

Florida's Beach Management Program:

History, Current Status and Challenges for the Future

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Bureau of Beaches and Coastal Systems



Presentation Outline

- **Program Inception**
 - **Growth**
 - **Milestones**
 - **Legislative Appropriations by Decade**
 - **Present-Day**
 - **Future Issues and Challenges**
- 

Program Inception - 1964

Florida Erosion Control Pioneer



Bill Carlton

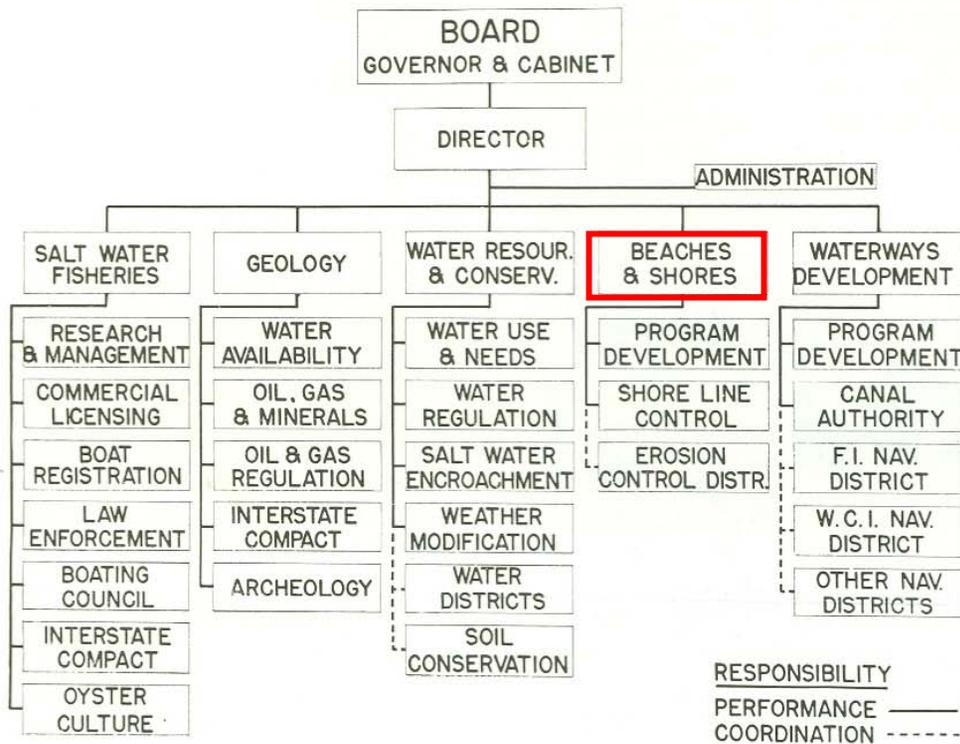
William T. "Bill" Carlton – the driving force behind Florida's erosion control program for nearly two decades

Carlton was the first permanent director of the Bureau of Beaches & Shores. He assumed office on March 11, 1964, shortly after the bureau was established.

Program establishment concurrent with activities at University of Florida

The Early Days of the Program

FLORIDA BOARD OF CONSERVATION



The above chart illustrates the Operations and functions of the present Florida Board of Conservation.

Program Growth

Establishment of Range Monument Network –

- every 1,000 ft along shorelines with sandy beaches
- horizontal and vertical control points for comparative measurements

Development/Refinement of Laws and Rules Governing Regulated Activities

- Chapter 161, Florida Statutes – Beach and Shore Preservation
- Chapter 62B-26, Florida Admin. Code (F.A.C.) – Setback Lines (24 counties)
- Chapter 62B-33, F.A.C. – Rules/Procedures for Constr. Seaward of the CCCL
- Chapter 62B-34, F.A.C. – Rules/Procedures General Permits (seaward CCCL)
- Chapter 62B-36, F.A.C. – Beach Management Funding Assistance Program
- Chapter 62B-41, F.A.C. – Rules and Procedures for Coastal Constr. Permits
- Chapter 62B-49, F.A.C. – Joint Coastal Permits and Proprietary Authorizations

Program Staffing – Stability and Institutional Knowledge

- Bureau Administrator – extensive working knowledge of CCCL Program and operational budgets
- 4 of the 5 current Program Administrators with the Beaches program since 1987 or earlier
- Senior Coastal Engineer employed since 1973

Directors/Chiefs since Program Inception

- **Ney Landrum: 1964**
- **William T. “Bill” Carlton, P.E.: 1964 - 1979**
- **Debbie Athos (Flack): 1980 - 1985**
- **Dr. Robert G. Dean, P.E.: 1985 – 1987**
- **Kirby B. Green, III, P.L.S.: 1987 – 1994**
- **Dr. Alfred Devereaux, Jr., P.E.: 1994 – 2001**
- **Michael W. Sole: Jan 2002 – Sep 2003**
- **Michael R. Barnett, P.E.: Dec 2003 – present**

Milestones

1965 – 1st legislative appropriation for beaches

- total state share: \$331,411

- total local share \$1.64M (3 federal/6 non-federal projects)

1970 – Dade County Beach Restoration

1972 – 1st Coastal Construction Setback Line (Martin County)

1981 – Establishment of 1st CCCL (Broward County)

1985 – 30-year Erosion Projection Procedure

Milestones

(continued)

1989 – First Listing of Critically Eroded Beaches in Florida

1998 - Doc Stamp Dedicated Funding Source - \$30M/yr

2000 – Statewide Strategic Beach Management Plan

2004 – Hurricanes Charley, Frances, Ivan, Jeanne

2005 – T.S. Arlene; Hurricanes Dennis and Wilma

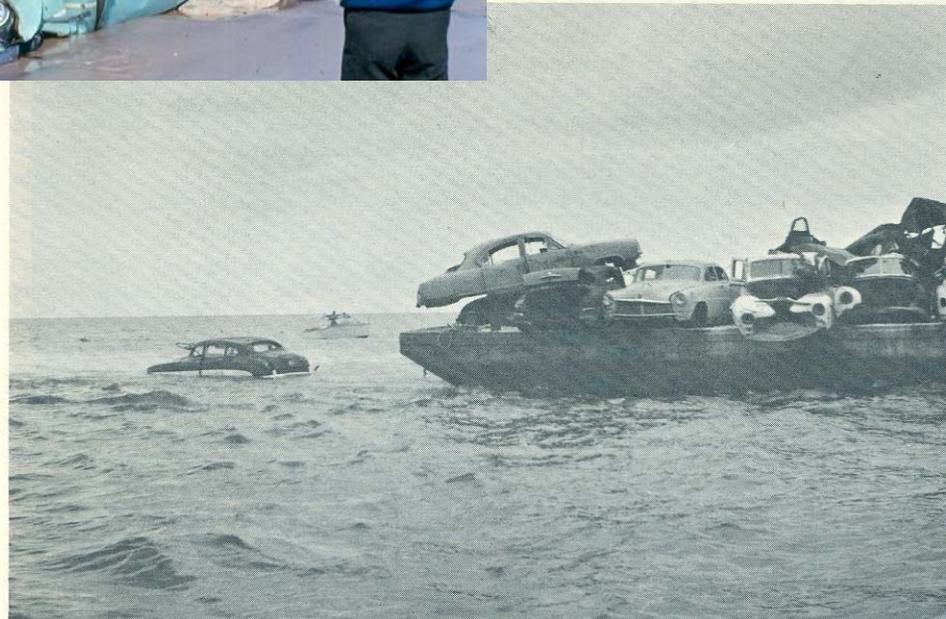
2005/2006 – Nourished 115 miles of shoreline, replenished 89 miles of dunes to offset impacts of the 04/05 storms

Challenges Along the Way – The Early Years

boundary.



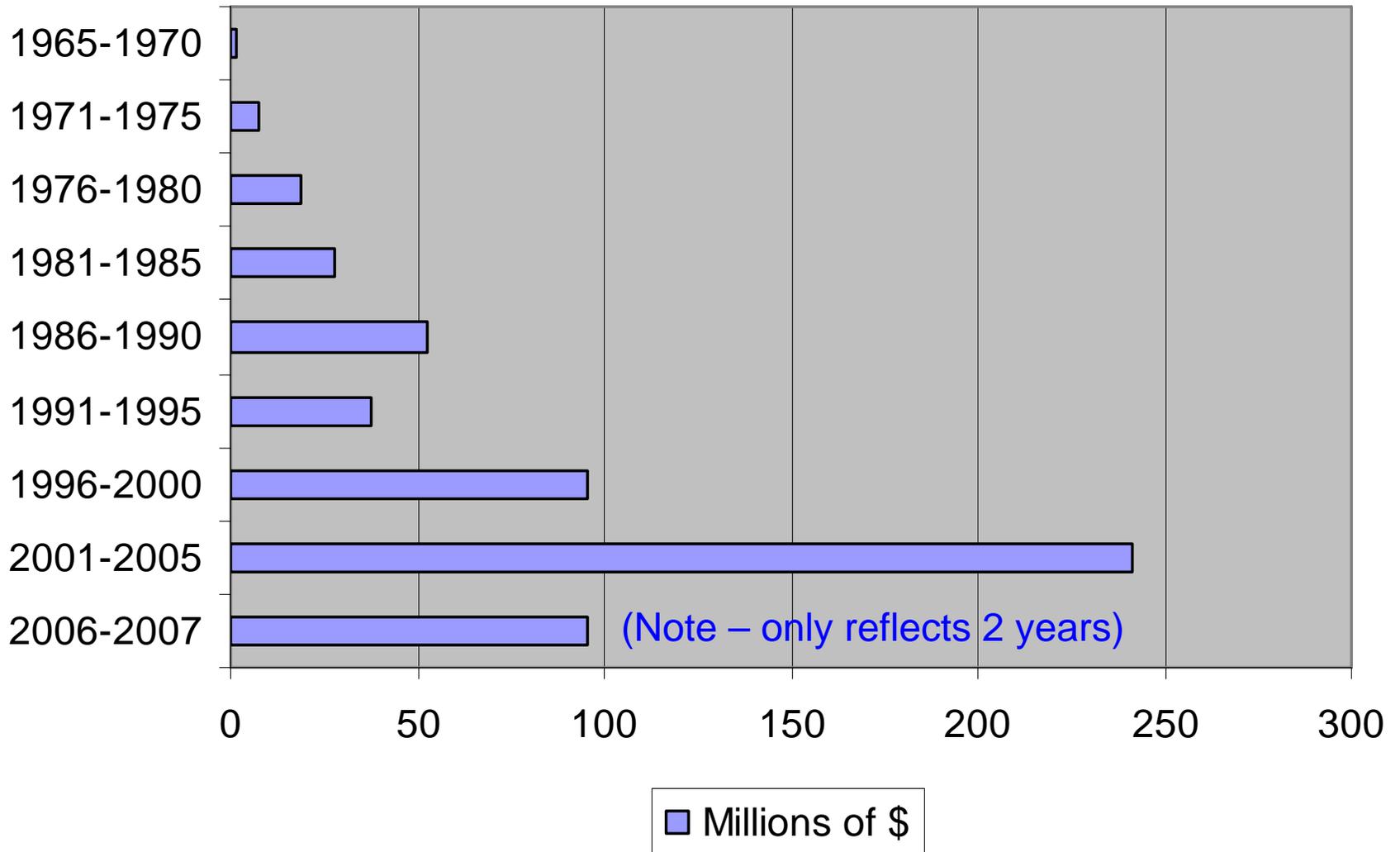
Do it yourself erosion control. In an effort to check any erosion on Florida Audubon Society's Reed Wilderness Beach on Jupiter Island, Charles Bacheller planted this row of posts and laid tires over them.



Legislative Appropriations – Summary

- 1960's – preliminary appropriations/first steps
- 1970's – breaking the \$1 million barrier
- 1980's – establishment of funding consistency
- 1990's – fluctuating funding amounts
- 2000's – *overwhelming* program support

Legislative Appropriations – Five Year Intervals



Present-Day

- **388 miles of the state's 825 miles of sandy beach shoreline designated as Critically Eroded (June 2007)**
- **196.1 miles of shoreline restored and managed to date**
- **Update to Statewide Strategic Beach Management Plan**
 - **refine & renew commitments to restoration & protection of beach-dune system**
 - **responsible inlet sediment management**
 - **adoption by December 2007**

Bureau of Beaches and Coastal Systems

**Comprehensive
Beach
Management**

**Local Government Fiscal
Assistance Program**

**Coastal
Engineering**

Regulatory Programs

CCCL

JCP

Coastal Data & Analysis

**Shoreline Surveying & Monitoring, Special Studies
Modeling, GIS**

Current Status

Additional shoreline segments targeted for *restoration* in the next year (or so):

- Honeymoon Island, Pinellas Co. – 1.4 miles (in progress and nearing completion)
- Nassau County Federal SPP – 4.3 miles
- St. Joseph Peninsula, Gulf County – 7.5 miles
- Alligator Point, Franklin County – 2.1 miles
- Town of Palm Beach Reach 8 – 2.0 miles



Programs, Beaches and Coastal Systems, What's New

- Water Home, Beaches, Control Line Permitting, Data & Analysis, Environmental Permitting, Erosion Control, Information, About Us, Contacts, Data, Events, Forms, News, Publications, Rules, Statutes

Hot Topics

- 62B-56, F.A.C., Rule Development for Sand-Filled Geotextile Dune Cores, Franklin Co.-Dog Island CCCL Reestablishment Information, Gulf Co. CCCL Reestablishment Information, BBCS Coastal Armoring Policy and Guidelines, BBCS Guidelines for Emergency Temporary Coastal Armoring Seaward of the CCCL for Florida Coastal Governments, Strategic Beach Management Plan, Sub-Tropical Storm Andrea

Chapter 62B-56, SAND-FILLED GEOTEXTILE DUNE CORES (Permits and Maintenance) Florida Administrative Code, (F.A.C.)Rule Development:

The Department is developing a new Rule Chapter 62B-56, F.A.C., to establish requirements and procedures for constructing and maintaining sand-filled geotextile containers as the core of a restored dune feature.

RULE DEVELOPMENT WORKSHOP: A rule development workshop will be held on October 17, 2007, 1:00 P.M. to 5:00 P.M., at the Bureau of Beaches and Coastal Systems, 5050 West Tennessee St., Building B, Room 307, Tallahassee, FL. The Notice of Rule Development Workshop was published in the Florida Administrative Weekly (FAW) on September 28, 2007 (Vol 33, No 39) and may be reviewed by clicking on the following link:

FAW Notice of Workshop

A draft of the proposed rule is available by clicking on the following link:

Draft Proposed Rule 62B-56, F.A.C.

- Draft Strategic Beach Management Plan, Coastal High Hazard Study Commission, Franklin Co., Dog Island CCCL Reestablishment Info, Gulf Co. CCCL Reestablishment Info: Bureau Coastal Armoring Policy & Guidelines - Including Emergency Temporary Armoring, Read about Coastal Properties Disclosure Statement, Read about the Florida Building Code, Interactive Web Mapping (opens in new window)

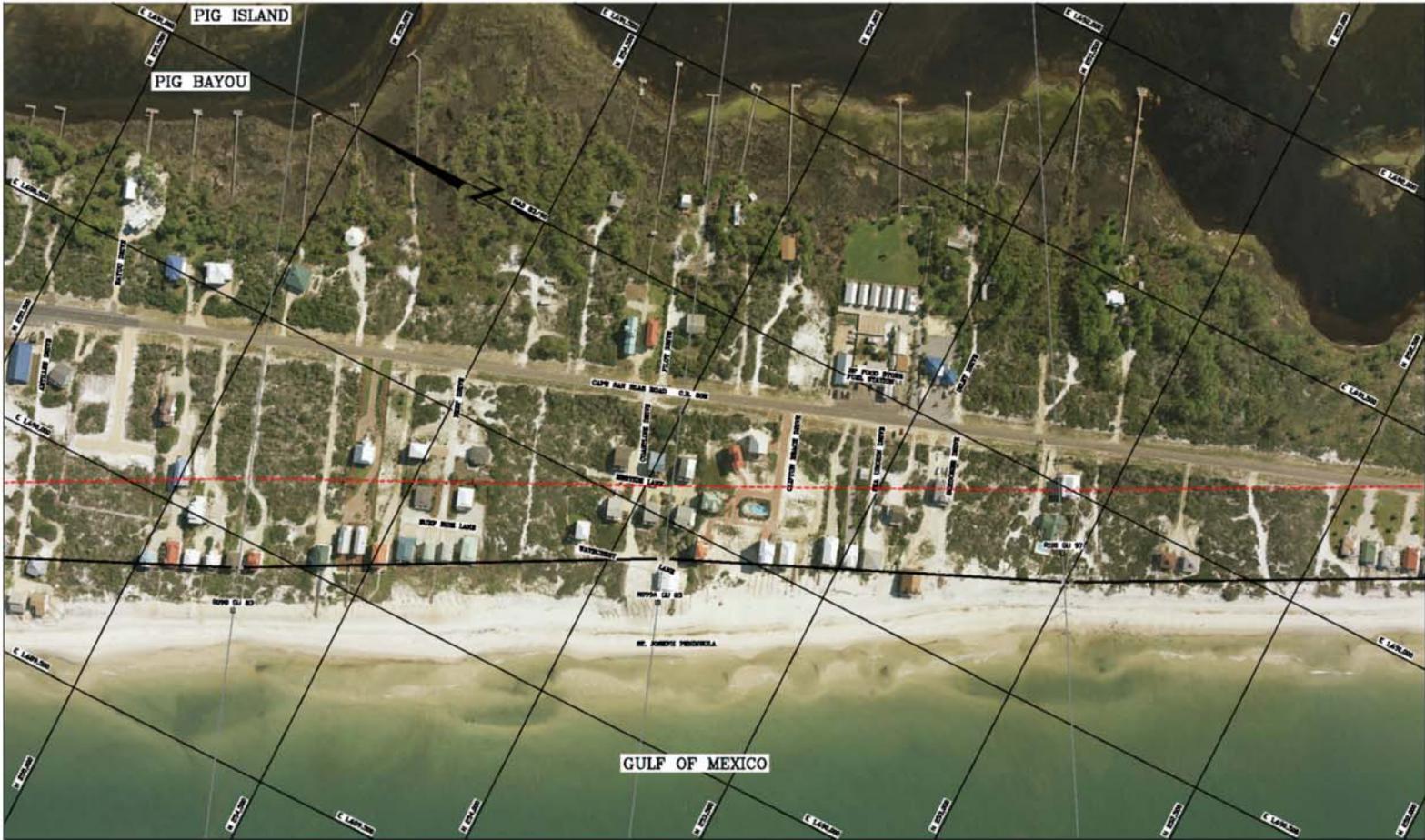
Highlights

- Beaches and Shores Resource Center (opens in new window), Links, Florida Division of Emergency Management (opens in new window), State Parks, USGS Hurricane Impact Studies Main Page (opens in new window), Water Resource Management

The Future – Program Challenges

- Budgetary Constraints - Diminishing Federal & Local Gov't Funding Levels
- Litigation – Takings and Property Rights
- “Temporary” Coastal Armoring
- Offshore Sand Resources – Finite Supply
- Project Performance – “Balancing” Act
- Monitoring (Physical & Environmental)

CCCL Reestablishment (Gulf County)



THIS PHOTOGRAPH IS FOR INFORMATION ONLY. ANY UNAUTHORIZED AND FURTHER INFORMATION SHOULD BE OBTAINED FROM THE RECORD PLAT FILED IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF THIS COUNTY.



 DELETED CONSTRUCTION CONTROL LINE
 (PROPERTY)

 COASTAL CONSTRUCTION CONTROL LINE
 (PROPERTY)

STATE OF FLORIDA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
GULF COUNTY
 COASTAL CONSTRUCTION CONTROL LINE



These Aerial Photo Maps Show the Deleted Coastal Construction Control Line as recorded February 8, 1988 in "Title Plat Book #1, Page 18, 1 through 18".

COMPILED BY PHOTOGRAMMETRIC METHOD
 AREAL CARTOGRAPHY
 OF AMERICA, INC.
 DATE OF PHOTOGRAPHY: MAR. 26, 2008
 DRAWN BY: J.C.A. BAC... MISSY M. OF...
 CHECKED BY: _____

CCCL Reestablishment (Gulf County)



THIS PHOTOGRAPH IS FOR PICTORIAL INFORMATION ONLY.
 ALL MEASUREMENTS AND FACTUAL INFORMATION SHOULD
 BE OBTAINED FROM THE RECORDS FILED IN THE OFFICE
 OF THE CLERK OF THE COUNTY OF THIS COUNTY.



STATE OF FLORIDA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 GULF COUNTY
 COASTAL CONSTRUCTION CONTROL LINE

STATE OF FLORIDA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 GULF COUNTY
 COASTAL CONSTRUCTION CONTROL LINE



These Aerial Photo Maps Show the
 Coastal Construction Control Line as
 recorded February 5, 1988 in "Plan. Plat.
 Book #1, Page 18, 1 through 17."

COMPILED BY PHOTOGRAMMETRIC METHOD
 AERIAL CARTOGRAPHY
 OF AMERICA, INC.
 DATE OF PHOTOGRAPHY: 1984, 1985, 1986
 DRAWN BY: JEA, HAD, HAD, HAD, HAD, HAD
 CHECKED BY: _____

CCCL Reestablishment – Development Implications



GULF R-102 TO R-105

- ▲ R-Monuments
- Proposed CCCL
- Current CCCL (1986)
- 30yr Erosion *Estimate* with Applied Credit for Beach Restoration Project
- ▭ Platted After Oct. 1985
- ▭ Platted Before Oct. 1985

**PROPERTIES PLATTED
AFTER OCTOBER 1985**

1 inch equals 100 feet

Date of Photography: Sept. 26, 2006

Printing Date: May 22, 2007

All information shown here is for the purpose of developing a statement of estimated regulatory costs pursuant to Section 120.541, Florida Statutes, and is not to be considered a final determination of the 30-year erosion projection by the Department of Environmental Protection



Post-Storm Emergency “Temporary” Armoring

Appropriately sited bulkhead



Inappropriately sited bulkhead



No comment –
Permit decision
(& litigation) pending



The Future - Tools

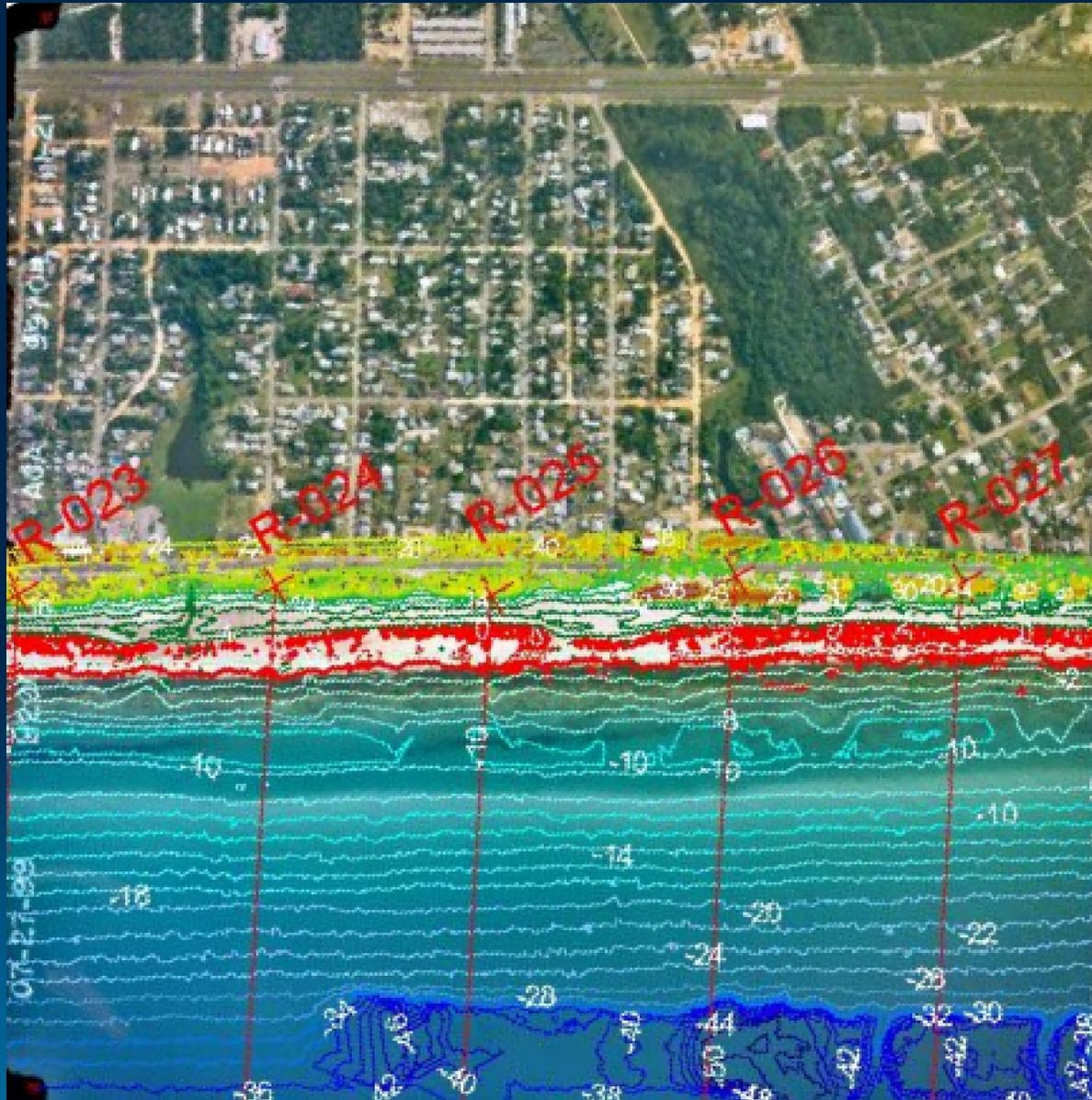
- Technological Advancements:
 - LiDAR
 - ROSS Database
 - Pictometry

 - Sand Source Optimization
 - Planning
 - Data Acquisition
 - Borrow Area Layout
 - Dredging Efficiencies

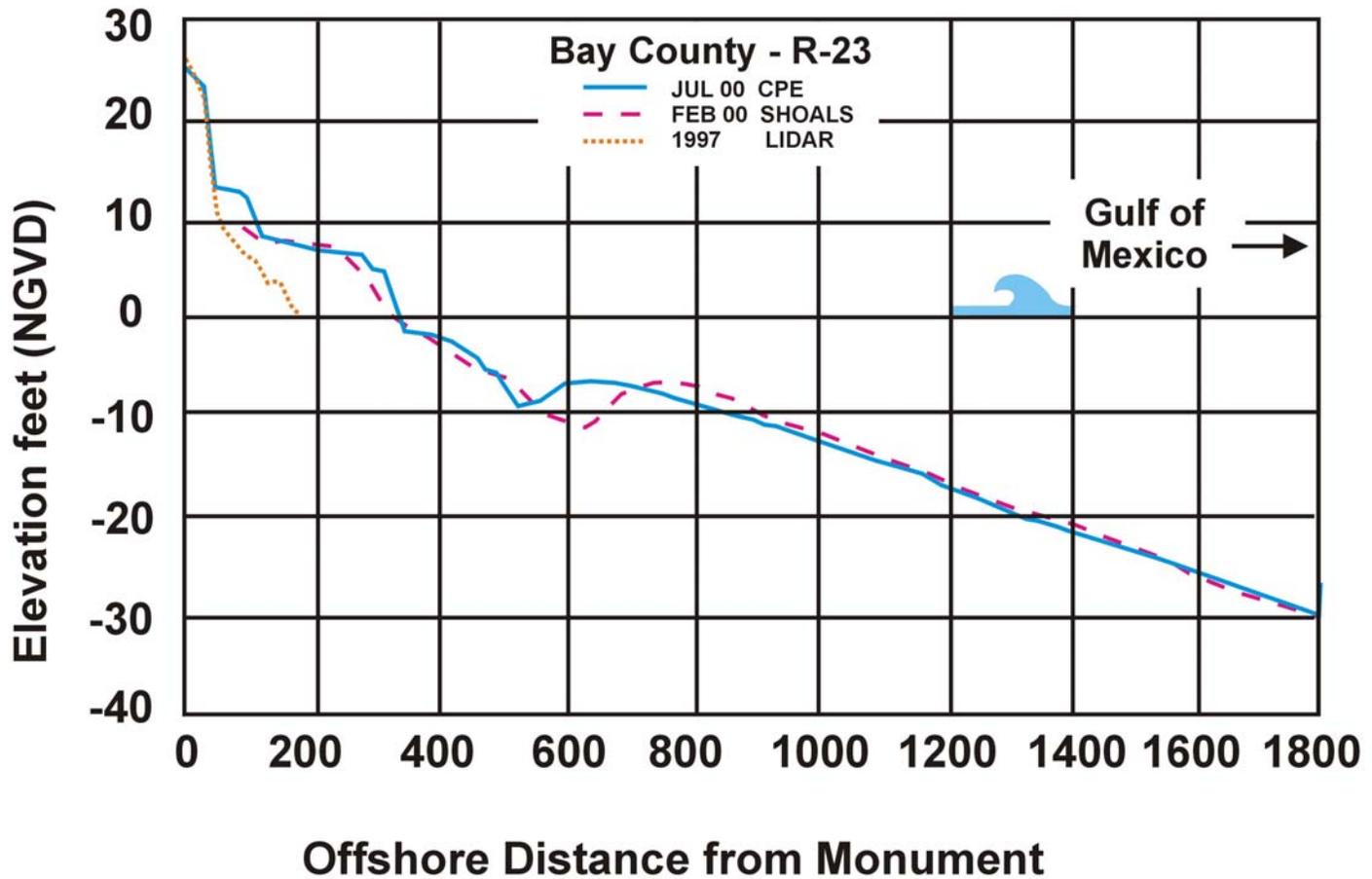
 - Innovation and Ingenuity for Mitigation

 - Habitat Conservation Plan
- 

LIDAR Topographic Data (2D)



LIDAR Topographic Data (3D)



Reconnaissance Offshore Sand Search

[FAQs](#) | [Related Links](#) | [Contact Us](#) | [FTP](#)

Reconnaissance Offshore Sand Search Home Page

- Mapping
- ArcIMS
- Database
- Query Builder
- Downloads
- Shapefiles
- Reports
- Technical Advice
- Bibliography
- Project List
- ROSS Terms

[Mapping](#)

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and Coastal Systems**

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<http://ross.urs-tally.com/>

ROSS
Database



FDEP Reconnaissance Offshore Sand Search

[Home Page](#)

[User Manual](#)

Tool Mode: Zoom In



X, Y 160263.39, 29314.98
Scale 1:4456939

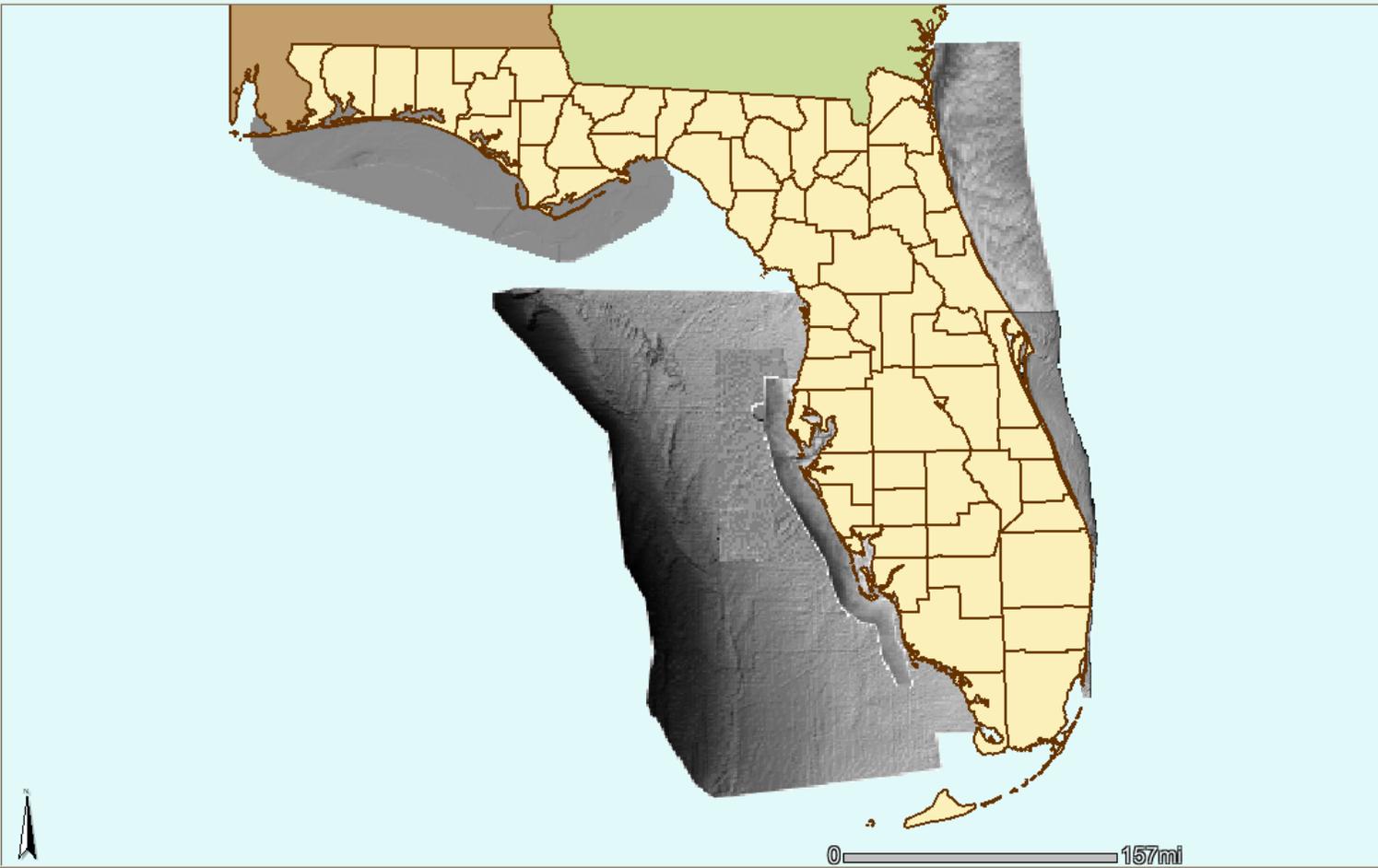
LAYERS

- Sediment Samples
- Other
- Reef/Hardbottom
- Geophysical
- Environmental
- Basemap
- Isopach Lines
- Bathymetry
- Borrow Sites
- Paleo Features
- Near Shore Features
- Geology/Geomorphology
 - Stratigraphy
 - Central Physiographic Ur
 - NE Physiographic Units
 - SE Physiographic Units
 - SW Physiographic Units
 - Hillshade
- Interpreted Maps
- Queries

Auto Refresh

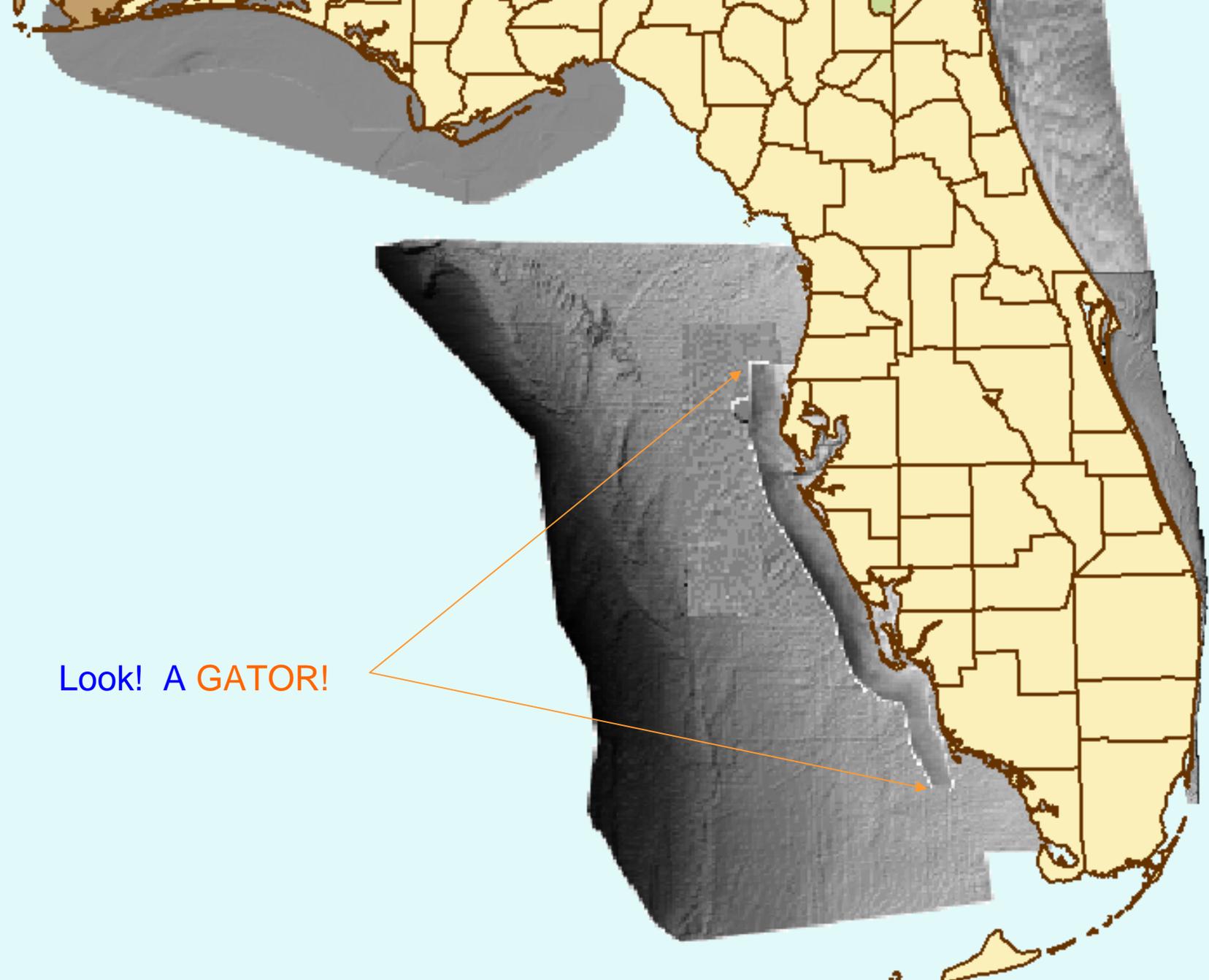
Help:

- A closed group, click to open.
- An open group, click to close.
- A layer contained within a group.
- A layer not contained within a group.
- A hidden group/layer, click to make visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make visible.
- An inactive layer, click to make active.
- The active layer.



Done

Trusted sites 100%



Look! A GATOR!





FDEP Reconnaissance Offshore Sand Search

[Home Page](#)

[User Manual](#)

Tool Mode: Zoom In



X, Y 243831, 35118.29
Scale 1:4456939 [Set Scale](#)

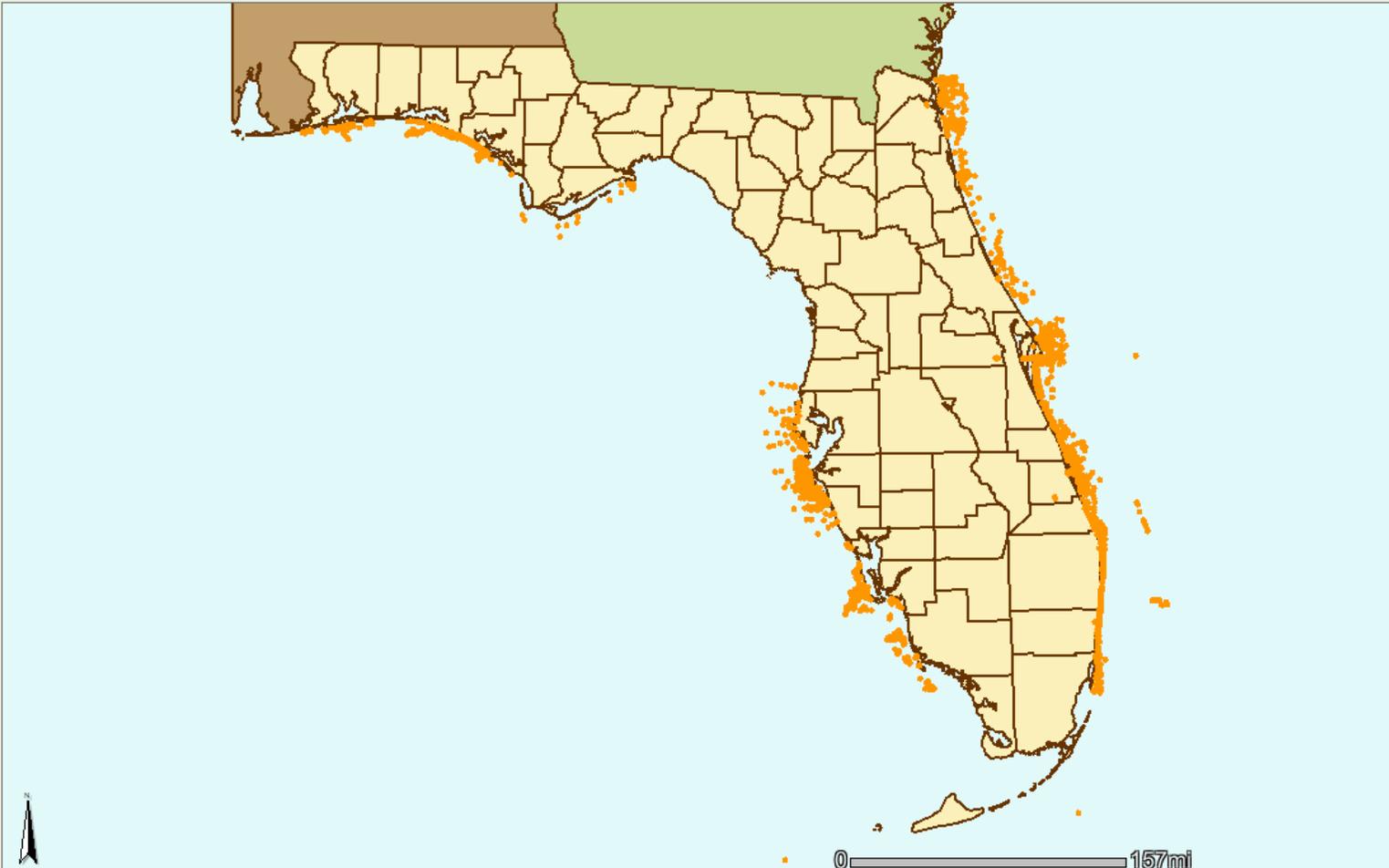
- LAYERS**
- Sediment Samples
 - Cores
 - Jet Probes
 - Grab Samples
 - All Sediment Data
 - Other
 - Reef/Hardbottom
 - Geophysical
 - Environmental
 - Basemap
 - Isopach Lines
 - Bathymetry
 - Borrow Sites
 - Paleo Features
 - Near Shore Features
 - Geology/Geomorphology
 - Interpreted Maps
 - Queries

Auto Refresh

[Refresh Map](#)

[View Legend](#)

- Help:**
- A closed group, click to open.
 - An open group, click to close.
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 - A partially visible group, click to make fully visible.
 - An inactive layer, click to make active.
 - The active layer.



Pictometry

MultiVision File View Tools Orthophoto Options Help

003100-051406172442-3, d=2

003451-051706135333-2, d=2

003274-051406180223-4, d=2

003624-052006161912-1, d=2

Orthophoto

Project loaded: Pinellas $x = 260995.75, y = 1227974.80, z = 5.05$ Orthophoto's scale = 1:30268.8

Pictometry (continued)

MultiVision

File View Tools Orthophoto Options Help

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Orthophoto

Ready

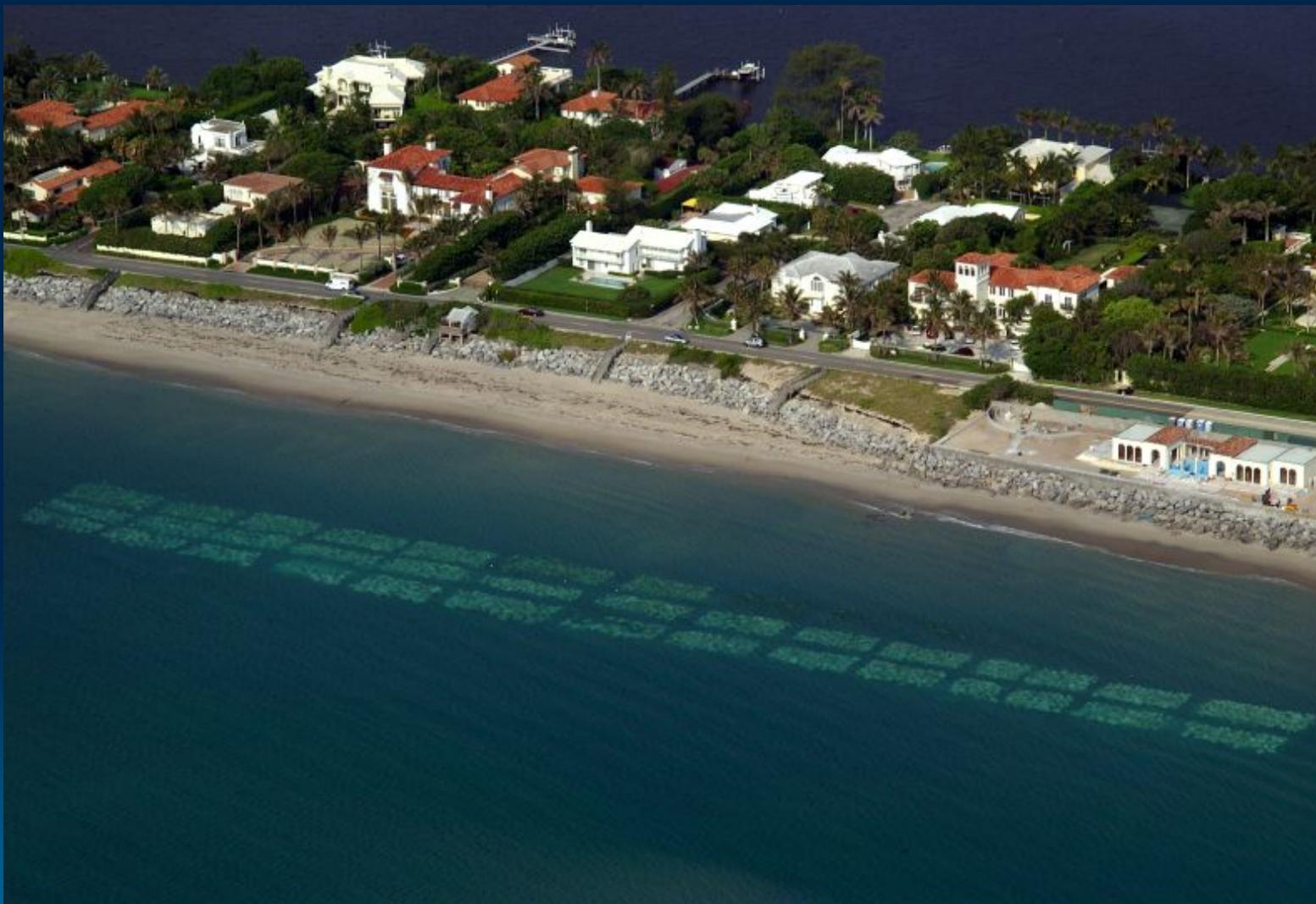
x = 261345.78, y = 1227582.82, z = 6.11

Orthophoto's scale = 1:20965.6

start MultiVision 2:10 PM

The image shows a screenshot of the MultiVision software interface. The main window displays an aerial orthophoto of a large resort complex. The resort features several multi-story buildings with red-tiled roofs, swimming pools, a beach area with lounge chairs, and large parking lots filled with cars. The software interface includes a menu bar (File, View, Tools, Orthophoto, Options, Help), a toolbar with various navigation and editing tools, and a status bar at the bottom showing coordinates and scale information. The Windows taskbar at the very bottom shows the Start button, the MultiVision application icon, and the system clock set to 2:10 PM.

Mitigation



Town of Palm Beach Artificial Reef Phipps Park

Print #40601002

Date:06/01/04



Aerial Photography, Inc. 954-568-0484

Thank You

Additional Information:

www.dep.state.fl.us/beaches

