US ARMY CORPS OF ENGINEERS
OPERATIONS AND REGULATORY UPDATE

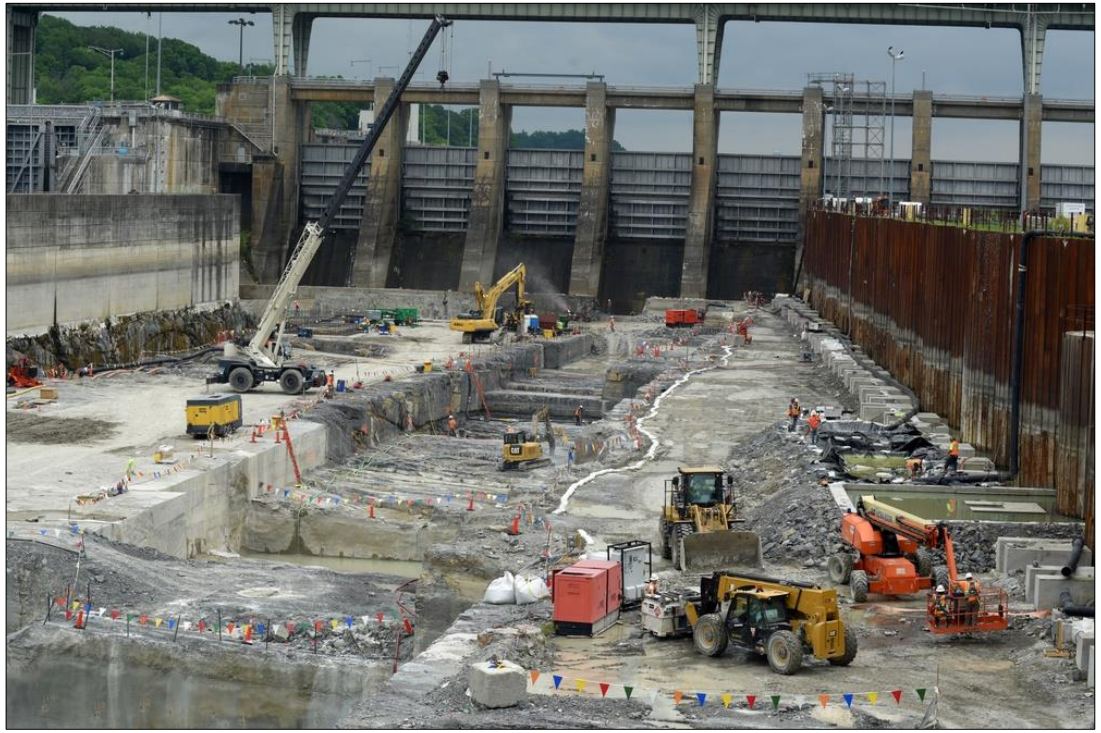
Mr. Thomas Smith, P.E.
Chief, Operations & Regulatory Division
USACE Headquarters

National Waterways Conference
27 October 2022

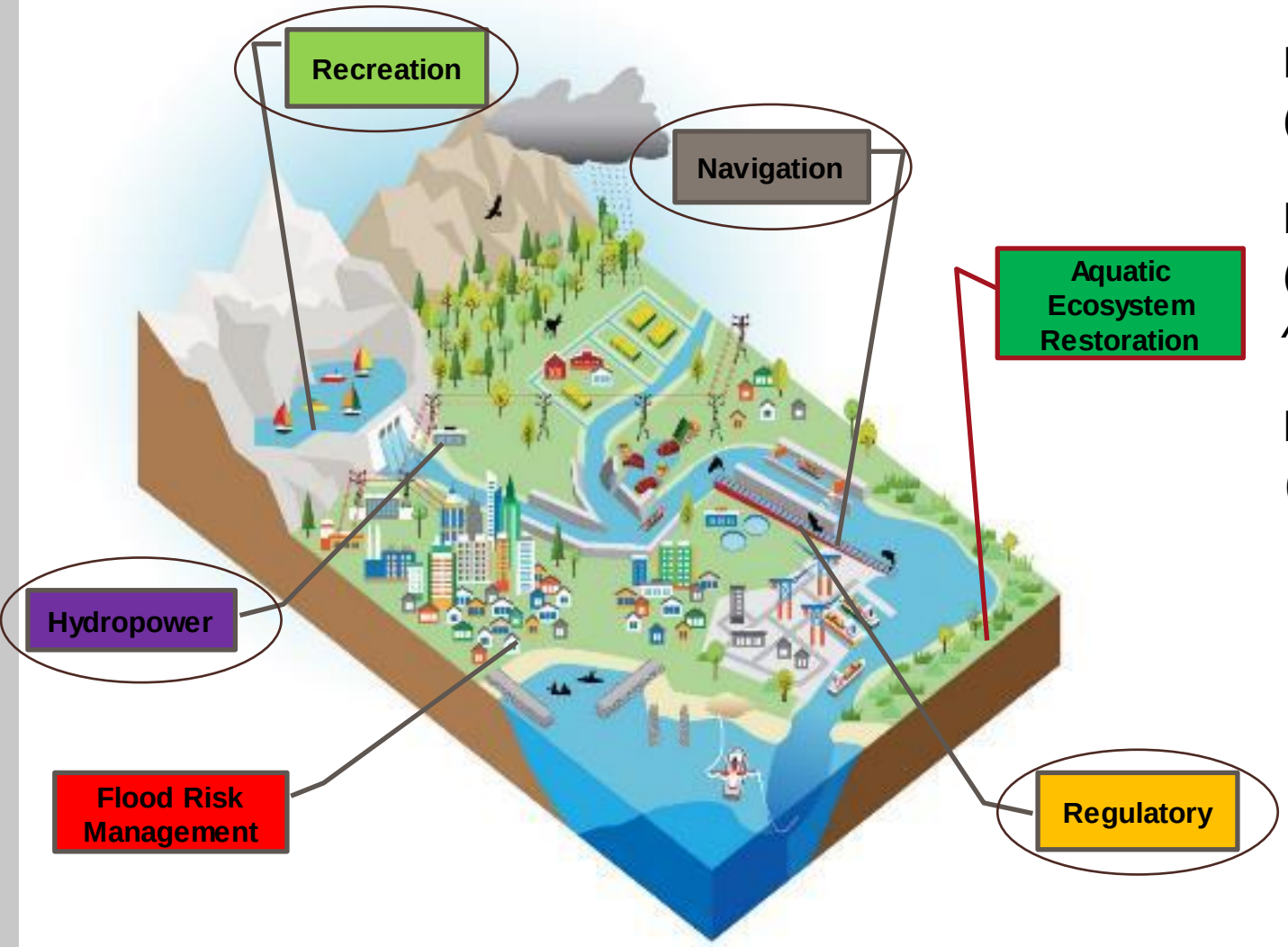
US Army Corps of Engineers®

ASSISTANT SECRETARY OF ARMY FOR CIVIL WORKS (ASA(CW)) LINES OF EFFORT

- **Upgrade Waterways and Ports to Strengthen Supply Chains and Economic Growth**
- **Build innovative, climate Resilient infrastructure to protect Communities and Ecosystems**
- **Modernize Civil Works Programs to better serve the needs of disadvantaged communities**
- **Invest in Science, Research and Development to deliver enduring water-resource solutions**
- **Strengthen communications and relationships to solve water resource challenges**



CIVIL WORKS PROGRAM - 2022 APPROPRIATIONS



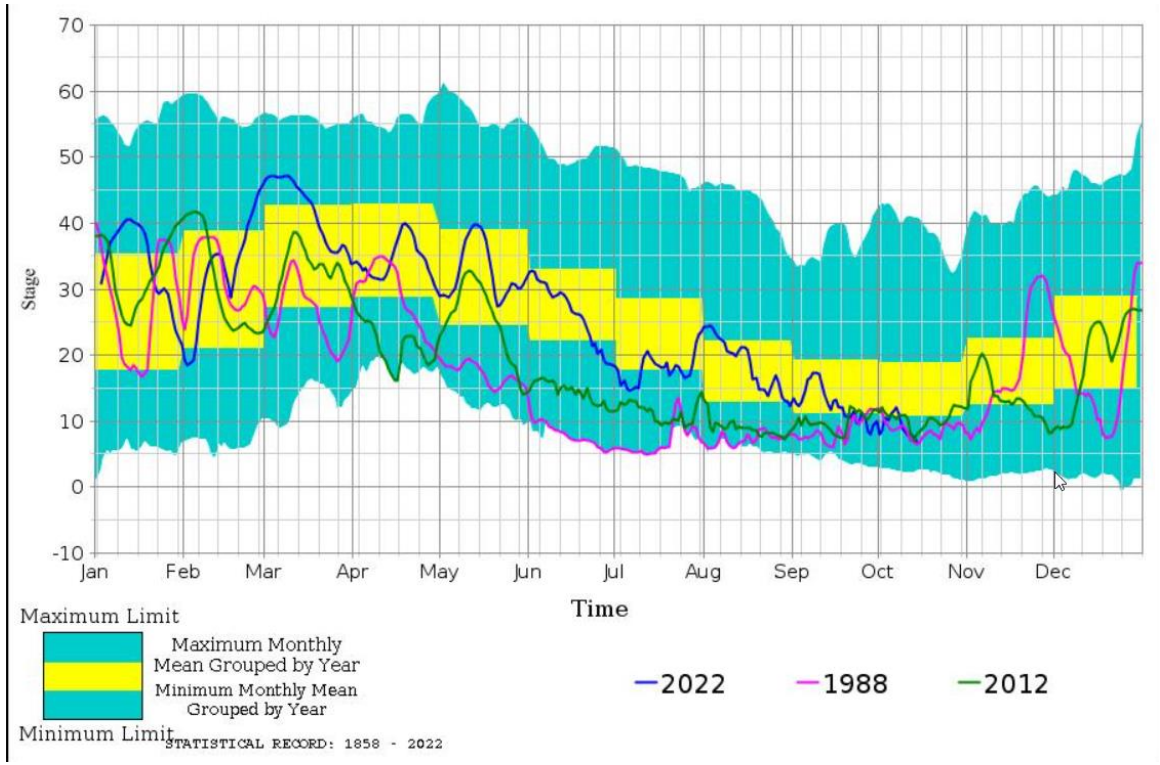
Infrastructure Investment and Jobs Act: **<u>$17.1B</u>**
(signed into law 15 Nov 2021)

FY22 Supplemental Appropriations: **<u>$5.7B</u>**
(Disaster Relief Supplementation Appropriations Act)

FY22 Regular Appropriations: **<u>$8.3B</u>**
(President's Budget - $6.7B)

FY22 Appropriations:
approximately **<u>$30B</u>**

USACE LOW WATER RESPONSE OCT 2022



MS Valley Low Flow Status
October 16, 2022

Upper Mississippi River

	Current	% of Cairo Flow	28 Day Projected	% of Cairo Flow
Total Flow	58,100	40	50,000	36

Missouri River

	Current	% of Cairo Flow	28 Day Projected	% of Cairo Flow
Total Flow	40,000	28	35,000	25
Gavin's Pt Release	30,000	21	30,000	21
Main Stem Flows	10,000	7	5,000	4

Ohio River

	Current	% of Cairo Flow	28 Day Projected	% of Cairo Flow
Total Flow	47,000	32	40,000	29
Main Stem Flow	17,000	12	15,000	11
Kentucky/ Barkley Flow	30,000	21	30,000	21

Ohio River @ Cairo

	Current	28 Day Fcst
Total Flow	145,000	140,000
Stage	5.0	4.5
Critical Stage		3.0

Arkansas/White Rivers

	Current	% of Vburg Flow	28 Day Projected	% of Vburg Flow
Total Flow	16,000	7	15,000	7

MS River @ Vicksburg

	Current	28 Day Fcst
Flow	230,000	210,000
Stage	3.0	0.5
Critical Stage		0.0

Critical stage refers to stage at which extended closure of river may be triggered

Probable Dredge Areas	
Main Stem	8 of 15, 7 remaining to dredge
Harbors	6 potential sites, yet to be dredged

- Managing reservoirs to add water
- Continuing communication with Industry
- Channel marking in coordination with USCG
- Maintaining authorized depth where possible

USACE NAVIGATION UPDATE

Upgrade Waterways and Ports to Strengthen Supply Chain

- 13 Post Panamax Port Deepening Projects on-going or funded
- 8 Lock and Dam Modernization/New Construction Projects on-going or funded
- Leveraging the Capital Investment Strategy

Strengthen Communications and Relationships

- Increased regional and enterprise coordination meetings for dredge scheduling
- Improved partnerships through strategic stakeholder and industry engagements

Build Innovative, Climate Resilient Infrastructure

- Focus on increasing beneficial reuse of dredged material

Modernize Civil Works Programs

- Developing remote lock operations
- Coordinating closures to complete necessary major lock maintenance and rehab
- Improving major maintenance and rehab policies to efficiently manage critical assets - locks, breakwaters, and jetties

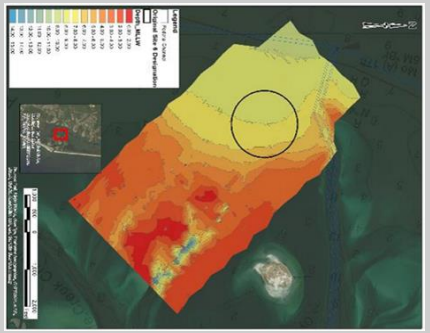
Charleroi L&D construction photos (LRP)

Incoming tow at Bankhead Lock & Dam (SAM)

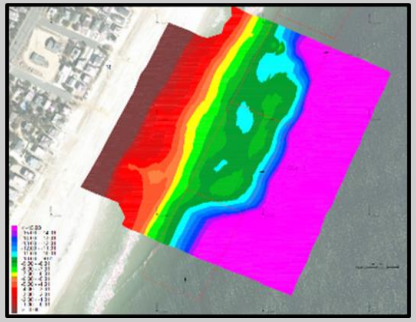
HOW ARE WE INCREASING BENEFICIAL USE?

- **Enterprise-wide goal to more than double environmentally acceptable beneficial use that delivers safe, reliable, cost efficient, sustainable, and resilient projects**
- **Quantify and document current practices in Navigation projects to showcase success and highlight potential opportunities to increase beneficial use**
- **Develop innovative solutions and partnerships**
- **Examine and update our existing policies**
- **Identify and address challenges – beneficial use obstacles root cause analysis**

Beneficial uses are defined as "productive and positive uses of dredged material, which cover broad use categories ranging from fish and wildlife habitat development, to human recreation, to industrial/commercial uses" (Engineer Manual 1110-2-5025, 2015).



1122 Barnegat Inlet Island Creation Location (NAP)



1122 Barnegat Inlet Island Nearshore Nourishment (NAP)

HYDROPOWER UPDATE

Strom Thurmond Powerhouse

Bonneville 2nd Powerhouse

Department of Energy Press Release October 21, 2022

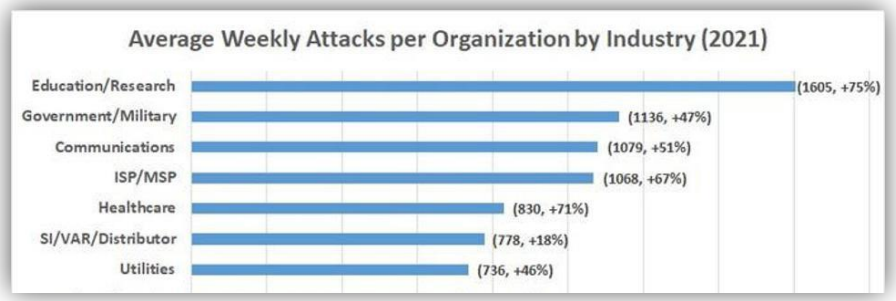
- Hydropower will be a key clean energy source in transitioning away from fossil fuels and meeting President Biden's goals of 100% carbon pollution free electricity by 2035 and a net-zero carbon economy by 2050.

- Hydropower has long provided Americans with significant, reliable energy, which will now play a crucial role in achieving energy independence and protecting the climate.

USACE Actions

- Addressing Non-Power Related Costs
- Improving Hydropower Acquisition and Delivery
- Operations and Maintenance Efficiencies

OPERATIONAL TECHNOLOGY CYBERSECURITY KEY INITIATIVES




JOINT CYBERSECURITY ADVISORY

Co-Authored by:

TLP:WHITE

Product ID: AA22-103A

April 13, 2022

APT Cyber Tools Targeting ICS/SCADA Devices

SUMMARY

The Department of Energy (DOE), the Cybersecurity and Infrastructure Security Agency (CISA), the National Security Agency (NSA), and the Federal Bureau of Investigation (FBI) are releasing this joint Cybersecurity Advisory (CSA) to warn that certain advanced persistent threat (APT) actors have exhibited the capability to gain full system access to multiple industrial control system (ICS)/supervisory control and data acquisition (SCADA) devices, including:

- Schneider Electric programmable logic controllers (PLCs),
- OMRON Sysmac NEX PLCs, and
- Open Platform Communications Unified Architecture (OPC UA) servers.

** open source*

1. Operational Technology Monitoring System (OTMS) & Monitoring Center (OTMC)

- Purpose built for OT networks to implement a continuous monitoring solution without creating additional system vulnerabilities
- Collects OT network traffic via passive monitoring and securely transfers to the OT Monitoring Center (OTMC) for analysis
- Applies patented OT-aware behavioral analytics and Layer-7 deep packet inspection
- Zero performance impact on the network and network devices

2. Cyber Risk Assessment Automated Tool

- Identify Vulnerabilities
- Add Consequence Data
- Record Interdependencies
- Develop a Cyber Risk Value
- Identify Risk Reduction Goals

3. National Test Lab

- Standardize OT Patching
- New Technology Testing & Innovation
- Incident Response and Forensics
- Trouble shooting for sites

4. Operational Technology Cybersecurity Design Requirements

- Ensure designs for OT meet minimum cyber standards
- Standardize OT cyber design across USACE

REGULATORY PROGRAM

Off-Shore Wind

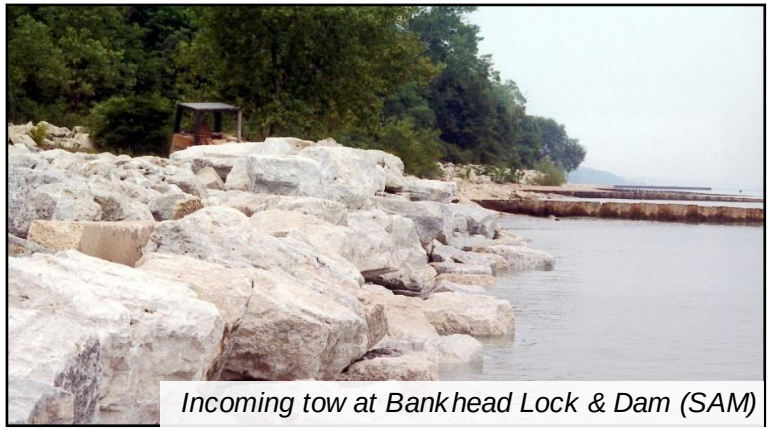
- Currently reviewing 10 Individual Permit Actions supporting establishment of new off-shore wind facilities.
- As a cooperating agency for NEPA and FAST-41 working closely with applicants and BOEM (Lead Agency)

Procedures for Protection of Historic Properties (Appendix C)

- Based on comments received on the "Modernizing Civil Works" Federal Register Notice, developing options for removing 33CFR 325 Appendix C and ensuring that National Historic Preservation Act responsibilities are appropriately addressed in line with USACE Regulatory authorities.

USACE Action Plan

- Supporting Plan to the Biden-Harris Permitting Action Plan.
- Focused on efforts to improve both quality and timeliness of Regulatory decisions



Incoming tow at Bankhead Lock & Dam (SAM)

THE BIDEN-HARRIS PERMITTING ACTION PLAN

The Biden-Harris Permitting Action Plan establishes that Federal environmental review and permitting processes will be:

- Effective, efficient, and transparent to accelerate delivery of well-designed infrastructure projects, to ensure predictability and timeliness for project sponsors and stakeholders;
- Guided by the best science, information, and complete environmental effects analysis to promote the best outcomes; and
- Shaped by early and meaningful public input – particularly from disadvantaged communities – and through partnership with State, territorial, and local governments and in consultation with Tribal Nations2 to deliver results for all Americans.

To deliver on these expectations, the Action Plan contains five key elements that build on strengthened Federal approaches to environmental reviews and permitting:

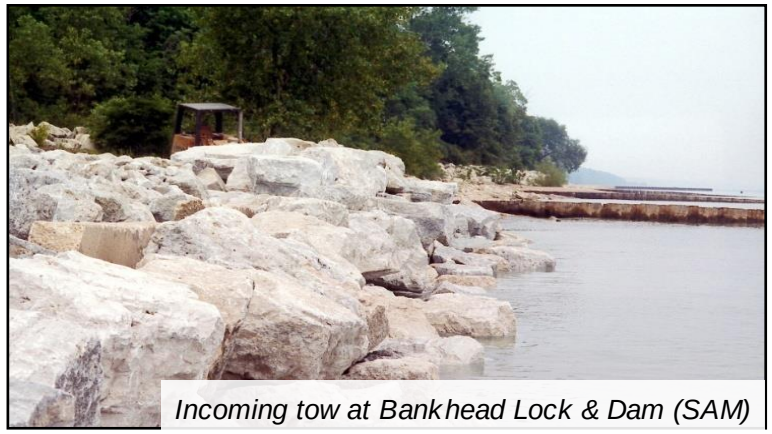
(1) accelerating permitting through early cross-agency coordination to appropriately scope reviews, reduce bottlenecks, and use the expertise of sector-specific teams;

(2) establishing clear timeline goals and tracking key project information to improve transparency and accountability, providing increased certainty for project sponsors and the public;

(3) engaging in early and meaningful outreach and communication with Tribal Nations, States, territories, and local communities;

(4) improving agency responsiveness, technical assistance, and support to navigate the environmental review and permitting process effectively and efficiently; and

(5) adequately resourcing agencies and using the environmental review process to improve environmental and community outcomes

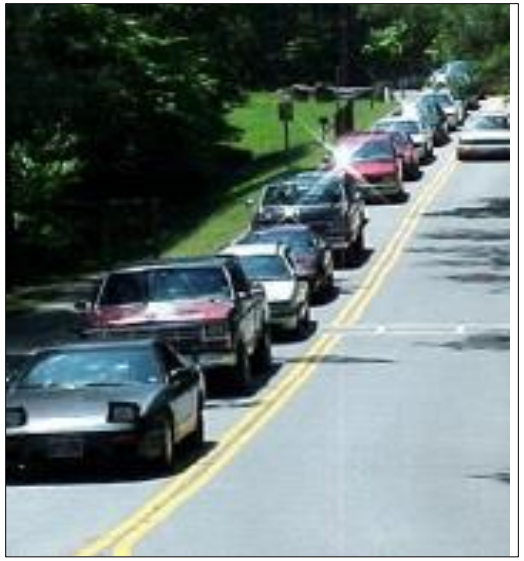


Incoming tow at Bankhead Lock & Dam (SAM)

NATURAL RESOURCES CHALLENGES & INITIATIVES

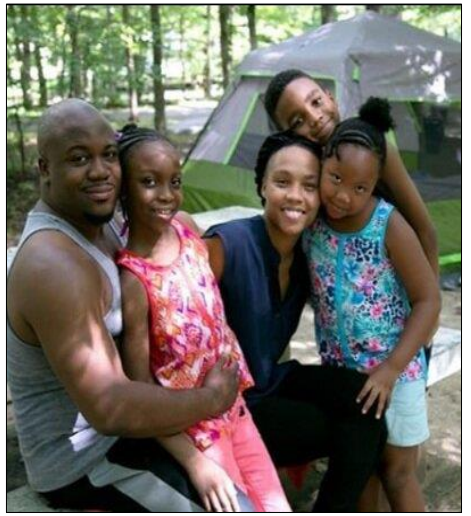
CHALLENGES

- Visitor Demand Up 18M visitors (2021: 272M)
- Public access infrastructure requiring increased maintenance
- Increasing land use requests
- Severe storm damages
- Invasive Species Concerns



OPPORTUNITIES

- **Support to underserved communities.**
  - Over 80% of USACE recreation areas are within 30 miles of disadvantaged communities.
  - Recreation program contributes $14B in visitor spending to local communities and supports 217K jobs
- **Administration Initiatives:**
  - IIJA/DRSAA - $101M repairs (FY22-23)
  - Energy & Water Sustainability – $23M (FY22)
  - Electric Vehicle Support Equipment – $8M (FY22)
  - FICOR – Federal Interagency Council on Outdoor Recreation
  - America the Beautiful – Protect 30% of America's lands by 2030

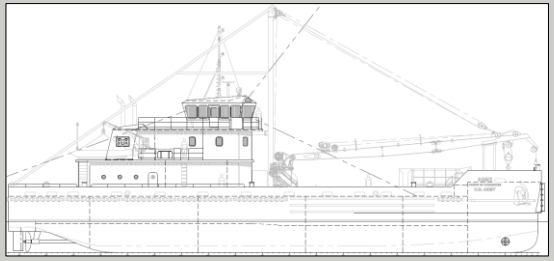


USACE MARINE DESIGN CENTER

Medium Class Hopper Dredge What We Are Building

- Hopper capacity: 6,000 CY
- Dredging Depth 35-65 feet
- Diesel Electric Power System
- In-service FY26

NY Drift Collection Catamaran



- First battery powered vessel in USACE fleet: under construction
- Diesel-Electric Hybrid: reduce GHG emissions
- In-service Jan 2024

MISSION: Provide full service Naval Architectural, Marine Engineering, Electrical Engineering, and Vessel Acquisition capability to support the U.S. Army Corps of Engineer's Fleet and other Federal customers within areas of expertise.

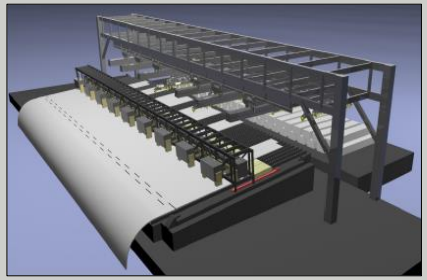
Current Initiatives:

1) **Replace Medium Class Hopper Dredge McFarland**
2) **Conceptualize "Near-Zero" GHG Emissions Dustpan Dredges**
3) **Upgrade the Revetment System Process**
4) **Replace NY Driftmaster with diesel-electric battery powered hybrid**

"Near-Zero" GHG Emission Dustpan Dredges Concept

- Utilize Emerging Power Technology
- Electric Vessel Power System
- Modern design for improved efficiency
  - Dredging
  - Propulsion

Revetment System



- Armor 1 (In-service: FY24)
- Bank Grading (In-service FY23)
- Mat Casting (under development)

ASSET MANAGEMENT UPDATE

Modernize Civil Works Programs

- Total Maintenance Backlog Policy
- Operations & Maintenance Budget prioritization
- Data modernization to support inland navigation risk assessments
- Operational Condition Assessment protocols
- Operational Status Reporting Policies and Reliability

Build Innovative, Climate Resilient Infrastructure

- Indicators for asset longevity and levels of performance
- Revise Flood Risk Management and Inland Navigation Component lists
- Align investments with Enterprise value measures
- Hydropower, Inland Navigation, Flood Risk Management Maintenance Standards
- Commonality of Components Enterprise strategy
  - Industry benchmark, gap analysis, visioning, strategic plan and leadership review
- Inland/coastal training structures condition assessment

Questions?

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