

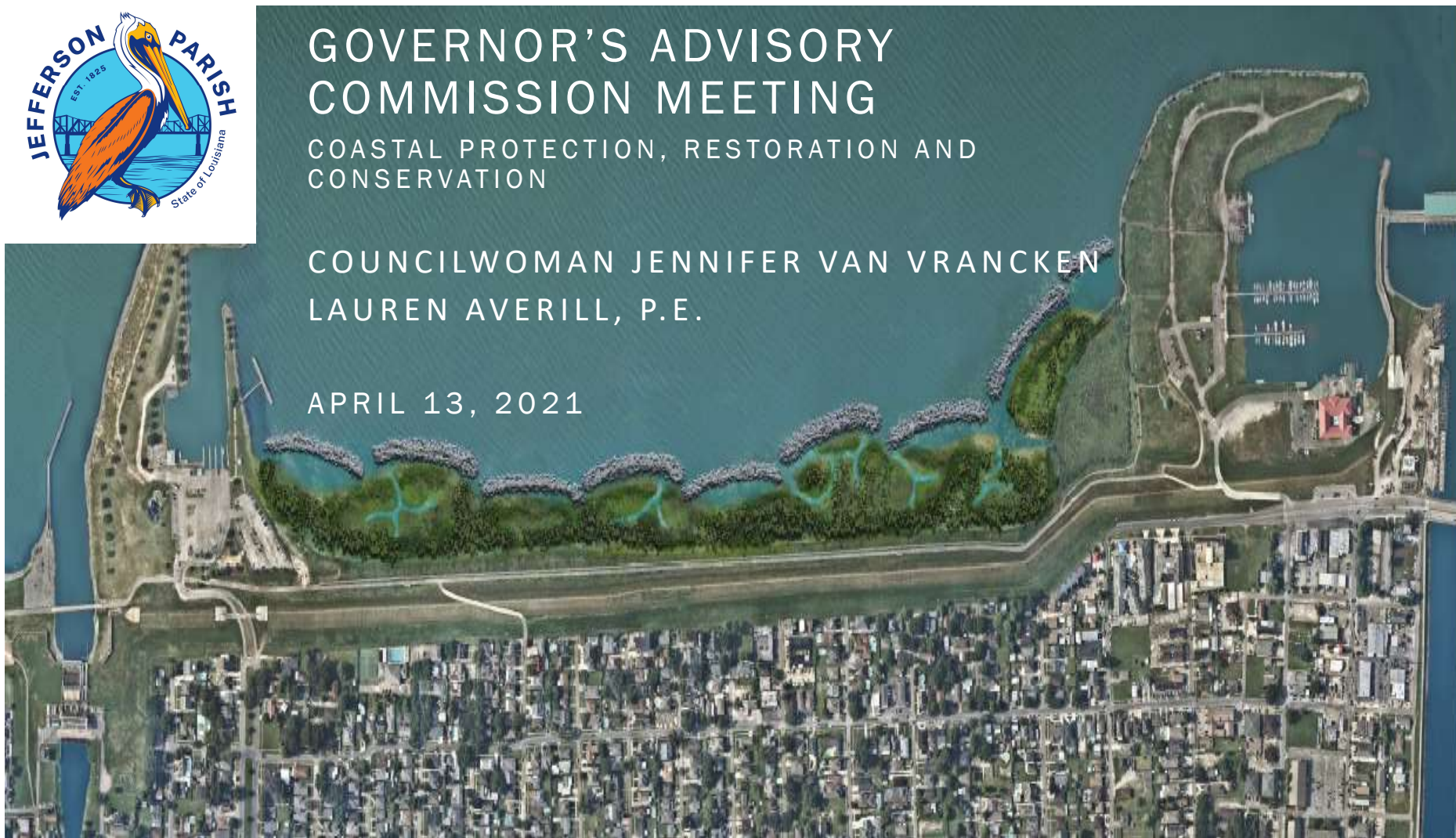


GOVERNOR'S ADVISORY COMMISSION MEETING

COASTAL PROTECTION, RESTORATION AND
CONSERVATION

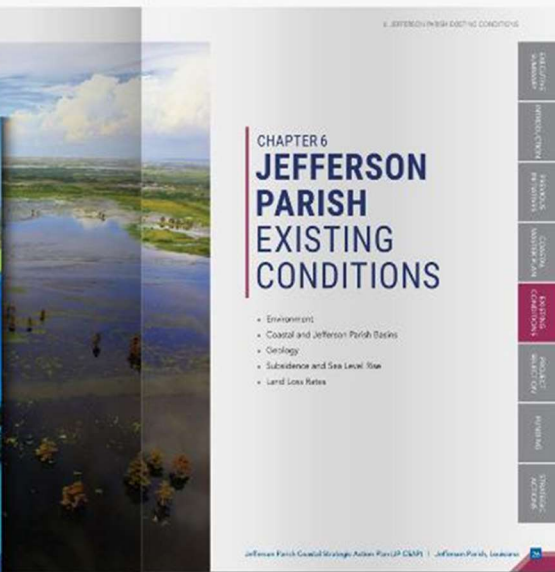
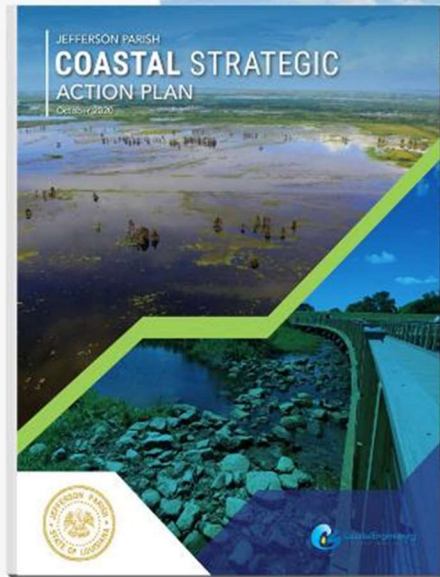
COUNCILWOMAN JENNIFER VAN VRANCKEN
LAUREN AVERILL, P.E.

APRIL 13, 2021





2021 COASTAL STRATEGIC ACTION PLAN



- Printed/Bound Books
- Online ArcGIS Story Map

JEFFERSON PARISH COASTAL STRATEGIC ACTION PLAN

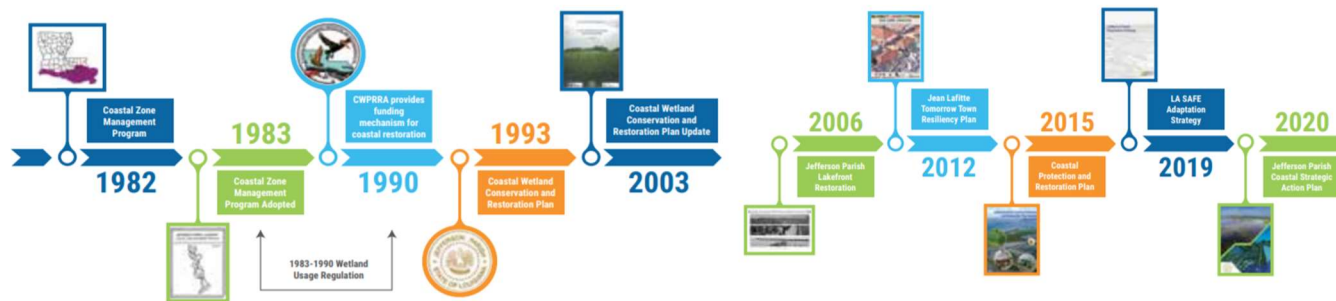


JEFFERSON PARISH COASTAL STRATEGIC PLAN



2021 COASTAL STRATEGIC ACTION PLAN

- 1993 – Coastal Wetland Conservation and Restoration Plan
- 2003 – Updated plan with 26 projects identified
- 2015 – Coastal Protection and Restoration Plan
- 2020 – Coastal Strategic Action Plan – incorporated the plan into the Parish Hazard Mitigation Plan with the goal of finding dedicated funding for regular updates





2021 COASTAL STRATEGIC ACTION PLAN: EXECUTIVE SUMMARY

GOALS

- Identify projects that prevent future damages
- Identify strategies for potential funding
- Enhance public awareness of future risks

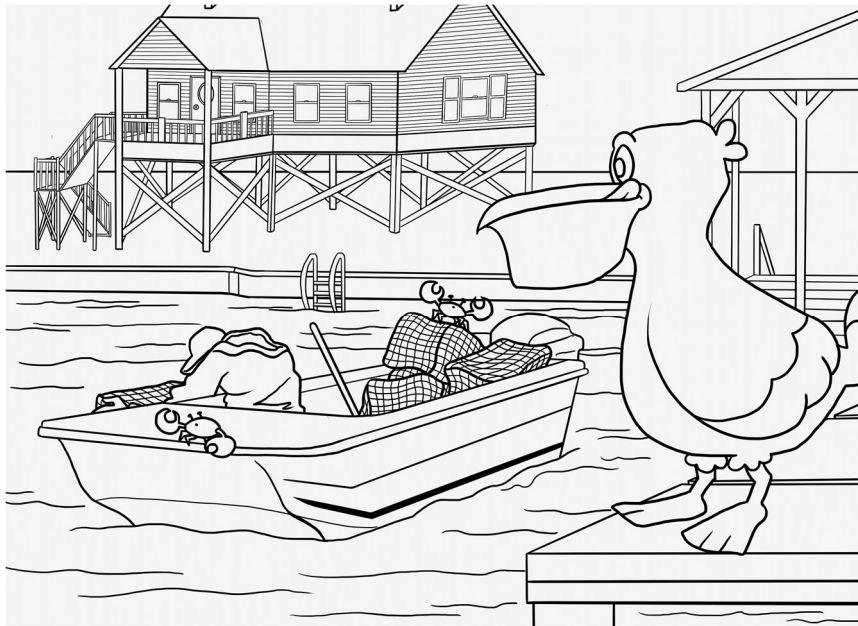
OBJECTIVES

- Find and develop opportunities
- Ensure the Parish is represented
- Ensure the Parish is prepared
- Increase involvement

STRATEGIES

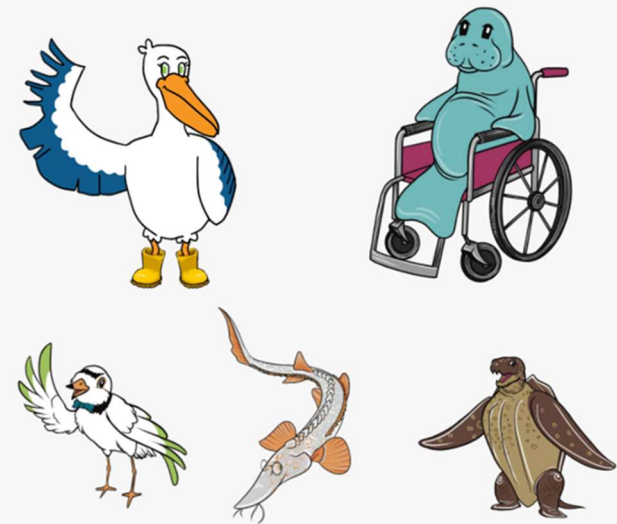
- Seek state and federal grant funding
- Undertake risk and vulnerability studies
- Perform planning and design of projects
- Monitor previously implemented projects
- Promote public support

EDUCATION AND OUTREACH



Outreach & Education

The Parish is striving to expand its outreach and engagement efforts with the use of a friendly resilient pelican - Miss Marsha and her friends Manny the Manatee, Piper the Piping Plover, Stu the Pallid Sturgeon, and Tina the Leatherback Turtle. Each of these characters have been or are currently featured on Jefferson Parish's threatened or endangered species list. Each of the characters will be featured in short infographics to educate children and adults about natural hazards, flood risk, and ways to save our coastal ecosystem.



Student Engagement

Our team is brainstorming ideas of working with summer camp students and possibly hosting an annual Ecosystem Experience event where citizens can learn more about the Coastal Ecosystem that surrounds Jefferson Parish. Groups that would like to participate by hosting a booth at a fun and interactive event can reach out to the Department of Ecosystem and Coastal Management at JPCoastalZone@jeffparish.net for more details.

PONTCHARTRAIN BASIN HIGHLIGHT PROJECT



JEFFERSON PARISH COASTAL STRATEGIC ACTION PLAN

...

THE PROBLEMS

IMPACTED AREAS

JP-CSAP

PROJECT MAP

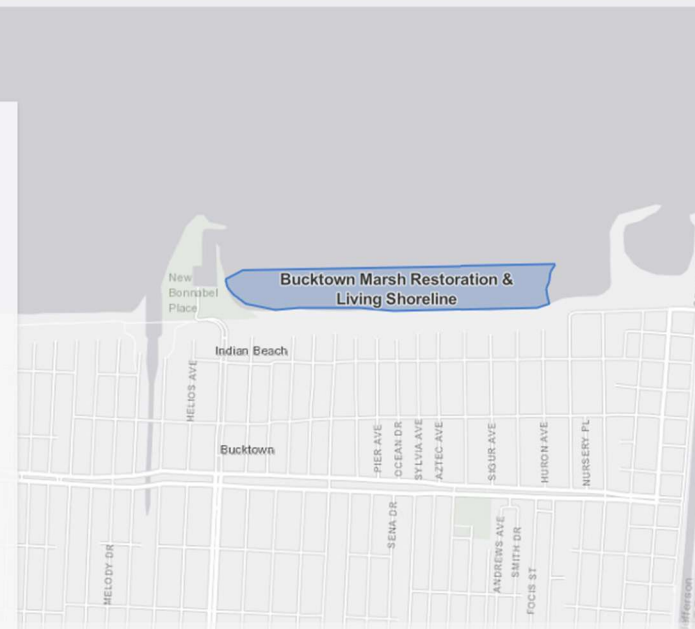
FUNDING

IMPLEMENTATION

LOCAL OUTREACH AND ENGAGEMENT

Bucktown Marsh Restoration & Living Shoreline JP-02

This Proposed project is on the south shore of Lake Pontchartrain between the Bonabel Park and Boat Launch to the west and the Bucktown Boat Harbor. The project would create approximately 39 acres of living shoreline for a 1-mile stretch.





PROJECT MAP



PROJECT FACT SHEETS

BUCKTOWN MARSH RESTORATION & LIVING SHORELINE

JP-02



Department of Ecosystem & Coastal Management
Jefferson Parish Government
(504) 736-6719
JP CoastalZone@jeffparish.net

OVERVIEW

Proposed project is on the south shore of Lake Pontchartrain between the Bonabel Park and Boat Launch to the west and the Bucktown Boat Harbor along the Lake Pontchartrain and Vicinity Hurricane and Storm Damage Risk Reduction System (HSDDRS). The project would create approximately 39 acres of living shoreline for a 1-mile stretch for an estimated project cost between \$8M and \$12M.

STRATEGY



JP-02

Bucktown Marsh Restoration & Living Shoreline

PROJECT TYPE

Marsh Creation Shoreline Protection Hurricane Protection Other

PROJECT MAGNITUDE

Large Scale Projects **Regional Projects** Local Projects Non-traditional Projects

ESTIMATED COST

<=1M 50M 100M >=150

ACRES

1 100 500 1000 >=2000

PROJECT LEAD

CPRA **JEFF PARISH** GILD LILD OTHER

STATUS

Conceptual Planning **Design** Construction

JEFFERSON PARISH COAST PLAN



BUCKTOWN LIVING SHORELINE PROJECT



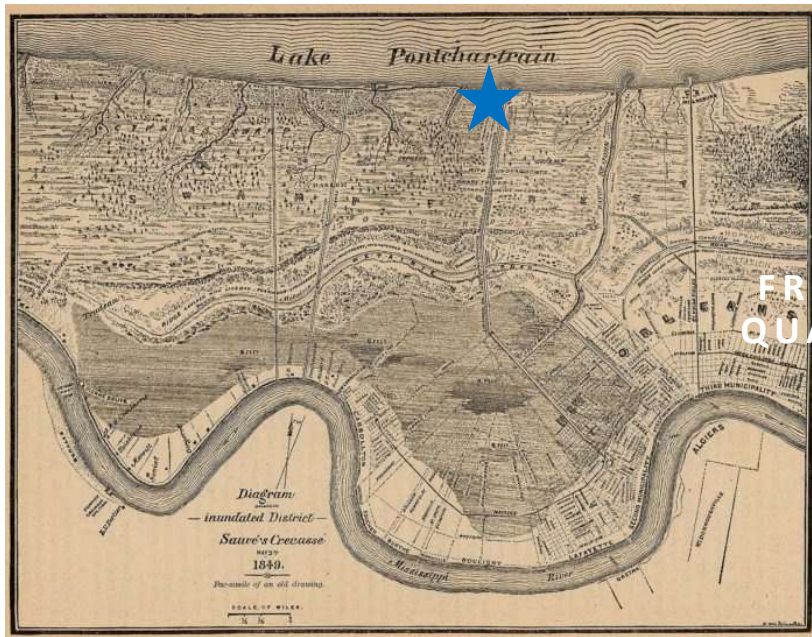


BUCKTOWN LIVING SHORELINE PROJECT

- Bucktown Significance
- Benefits
- Project History
- Funding



LAKE PONTCHARTRAIN: HISTORIC SHORELINE



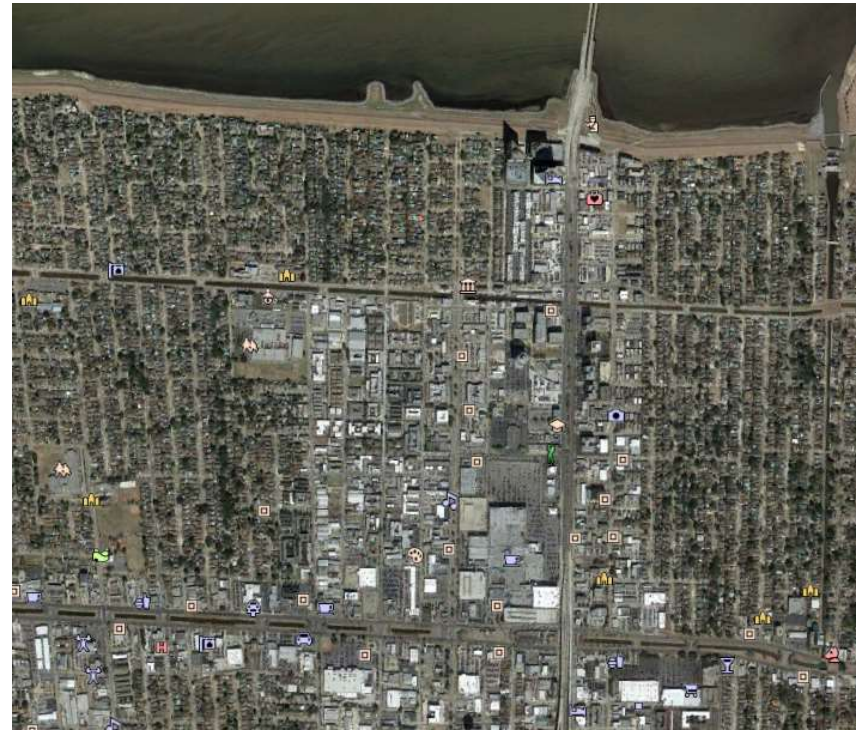
1849



FROM MARSH TO METAIRIE



1956



2020

HISTORIC MARSH SHORELINE



1948



HISTORIC BUCKTOWN COMMUNITY



CURRENT BUCKTOWN SHORELINE



BUCKTOWN MARINA HISTORY

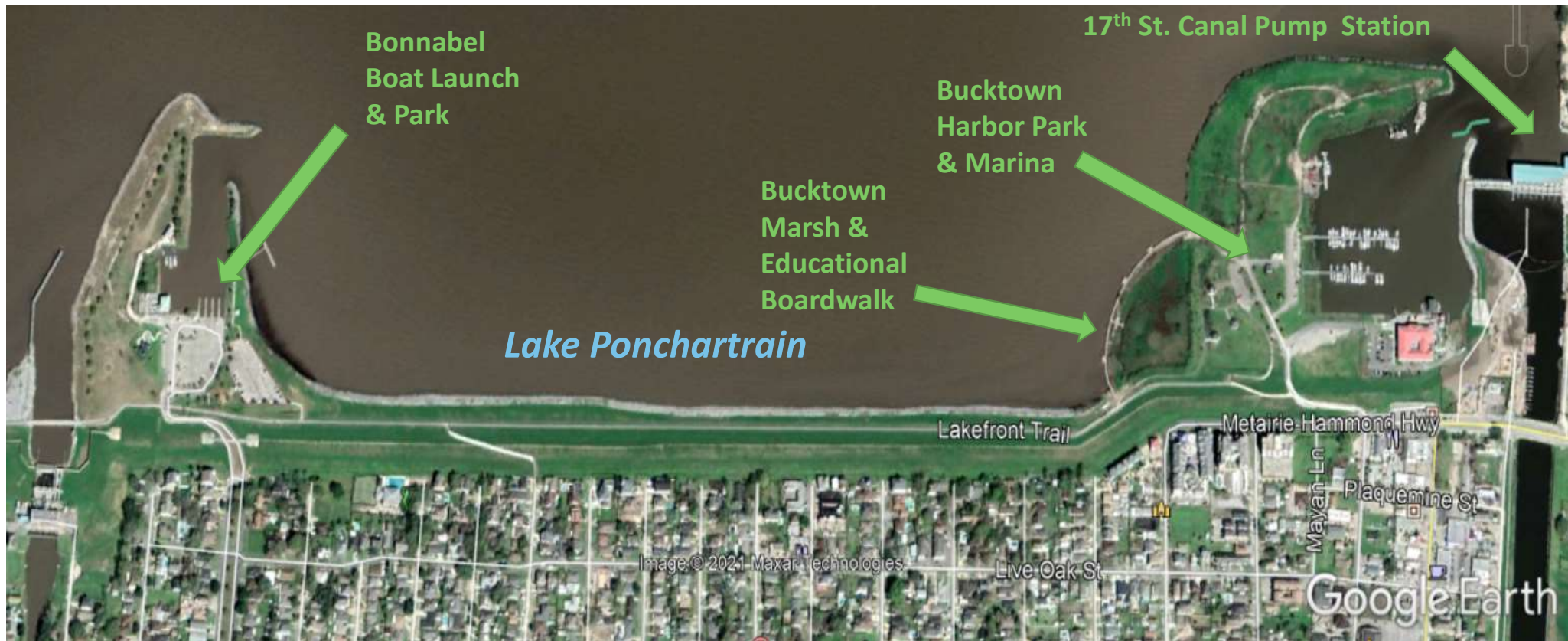


1998



2020

PROJECT SITE



BUCKTOWN MARSH & EDUCATIONAL BIRDWALK



2020

PROJECT RENDERING

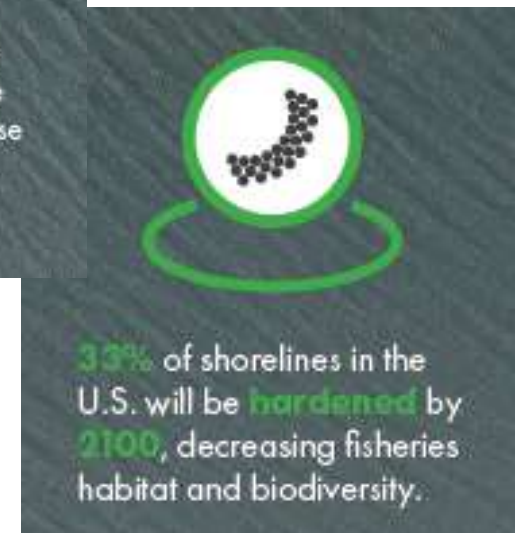


PROJECT BENEFITS

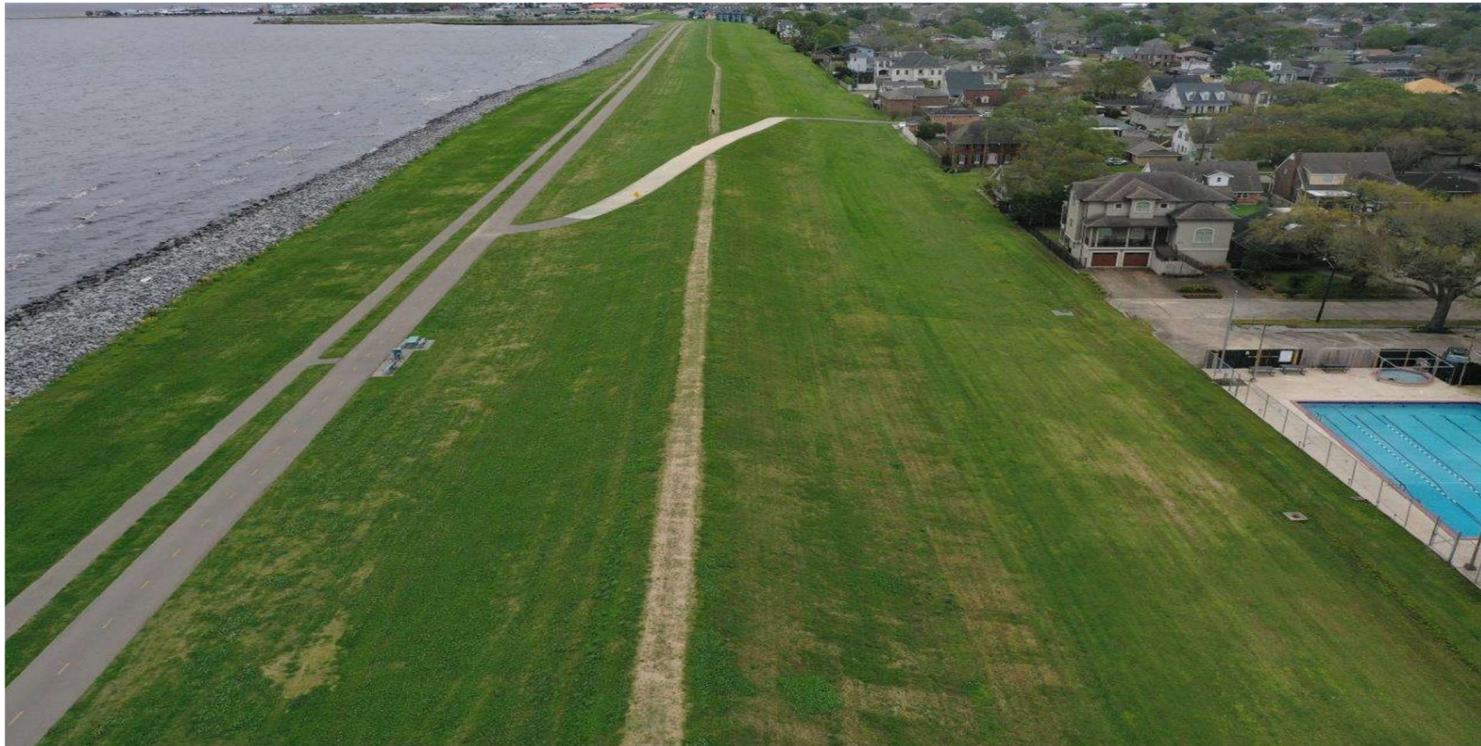
- Restore historical marsh
- Increase Ecological & Environmental Resiliency
- Strengthen Storm and Hurricane Protection Resiliency
- Reconnect the Community to the Lake

ECOLOGICAL RESILIENCY

- Improve water quality
- Increase ecological functions
- Enhance existing fisheries
- Provide needed habitat for waterfowl and shorebirds
- Build habitat for juvenile fish, crab and other species

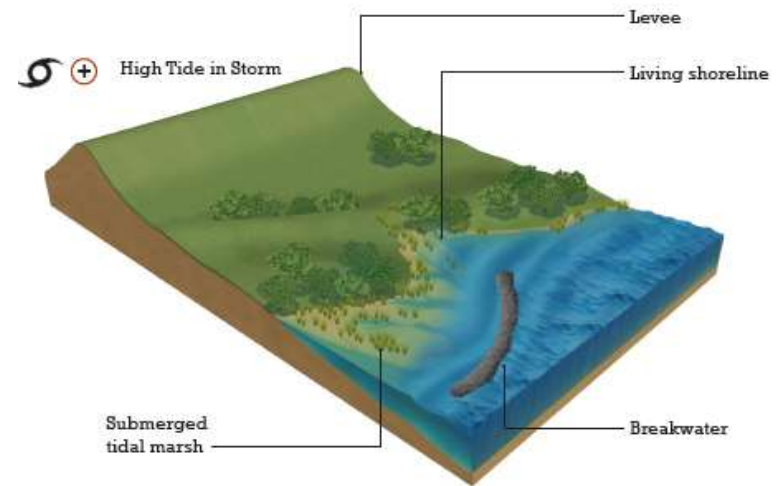


FORESHORE PROTECTION RESILIENCY & STABILITY



STORM PROTECTION RESILIENCY

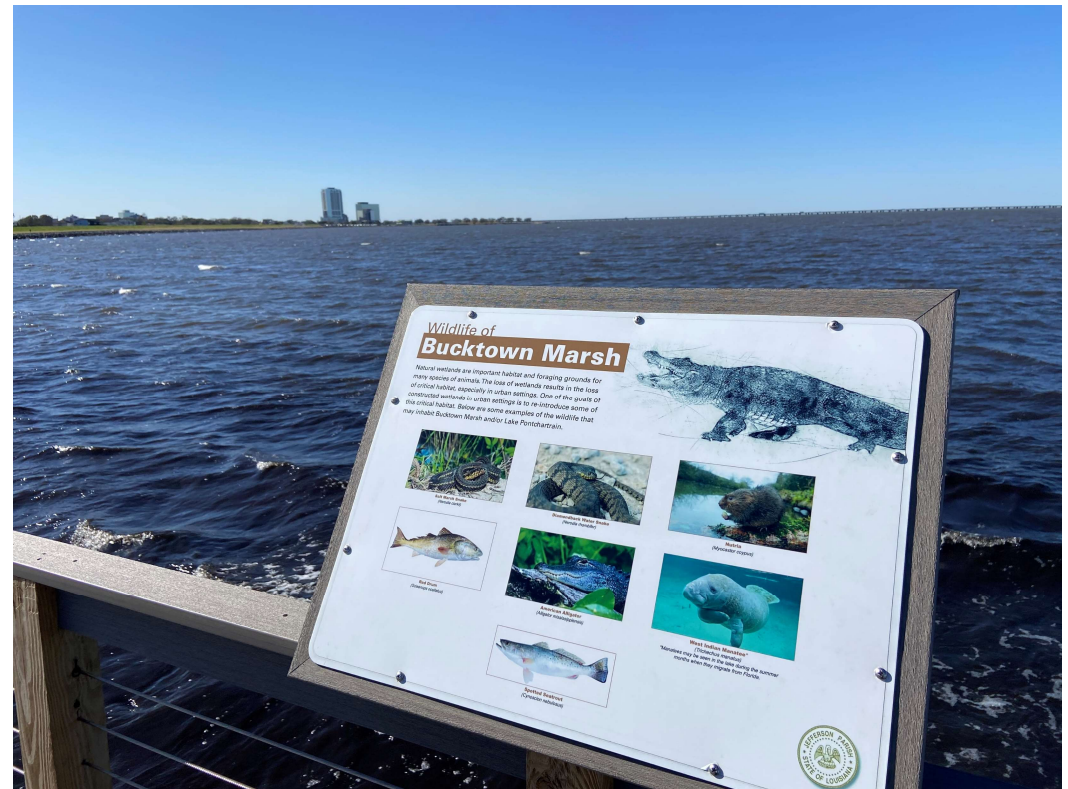
- Integrated approach combining coastal restoration & storm protection
- Restore historic marsh, the 1st line of defense from storm surge
- Increase storm resilience of the Bucktown community & the East Bank of Jefferson
- Scalable along the length of the Jefferson's lake shoreline



A **levee** provides an additional layer of coastal flood protection, helping to mitigate water from flowing over the levee into undesirable areas like the built environment.

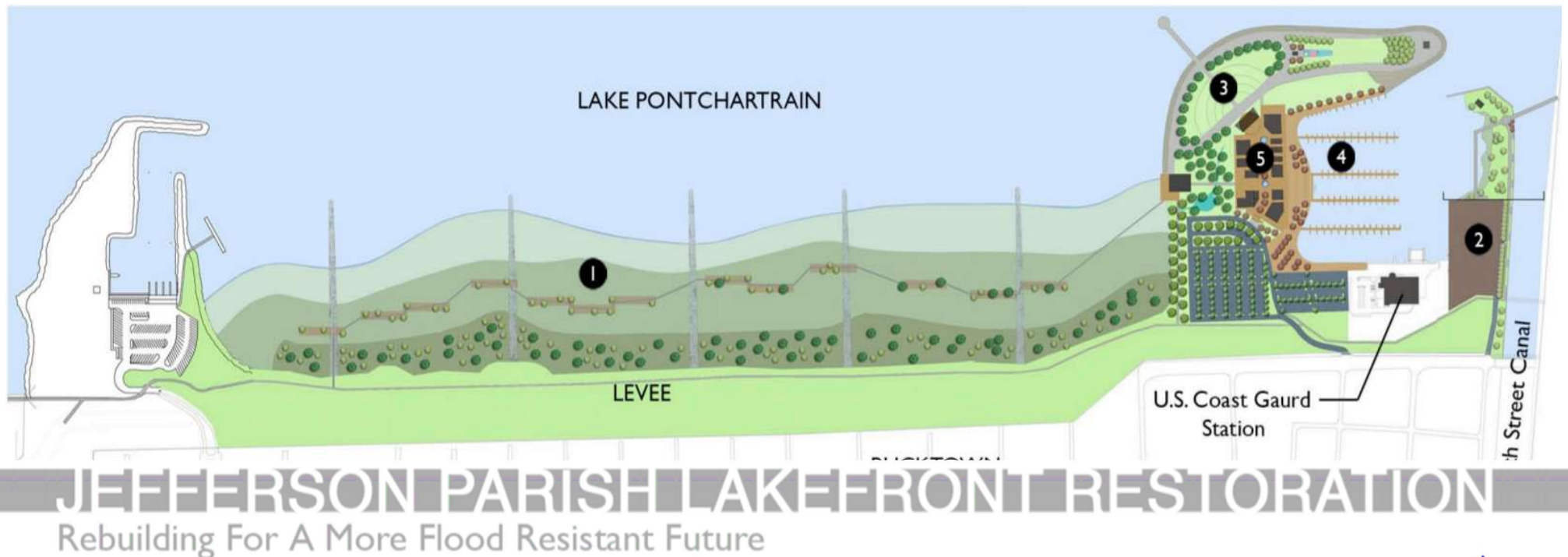
RECONNECTING THE COMMUNITY

- Provide coastal resiliency and environmental education opportunities
- Increase the connection between the lakefront and the community
- Increase recreational blue trails for hand paddling
- Provide residents the ability to see a coastal habitat without needing a boat



PROJECT HISTORY:

LSU SCHOOL OF LANDSCAPE ARCHITECTURE AND THE
LOUISIANA SEA GRANT COLLEGE PROGRAM



PROJECT HISTORY:

LSU SCHOOL OF LANDSCAPE ARCHITECTURE AND THE
LOUISIANA SEA GRANT COLLEGE PROGRAM



JEFFERSON PARISH LAKEFRONT RESTORATION

Rebuilding For A More Flood Resistant Future

PROJECT HISTORY: 2018 JEFFERSON PARISH VISION PLAN



2018 JEFFERSON PARISH VISION PLAN

Over the next decade, the lakefront will offer more to see, do, enjoy, and preserve.



In 2018, Jefferson Parish embarked on an ambitious effort to renew its lakefront. **The goal: Create a unique, celebrated lakeside corridor of recreational and natural spaces.** Aligned with this goal is the desire to increase the resilience of the levee system and protect adjacent communities. Restored marsh and other bio-engineered features provide a first line of defense against storm surge and rising lake levels while improving water quality and ecological function.

Starting with Bucktown Harbor, Parish staff, planners, and the community worked collaboratively to develop a vision for 23-acres of parkland and marina facilities. With support from the National Fish and Wildlife Foundation National Resilience Fund Program, planning continued with study of developing a 70-acre living shoreline between Bucktown and Bonabel—one of the largest of its kind in the U.S.

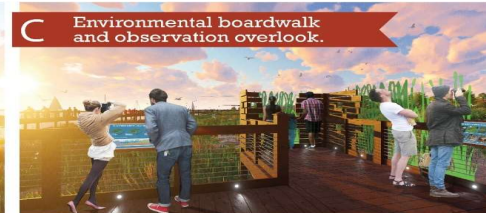
What's next? Community leaders and planners are working to fund the vision through a variety of public and private sources. Construction of the new Bucktown Harbor Educational Boardwalk is underway. Design is nearing completion of several other feature projects of the new Bucktown Harbor—the Multi-Purpose Harbor Pavilion, new kayak launch facilities, and others. **The hope in 2020 is to extend planning and renewal beyond Bonabel west to the Causeway and the length of Jefferson Parish's lakefront.** Adding this area creates the possibility for a renewed stretch of +/- 10 miles of Lakefront.



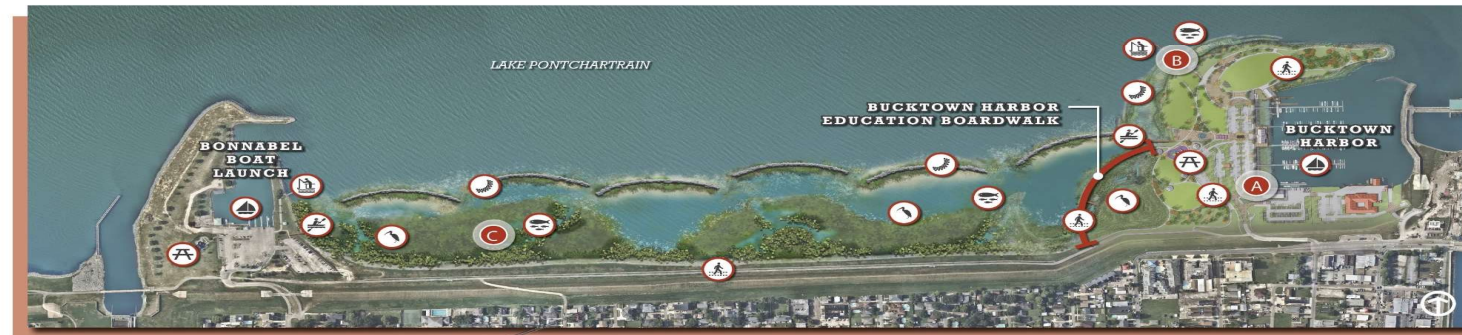
A Community multi-use pavilion and event space.



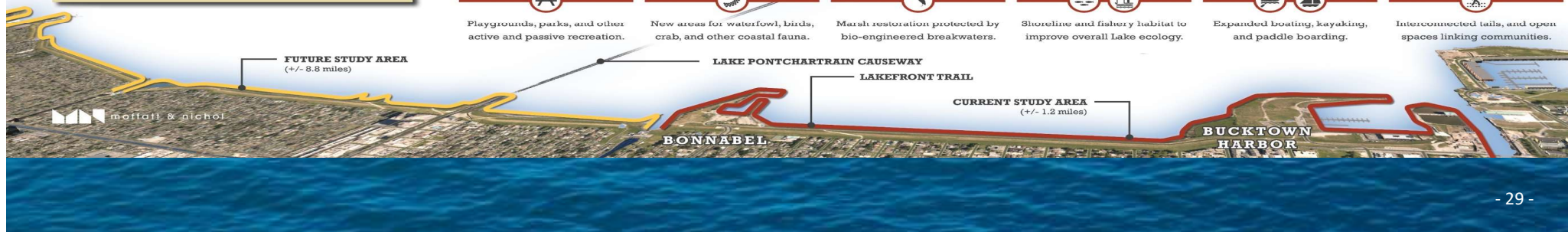
B Programmed passive and active open space lawn.



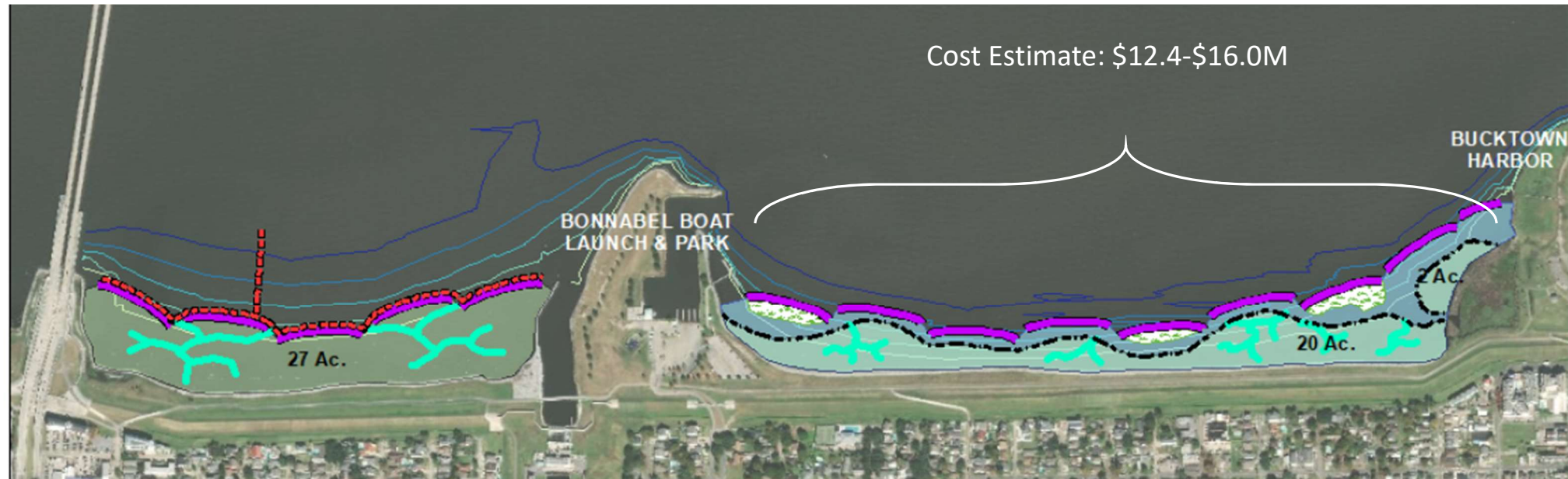
C Environmental boardwalk and observation overlook.



- Playgrounds, parks, and other active and passive recreation.
- New areas for waterfowl, birds, crab, and other coastal fauna.
- Marsh restoration protected by bio-engineered breakwaters.
- Shoreline and fishery habitat to improve overall Lake ecology.
- Expanded boating, kayaking, and paddle boarding.
- Interconnected trails, and open spaces linking communities.



BUCKTOWN LIVING SHORELINE 2019 FEASIBILITY STUDY



Bucktown Living Shoreline
Alternative 1

Legend

Access Channels

Containment Dikes

Curvilinear Breakwaters

Scrub/Schrub Island Option

Tidal Creeks (w/ Open Water)

Marsh Creation

Open Water Option

Elevation

-5'

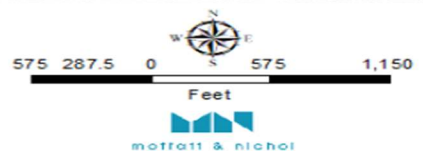
-7'

-6'

-5'

-4'

-3'



2020 VALUE ENGINEERING REPORT

Reduce project Costs:

- Area is deeper than anticipated.
- Cost increased due to additional rock needed

Strategy:

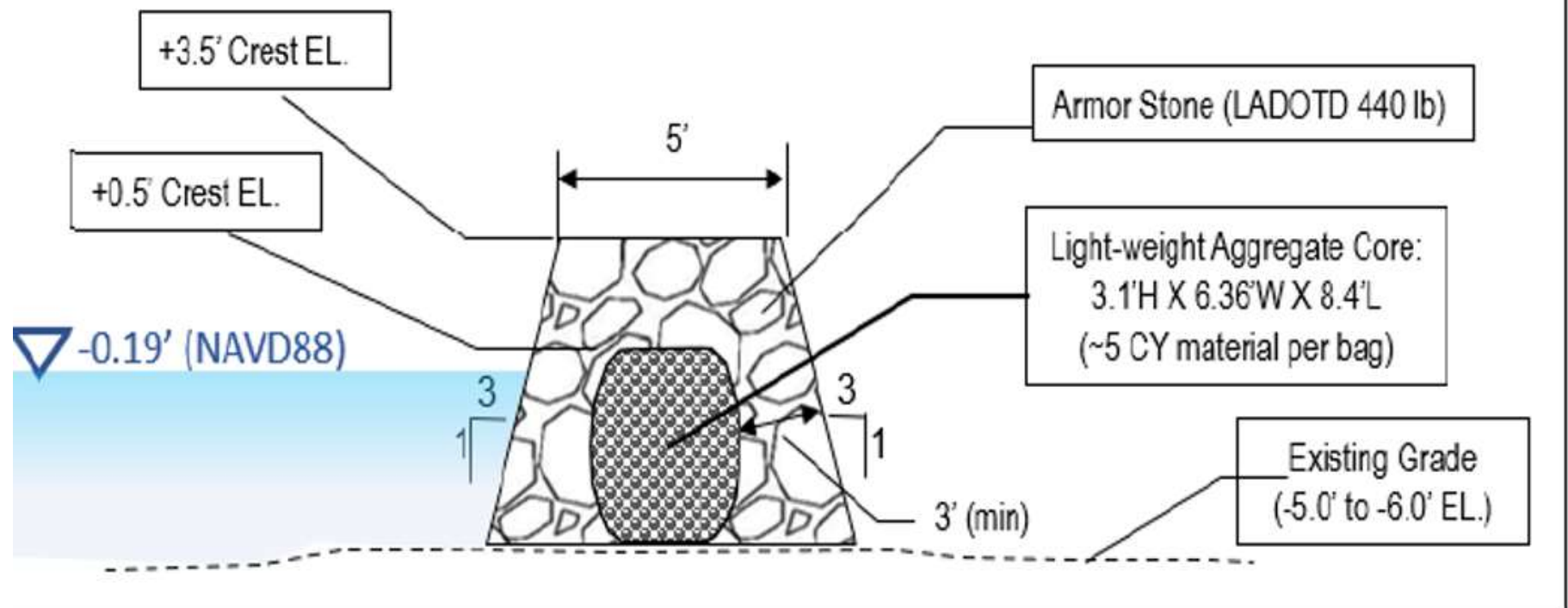
- Shift breakwaters slightly towards levee
- Utilize Recycled Parish Construction Debris

Cost Estimate:

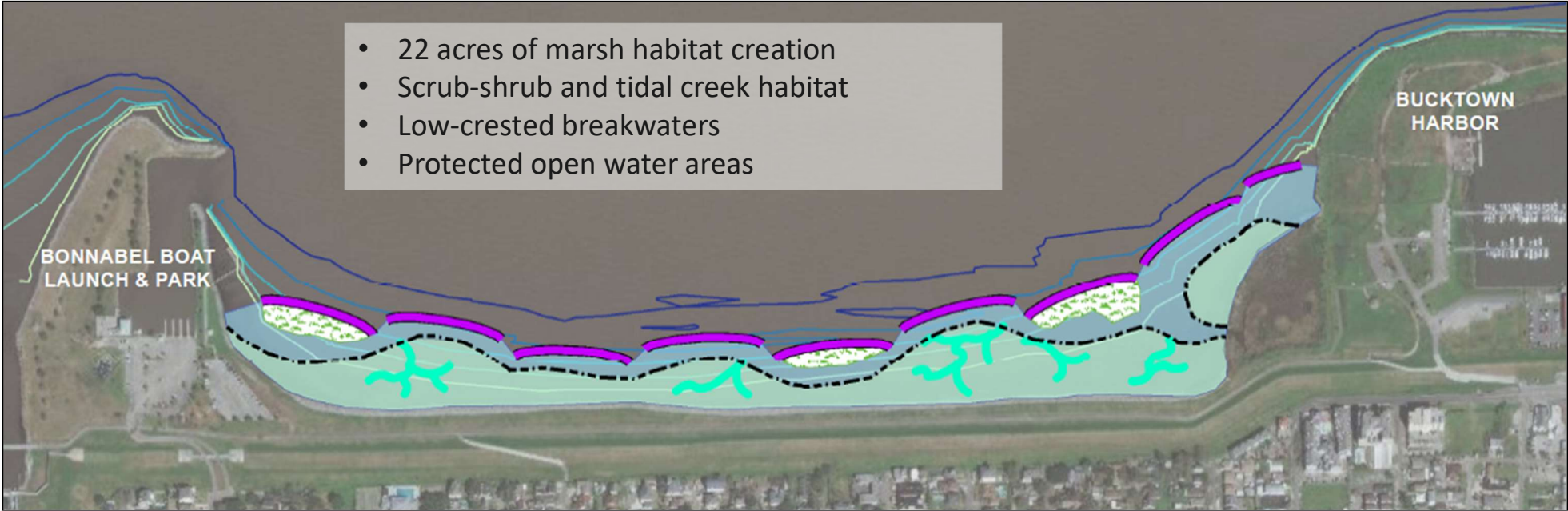
- \$8.0-10.5M
- Reduced project cost by nearly 35%



CONSTRUCTION INNOVATION: USING RECYCLED MATERIALS



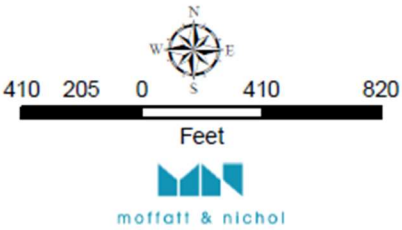
PREFERRED ALTERNATIVE (2020)



Bucktown Living Shoreline
Alternative 1

Legend

- | | | |
|---------------------------|------------------------------|------------------|
| ----- Containment Dikes | Tidal Creeks (w/ Open Water) | Elevation |
| Curvilinear Breakwaters | Marsh Creation | -5' |
| Scrub/Shrub Island Option | Open Water Option | -7' |
| | | -6' |
| | | -4' |
| | | -3' |





PROJECT COST ESTIMATES

Phase		Status
Design	\$685,000	In Final Design
Recycled Concrete Savings	\$500,000	On Going
Construction	\$8,000,000-10,500,000	1Q22



PROJECT FUNDING

Design

- \$250K NFWF
- \$250K JP GOMESA

Construction

- \$2.5M NFWF
- \$4.0M JP GOMESA

Funding Needed

- \$4.0M



BUCKTOWN MARSH RESTORATION AND LIVING SHORELINE

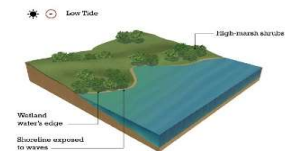
seeks to advance the goal of restoring indigenous marshland and ecological features within this zone while also increasing the resilience of the Jefferson Parish levee system.

The intent of this project is to rebuild a previously existing natural first line of defense against storm surge and rising sea levels, and to support the restoration of the water quality and ecological functions of Lake Pontchartrain. The indigenous marshland and ecological features once present along a one-mile stretch of lakefront from Bonnal Park and Boat Launch to

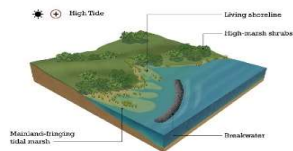
Bucktown Harbor connected Parish residents to the surrounding natural resources. This project will help facilitate a stronger relationship between Jefferson Parish residents and surrounding native habitats. NFWF's National Resilience Fund Program will help support the feasibility study and full design tasks necessary to advance the project toward implementation.



COASTAL STORM RISK MANAGEMENT MEASURES



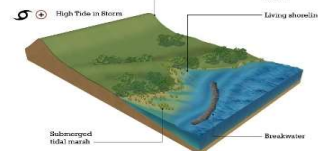
Open and exposed shorelines are prone to erosion due to waves.



Living shorelines are essentially tidal wetlands constructed along a shoreline to reduce coastal erosion. Living shorelines maintain dynamic shoreline processes, and provide habitat for organisms such as fish, crabs and turtles.



An essential component of a living shoreline is constructing a rock structure (breakwater/sill) offshore and parallel to the shoreline to serve as protection from wave energy that would impact the wetland area and cause erosion and damage or removal of the tidal plants.



A levee provides an additional layer of coastal flood protection, helping to mitigate water from flowing over the levee into undesirable areas like the built environment.



These successful living shoreline designs will provide recommendations to support preliminary and final design concepts.



LAKE
PONTCHARTRAIN

Questions?

Councilwoman Jennifer Van Vrancken
Jefferson Parish District 5

Lauren Averill laverill@jeffparish.net
Office (504)736-6654