

# CWPPRA

PPL 34 Regional Planning Team (RPT)  
Meetings

Final Package Demonstration Projects

7 February 2024

**Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)  
Priority Project List 34  
Regional Planning Team Meetings**

**Region 4 – Lake Charles – January 30, 2024, 9:30 am**

**Region 3 – Morgan City – January 31, 2024, 9:30 am**

**Region 1 & 2 – Lacombe – February 1, 2024, 9:00 am**

**AGENDA**

**Meeting Purpose:** The Regional Planning Teams (RPTs) will accept project and demonstration project nominations for developing the 34<sup>th</sup> Priority Project List (PPL34). Public comments are welcomed. RPTs will select PPL 34 nominees via electronic voting on February 23, 2024.

- 1. Welcome and Introductions**  
RPT Team Leader, Louisiana Coastal Protection and Restoration Authority (CPRA), U.S. Army Corps of Engineers (USACE), CWPPRA Representatives, Parish Representatives, State Representatives, RPT members
- 2. Review of CWPPRA Strategy and Criteria for Project Selection (Kaitlyn Richard, USACE)**  
Overview of selection criteria and other considerations utilized to determine most impactful projects.
- 3. PPL 34 Selection Process Brief Overview and Ground Rules for Today's PPL 34 Nomination Meeting (RPT Leader)**
- 4. Explanation of Coastwide Voting Process (RPT Leader)\***
- 5. PPL 34 Project Nominations (Entire RPT)**  
Nominees must be consistent with and support the state's 2017 and/or draft 2023 Coastal Master Plan.
- 6. Announcements of upcoming PPL 34, Task Force, Technical Committee and Other Program Meetings**
- 7. Adjourn**

*\*Parishes within each basin will be asked to identify who will vote during the coastwide electronic vote by January 29<sup>th</sup>.*

**No additional projects will be nominated after the RPT meetings, nor will any significant changes to projects proposed at these meetings be allowed. Public comments will be heard during the meeting and additional written comments may be forwarded to CWPPRA Project Manager, Terri Von Hoven, by February 16, 2024 for dissemination to the CWPPRA agencies.**

# Demonstration Projects

- Demonstrate a restoration technique or material that can be transferred to other areas of the coastal zone.
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA SOP criteria.
- All coastal parishes & agencies will vote on selection of up to 6 demonstration projects.
- Previous candidates must be ***re-nominated*** for PPL 34.



## Demonstration Projects

Project ID	Agency	Project Name
Demo - 01	NRCS	Gulf Shoreline Protection Alternatives Analysis
Demo - 02	LAWLF	Gulf Shoreline Protection
Demo - 03	ReCoast	Recycle to ReStore the Coast

## Coastwide Projects

Project ID	Agency	Project Name
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**PPL 34 RPT Demonstration Project Fact Sheet**  
**February 06, 2024**

**Project Name**

Gulf Shoreline Protection Demonstration

**Project Location**

Coast-wide application

**Problem**

Many reaches of the Gulf of Mexico (GoM) shoreline are eroding at alarming rates. CWPPRA has addressed these issues with either segmented break waters in areas with solid substrates (beach fronts/barrier islands) or light-weight aggregate core rock dikes in areas with low weight-bearing substrates (former marsh platforms). Unfortunately, current shoreline protection methods designed for GoM conditions are too expensive to compete for project selection as the costs of suitable rock and aggregate have soared. Projects that are selected are typically scaled back in scale from linear miles to linear feet of protection. Because wave conditions are substantially harsher along the GoM, project developers are hesitant to apply different strategies that have worked in lesser wave conditions without rigorous engineering and design.

**Proposed Solution**

We propose to design several alternatives to the 95% Engineering and Design stage. We would select alternatives from prior CWPPRA and CIAP projects with promising results along large bays (see LA-0016, TE-0045, PO-0174). Design conditions/parameters (Geotech surveys, topo/bathy surveys, wave condition, prevailing winds) from ME-18 Rockefeller Gulf Shoreline Protection would be provided to the designers to reduce costs and provide consistency for evaluations. The alternatives would be designed for a 20-year life. The alternatives would be evaluated based on performance (shoreline movement and soil volume change) and costs including construction and maintenance. Top performers could then be tested along the GoM.

**CWPPRA Demo Requirements**

- A. **Directly provides wetland benefits:** Projects could be selected, designed, and constructed more quickly and at a lower cost which would increase wetland benefits.
- B. **Technology not fully developed for routine application:** Contains technology that has not been fully developed along the Gulf of Mexico.
- C. **Transferability:** Demonstration project would use specifications for the Rockefeller Refuge reach but could be transferred to other reaches along the GoM.
- D. **Unique and not duplicative:** Procedurally unique, evaluating alternatives to the 95% Engineering and Design would allow future projects along the GoM to select from more cost-effective alternatives rather than expending time and cost on alternative analyses during project E&D.

**Preparer of Fact Sheet**

Thomas McGinnis; USDA-NRCS; [thomas.mcginis2@usda.gov](mailto:thomas.mcginis2@usda.gov)

# Gulf Shoreline Protection Alternatives Demonstration

USDA-NRCS

Thomas McGinnis

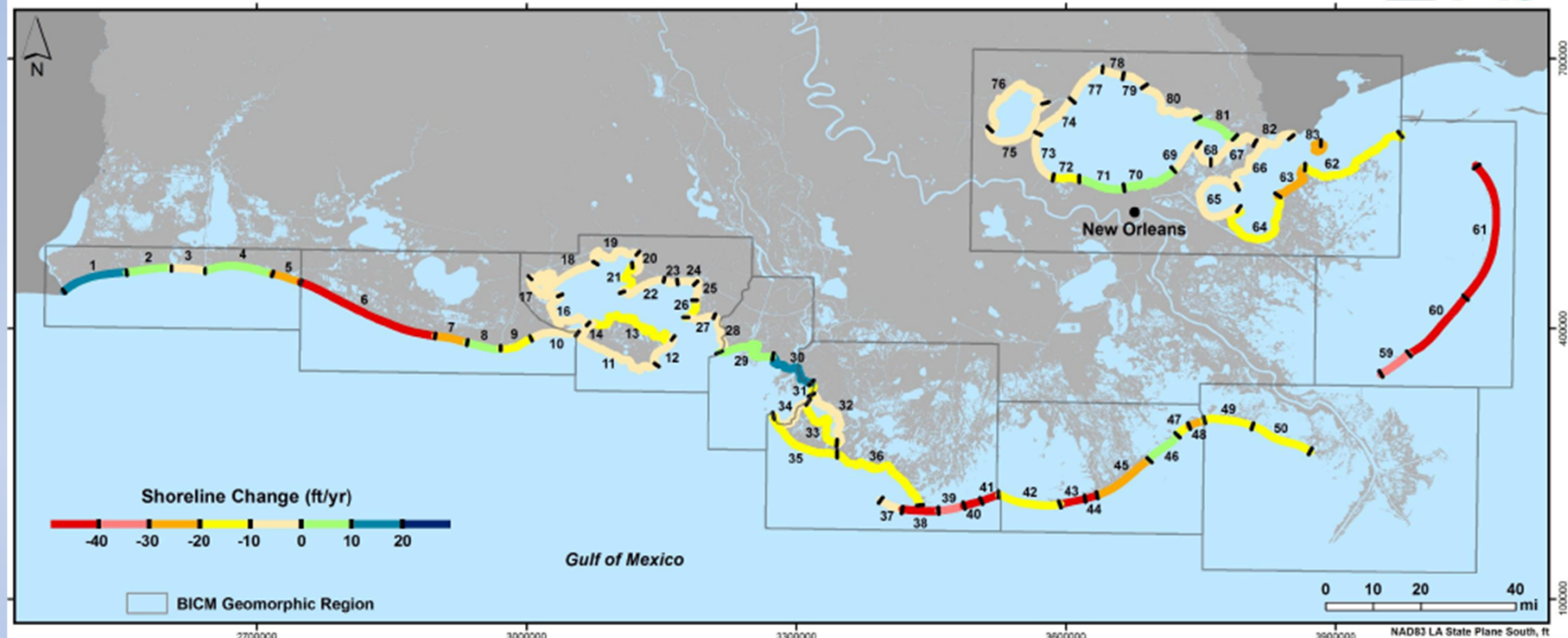
CWPPRA PPL34 RPT Meeting



# Problems

## Louisiana Shoreline Change: 1998 to 2015

### Barrier Island Comprehensive Monitoring Program (BICM) - Phase 2



- Many reaches of the Gulf of Mexico shoreline are eroding at alarming rates.
- The harsh GoM conditions require design of more robust structures than have been used in bay settings.

Problems

- Currently used strategies using rock rip-rap are too expensive to compete in CWPPA.
- Only small reaches are affordable to construct.

Example

- ME-18 was originally planned for 9.2 miles but was shortened to 3.8 miles.
- Recent reaches are now discussed in linear feet rather than miles.



**Robustly-designed and Cost-effective Alternatives for Shoreline Protection Are Needed**

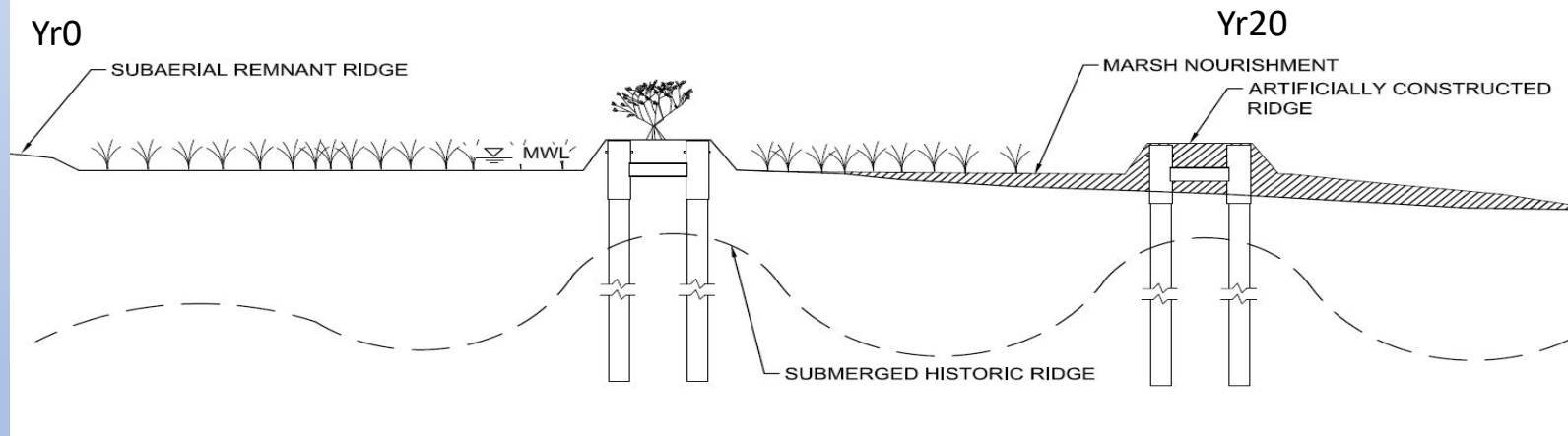
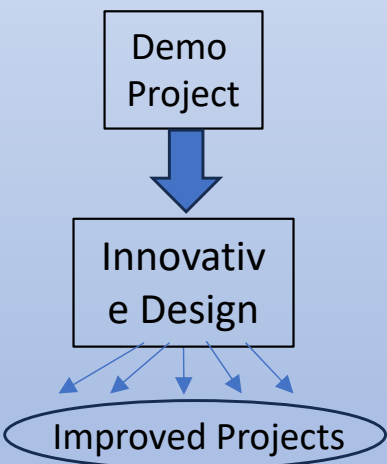
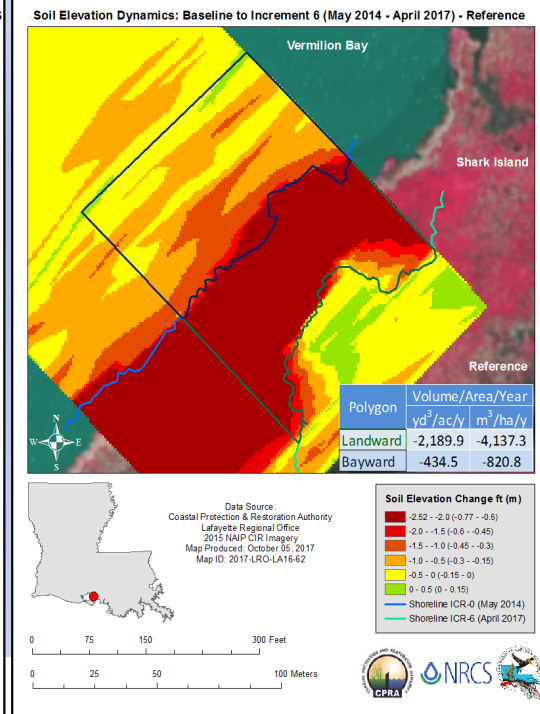
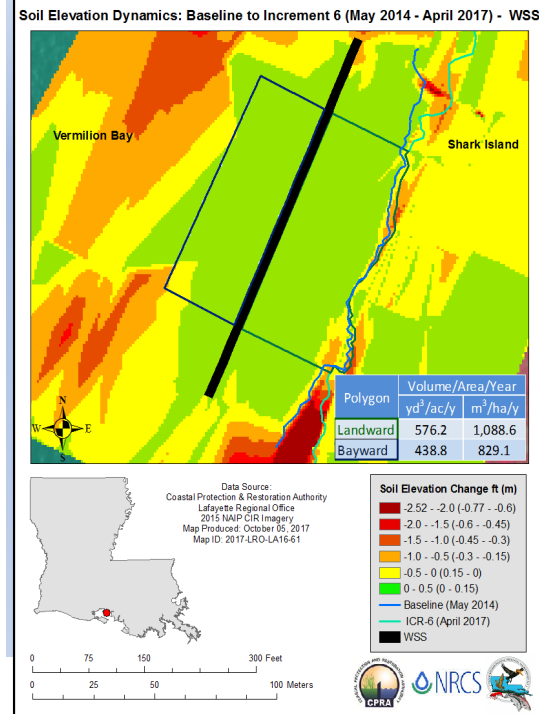
## **Proposed Solution**

- Use CWPPRA demonstration project to evaluate different alternatives along highly-erosive Gulf of Mexico shorelines.

## **Proposed Strategy**

- Within the \$2 Million cap on Demonstration projects, we propose to design several alternatives to the 95% Engineering and Design stage.
- Several alternatives demonstrated promising results in large bay conditions in other CWPPRA and CIAP projects; however, more robust designs are needed for the GoM.
- Design conditions/parameters used for ME-18 would be provided to reduce costs.
- Alternatives would be evaluated based on performance and costs.





## **What Constitutes a Demonstration Project (CWPPRA Appendix E SOP for Demonstration Projects)**

- A. Includes funding that directly provide wetland benefits:** Yes, allows more projects to be constructed more quickly and at a lower cost. But, it would not directly put a feature on coast any more than any other proposal at this stage.
- B. Technology not fully developed for routine application:** Contains technology that has not been fully developed along the Gulf of Mexico.
- C. Transferability:** Yes, this demo would be transferable to other GoM reaches.
- D. Unique and not duplicative:** Procedurally unique, evaluating alternatives to the 95% Engineering and Design would allow future projects along the GoM to select from more cost-effective alternatives rather than expending time and cost on alternative analyses during project E&D.

**PPL34 PROJECT NOMINEE FACT SHEET**  
**Jan. 30, 2024**

**Project Name**

Demonstration Project Price Lake Gulf Breach

**Project Location**

Region 4, Mermentau Basin, Cameron Parish, south of Hwy. 82 located on Rockefeller Wildlife Refuge.

**Problem**

Annual extreme erosion rates and damages from Hurricane Laura created a channel that impacted interior wetlands. Preventing the Gulf of Mexico from breaching dredged placed plugs and the natural beach rim is a challenge without a shoreline protection structures.

**Goals**

Install SPPR panels for 1,300 ft to protect the breach as well as for testing a new product that could put gulf shoreline protection methods once again cost effective.

**Proposed Solution**

Install SPPR panels for 1,300 ft along the Gulf shoreline.

**Project Benefits**

The installation of the SPPR panels will protect and replenish sediments to maintain the plugs. By preventing the plugs from breaching will reduce impacts to ME-20 and ME-32 and remaining adjacent coastal habitat.

**Considerations**

Considerations is for a new design technique allowing future shoreline protection to more cost competitive for armoring the coastline.

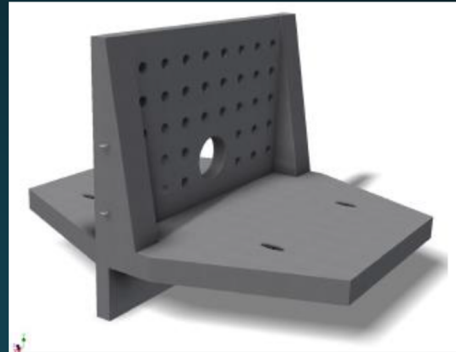
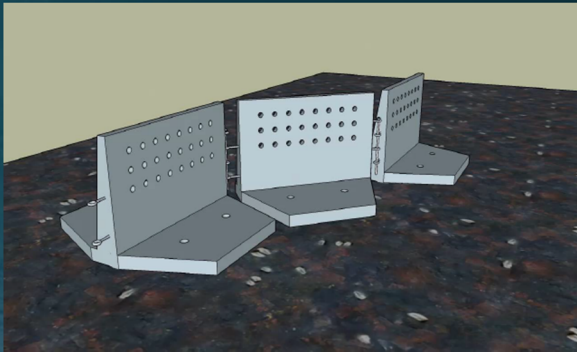
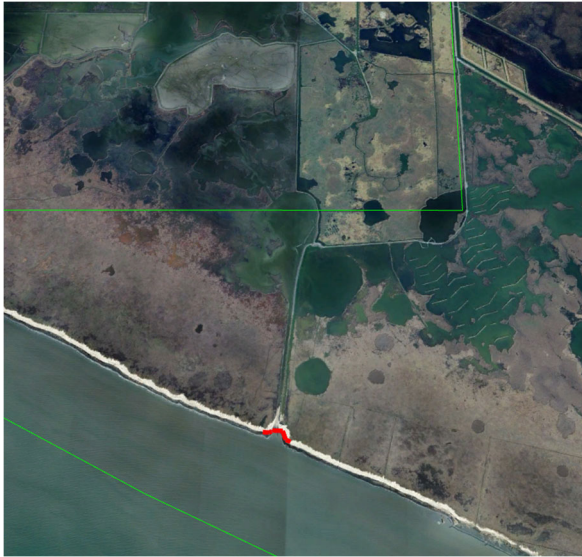
**Preliminary Cost**

The construction cost plus 25% contingency is estimated to be approximately \$2M. Rockefeller Wildlife Refuge will take ownership after the life of the project.

**Preparer(s) of Fact Sheet:**

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**PPL34 RPT Demonstration Project Fact Sheet****February 1, 2024****Project Name**

Recycle to Restore the Coast

**Project Location**

Coast-wide application

**Problem**

Sand is the planet's most exploited resource after water so, realistically, we cannot keep mining and dredging the amount of sediment needed for coastal restoration projects. Solving our land loss crisis requires convergence of all types of ideas and glass sand is an important part of that solution.

**Proposed solution**

Utilize coastal restoration sand mixture produced from recycled glass by Glass Half Full, L3C (GHF) for coastal restoration projects. Data generated by Tulane University researchers under the National Science Foundation Convergence Accelerator Program (2021-present; Award #2137730 and 2230769) supports the conclusion that GHF's coastal restoration sand mixture is safe and effective for mitigating land loss in Louisiana's coastal wetlands environment. These data are summarized on the next page.

**CWPPRA Demo Requirements**

Glass Half Full's coastal restoration sand mixture...

- ✓ provides direct wetland benefits.
- ✓ has not been fully developed for routing application in coastal Louisiana.
- ✓ can be transferred to other areas of the coastal zone.
- ✓ is unique and not duplicative when compared to coastal restoration materials that have been developed for routing application in coastal Louisiana.

**Project Costs**

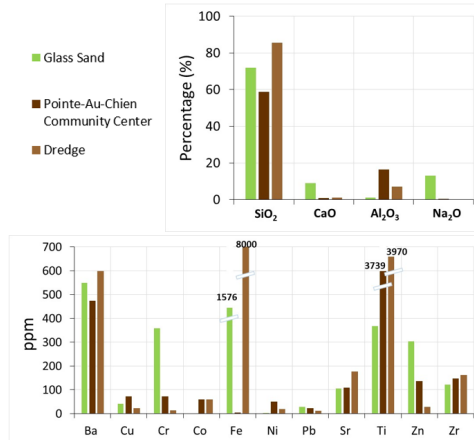
\$2,000,000

**Preparer of Fact Sheet**

Julie Albert, PhD, Associate Professor at Tulane University; 504-862-3260; [jialbert6@tulane.edu](mailto:jialbert6@tulane.edu)

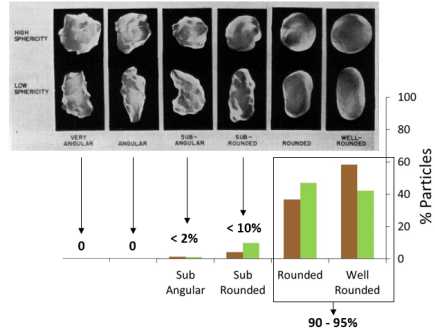
# Recycled Glass Sand Versus the Region's Natural Sand

Chemistry assessed using X-ray Fluorescence



"Sharpness" assessed using "Roundness Scale"

Maurice Cary Powers; A new roundness scale for sedimentary particles. *Journal of Sedimentary Research* 1953; 23 (2): 117-119.



- ✓ Recycled glass sand is mostly silica like natural sand.
- ✓ Trace metals of concern in recycled glass sand are comparable to or less than levels in natural sand.
- ✓ Recycled glass sand particles are less rounded than natural sand but not "sharp."

## Ecological Impacts – Laboratory Testing

### Vegetative Ecological Testing

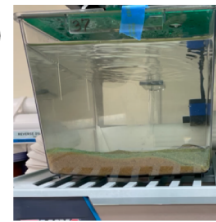
- ✓ **Cordgrass** (*Spartina alterniflora*)
- ✓ **Cutgrass** (*Zizaniopsis millacea*)
- ✓ **Black willow** (*Salix nigra*)
- ✓ **Black needlerush** (*Juncus roemerianus*)
- ✓ **Saltmeadow hay** (*Spartina patens*)
- ✓ **Baldcypress** (*Taxodium distichum*)
- ✓ **Giant bulrush** (*Schoenoplectus californicus*)



- ✓ All marsh species grow in recycled glass sand, 50/50 mixtures of recycled glass sand/dredge, and dredge.
- ✓ 50/50 mixture is usually best (based on dry biomass); exception: black needlerush does best in dredge

### Animal Exposure Experiments

- ✓ **Atlantic croaker** (*Micropogonias undulatus*)
- ✓ **Gulf killifish** (*Fundulus grandis*)
- ✓ **Blue crab** (*Callinectes sapidus*)
- ✓ **Eastern oyster** (*Crassostrea virginica*)
- ✓ **White barnacle** (*Balanus subalbidus*)



- ✓ No mortality due to recycled glass sand treatment (comparison substrates: aquarium-grade sand, dredge, play sand).
- Team is still trying to locate a histologist to examine tissue samples from aquarium tests.
- Field testing in progress at Big Branch National Wildlife Refuge – focus on microbial colonization of sediment.
- Blue crab



## Example Projects



Current production: 10 yd<sup>3</sup>/day  
Process-limited (not collection-limited)

Realistic project size: 10-100 yd<sup>3</sup>

- Stabilize eroding land (Pointe-au-Chien Indigenous Tribe Community Center)
- Repair blowouts/marsh breaks (Big Branch – June 2022, 2023)
- Build small "islands" (Bayou Bienvenue – planned – Army Corps permit received; LDNR CUP in final stage)
- Maintain larger restoration projects – a local and continual supply of sand material







<https://recycleforthe coast.org/>

We are a **team of 20+ scientists and engineers** based in New Orleans and dedicated to creation of coastal community recycling programs that keep glass out of landfills and instead use it to support coastal restoration, preservation, and resiliency.



**NSF  
Convergence  
Accelerator**

Award #2137730 and 2230769

# Recycle to Restore the Coast



**Julie Albert**  
lead investigator



**Franziska Trautmann**  
CEO, Glass Half Full



**Sunshine Van Bael**  
ecological testing



**Ehab Meselhe**  
deployment strategy



**Katie Russell**  
community engagement

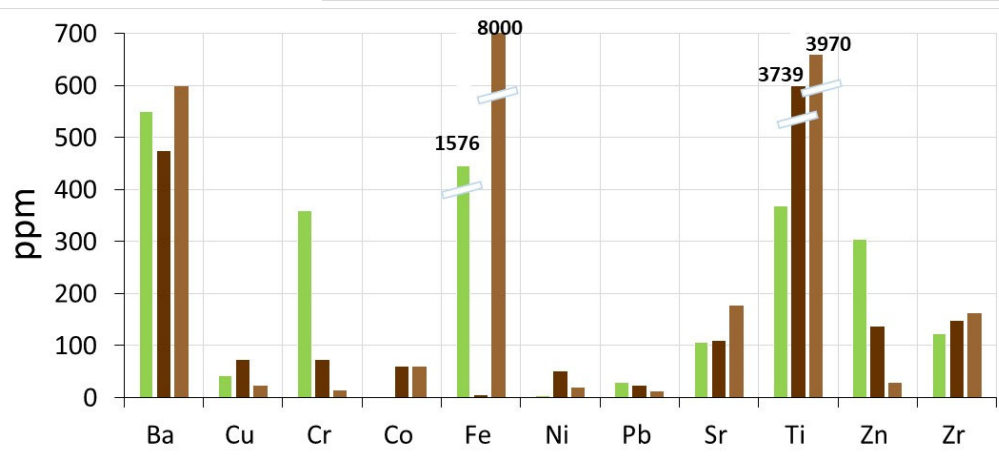
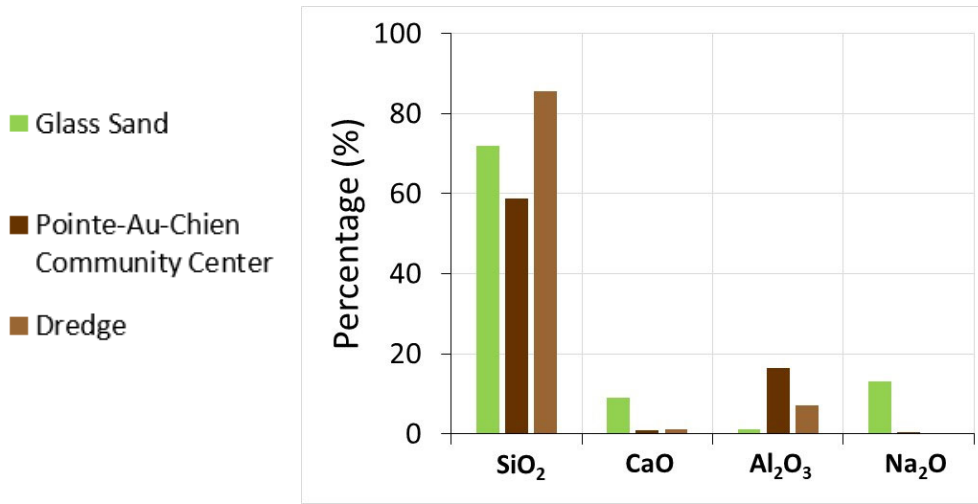


**Kat Fogg**  
Project Manager



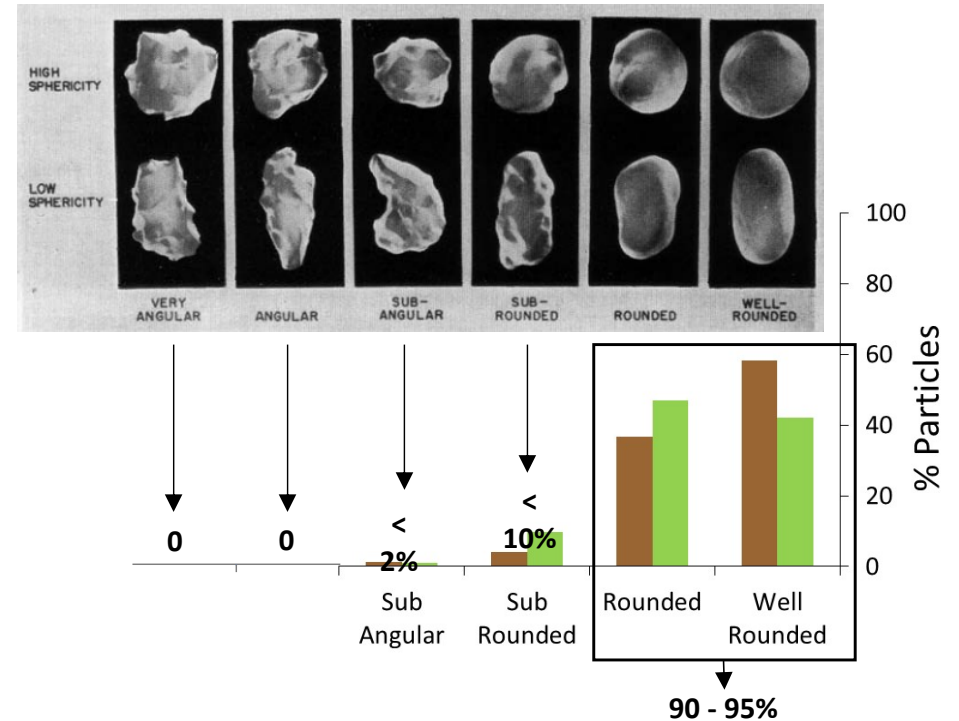
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May 2022 - before

May 2022 - after

Sept 2022

Jan 2024

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# CWPPRA

COASTAL WETLANDS PLANNING,  
PROTECTION AND RESTORATION ACT



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