



U.S. ARMY

US Army Corps of Engineers



GRAND ISLE Hurricane Rehabilitation Project



Rob Davinroy, P.E., MASCE

St. Louis District

**Project Manager for Grand Isle
Engineering and Design**

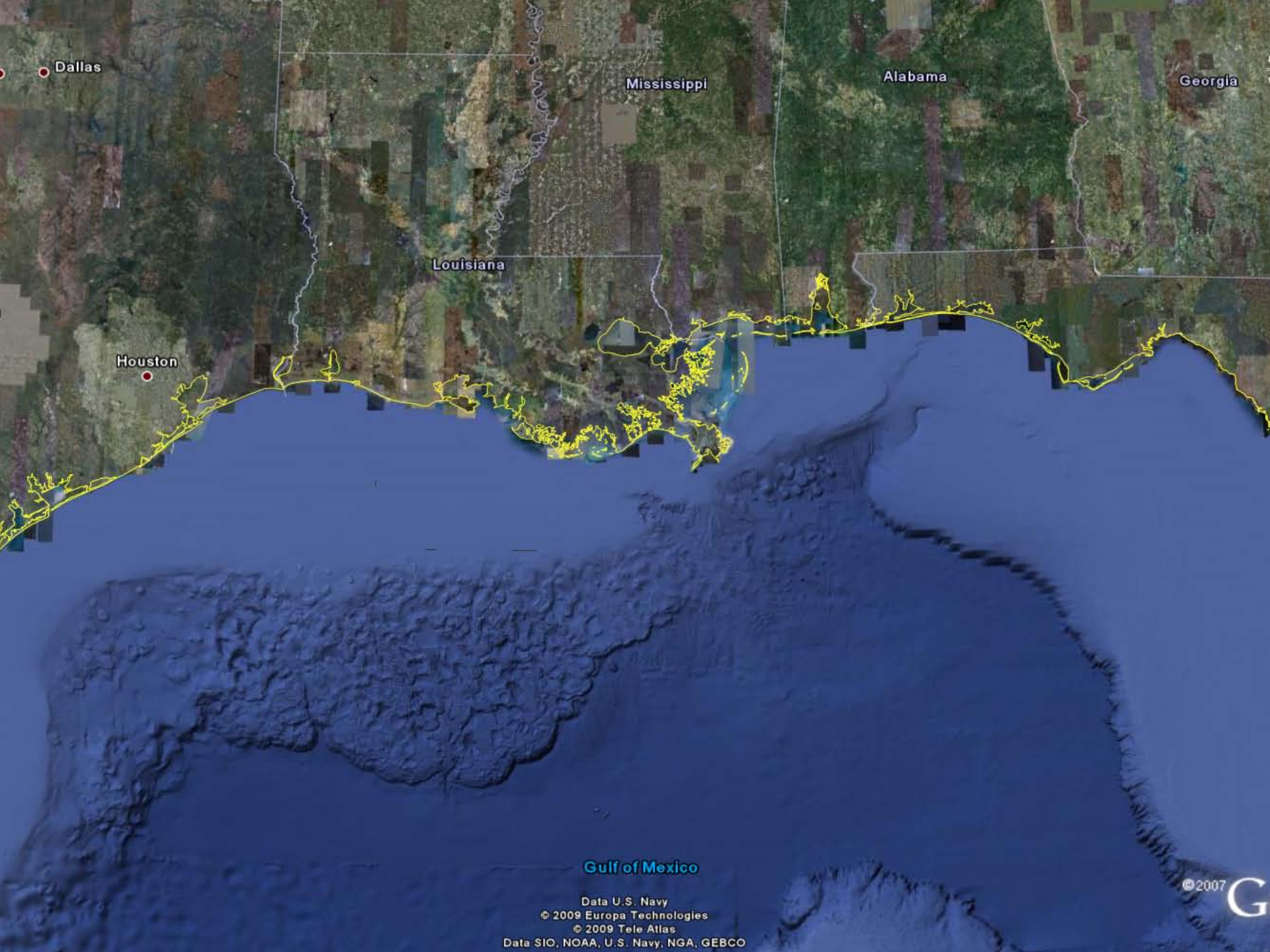
**New Orleans District Hurricane Protection
Office**

© 2008 Europa Technologies

Image © 2008 DigitalGlobe

© 2008 Google™

Building Strong



Dallas

Mississippi

Alabama

Georgia

Louisiana

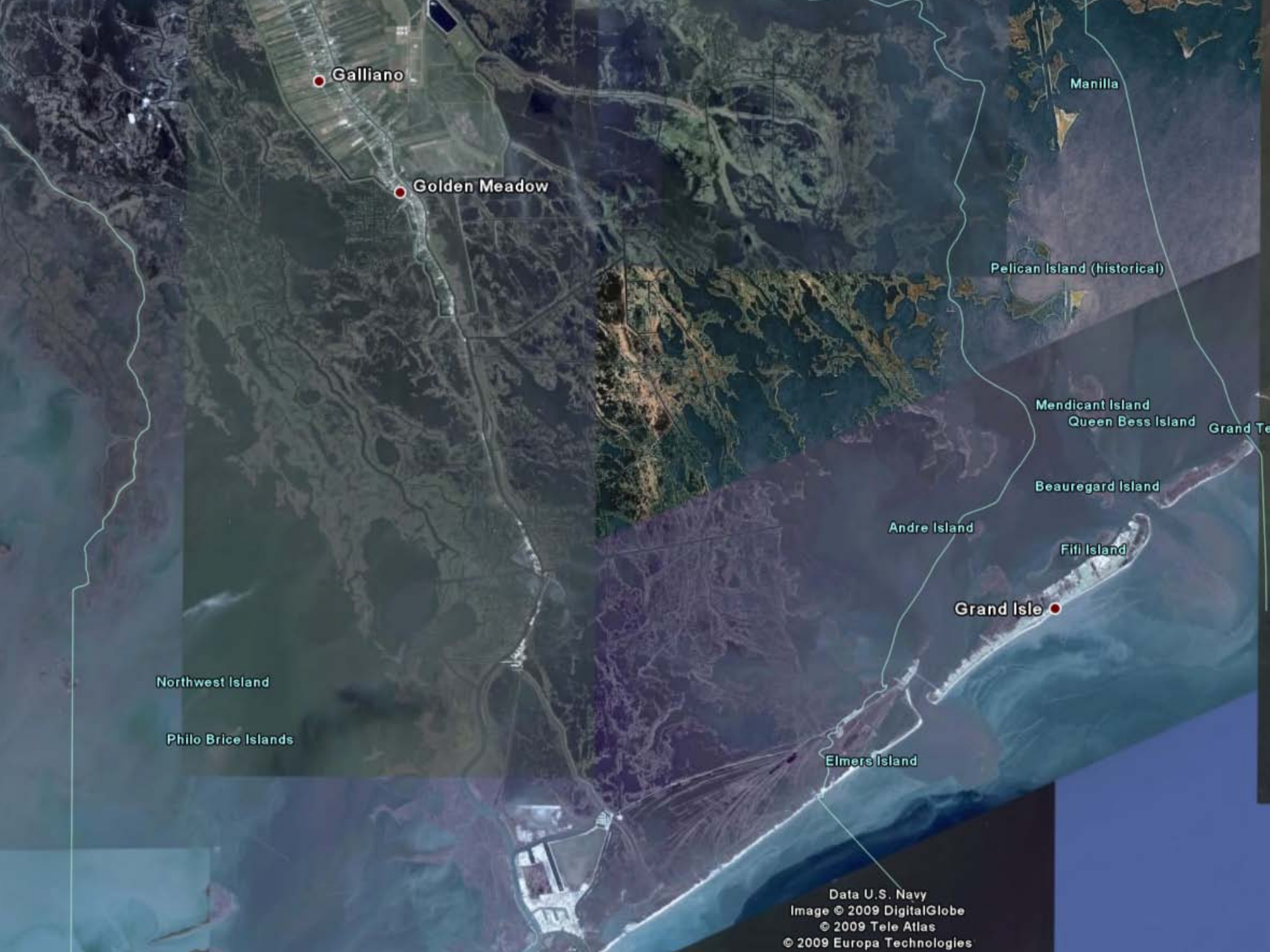
Houston

Gulf of Mexico

Data U.S. Navy
© 2009 Europa Technologies
© 2009 Tele Atlas
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

© 2007

G



Galliano

Golden Meadow

Manilla

Pelican Island (historical)

Mendicant Island

Queen Bess Island

Grand Te

Beauregard Island

Andre Island

Fifi Island

Grand Isle

Northwest Island

Philo Brice Islands

Elmers Island

Data U.S. Navy
Image © 2009 DigitalGlobe
© 2009 Tele Atlas
© 2009 Europa Technologies



US 1



Damage after Ike



US Army Corps of Engineers



Amended Project Information Report
PL 148-109 Rehabilitation of Damaged
Hurricane/Shore Protection Projects

GRAND ISLE AND VICINITY, LOUISIANA

JEFFERSON PARISH, LA



October 2008

U.S. Army Corps of Engineers
New Orleans District
New Orleans, LA

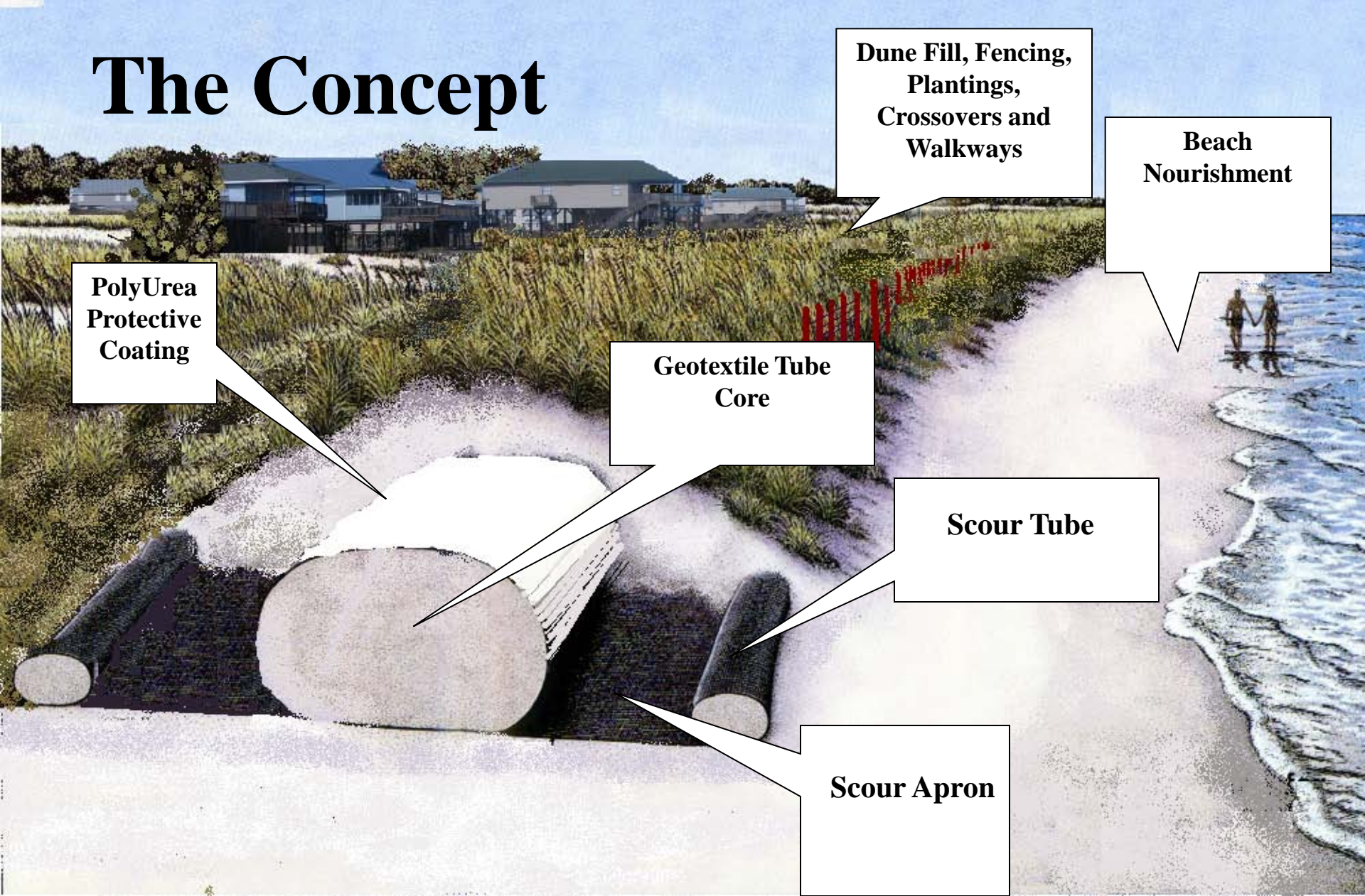
ATTN: CEMVN-ERO



"Building Strong"



The Concept



**PolyUrea
Protective
Coating**

**Geotextile Tube
Core**

**Dune Fill, Fencing,
Plantings,
Crossovers and
Walkways**

**Beach
Nourishment**

Scour Tube

Scour Apron



ALT 4. CLAY BORROW AREA





Damage After Ike





Sand filled geotextile tubes

VS

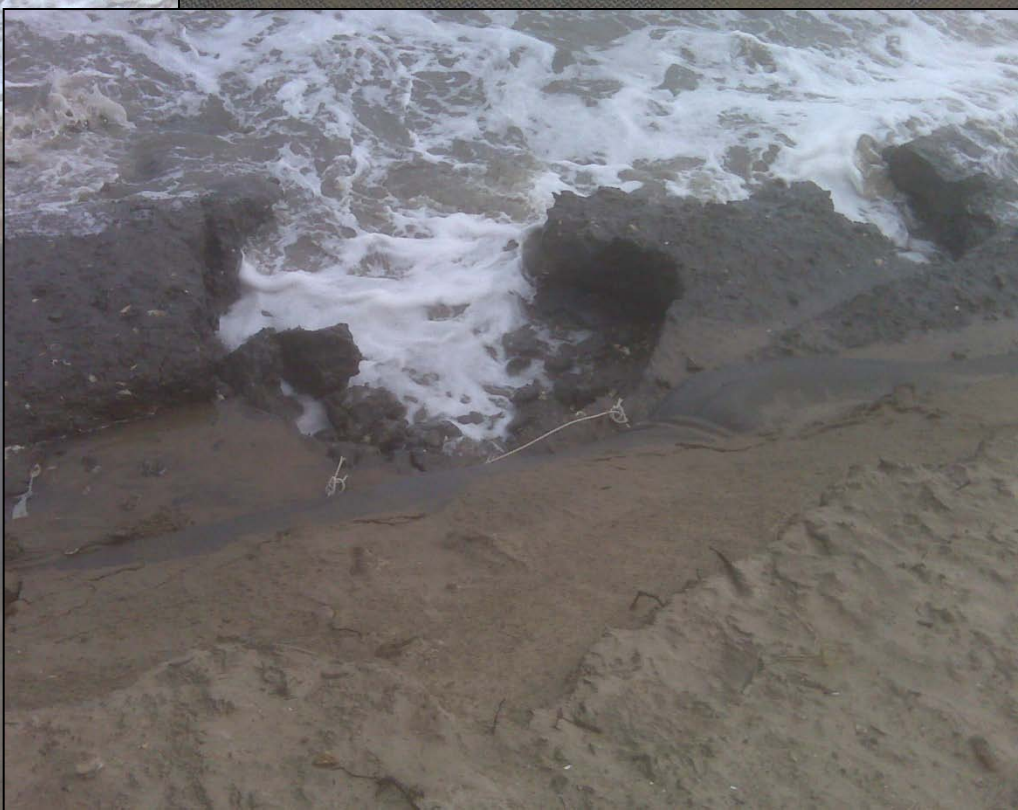
Clay filled geotextile burritos

\$17.5 Million SAVINGS



Field Trip with Mayor, Consultants, Industrial Fabrics, and Engineers to Galveston



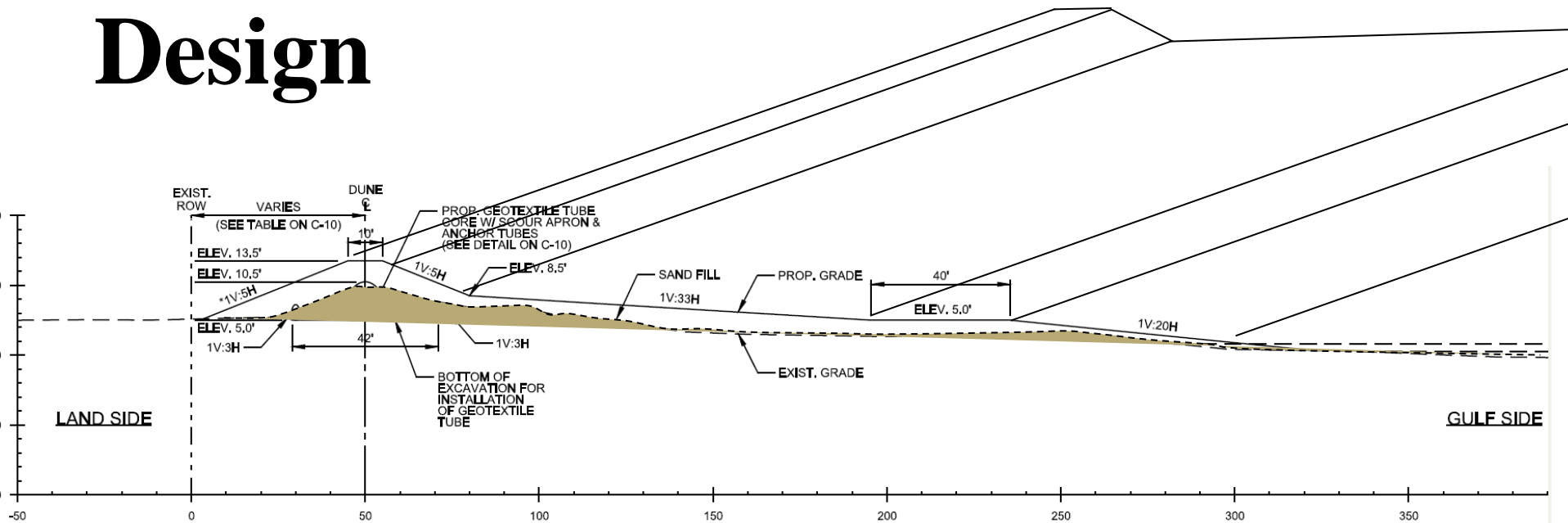


The Concept





Proposed Design





Inside a Geo-textile Tube





- **Grade area**
- **Create swell that is the width of Tube plus apron**
- **Controls large volume of water to prevent localized erosion**



- **Unroll apron**
- **Fill anchor tube**
- **Overlap second apron and fill anchor tube**
- **Stretch apron so its free of wrinkles**

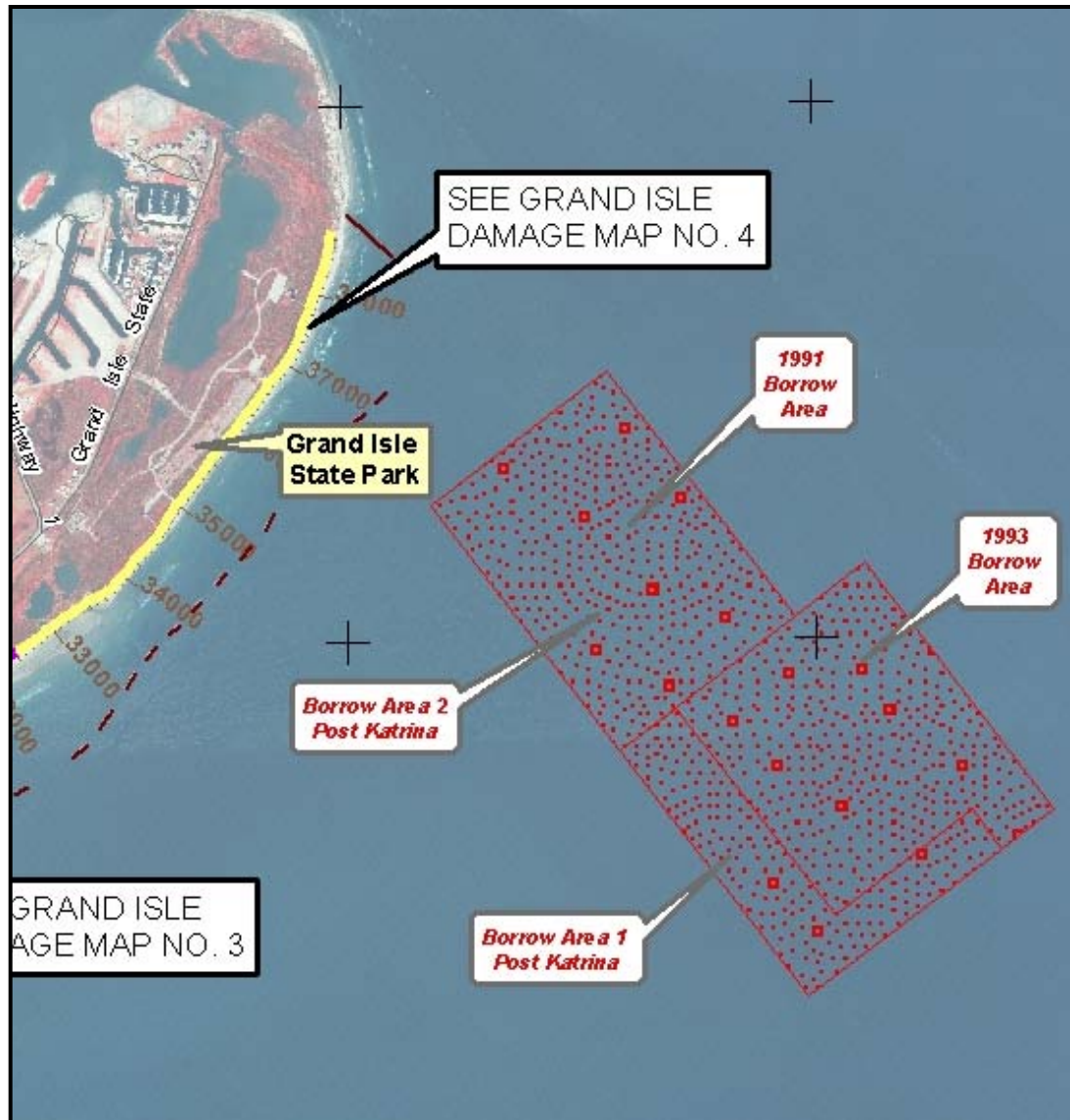
INFRASTRUCTURE ALTERNATIVES ©



- **Unroll Geotube**
- **Connect discharge line from the dredge**
- **Fill Geotube while monitoring fill**
- **Adjust alignment as necessary before fill is complete**



US Army Corps of Engineers







January 2011 Field Visit



January 2011 Field Visit



January 2011 Field Visit



January 2011 Field Visit



January 2011 Field Visit

