Lake Pontchartrain & Vicinity and West Bank & Vicinity: Levee Lifts GRRs

April 30, 2019

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CURRENT STATUS

Today, the system provides the 1% level of risk reduction authorized by Congress and USACE is fully confident it will perform as designed and continue to do so for several years without additional lifts. The need for future levee lifts has always been known, but was not authorized along with the system's initial construction.

MEETING PURPOSE

- As part of the scoping process, we need your input on:
  - Significant issues/impacts to be addressed in the EIS
  - Potential project features/alternatives
  - Data sources
  - Issues that are not significant and need not be addressed

- As part of the development of an Environmental Impact Statement (EIS), the National Environmental Policy Act (NEPA) requires an early and open process for determining the scope of the issues to be addressed
- General Reevaluation Report (GRR): a study to affirm, reformulate, or modify an existing plan. Similar to a feasibility study.

AGENCY PARTNERSHIP & COORDINATION

Non-Federal Sponsor

Coastal Protection and Restoration Authority (CPRA)

- Feasibility cost-share agreement was executed on October 09, 2018.

Permitting & Advisory Agencies:

NATIONAL PARK SERVICE

DEQ LOUISIANA

LOUISIANA OFFICE of CULTURAL DEVELOPMENT

ARTS · ARCHAEOLOGY · HISTORIC PRESERVATION · CODOFIL

NOAA

LOUISIANA WILDLIFE & FISHERIES DEPARTMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

USGS science for a changing world

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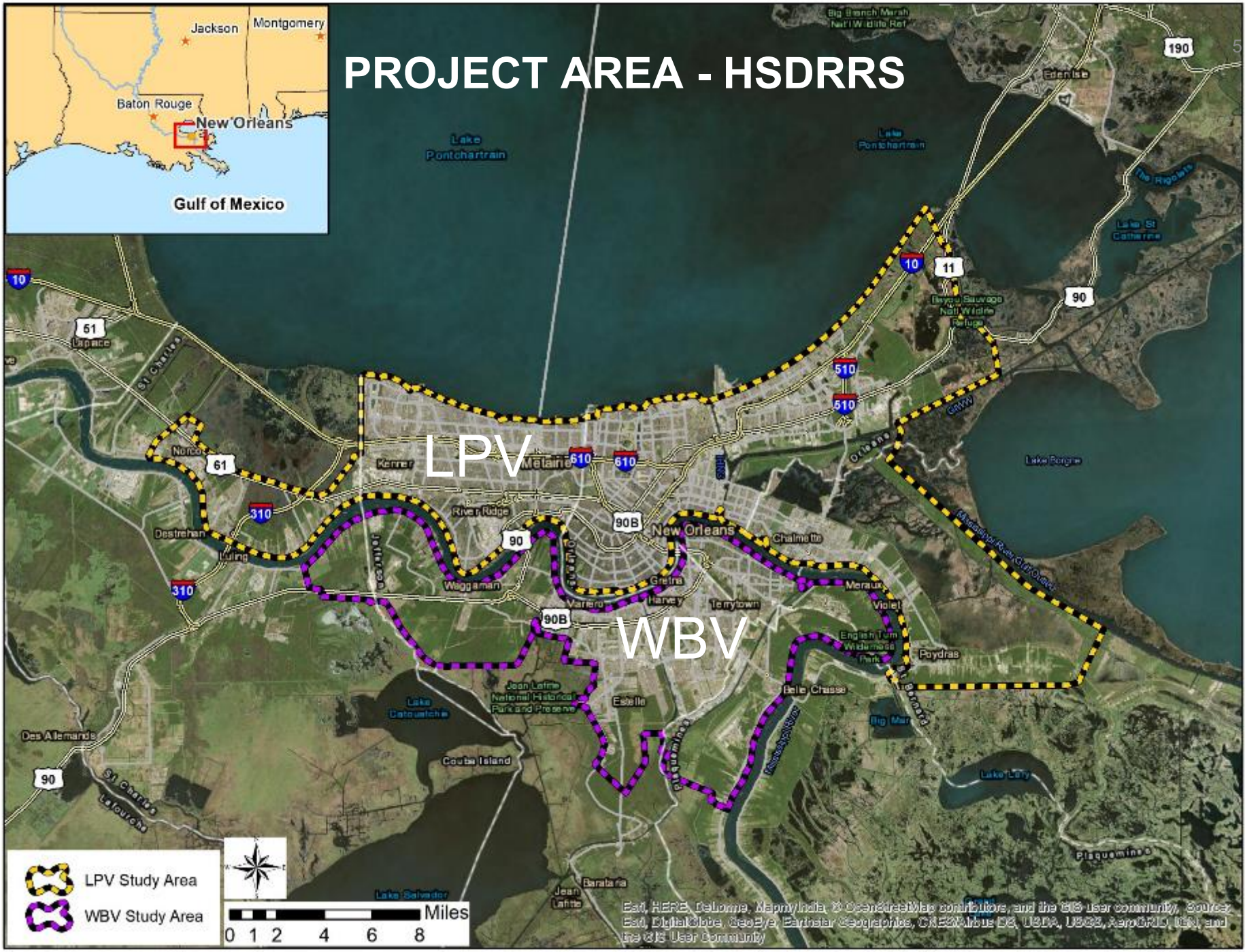
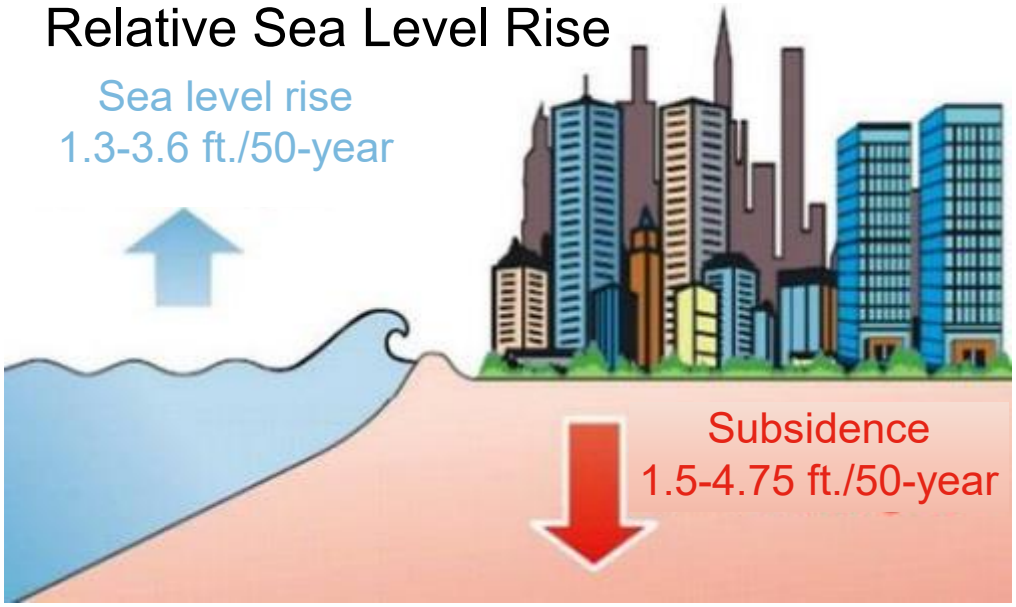
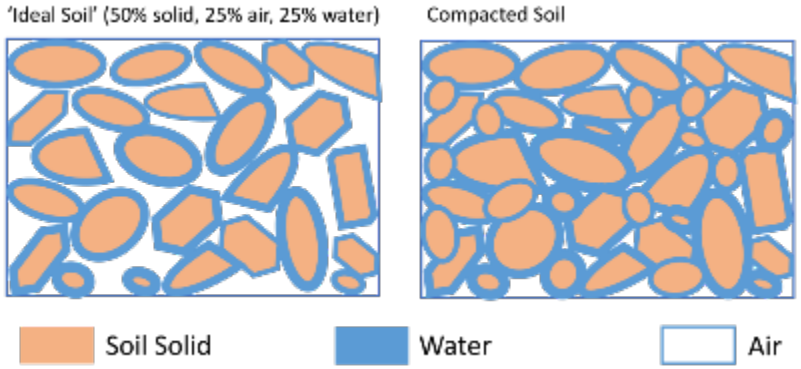

PROJECT AREA - HSDRRS
Jackson
Montgomery
Baton Rouge
New Orleans
Gulf of Mexico
LPV
WBV
Lake Pontchartrain
Kenner
Metairie
River Ridge
New Orleans
Chalmette
Arabi
Meraux
Violet
Poydras
Belle Chasse
Harvey
Terrytown
Waggaman
Destrehan
Luling
Norco
Lapalace
Des Allemands
Couba Island
Estelle
Lake Cataouatche
Lake Salvador
Barataria
Jean Lafitte
Plaquemines
Lake Borgne
Lake Lery
Big Mar
Eden Isle
LPV Study Area
WBV Study Area
Miles
0 1 2 4 6 8

TERMS & DEFINITIONS

Sea Level Rise + Subsidence =
Relative Sea Level Rise



Compaction/Settlement of levee



*__Note__: Because of the age of the levees, the topography, bathymetry, and other factors, the levee settlement rates are not equal across the system.

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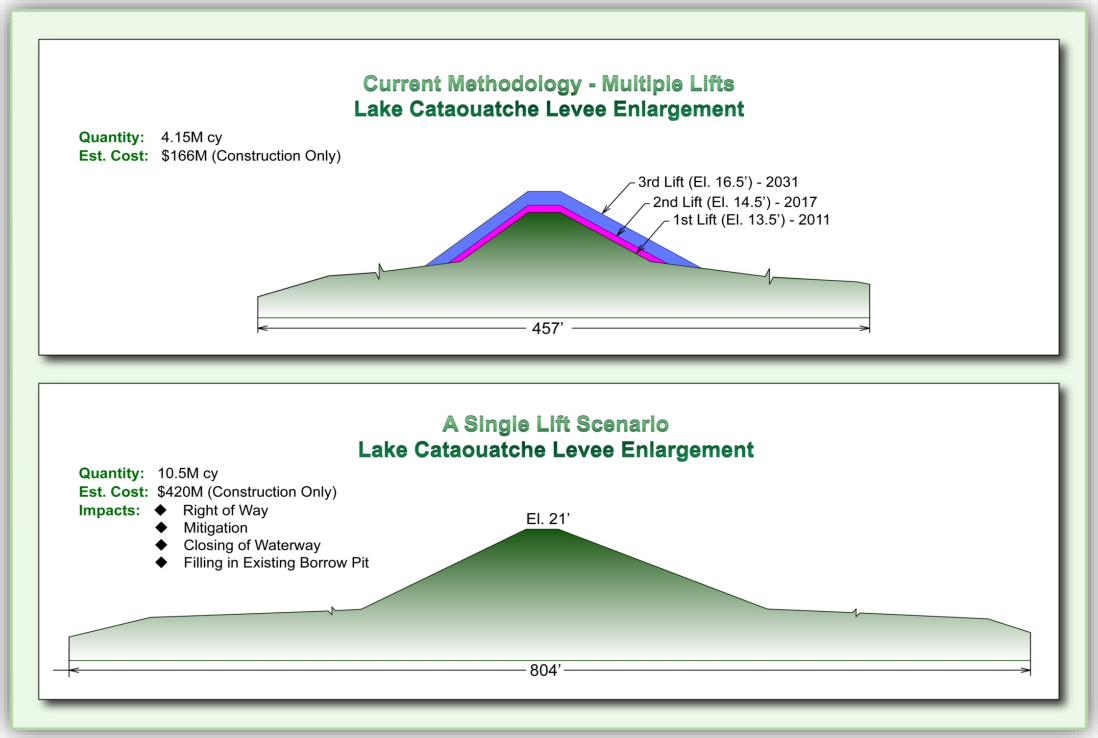
WHY ARE FUTURE LEVEE LIFTS REQUIRED?



Multiple Lift vs. Single Lift Construction Compared

While the LPV and WBV projects provided the 1% level of risk reduction when construction was completed, additional future levee lifts will be required to offset expected consolidation, settlement, subsidence, and sea level rise which will cause levee reaches within the system to fall below the required elevation necessary to provide 1% risk reduction.

**Note: this study will also consider other risk reduction measures*

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AUTHORITY

Section 3017 of WRRDA 2014 authorizes the Secretary of the Army to carry out measures that address consolidation, settlement, subsidence, sea level rise, and new datum to restore certain federally authorized hurricane and storm damage reduction projects to their authorized levels of protection, if the Secretary determines the necessary work is *technically feasible, environmentally acceptable, and economically justified*.

In 2018, Congress provided appropriations via the Bipartisan Budget Act to conduct the two General Reevaluation Report and Supplemental Environmental Impact Statements necessary to inform this determination.

STUDY GOAL: Reduce the risk of life loss and economic damages due to hurricane storm surge in the New Orleans greater metropolitan area.

OBJECTIVE I – Reduce risk of life loss	OBJECTIVE II – Reduce Economic Damages	OBJECTIVE III – Reduce Environmental Damages
		

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STUDY AREA CHARACTERISTICS

- Population increase by almost 6% by the year 2030.
- Estimated levee lift costs will be $820 million (2010 dollars)

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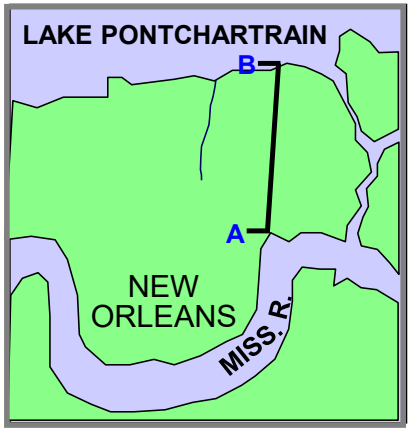
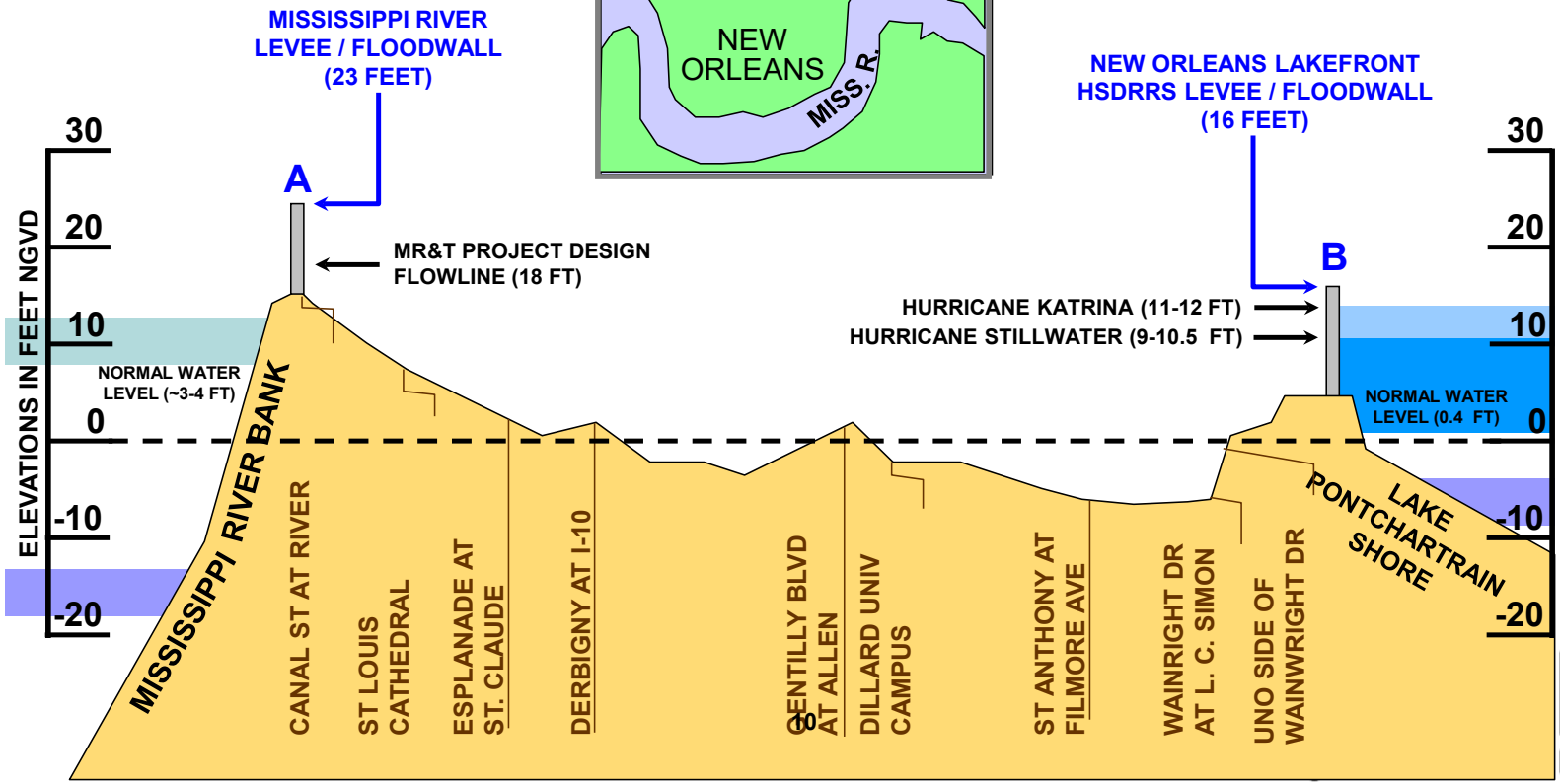
STUDY AREA TOPOGRAPHY

City of New Orleans Ground Elevations



From Canal St. at Mississippi River to the Lakefront



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RISK REDUCTION MEASURES

Structural

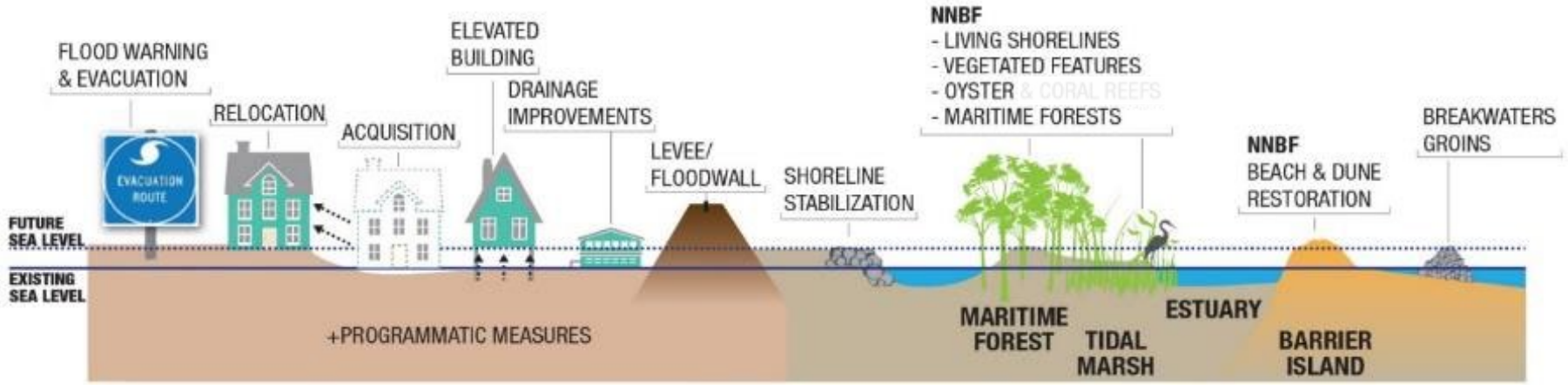
- Levee Raise
- Island/Surge Barrier
- New Floodwalls
- Breakwaters standalone/ in combination
- Interior drainage improvements
- Add armoring on the flood side
- Wave Berms

Non-Structural

- Risk Communication with the public/Flood Warning
- Buyouts
- Flood-proofing
- Elevated buildings

Nature-Based

- Marshes
- Dunes/Beaches
- Living Shoreline



OVERALL STUDY TIMELINE

Nov 2019
- Project Initiation
- Alterative Development

Dec 2018 - Oct 2019
- Public & Agency Meetings
- Develop Existing Conditions and Alternative Analysis

Dec 2019
- Tentatively Select Plan
- Public Review *(anticipated mid-December 2019)*

Apr 2020
- Agency Endorsement of Recommended Plan

Sept 2021
- Approval of Final Report

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WHAT WE NEED FROM YOU

1. What hurricane event did your community see the most damages?
2. Are there risk reduction measures that you would like the planning team to evaluate to address the problems?
3. Are there specific things the planning team should consider?
4. Is there data/studies that you know of that could help the study?
5. Significant issues/impacts to be addressed
6. Issues that are not significant and need not be addressed

COMMENTS & QUESTIONS

Comments or information can be provided to:

U.S. Army Corps of Engineers, New Orleans District
C/O Mr. Bradley Drouant, P.E.
CEMVN-PMO-L
7400 Leake Avenue
New Orleans, LA 70118

Or by email to

CEMVN-WBVGRR@usace.army.mil
CEMVN-LPVGRR@usace.army.mil

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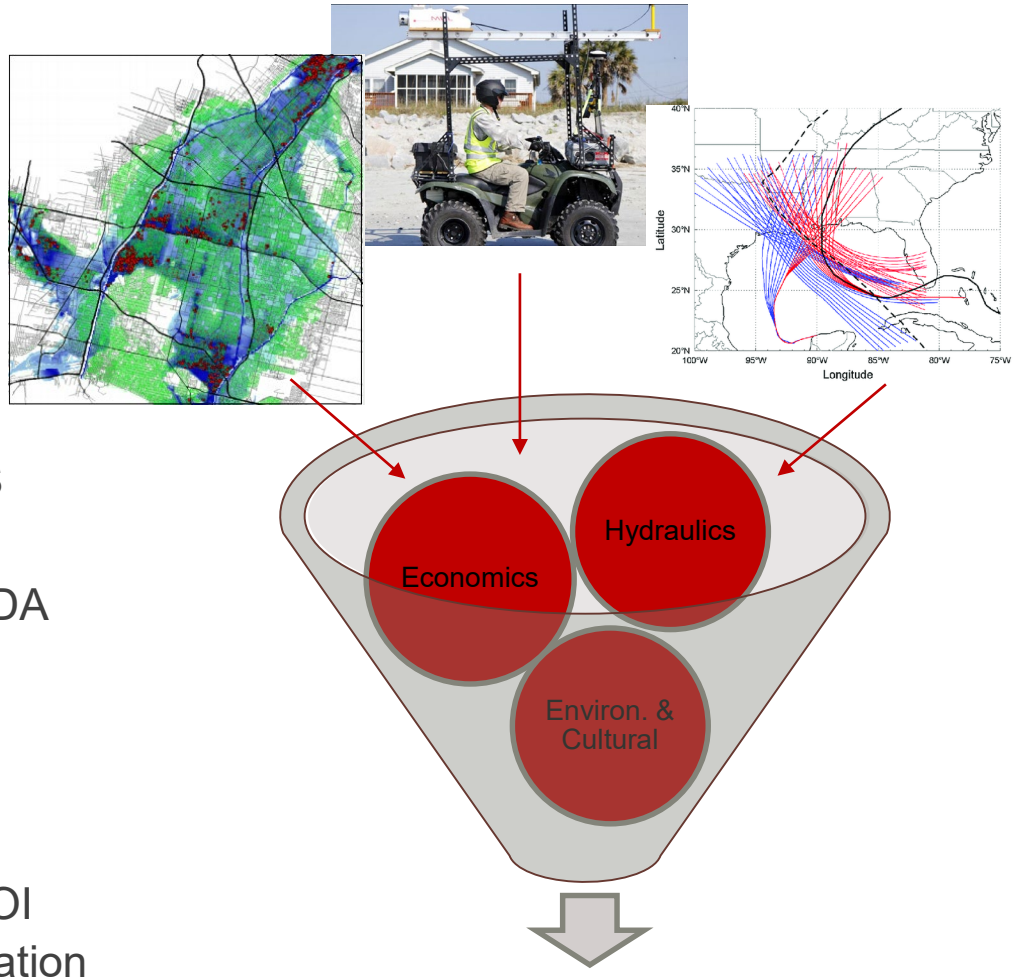
PATH FORWARD

- Geotech
  - Levee consolidation curves updates
- H&H
  - Breach and overtopping modeling
  - Sea level rise scenarios
  - Inundation mapping using HEC-RAS
- Economics
  - Structure inventory updates, HEC-FDA
  - LifeSim
  - NED benefit quantification
  - Environmental Justice
- Environmental
  - Prepare NEPA document, publish NOI
  - Determine quantity and cost of mitigation
- Levee Safety
  - Semi-Quantitative Risk Assessment for levees
  - Identify alternative below tolerable risk guideline



Tentatively Selected Plan

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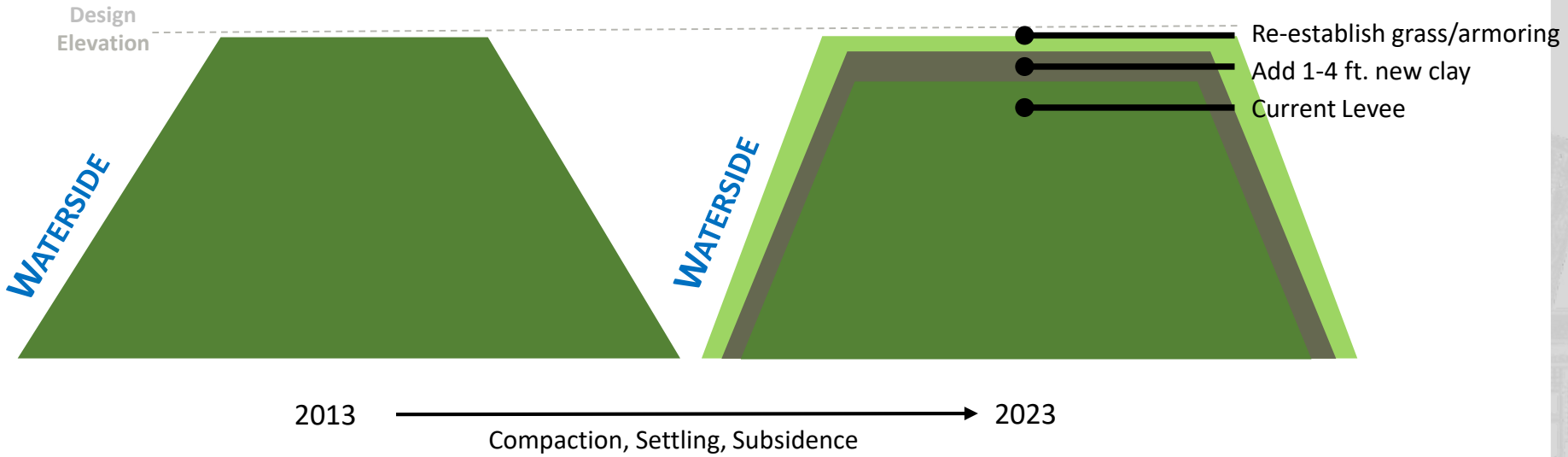
WHAT IS A LEVEE LIFT?



Many earthen levee systems, including the HSDRRS levees, require future lifts to account for levee consolidation, land subsidence and sea level rise and maintain their authorized design elevation over time.

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