COASTAL PROTECTION AND RESTORATION AUTHORITY BOARD MEETING

US Army Corps of Engineers
New Orleans District

September 13, 2023

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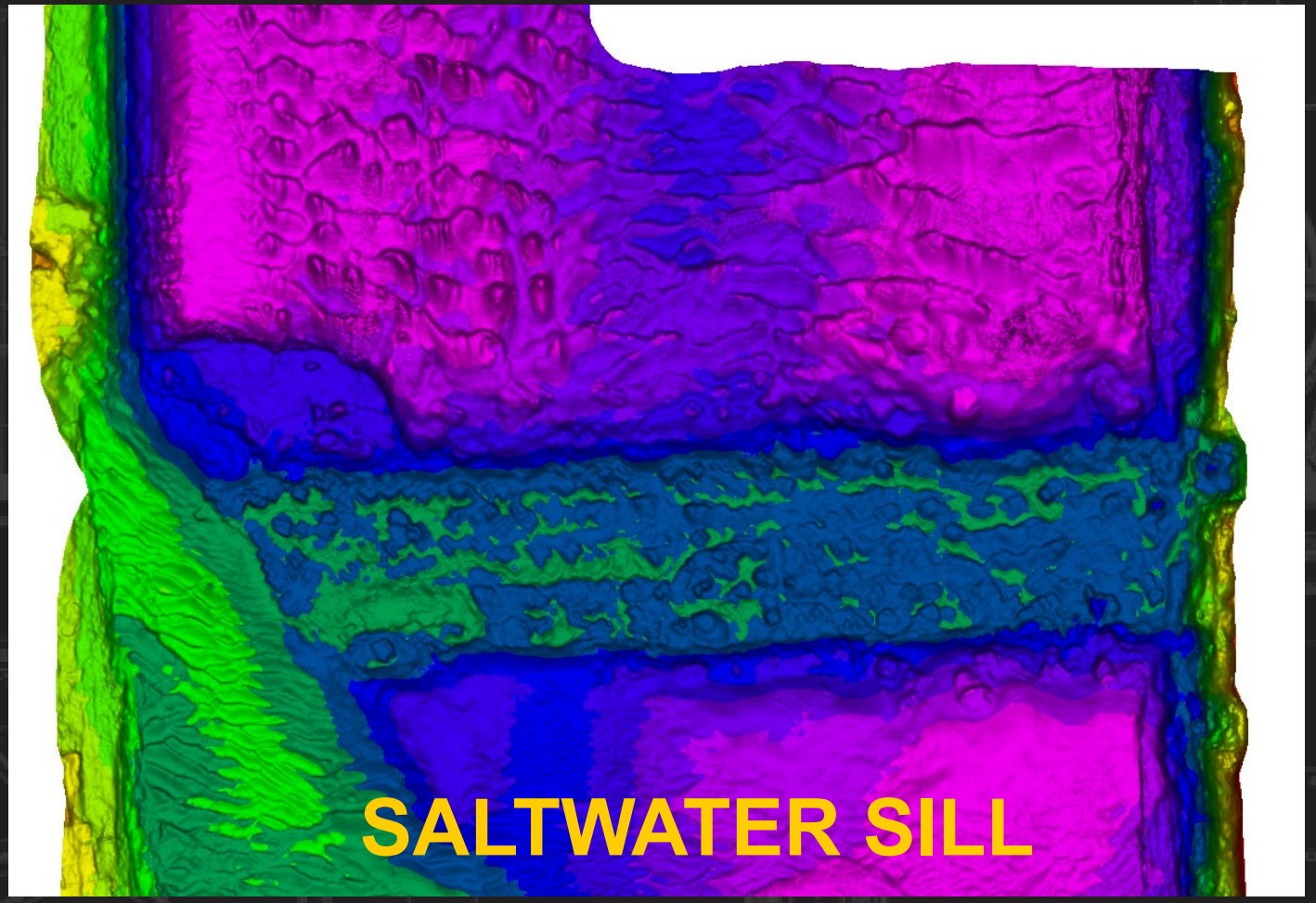
MISSISSIPPI RIVER UNDERWATER SALTWATER SILL



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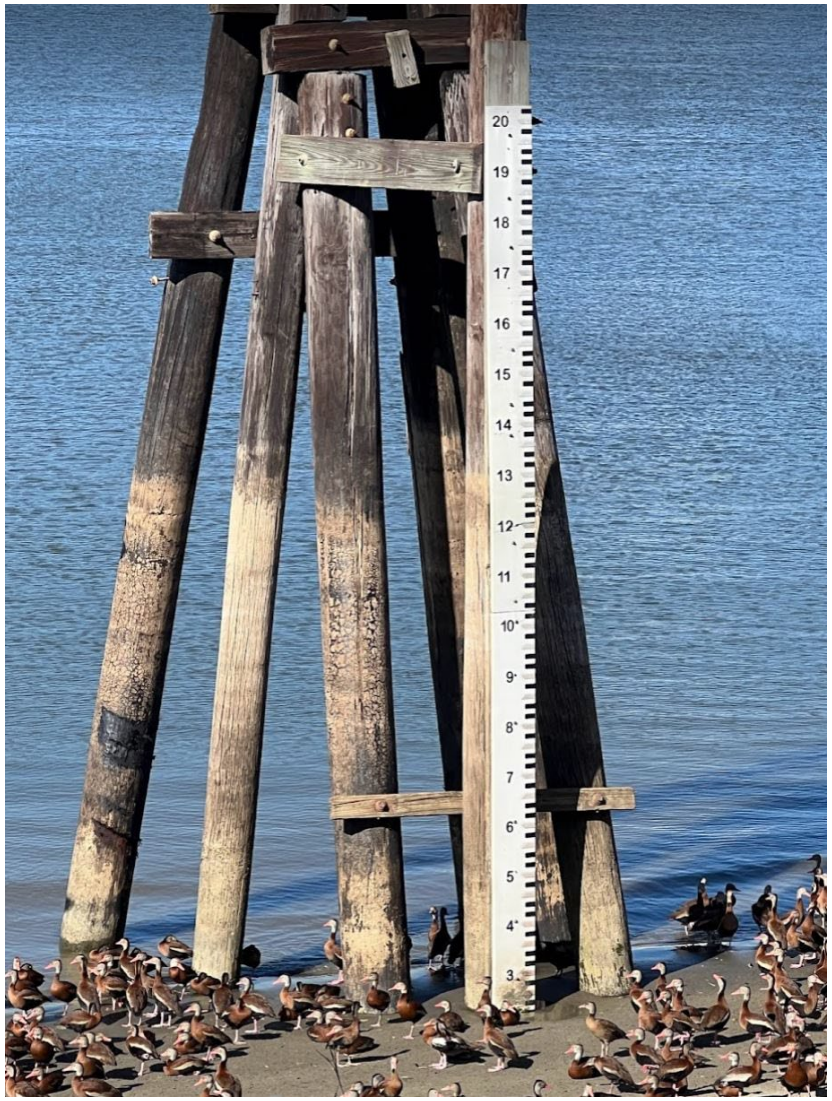
LOW WATER MONITORING

- A 10 day average flow of 300,000cfs in the Mississippi River initiates monitoring the river forecast for low flows
- Water management measures the saltwater wedge toe location twice weekly
- The 2023 low water season is unusually early
- Trigger to construct the saltwater barrier sill is when the toe of the saltwater wedge is forecasted to get to RM 90 in 28 days
- 29 June: COL Jones signs an emergency declaration and decides to move forward with constructing sill

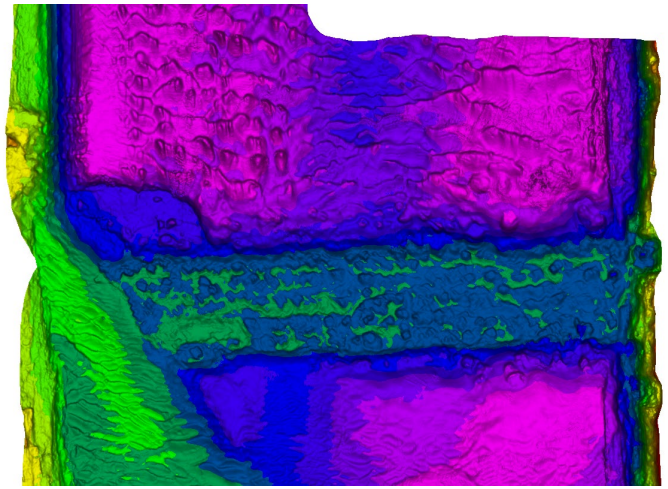


SALTWATER BARRIER SILL CONSTRUCTION

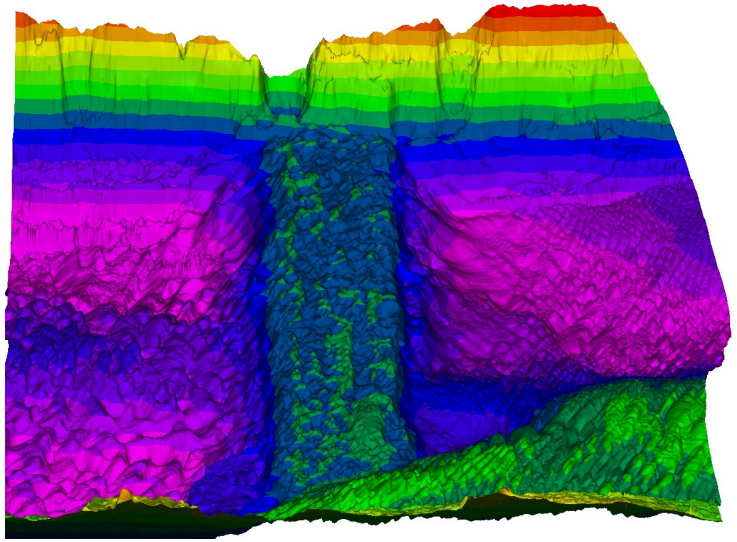
- The underwater saltwater barrier sill is a mitigation feature of the deep draft navigation channel to stall progression of saltwater intrusion for the duration attributable to the deepening of the navigation channel.

- Construction of the saltwater barrier sill is required approximately every 10 years. Extreme low water in the Mississippi River in 2023 resulted in the unprecedented requirement to construct a saltwater barrier sill for a second time in less than 1 year.

- The Mississippi River Ship Channel mitigation requirement was fulfilled with construction of the saltwater barrier sill in July 2023.



Plan View



Along Alignment

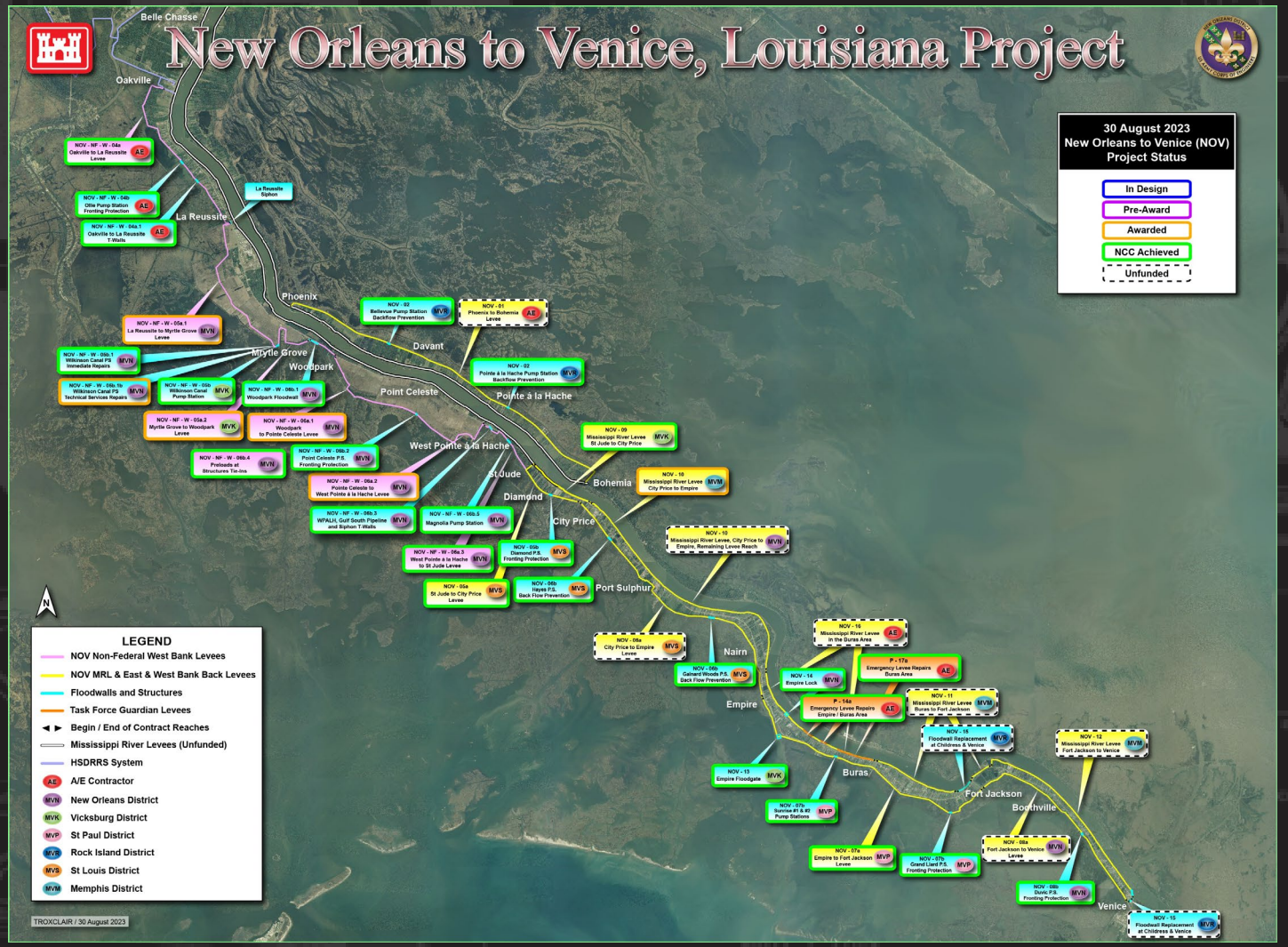
REVERSE OSMOSIS CONTRACT

- 13 July: Governor Edwards requested assistance for a reverse osmosis water purification unit (ROWPU)
- MVN coordinates specifications with Plaquemines Parish
- Chloride measurements remain low
- 14 August: MVN moves forward with contract
- Contract awarded 8 September 2023

LOW WATER PATH FORWARD

- Continue monitoring falling river flow conditions and saltwater wedge toe location
- Predictions have the flows getting as low as 130,000 cfs by the end of September
- Water management predicts the saltwater overtopping the existing sill
- Additional action by MVN will require a request from the State for emergency assistance
- Low water season can last until late winter or spring flood season

NEW ORLEANS TO VENICE, LOUISIANA



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NOV – Project Background and Status

New Orleans to Venice (NOV) originally authorized by Section 203 of Flood Control Act of 1962

3rd, 4th, 6th, and 7th Emergency Supplemental Bills provided $767M allocated to NOV project (includes emergency repairs)

4th and 6th Emergency Supplemental Bills provided $671M to incorporate 34 miles of existing Non-Federal Levees (NFL) into NOV project

Total Emergency Supplemental Appropriations: ~1.4B

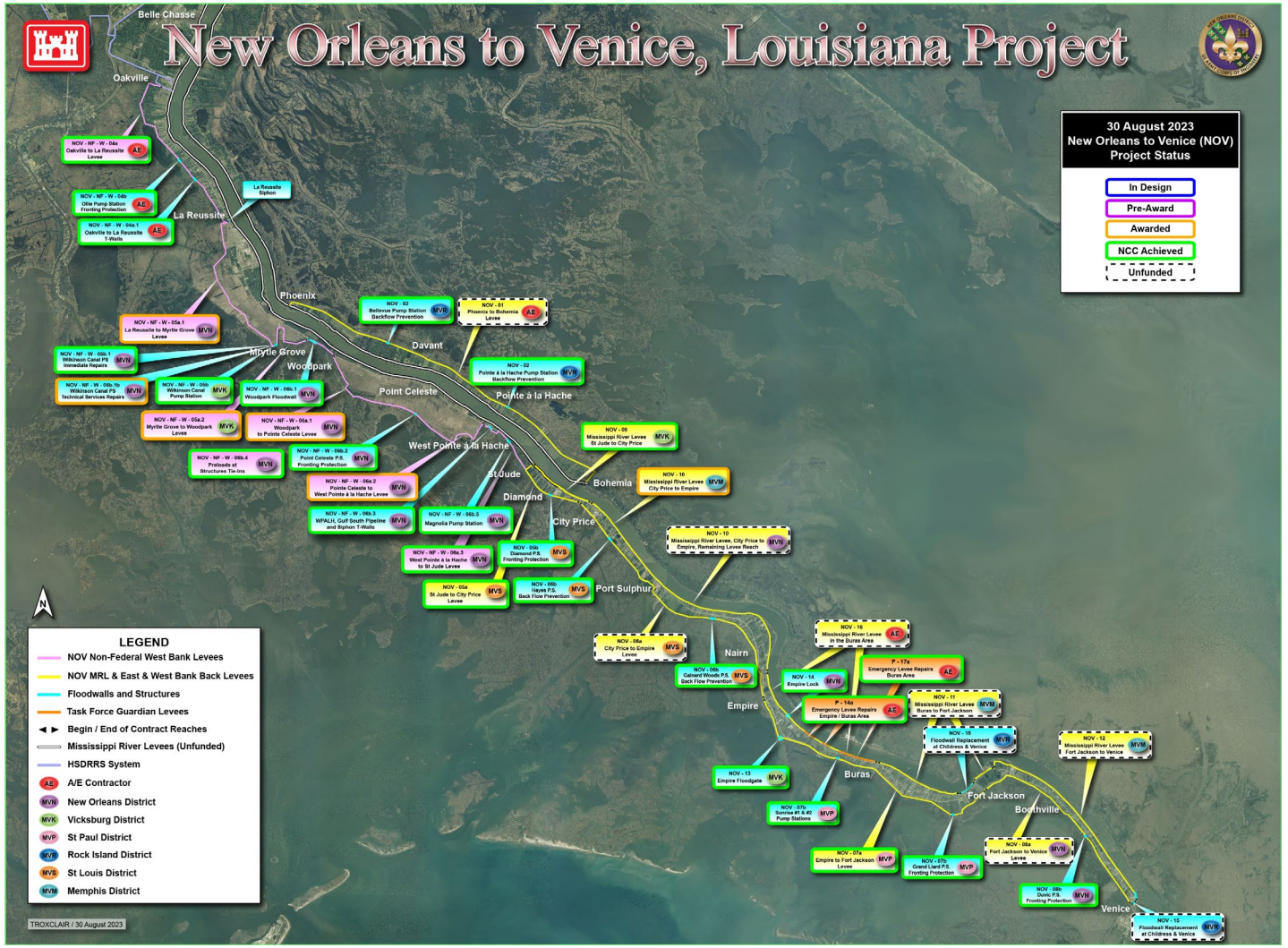
Project is authorized to 2% or 50-yr Level of Risk Reduction (LORR)

- Portions of NFL reaches are currently designed/constructed to 20-25-yr LORR

23 of 29 contracts completed, 6 remaining contracts currently under construction with existing funding

Disaster Relief Supplemental Appropriations Act (DRSAA), 2022 provided additional $783M to construct 10 contracts to the 2% or 50-yr LORR

- 5 contract reaches remain unfunded



NOV – Future Work

DRSAA will fund the construction completion of:

- 10 contracts to authorized grade (50-yr LORR)
- at full Federal expense
- some levee reaches previously/currently being constructed to 25-yr LORR

Includes $783 M for:

- Levee construction on 7 levee reaches:
  - NOV-NF-W-05a.1, Levee
  - NOV-NF-W-05a.2, Levee
  - NOV-NF-W-06a.1, Levee
  - NOV-NF-W-06a.2, Levee
  - NOV-NF-W-06a.3, Levee
  - NOV-10, Levee
  - NOV-11, Levee
- Fronting Protection (FP) at Pumping Stations (PS):
  - NOV-02, FP Floodwall @ PS
  - NOV-06b, FP Floodwall @ PS
- Replacement of I-walls with T-walls:
  - NOV-15, T-Wall

Regional Work performed by MVM:

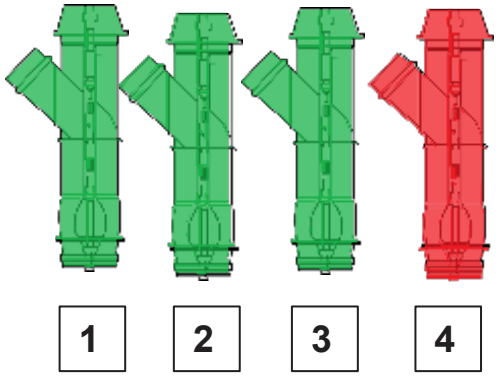
- MVN maintains lead for sponsor coordination
- PDT initiating surveys and borings on 5 contracts

NOV – Wilkinson Canal Pump Station

Pump Station Design Capacity and Status

- Design capacity: 1,000 cfs (4 pumps @ 250 cfs each)
- Operational capacity: 500 cfs (Pumps 1 & 2 @ 250 cfs each)
- Hurricane Season 2023: 2 pumps operational, PS @ 50% capacity
- Hurricane Season 2024: Pumps 1-4 operational, PS @ 100% capacity
- The 25-year event is not expected to threaten HWY 23

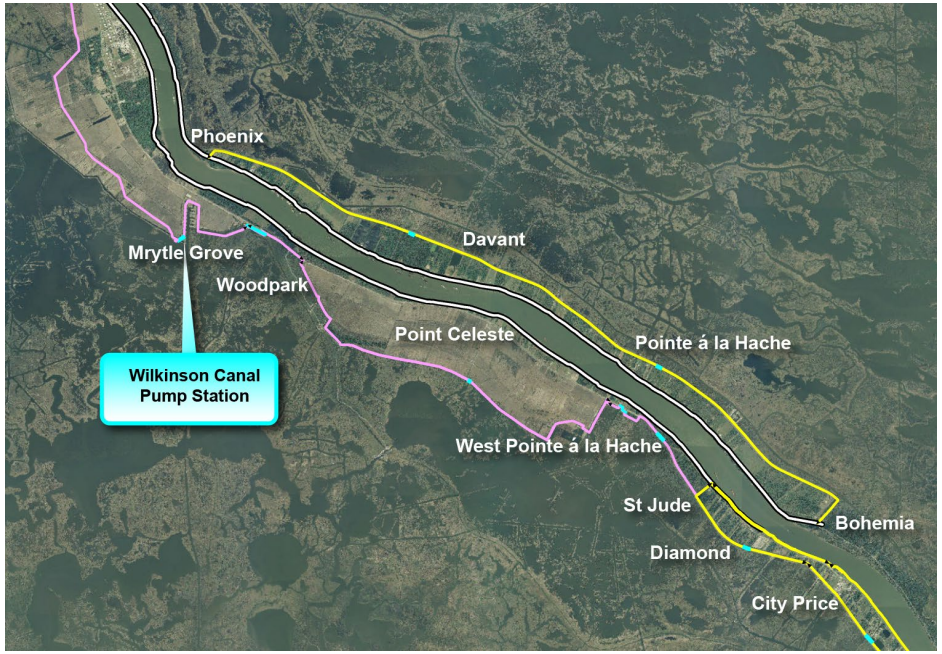
Pump Operation and Repair Tracker



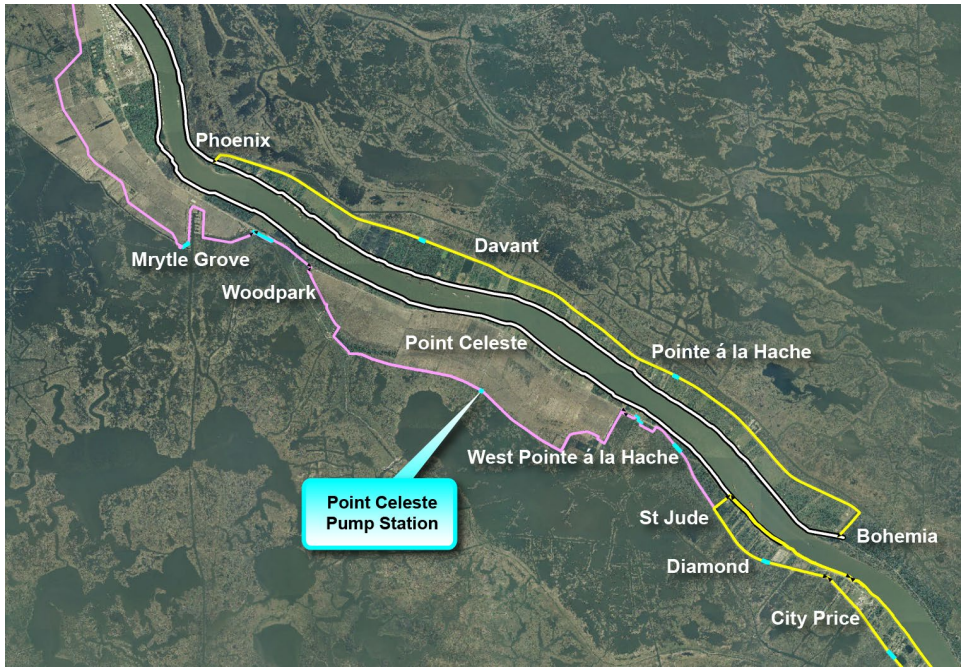
Pumps 1 & 2: Currently operational; to be removed for service/maintenance.
Est. Final Return to Service: April 2024

Pump 3: Wet test complete; currently operational
Final Return to Service: May 2023

Pump 4: Repairs ongoing;
Est. Final Return to Service: Oct 2023



NOV – Point Celeste Pump Station



Pump Station Design Capacity and Status

- Non-Federal pump station. Design capacity: 520 cfs
- Current capacity: ~275 cfs (as reported by PPG)
- USACE completed 50-year LORR for fronting protection and turned over to NFS in 2022
- Currently temporary pumps in place for 2023 Hurricane season (deployed by others)

- NFS working with Congressional delegation to expedite rehabilitation of the PS
  - Sec. 8152 of WRDA 2022 authorized a rehabilitation program for pumps, pending USACE Implementation Guidance
  - Pt Celeste appears to be eligible for consideration, subject to request from the NFS
  - Funding will need to be appropriated for this rehab program

NEPTUNE PASS

NEPTUNE CREVASSE

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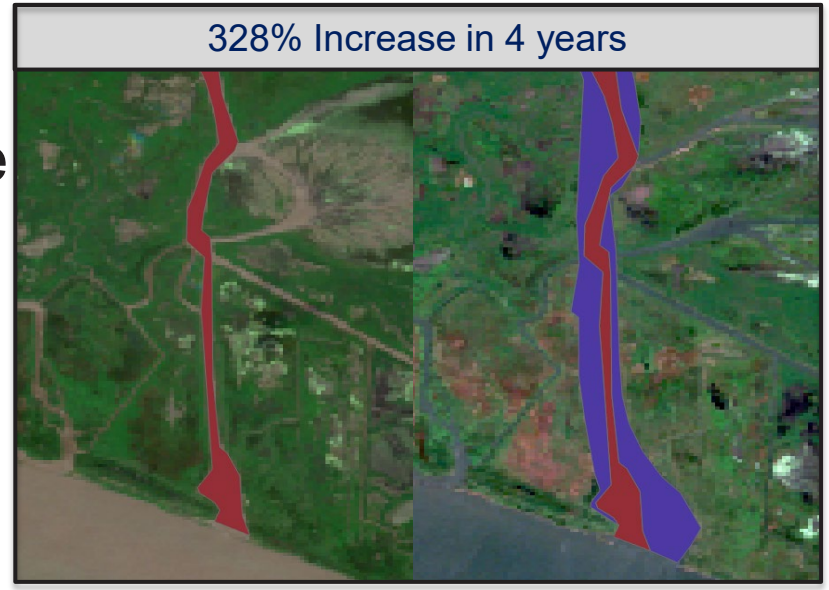
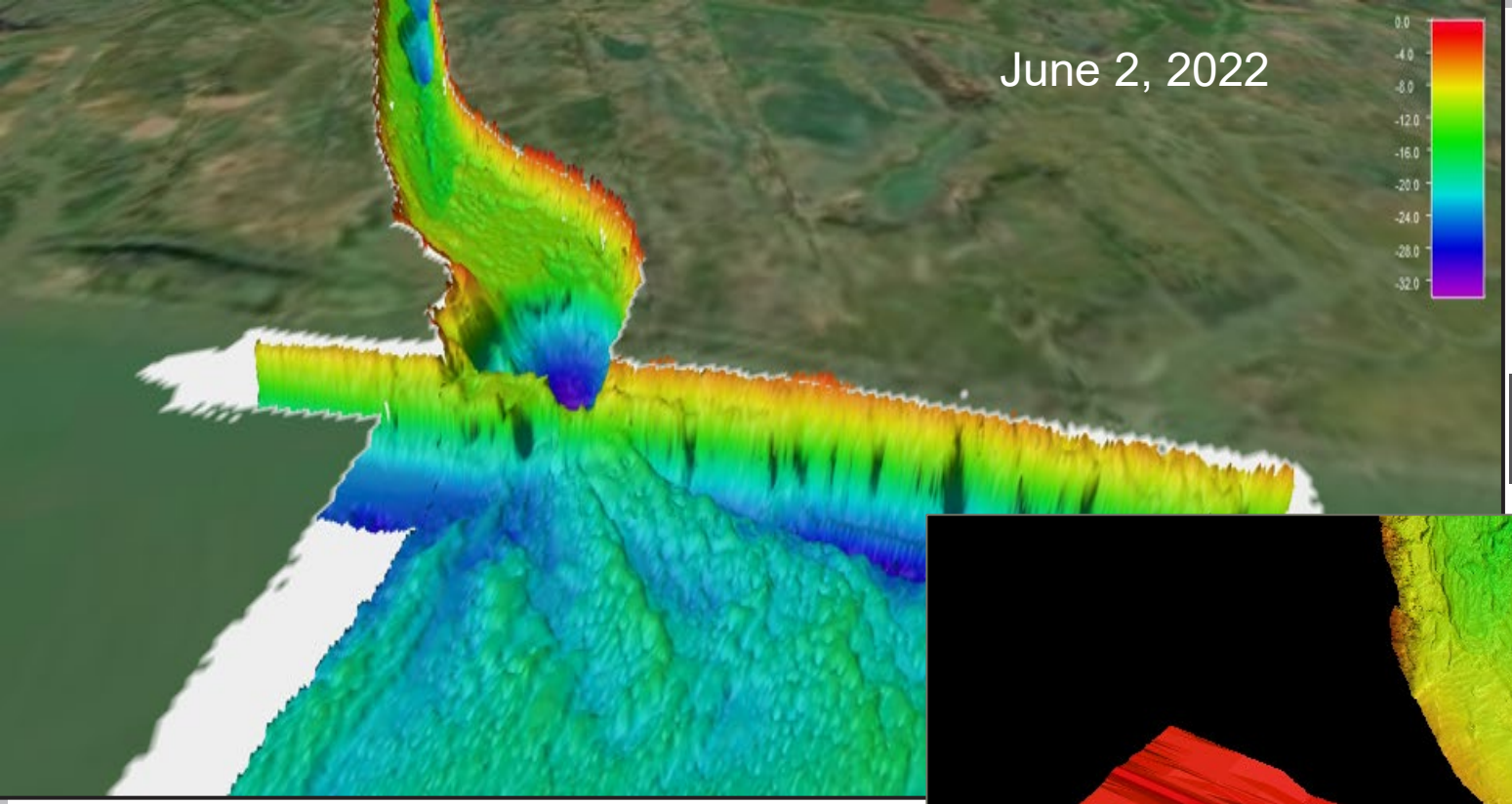
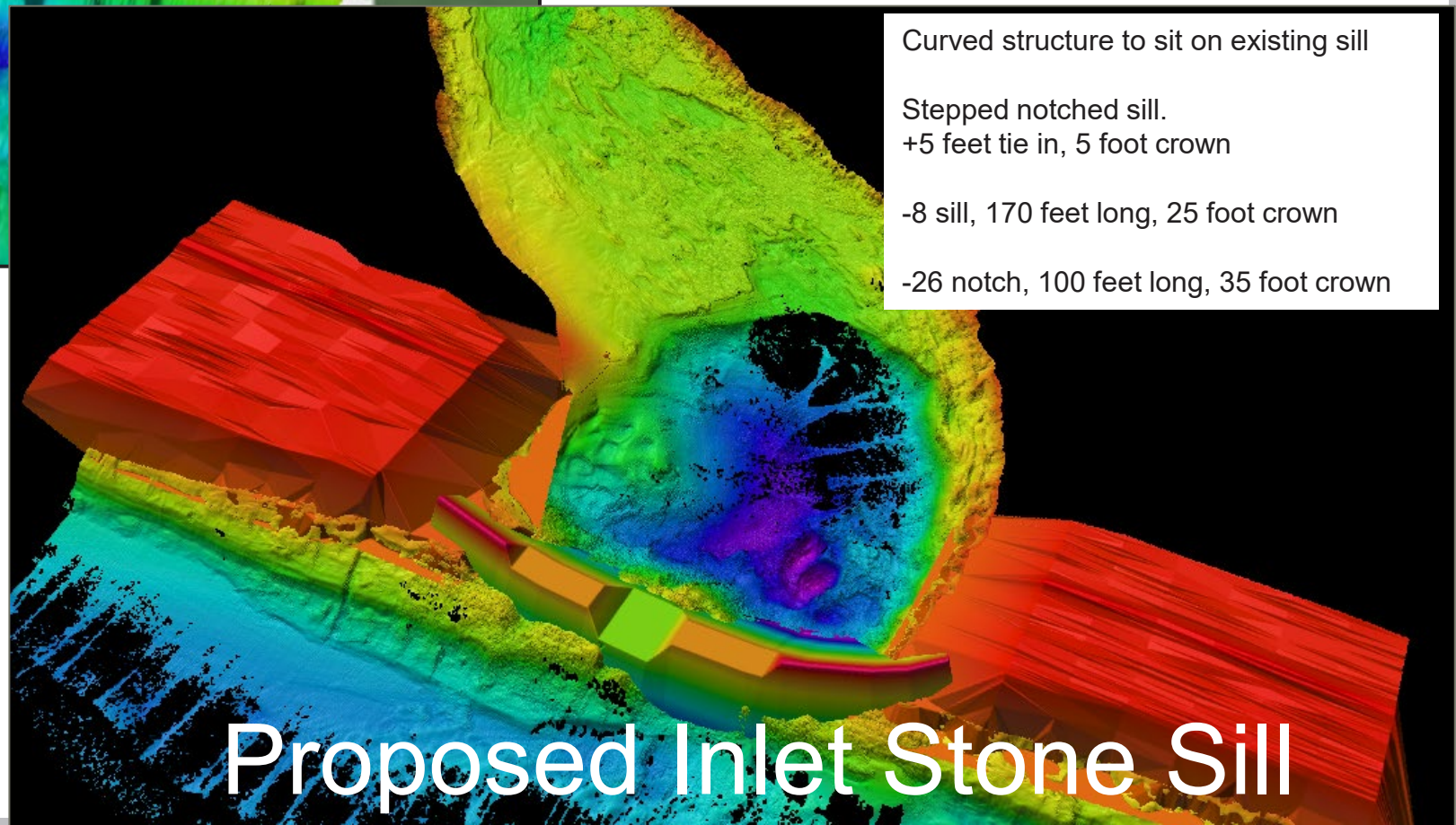
RECENT TIMELINE OF NEPTUNE PASS

- **2019** - Initial Bank Failure. Like MG Pass we conducted yearly monitoring. Steady growth through 2023
- **Spring 22** - Shoaling in MS River required dredging; reports of Nav Hazard by pilots. Q Measurements indicated 16% loss through Neptune Pass
- **July 22** - Stone Revetment placed on remaining bankline to prevent scour of remaining sill.
- **Nov 22** - USACE developed Control Structure Plan; published EA. Subsequent modeling showed structure would induce high velocity current going around structure in high water conditions; high probability that structure could be flanked after a few years
- **April 2023** - USACE discovered rapid scouring along east bank of Neptune Pass. Additional stone revetment was placed to prevent the opening from enlarging.







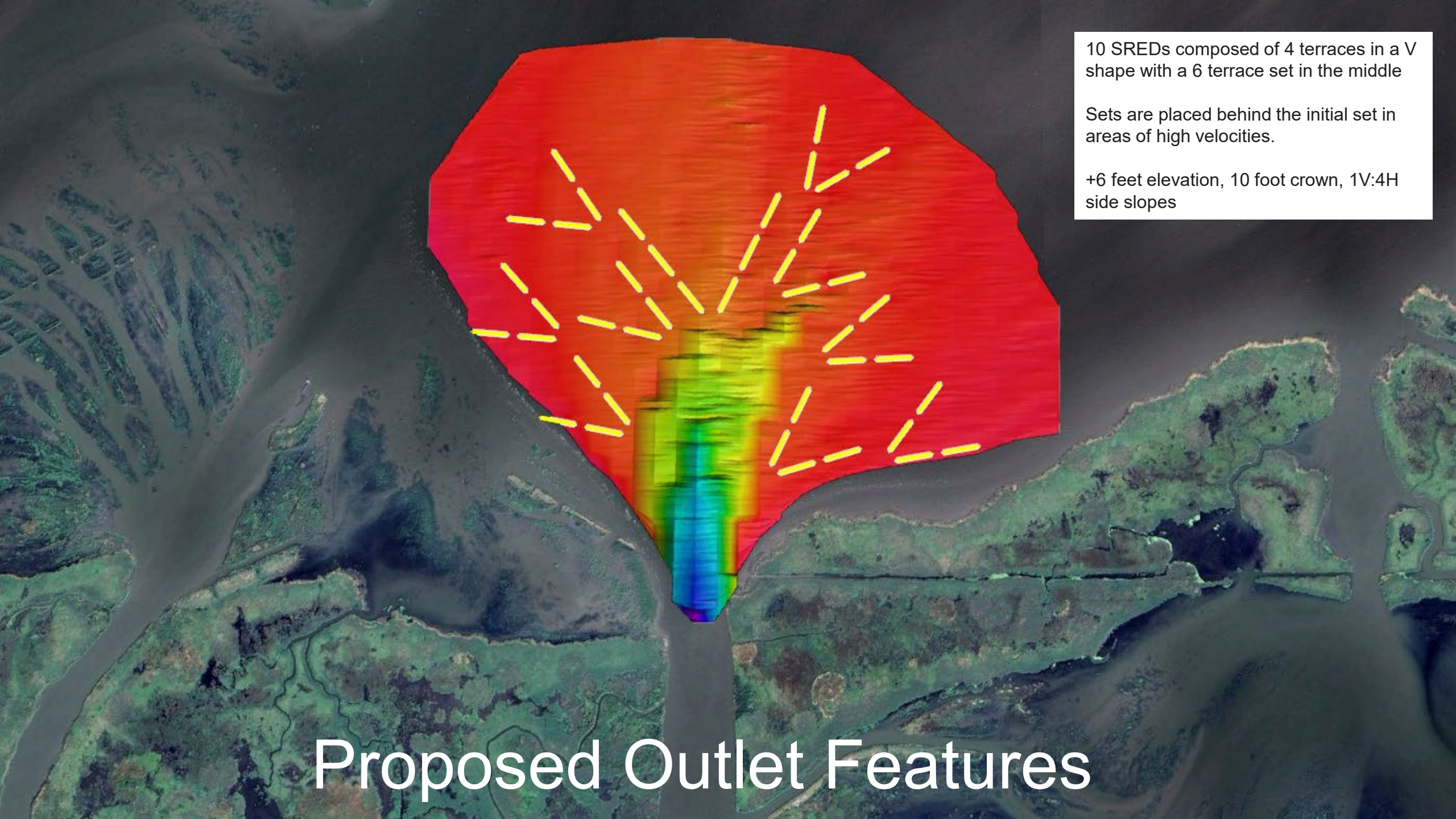
Curved structure to sit on existing sill

Stepped notched sill.
+5 feet tie in, 5 foot crown

-8 sill, 170 feet long, 25 foot crown

-26 notch, 100 feet long, 35 foot crown

Proposed Inlet Stone Sill



10 SREDs composed of 4 terraces in a V shape with a 6 terrace set in the middle

Sets are placed behind the initial set in areas of high velocities.

+6 feet elevation, 10 foot crown, 1V:4H side slopes

Proposed Outlet Features

PATH FORWARD

- Ongoing - Project description Developed; Draft EA currently being written
- 1 April 24 - EA/Public Notice/Compliance Complete
- 1 May 24 - Contract solicitation
- 15 June 24 - Contract Award
- 15 July 24 - Construction start

PERMANENT CANAL CLOSURES AND PUMPS (PCCP)

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STATUS OF THE PERMANENT CANAL CLOSURES AND PUMPS

BLUF:

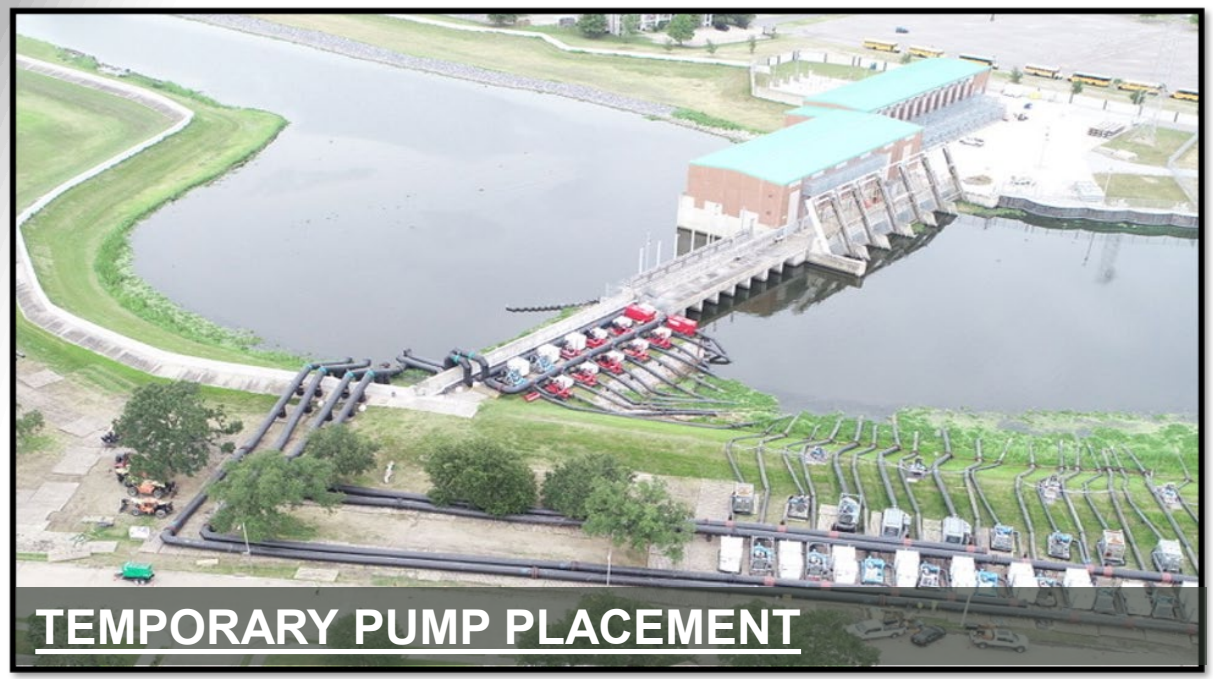
All 17 PCCP Pumps remain “Fit to Fight” for Hurricane Season 2023.

USACE, in cooperation and collaboration with CPRA, FPA-East, and construction contractors, remains steadfast on ensuring the Permanent Canal Closures and Pumps Project will deliver the designed level of risk reduction.

Phase II has commenced with receipt of the PCCP JV conceptual plan and collaborative joint roundtable reviews are ongoing.

Concurrently, we are developing the path forward for delivering our commitment of sustainable and reliable pumps that meet design-life specifications.

PHASE I: HURRICANE SEASON READINESS CONTINGENCY



TEMPORARY PUMP SUPPORT

- Support from **U.S. Navy Supervisor of Salvage and Diving (SUPSALV)**
- Provided **1,000 cfs** in additional pump capacity.
- Contingency operations standard operating procedures remains available.
- Site Demobilization completed.
- Initiating Site Recovery. Planting x2 Live Oaks, Seeding and Fertilizing, and tree treatment.

PHASE II: DELIVERING THE PROJECT AS DESIGNED

USACE COMMITMENT:

Ensure all 17 pumps meet the 35-year design life specification

1. **ONGOING**: Identify Underlying Cause
2. **ONGOING**: Secure Necessary Funding
3. **ONGOING**: Develop scope and finalize design
4. **ONGOING**: Identify most beneficial acquisition strategy

TARGETED MOBILIZATION DATE: DECEMBER 1, 2023

Phase II will be a multi-year effort with work to occur outside of hurricane season (Dec 1 to May 31)

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PATH FORWARD

Inspection and assessment

- Complete inspection assessments (being accomplished by the design-builder).
- Identify root cause for advanced corrosion.

Long-term corrective actions

- Develop scope and estimate for long term corrective action.
- Solidify funding for permanent fix.
- Complete design for permanent fix to ensure 35-year life.
- Execute contract (anticipate construction to potentially last >2 years due to likely limiting of work to outside hurricane season).

Contingency operations

- Monitor and remain engaged with NFS to execute contingency pumping standard operating procedures.

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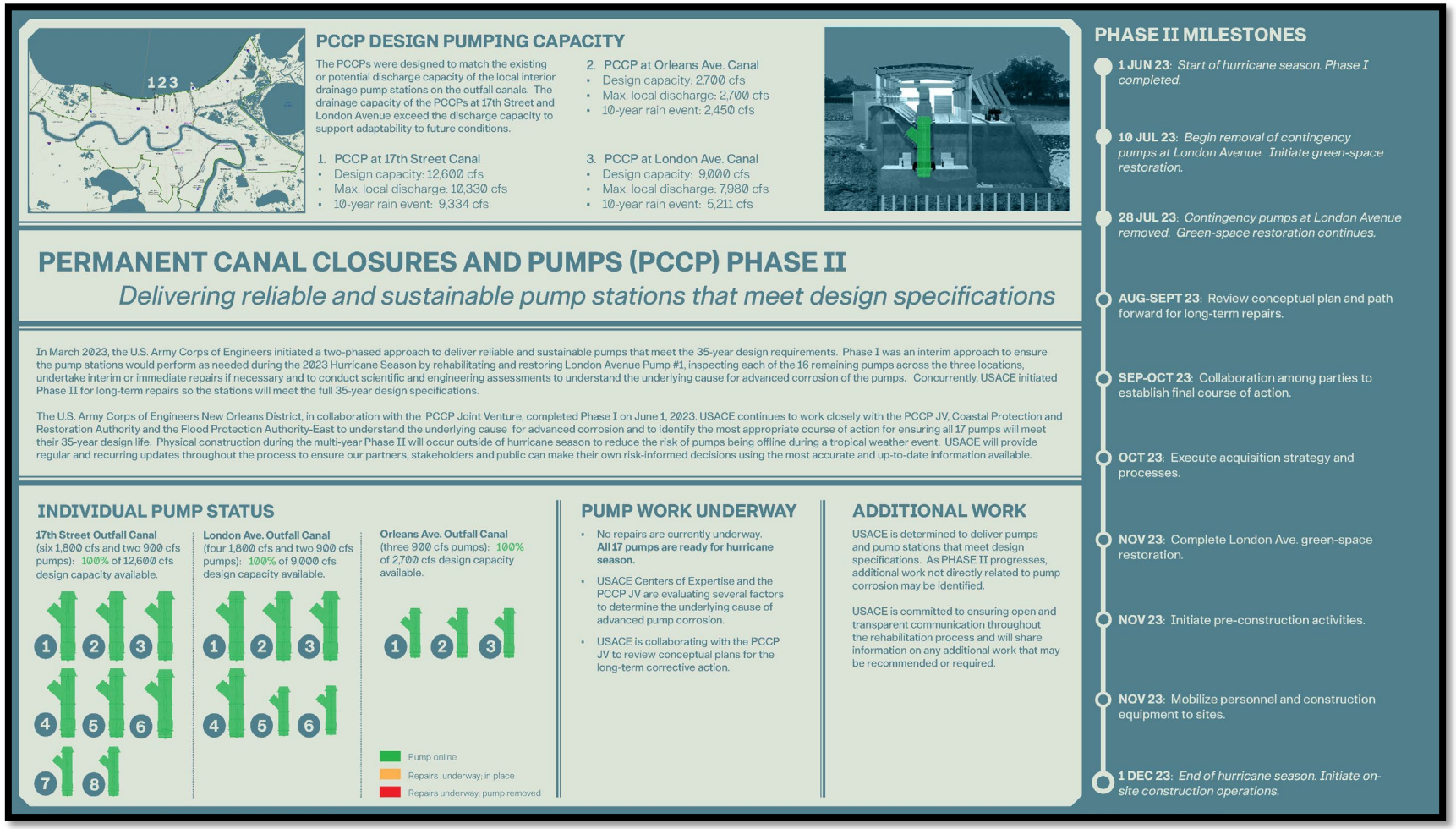
OUTREACH AND ENGAGEMENT



Cooperation, Collaboration and Communication

- ❑ Ensure open and transparent communication throughout the process.
- ❑ Provide regular and recurring updates to partners, stakeholders and the public directly as well as through traditional and social media channels.