation
- Environmental Engineering Services
- Water and Wastewater Surveys and Evaluations

LG2 Environmental Solutions (LG2)

- Archaeological and Cultural Resources
- Natural Resources Assessment & MGMT
- GIS Database MGMT and Remote Sensing
- NEPA Documentation
- Clean Water Act and Clean Air Act Consulting and Permitting
- INRMP and ICRMP Preparation, Updates, and Implementation

TECHNOLOGY & PROFESSIONAL

Oneida Professional Services (OPS)

- Training and Educational Support: Instructional Design, Curriculum Development, Classroom Instruction, Distance Learning, Subject Matter Experts, Performance / Cognitive Enhancement
- Research and Engineering
- Information Technology Solutions

Oneida Technology Services (OTS)

- Computer System Integration Design
- Computer Engineering
- Software Engineering

1822 Land & Development Company of Oneida (1822)

- Develop and invest in commercial real estate properties
- Manage Oneida Nation commercial properties
- Development of retail, commercial, and light industrial properties focus
- Manage a portfolio of real estate properties with investment partners

Project Contractor Partners



- **Oneida GMC** – Prime Contractor
- **Oneida LG2** – Environmental
- **GHD** – Engineering Design and JCP Permitting
- **CHC** – Construction
- **EarthBalance** – Sea Oats & Native Plantings on dune
- **Ecological Associates** – Sea Turtle Nest Relocation



Naval Station Mayport



Naval Station Mayport

Military Mission

- Airfield and Seaport
- > 14,000 sailors and civilians
- Third largest fleet concentration in the U.S.
- Serves 70 tenant commands, detachments, orgs, and approximately 50,000 local family members and retirees



Naval Station Mayport



Objectives for restoring dunes

- Prevent further encroachment of shoreline landward
- Protect beachfront infrastructure and T&E species habitat
- Sea Turtle Management Program
- Species protection and habitat development – Gopher Tortoise
- Outdoor recreation
- Natural shoreline protection through beneficial reuse

Reuse of Suitable Material from DMMA's



—— PRIMARY
- - - - RETURN

2022 Hurricanes Ian & Nichole Damage to Dunes & Walkovers



2022 Hurricanes Ian & Nichole Damage to Dunes & Walkovers



Steps to Restore Dunes

- **Suitability Testing** – geotechnical testing of sand material in DMMA 1 & 2
- **Design** – engineering design
- **Permitting** – FDEP Joint Coastal Permit
- **Construction** – 1 mile of dune restoration and 6 beach walkovers
- **T&E species monitoring** – beach nesting birds, marine turtles and gopher tortoises
- **T&E Species relocation** – approximately 5 GTs and 15 marine turtle nests
- **Construction** – 1 mile of dune restoration and 6 beach walkovers
- **Vegetation Planting and Monitoring** – revegetate and confirm success criteria met

Timeline

NOVEMBER 2023

Start of testing, design
and permitting

MAY 2024

Start of
construction

MAY 2025

Complete
construction

2023

2024

2025

APRIL 2024

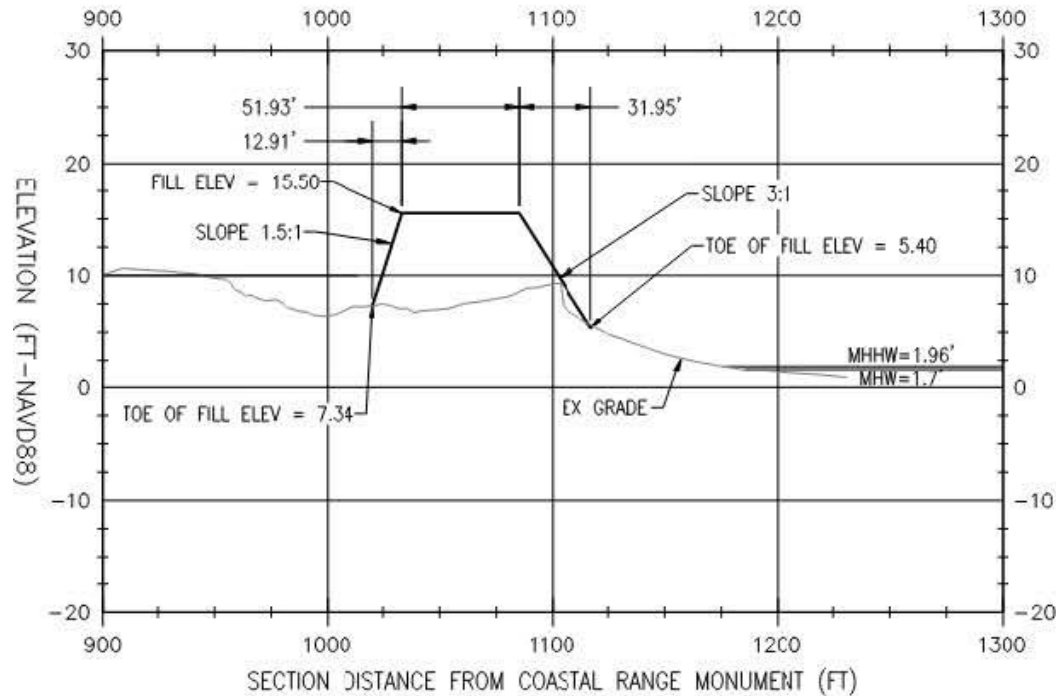
FDEP permitting
complete

JULY 2025

Complete vegetation
monitoring and
report success

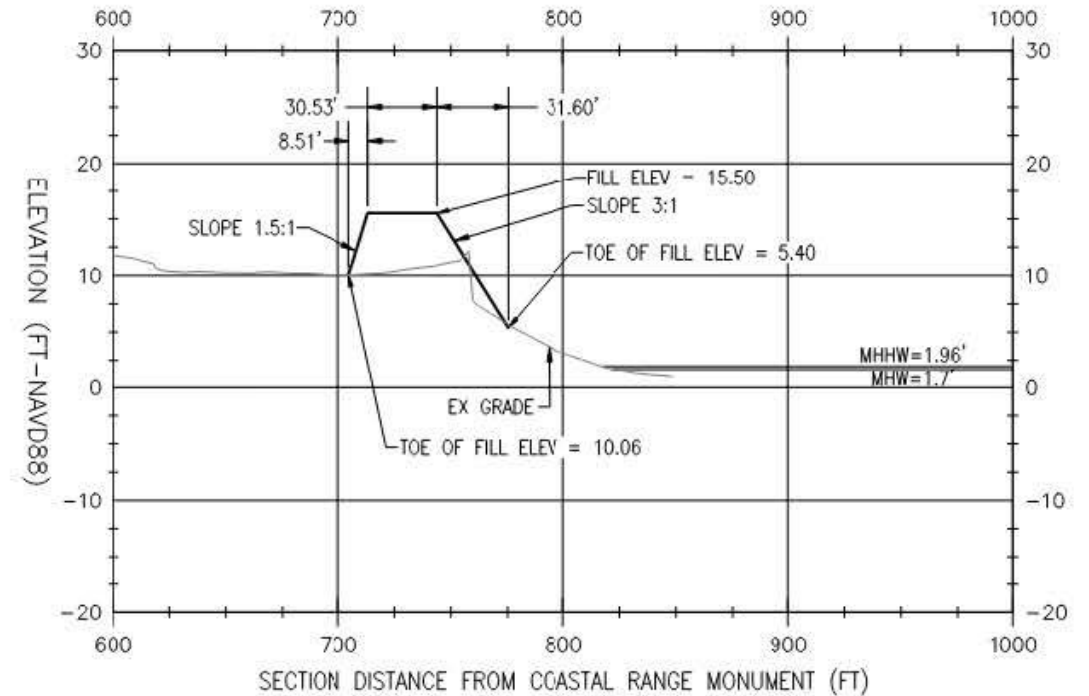
Design Profile

V-501



V-501
(C1) COASTAL RANGE MON. SECTION
SCALE: H 1" = 50'-0"
V 1" = 10'-0"

V-502



V-502
(C3) COASTAL RANGE MON. SECTION
SCALE: H 1" = 50'-0"
V 1" = 10'-0"

Sand Mining and Screening

Dunes and Beach Restoration
N69450-23-C-0073

Jul 11, 2024 at 8:53:19 AM
+30.381932,-81.429342

Screener in full operation



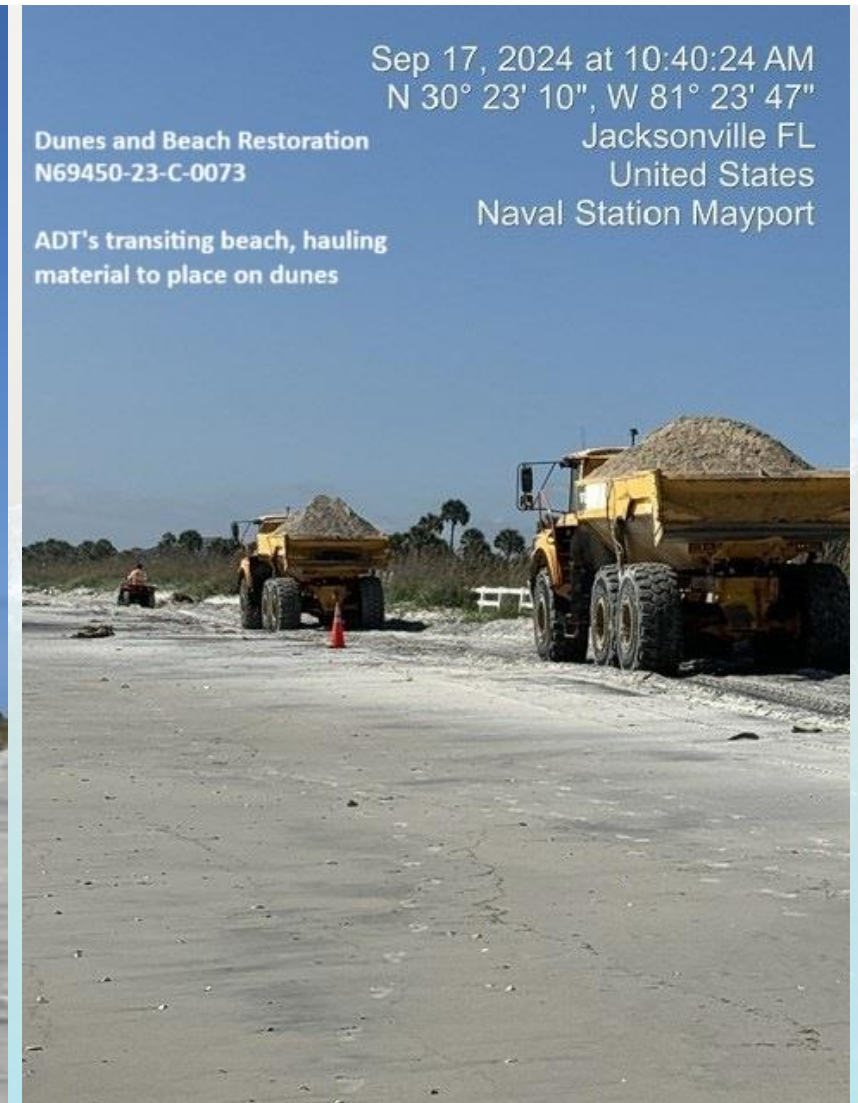
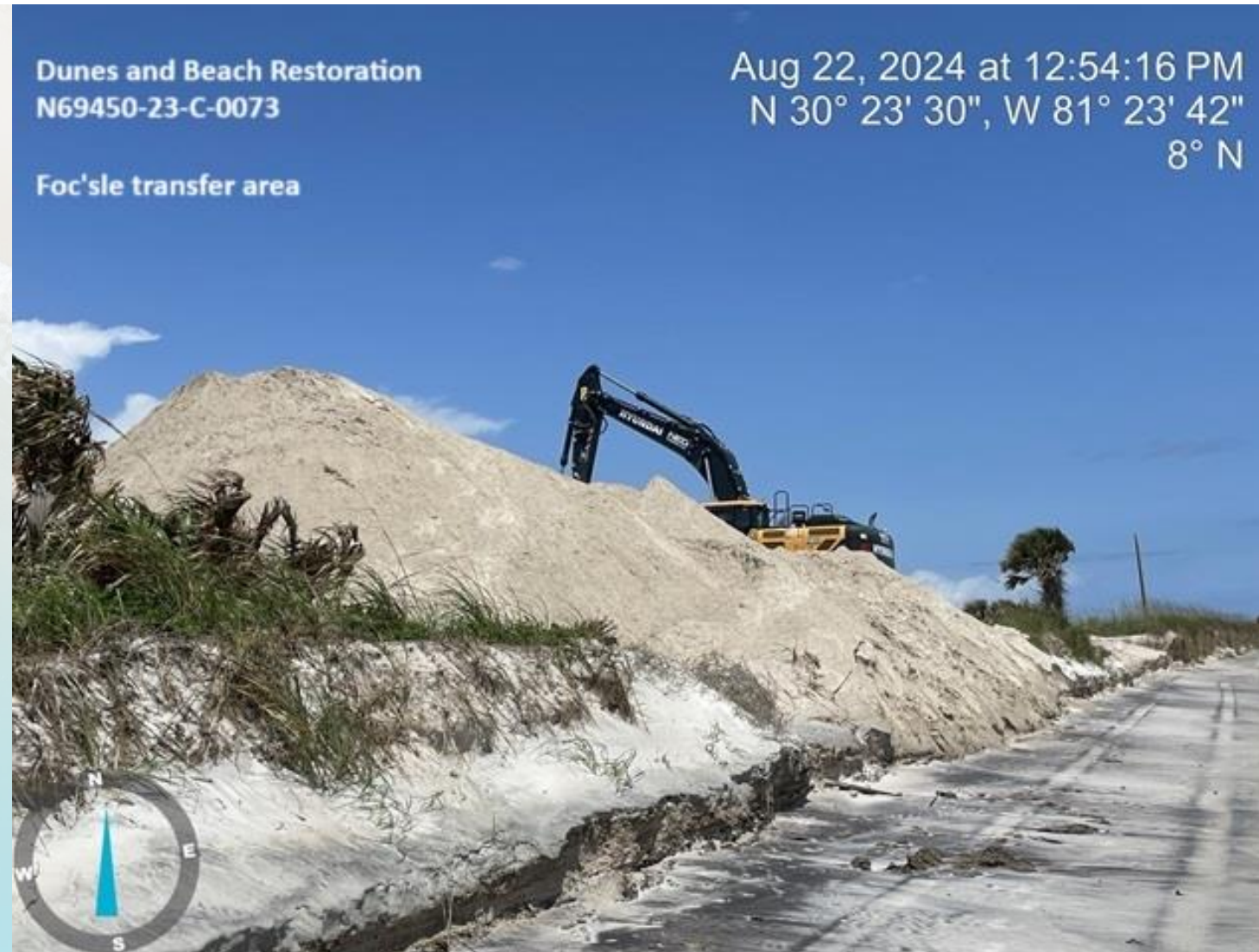
Sep 4, 2024 at 10:26:14 AM
N 30° 23' 13", W 81° 25' 33"
301-367 Perimeter Rd
Jacksonville FL 32233
United States
Naval Station Mayport

Dunes and Beach Restoration
N69450-23-C-0073

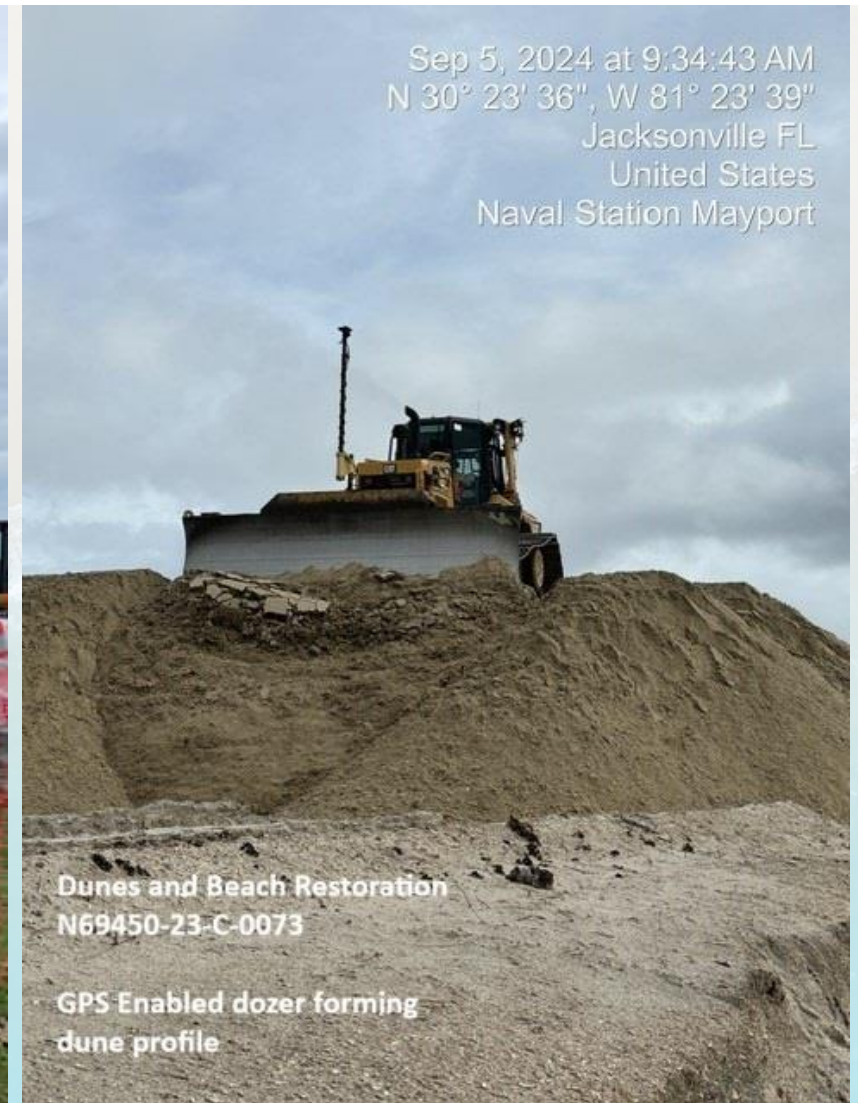
On-road dumps lining up to be filled
with mined material for transfer to the
dunes



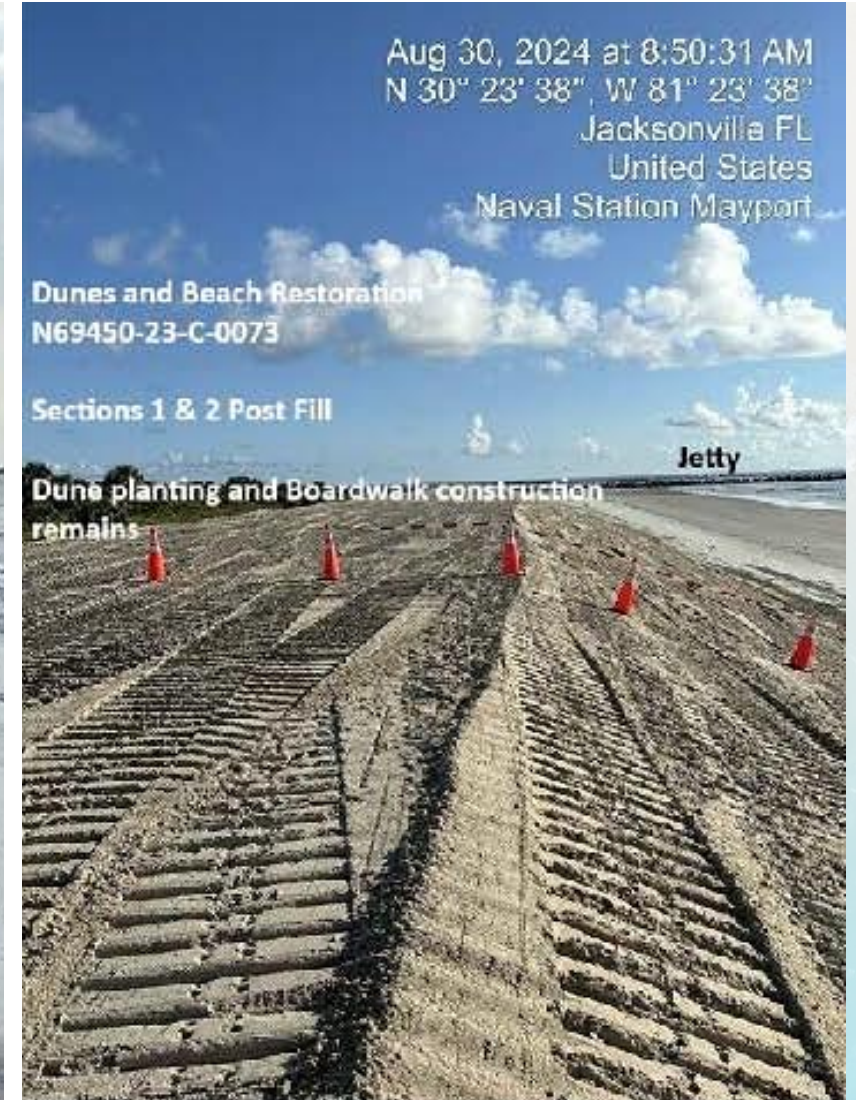
Staging and Transfer



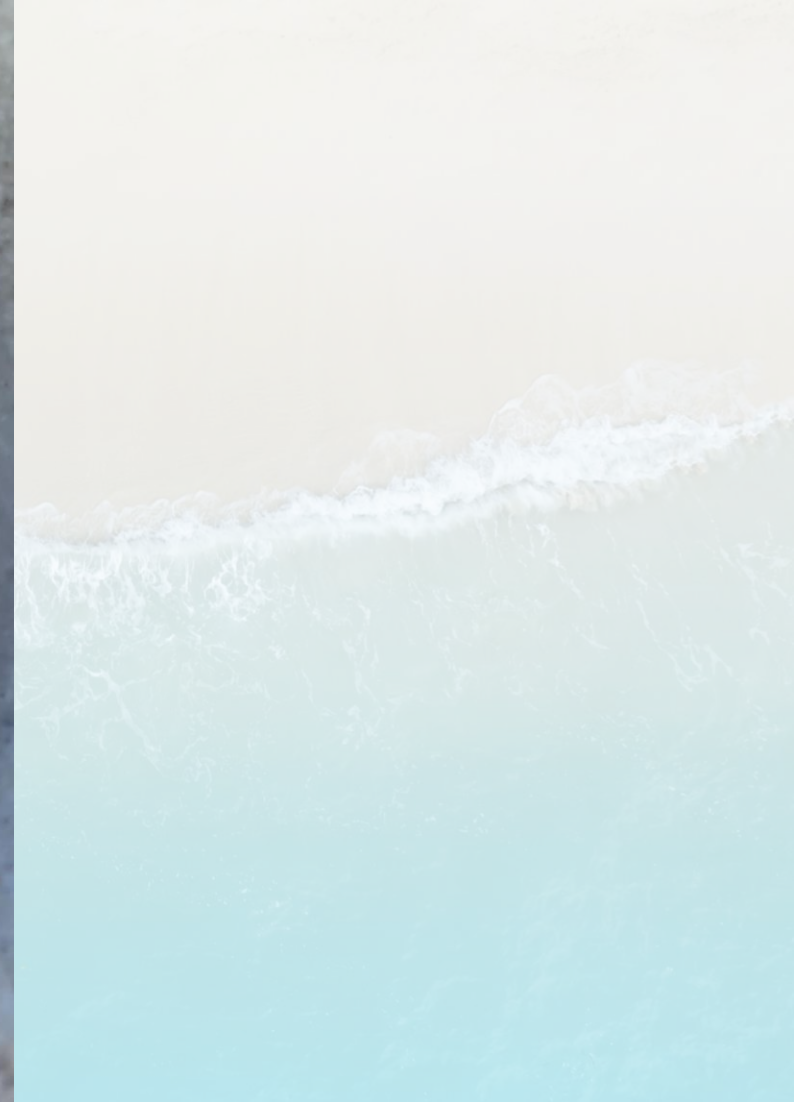
Transfer and Dune Construction



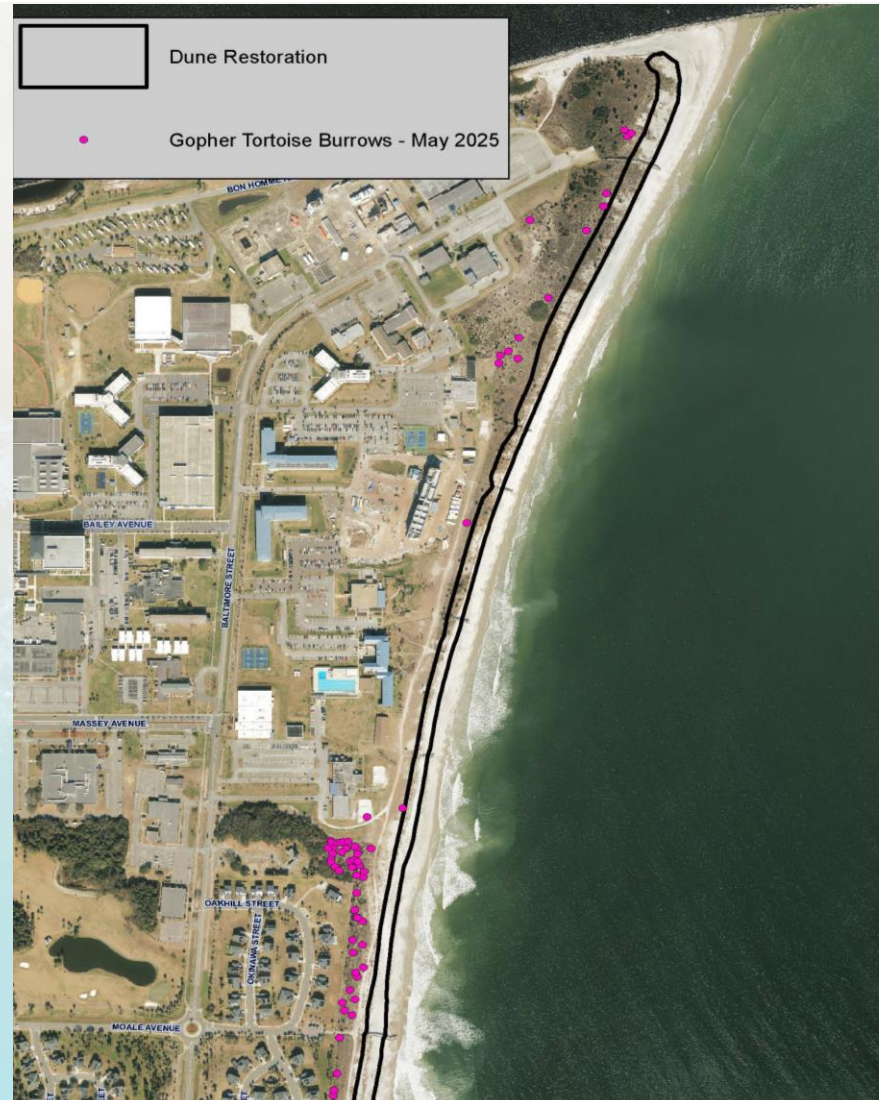
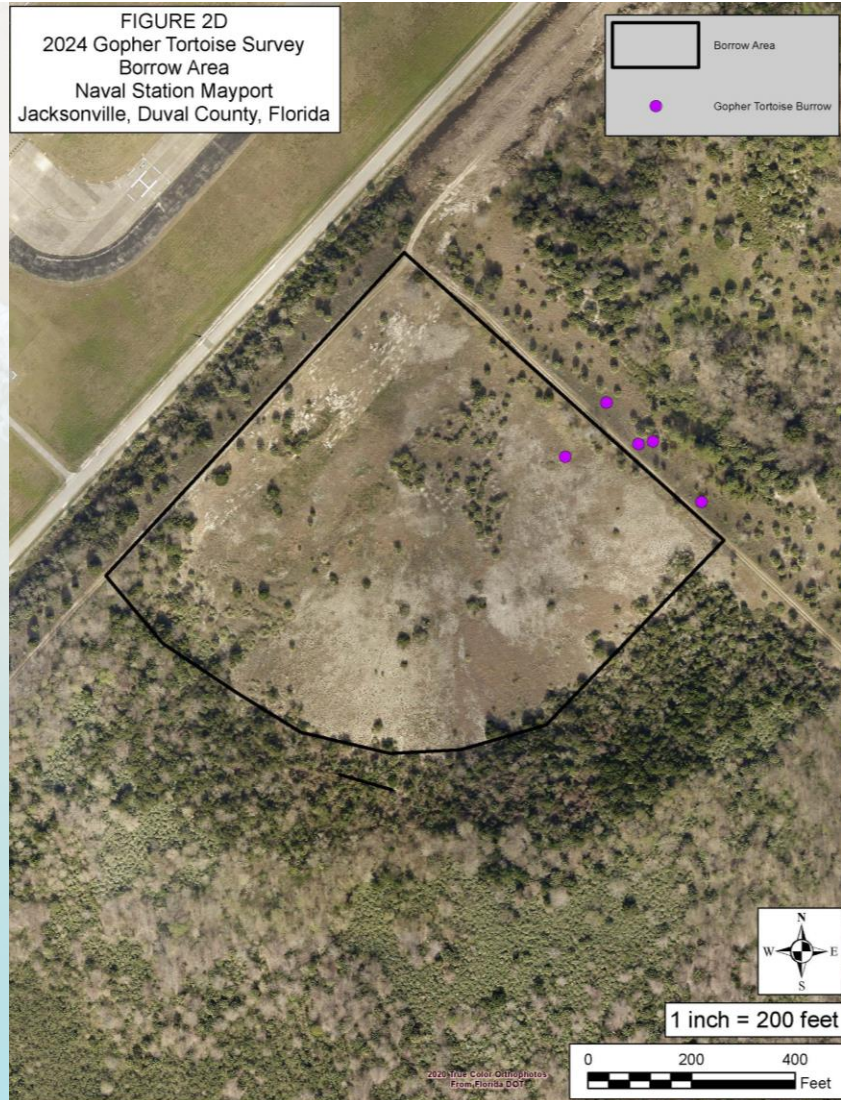
Pre-Post Comparison



Marine Turtle Monitoring and Relocation



Gopher Tortoise Monitoring and Relocation



Beach Nesting Bird Monitoring



FLORIDA SHOREBIRD DATABASE

AN ONLINE TOOL FOR ENTERING AND EXPLORING DATA ON FLORIDA'S SHOREBIRDS AND SEABIRDS.



[HOME](#) | [ABOUT](#) | [INSTRUCTIONS](#) | [MY DATA](#) | [EXPLORE DATA](#) | [FOCAL SPECIES](#) | [RESOURCES](#) | [HELP](#)

My Breeding Data

Welcome [LG2 Environmental](#), you are entering data for:

[My Breeding Data](#) | [My Wintering Data](#) | [Manage Account](#) | [Logout](#)

Who would you like to enter data for?
Entering data for others? See the [Quick Guide](#) for reference

[Set for Myself](#) | [Select Another User](#)

Number of sites you are currently monitoring:

shorebird

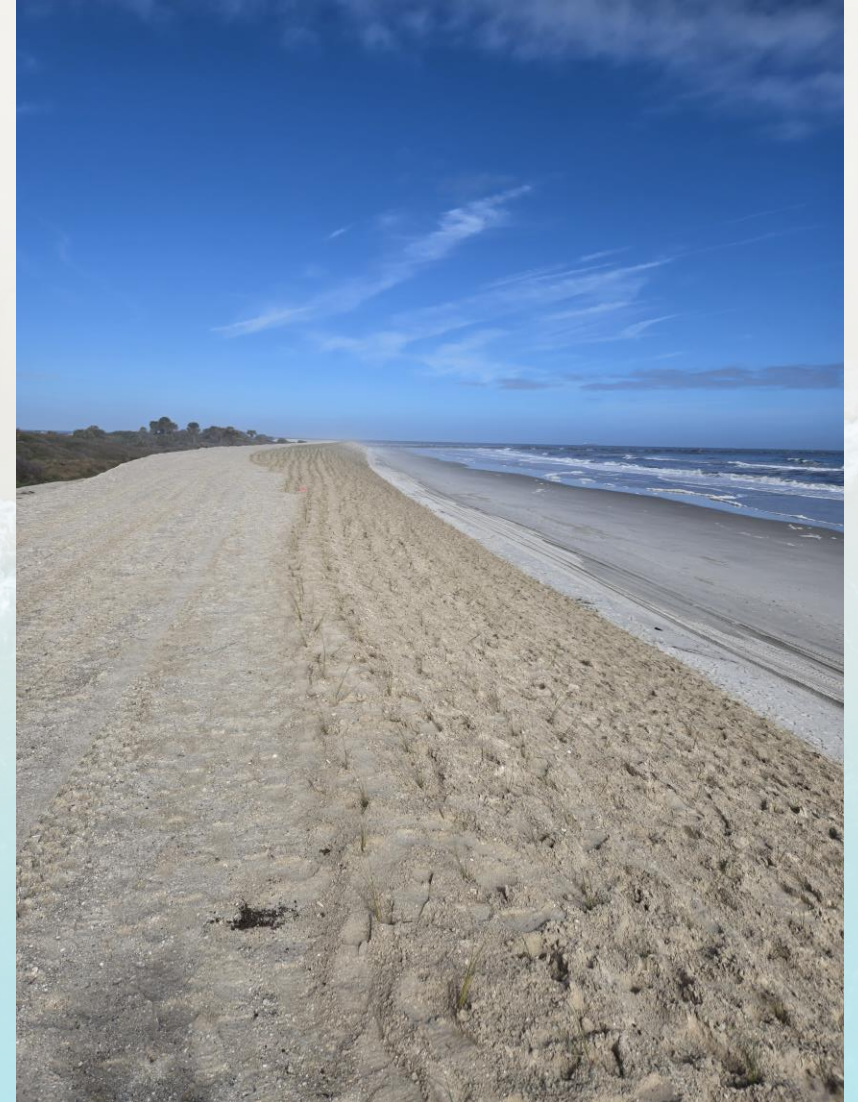
seabird

rooftop

[home](#) | [about](#) | [instructions](#) | [my data](#) | [explore data](#) | [focal species](#) | [resources](#) | [help](#)

 **Have a question?**

Dune Vegetation Planting



Vegetation Plant Material



Vegetation Planting on 18" Centers



Vegetation Monitoring – Initial Planting vs. 4 Months Post



Vegetation Monitoring – Initial Planting vs. 4 Months Post



Vegetation Monitoring – 6 Months Post Planting



Vegetation Monitoring – 6 Months



Vegetation Planting Success

Sea Oats (*Uniola paniculata*)

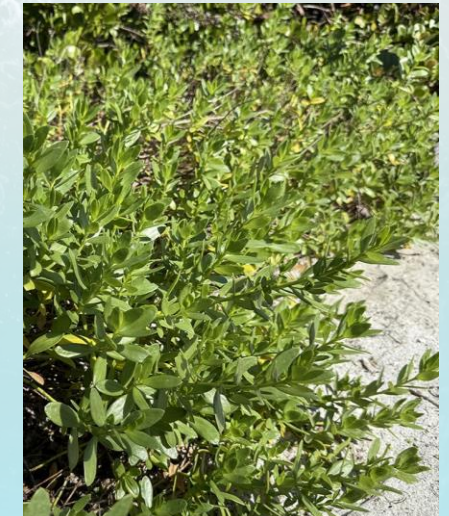
- 98% survival rate 90 days post completion
- Whole Zone Survival rate > 80%
- Survival Pattern width > 80% occupied by surviving plants
- Root Zone penetration of 9" or greater over > 80% of sampled planting units



Vegetation Supplemental Planting & Recruited Species

Plant diversity is helpful to establishing a healthy dune system

- Bitter Panicum (*Panicum amarum*)
- Railroad Vine (*Ipomoea pes-caprae*)
- Beach Morning-glory (*Ipomea imperati*)
- Seashore Dropseed (*Sporobolus virginicus*)
- Seacoast Marshelder (*Iva imbricata*)
- Blanketflower (*Gaillardia pluchella*)
- Dune Sunflower (*Helianthus debilis*)



Dune and Vegetation Photos as of October 1, 2025



Dune and Vegetation Photos as of October 1, 2025



Dune and Vegetation Photos as of October 1, 2025



Dune and Vegetation Photos as of October 1, 2025



Questions?

CONTACT

Pete Johnson

pjohnson@oescgroup.com