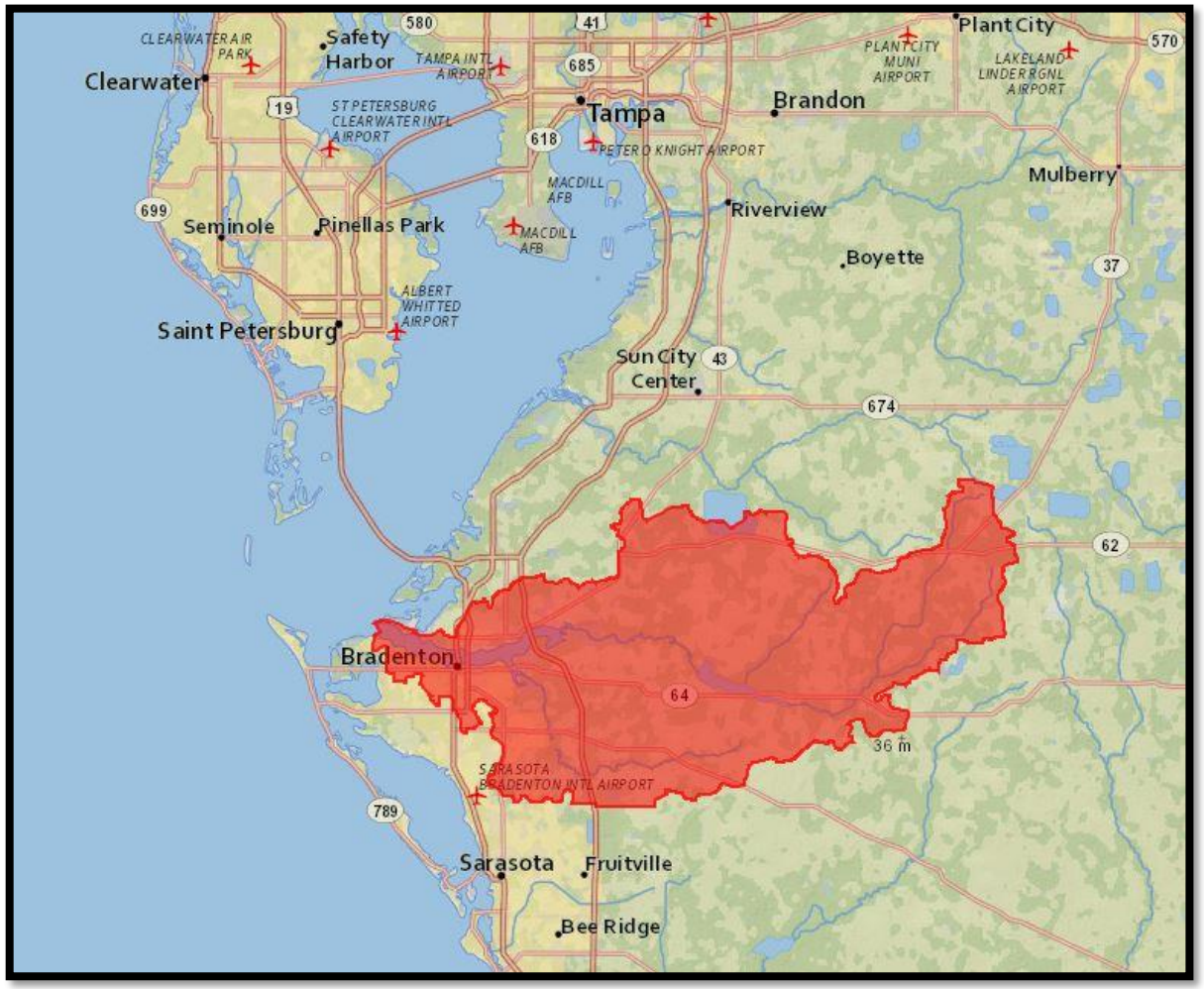
A Proposed Path Forward for Potential Large Scale Oyster Habitat Restoration in the Manatee River

Presented By Damon Moore

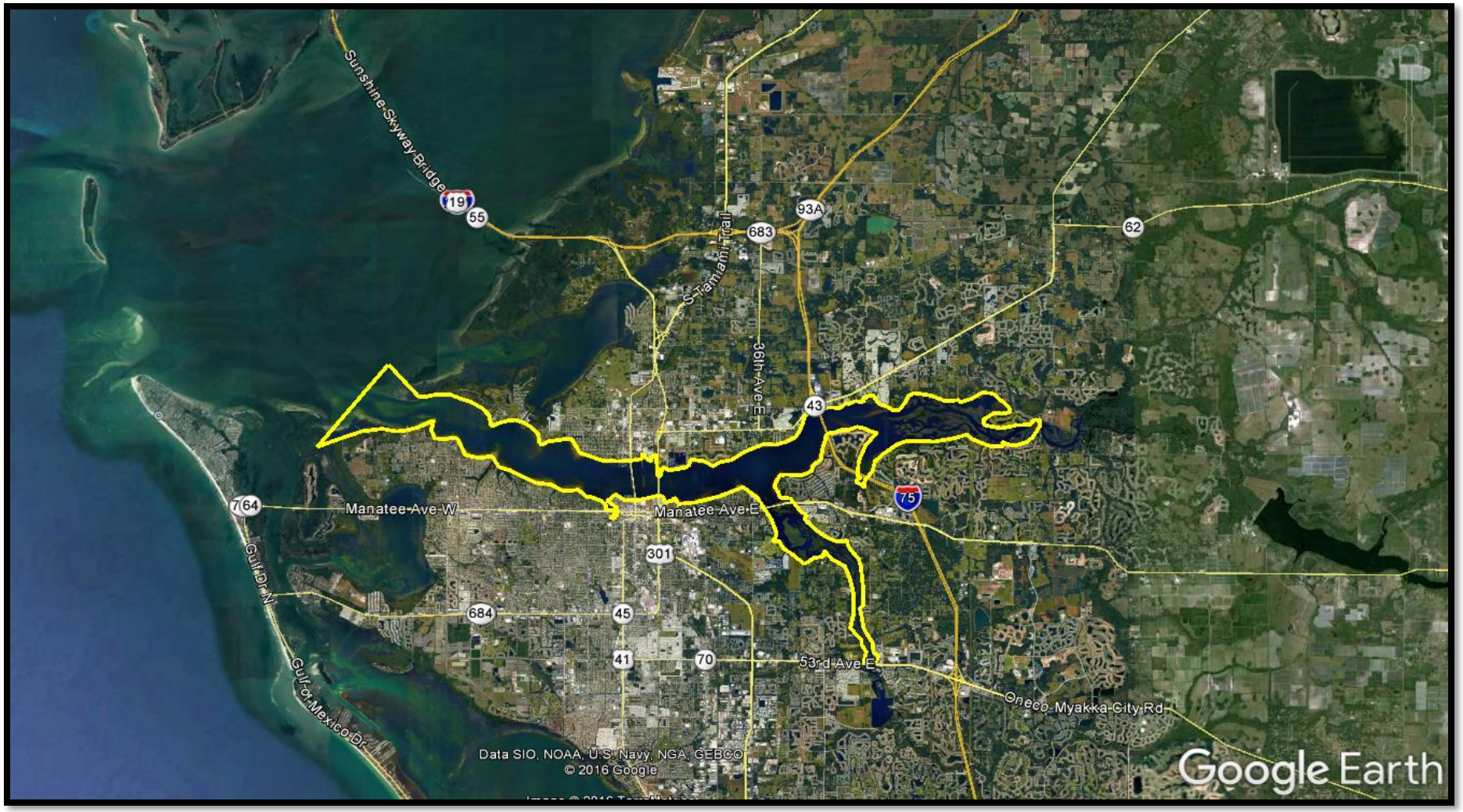
Manatee County Parks and Natural Resources Department

Introduction



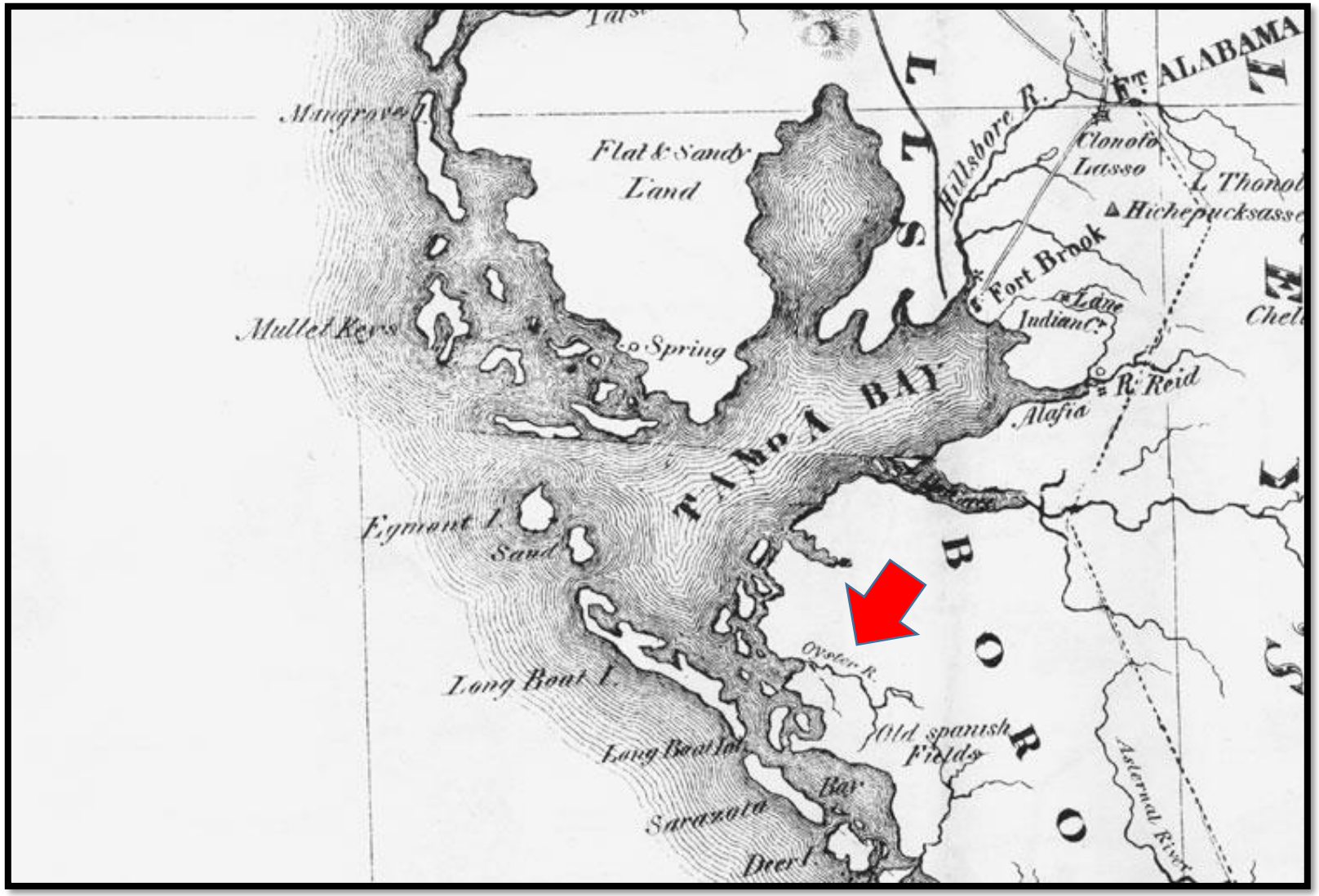
The Manatee River Watershed. Approximately 350 Square miles shown within the red polygon. (Manatee County Water Atlas, 2016)

Introduction



Project Area within yellow polygon. (Google Earth, 2016)

Background



Cut from J.L. William 1837 Map. Note Manatee River is referred to as "Oyster R."

Bulletin of the United States Fish Commission. "The Oyster-Bars of the West Coast of Florida: Their depletion and restoration. By: A Smeltz. Vol. XVII. 1897. Washington, D. C. U.S.G.P.O. 1898

> "In 1876 I came to the west coast of Florida from one of the largest oyster growing sections in the world, Chesapeake Bay. I landed at Cedar Keys and at once became interested in the oyster beds of Florida. After spending three weeks at Cedar Keys, I cruised southward, examining the most prominent oyster beds, such as Crystal River Bay, the bars of the Cootie region, Clearwater Harbor, Point Pinellas, Hillsboro Bay, Old Tampa Bay, and on to a hamlet I found at the mouth of the Hillsboro River known as Tampa; thence I continued southward to the Alafia River, Big and Little Manatee, Sarasota, Boca Grande oyster bars and 100 miles farther south, and on every hand I found the same condition - oysters, oysters everywhere. How little did I then think that in less than twenty five years every one of these bars would be partially or totally depleted.

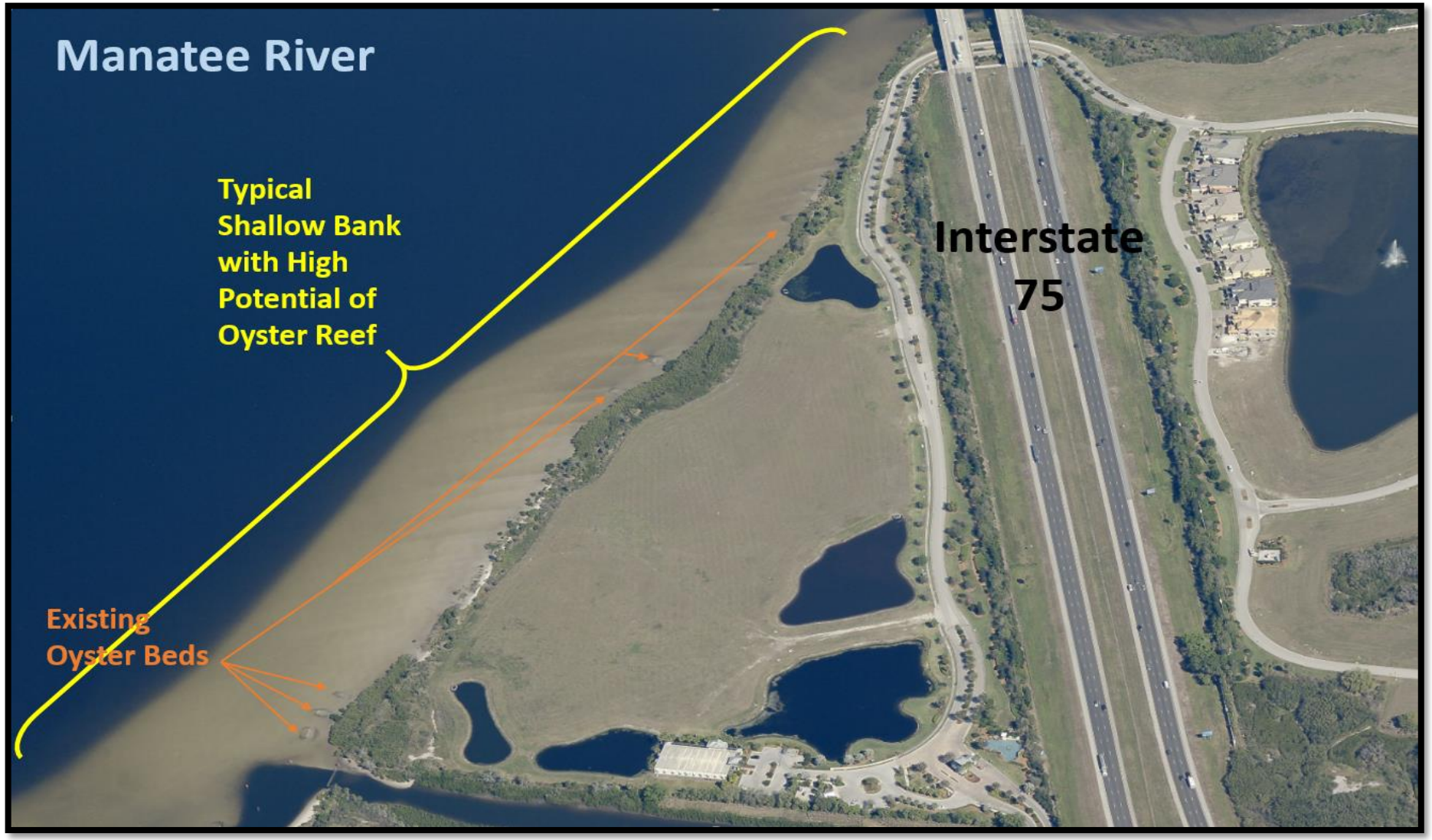
Fig. 2. Dredge No. 3 loading oyster shell on barge.

Shell Dredge in Tampa Bay (The Florida Anthropologist Volume 25 June 1972 No. 2 Part 1 Commercial oyster Shell of Tampa Bay L.O. Warren)

Dot Dash Islands 1940. Note dark signature surrounded by lighter color north of the islands and along the shoreline adjacent to the development with dock into river. Dark signature is possibly oyster bars. (UF George A Smathers Libraries Digital Collections)

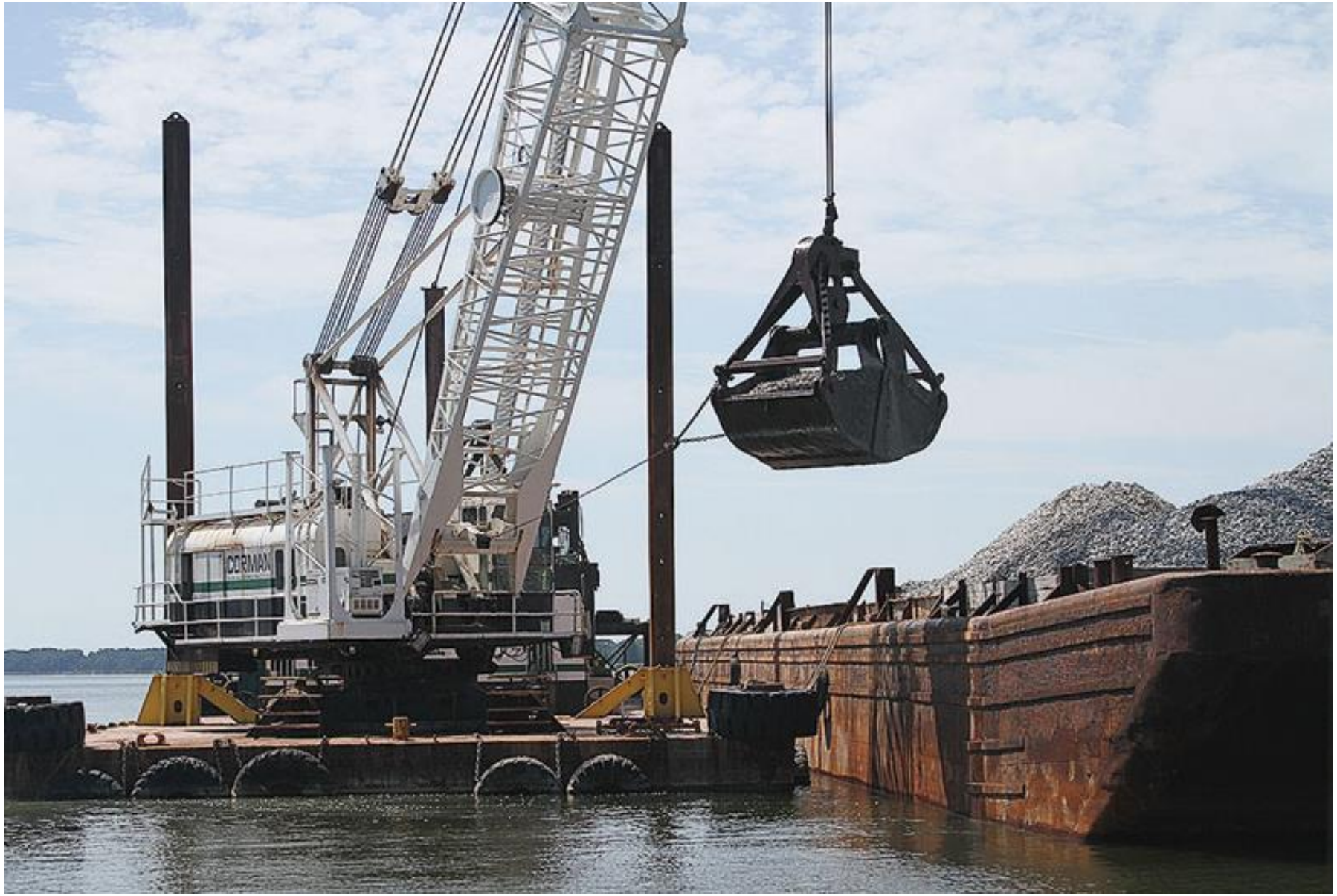
Dot Dash Islands 2015. Note dark signature is no longer present and there is only sand bottom.
Just south of the SR 64 Bridge are live oyster bars.

South Dot Dash Islands and South of SR 64 Bridge, 2015. Note dark signature is of large oyster bars South of the old bridge only.



Pictometry of area along south shore of Manatee River west of I-75. This is a typical large area with high potential for oyster restoration. (Manatee County GIS 2016)

2015 aerial shows the location of the area highlighted (Figure 1 Area) in context of large shallow sand areas with the same aerial signature. (Manatee County GIS 2016)

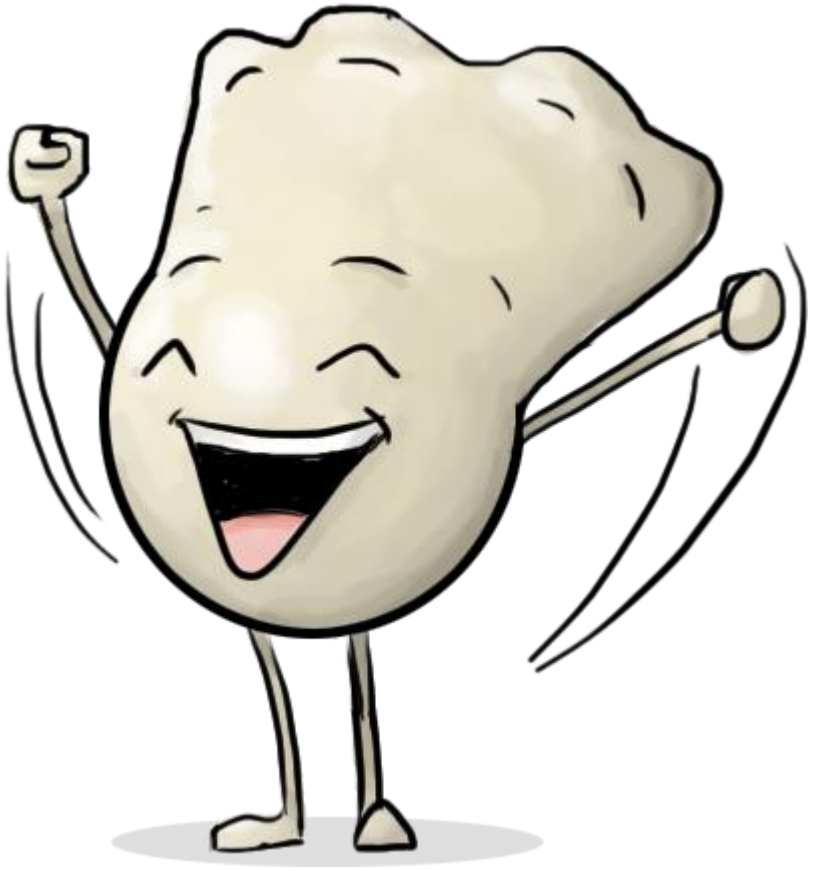


A crane moves substrate to help rebuild part of a reef on Virginia's Great Wicomico River. (U.S. Army Corps of Engineers)

Fig. 2. Dredge No. 3 loading oyster shell on barge.

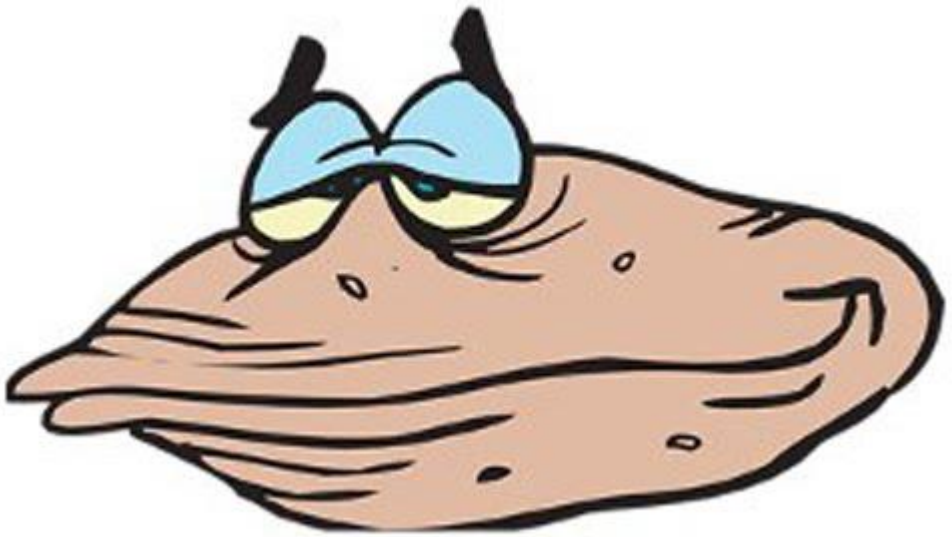
Shell Dredge in Tampa Bay (The Florida Anthropologist Volume 25 June 1972 No. 2 Part 1 Commercial oyster Shell of Tampa Bay L.O. Warren)

So is it that simple?.....YES IT IS!!!!!!



http://www.thejollyoyster.com/

But also……NO IT’S NOT.



http://www.thejollyoyster.com/

Well…Why not?

Funding?

Public Opposition?

Legal Liability?

Permitting Challenges?

Title Restrictions?

Green Mussels?

Existing SAR?

Project Partners?

Sea Level Rise?

ROI?

Bathymetry?

Freshwater Flows?

Oyster Diseases?

Sedimentation?

Priority Areas?

Funding?

Funding?

Funding?

Multimillion dollar effort. You better have a plan.

Manatee River Oyster Habitat Restoration Project – Phase I: Master Restoration Plan Development and Pilot Oyster Reef Construction

- Initial focus group meetings.
- Partnership building.
- Gathering and analysis of existing baseline and historical data.
- Filling in data gaps (i.e. mapping existing submerged aquatic resources, bathymetry, freshwater flows analysis, sedimentation analysis, spatial suitability model, biological limiting factors analysis, sea level rise implications analysis).
- Unintended Consequences Analysis
- Formulation of an overall project-wide conceptual restoration plan.
- Hosting and documenting public input and focus group meetings.
- Set quantifiable goals for restoration success.
- Engineer's cost estimates for full scale and unit based large scale project implementation.
- Determination of funding strategies.
- Legal Liabilities Assessment
- Design and permitting of a series strategically placed of pilot oyster reefs. (These reefs will be strategically located to assess oyster spat settlement and early establishment potential).
- Construction and monitoring of the pilot oyster reefs (**a major cost component**).
- Creating the MRP document including scalable and prioritized future projects.

Reply Reply All Forward

Tue 12/6/2016 12:37 PM

Restoration Projects (Shared Mailbox) <Restoration.Projects@dep.state.fl.us>

RE: Form Returned: Portal_Project_Submittal_Form.pdf

To Damon Moore

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hello,

Thank you for the Project Proposal. The information has been added as Project Proposal number: 1655 *Manatee River Oyster Habitat Restoration Project - Phase 1: Master Restoration Plan Development and Pilot Oyster Reef Construction.*

A project summary list is updated monthly (http://www.dep.state.fl.us/deepwaterhorizon/). If you have any questions or concerns please email Restoration.Projects@dep.state.fl.us.

Best,

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Division of Water Restoration Assistance
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Oyster Cake?