A Brief History of Restoration Efforts on Lake Pepin

By Rylee Hince

Lake Pepin Legacy Alliance

Executive Director

St. James Hotel
Red Wing, Minnesota
Monday February 23rd, 2015

<u>Participating Entities</u>

Lake Pepin Legacy Alliance

Red Wing Wildlife League

Audubon Minnesota

Minnesota Department of Natural Resources

Wisconsin Land Trust (now Landmark Conservancy)

Wisconsin Department of Natural Resources

Mississippi River Fund (now Mississippi Park Connection)

Partners at this meeting discussed existing institutional objectives, process, costs, benefits, and opportunities for collaboration. Specifically:

- **Bank erosion and deterioration.**
- **Bird and wildlife habitat.**
- **Moist soil loss and blown out dikes.**
- **Stabilization of existing islands.**
- **Loss of navigation**
- **Goose Lake and Dead Slough Lake**
- **Cottonwood regeneration within floodplain forests.**
- **Invasive species removal.**

St. James Hotel
Red Wing, Minnesota
April 4, 2018

Public Meeting and Open House

The United States Army Corps of Engineers and the Wisconsin Department of Natural Resources agreed to pursue a project within the Pierce County Islands Wildlife Management Area

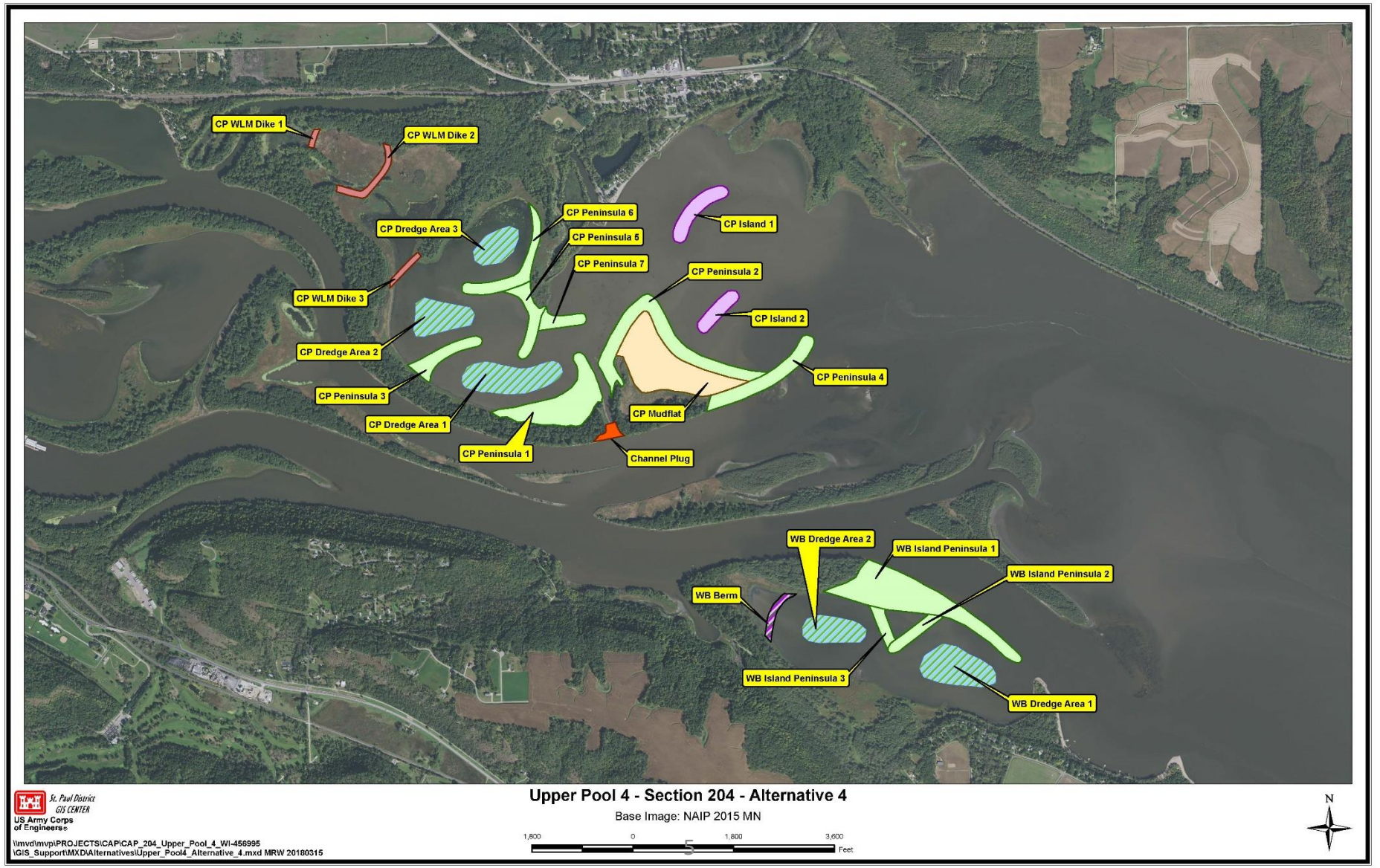
(managed by the Wisconsin DNR)

Participating Entities

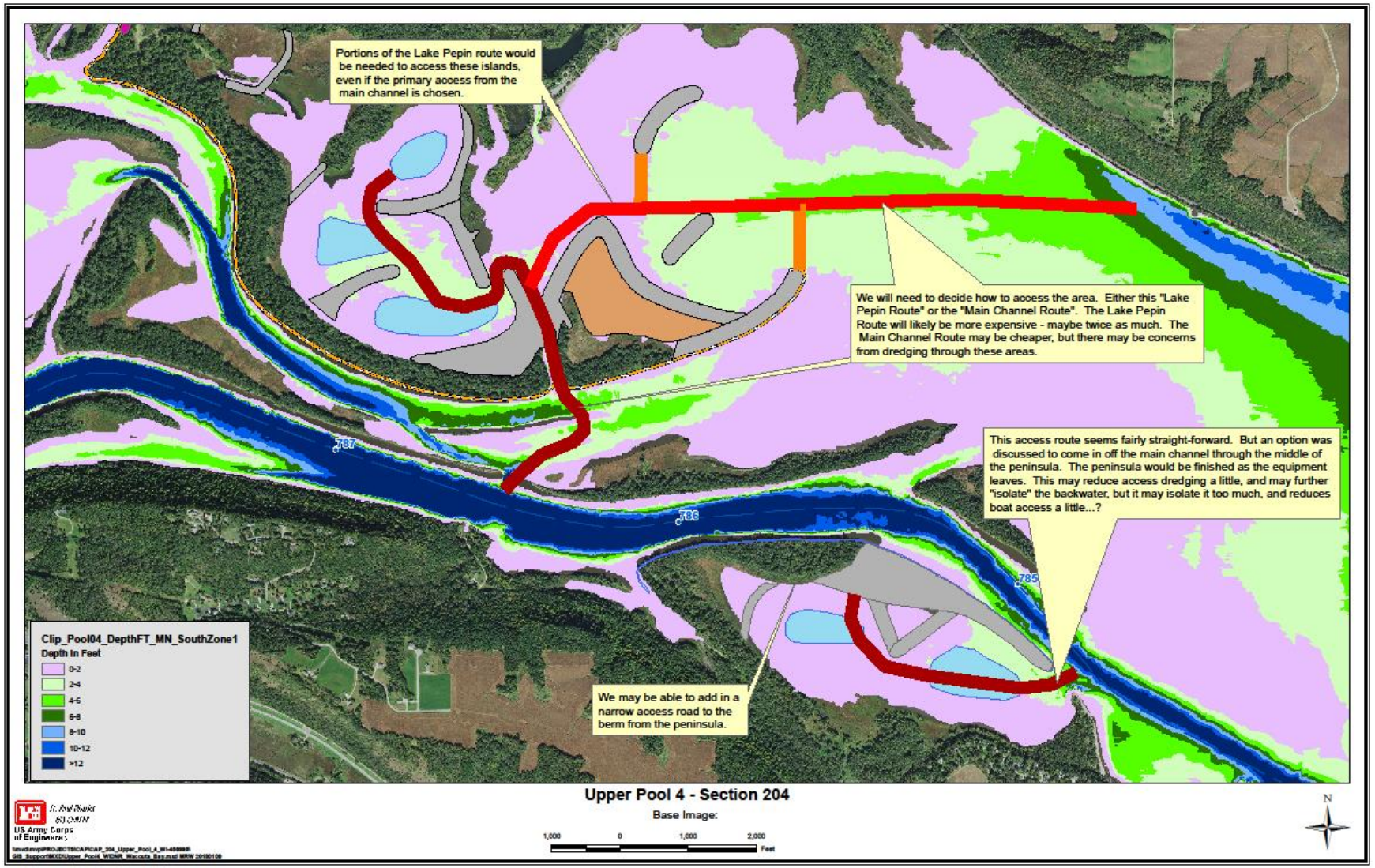
U.S. Army Corps of Engineers, Wisconsin DNR, Minnesota DNR, Lake Pepin Legacy Alliance, Audubon Minnesota, Ducks Unlimited, US Fish and Wildlife Service , Public, Industry, NGO's

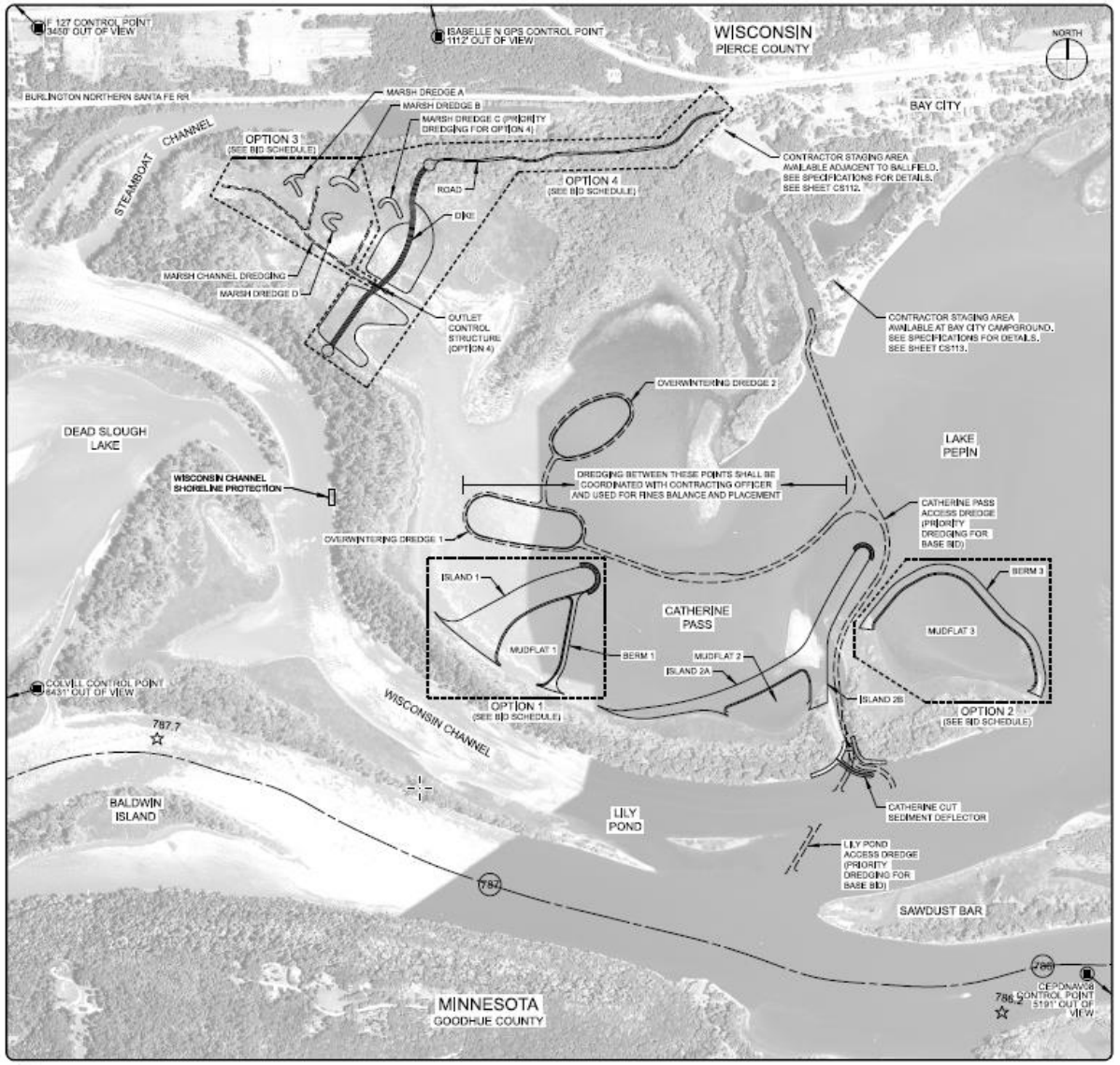
- Project Area History
- The lake covers 26,000 acres.
- An average of 1.7 miles wide, it is the widest natural reach of the entire Mississippi River.
- Upper Lake Pepin consists of channel border islands and backwater lakes grading into an expansive, shallow open water area with little physical structure.
- Valuable cultural, aesthetic, recreational and economic asset to local communities.
- Designated as a globally significant bird area.

Alternative 4 – ALL POSSIBLE FEATURES



Access Dredging (DRAFT OPTIONS)





C9 PROJECT FEATURES MAP

SCALE: 1" = 600'

0 600' 1200'

VERTICAL AND HORIZONTAL CONTROL POINTS				
NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
ISABELLE N GPS	911,433.83	3,022,884.63	776.74	NGS PID DL4231
COLVILL	902,137.42	3,013,071.86	723.34	NGS PID DO7907
F 127	912,752.89	3,016,835.51	782.57	NGS PID PP0431
CEPDNAV08	897,919.39	3,033,422.08	724.06	ALUMINUM CAP WITH ALUMINUM COVER NEAR WACOTA, MINNESOTA. (GRACE TRAIL/LAKEVIEW AVENUE)

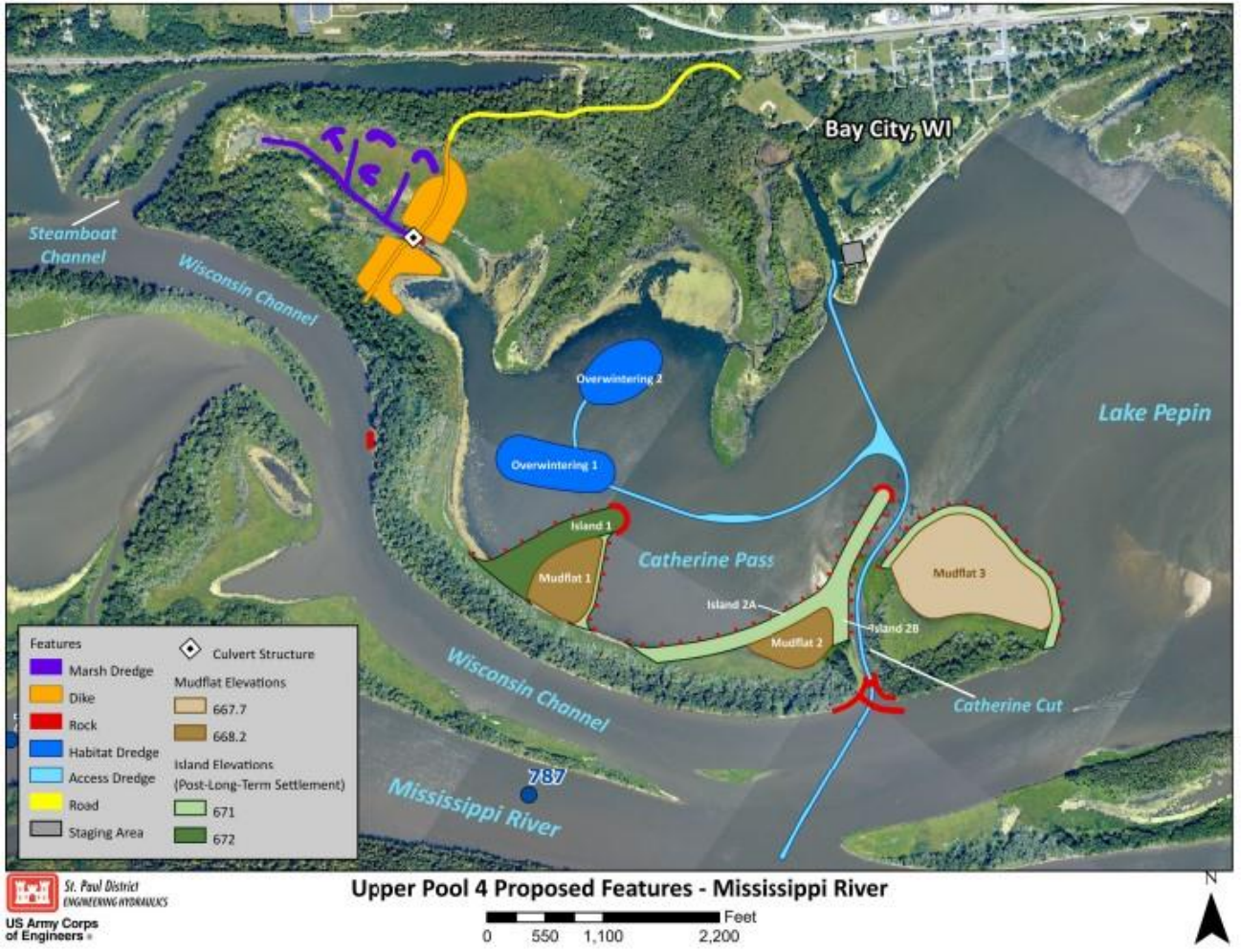
NOTE: COORDINATES FOR HORIZONTAL CONTROL POINTS LISTED SHALL BE VERIFIED BY THE CONTRACTOR.

A11 TABLE - CONTROL POINTS

SCALE: N.T.S.

COORDINATE SYSTEM (HORIZONTAL CONTROL): NAD 83 (2011) MN SPCS, SOUTH ZONE (US SURVEY FT - COMBINED FACTOR (CF): 0.999967983)

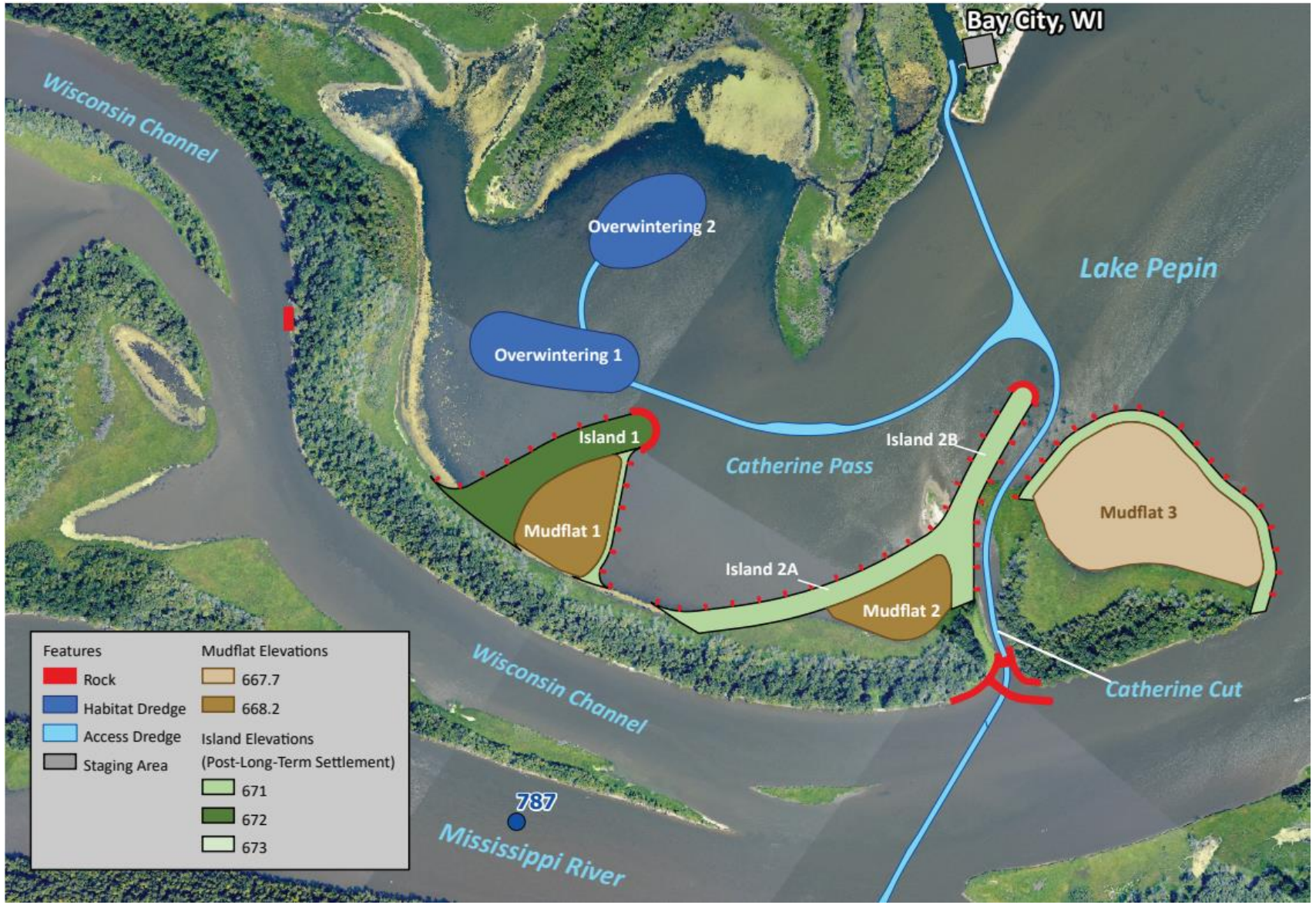
ELEVATION DATUM (VERTICAL CONTROL): NAVD 88 GEOID 12B



Refined Schematic for Bay City Project

**Wacouta Bay removed from recommendations due to high project costs.

Final Project Features for Bay City Restoration
Total Project Cost - $22 Million ($4 million raised locally)

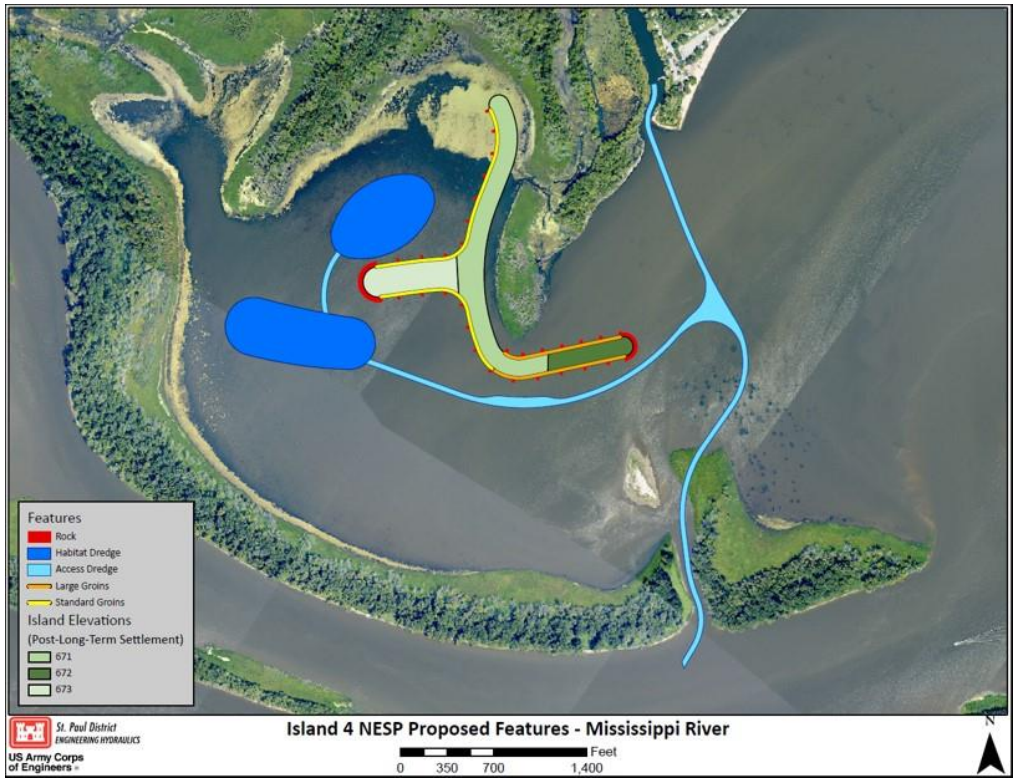


And Now…

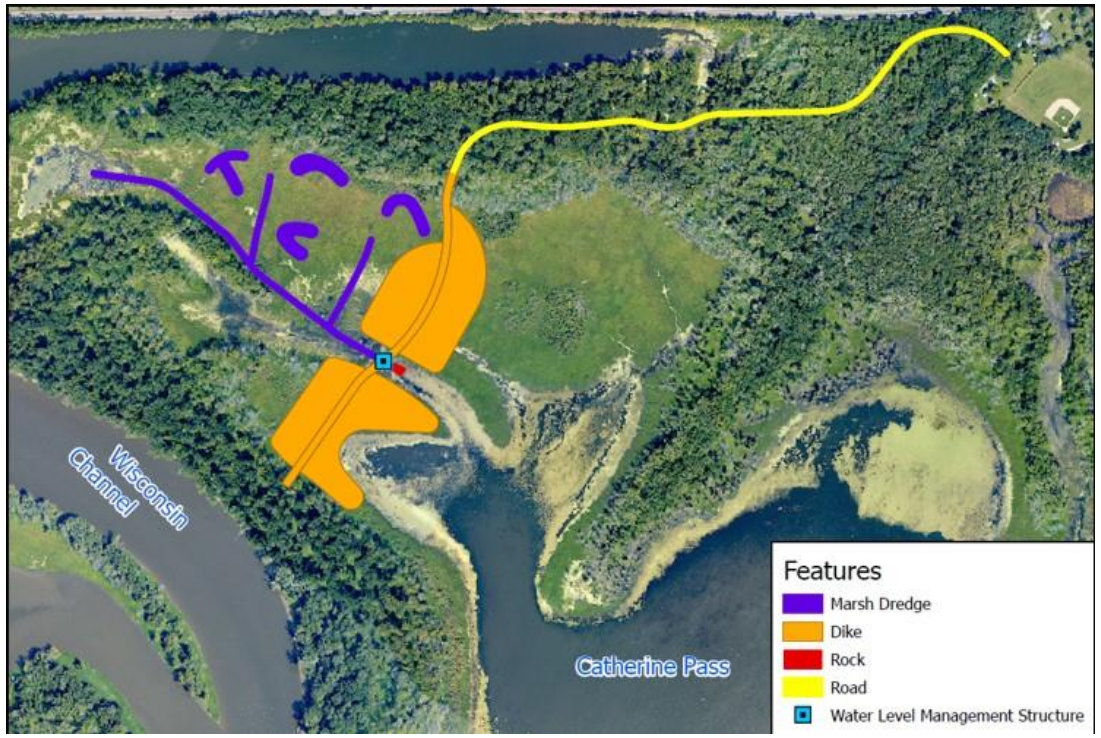
An additional $30 Million is coming to the Head of Lake Pepin through the Navigation and Ecosystem Sustainability Program.

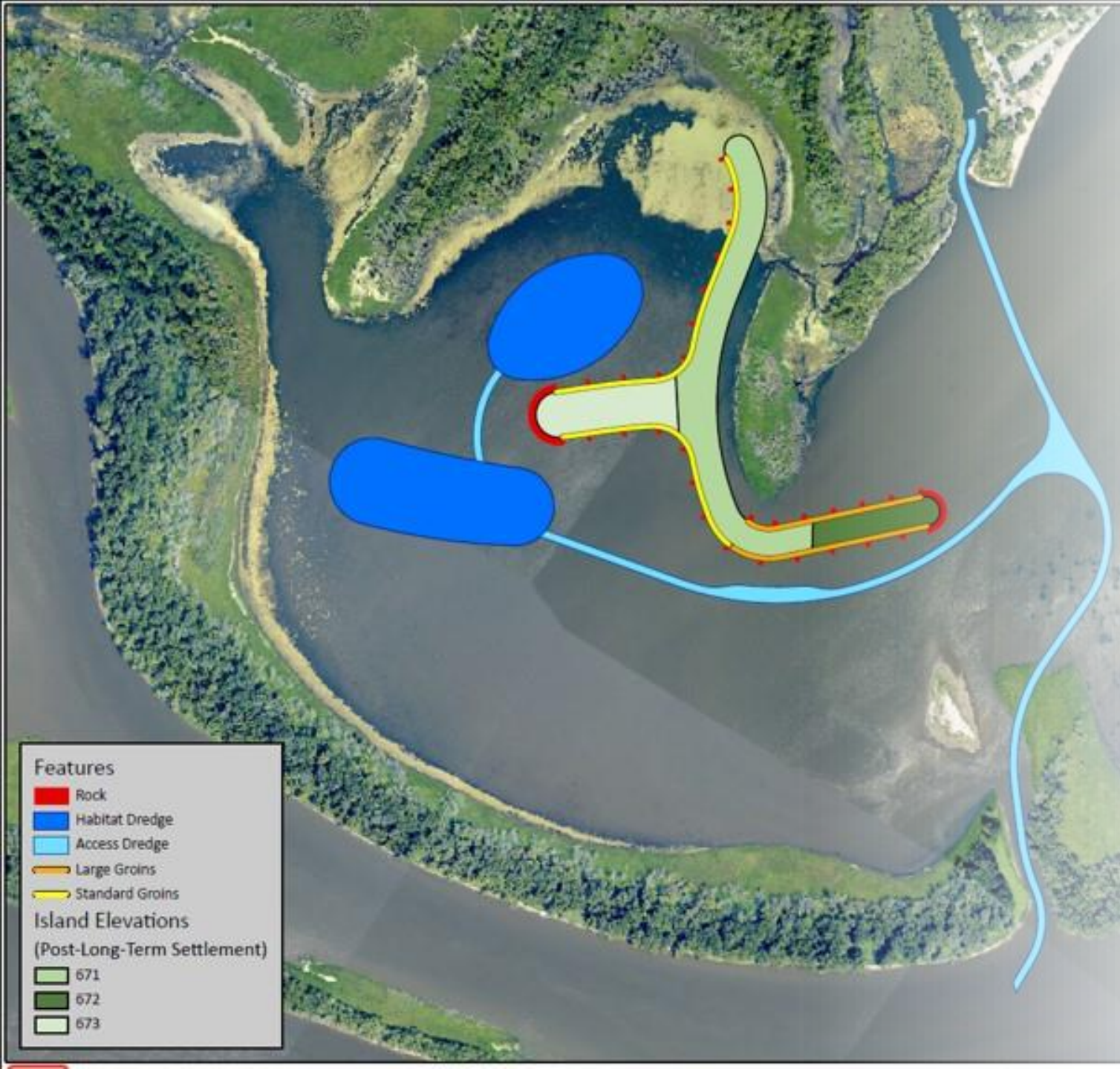
These additional features will be paid with 100% Federal Funding.

Estimated Construction Cost: $13 Million



Estimated Construction Cost: $6 Million

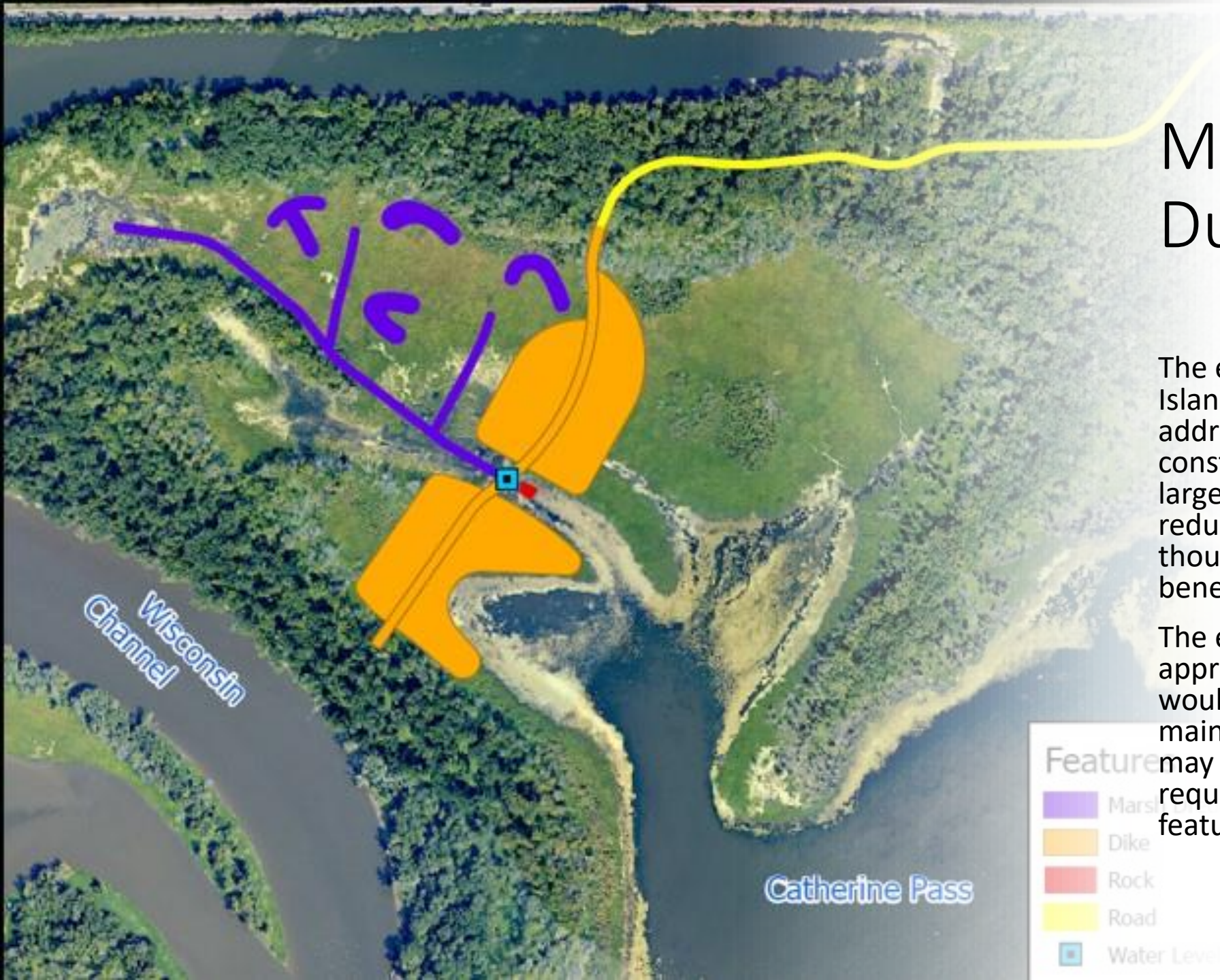




Island 4 in Bay City

Island 4 was initially a feature of the Section 1122 Upper Pool 4 Pierce County Islands project that was awarded in September 2022. This feature was removed from this project during the design phase due to funding constraints. Island 4 was initiated as a stand-alone project in December 2022 as part of a NESP systemic mitigation program.

The team is expected to complete the design phase and award a construction contract in summer 2023. The estimated construction cost is $13 million, and construction is estimated to be completed by the fall of 2025.



Marsh Dredging for Duck Habitat

The existing Upper Pool 4 Pierce County Islands project (1122 project) considered addressing these deficiencies through the construction of numerous features in a large project area. Funding constraints reduced the scope of the project even though these features would have been beneficial.

The estimated Total Project Cost is approximately $6M. Project features would require minimal operation and maintenance costs. Features of this project may be constructed above the OHWM, requiring a non-federal cost share for that feature.

NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)

ST. PAUL DISTRICT- ROCK ISLAND DISTRICT - ST. LOUIS DISTRICT

WACOUTA BAY

US Army Corps of Engineers

PROJECT SUMMARY

The Army Corps of Engineers , in partnership with the Wisconsin Department of Natural Resources, is implementing a navigation and ecosystem sustainability program project in Wacouta Bay which is located at the head of Lake Pepin in Pool 4 of the Mississippi River. The study area spans the entirety of Wacouta Bay, located on the right descending side of the channel, approximate river miles 784-786. Potential project features are all below the Ordinary High Water Mark.

PROBLEMS

Concerns over habitat deficiencies in Wacouta Bay, most resulting from sedimentation and turbidity, include: reduced aquatic and terrestrial habitat diversity and quality, lack of aquatic vegetation, lack of protected wetlands, and reduced abundance of fish and wildlife. Deep protected aquatic habitat for centrarchid fish and associated species is lacking in the backwaters and large shallow open water areas of Upper Lake Pepin.

OBJECTIVES

1. Increase the diversity and acreage of aquatic vegetation
2. Increase the health and quantity of floodplain forest
3. Improve the quality of habitat for riverine and backwater fish species
4. Increase the quantity and quality of wetland habitat
5. Protect existing shoreline habitat and increase the linear feet of sheltered bank and associated littoral habitat

MEASURES

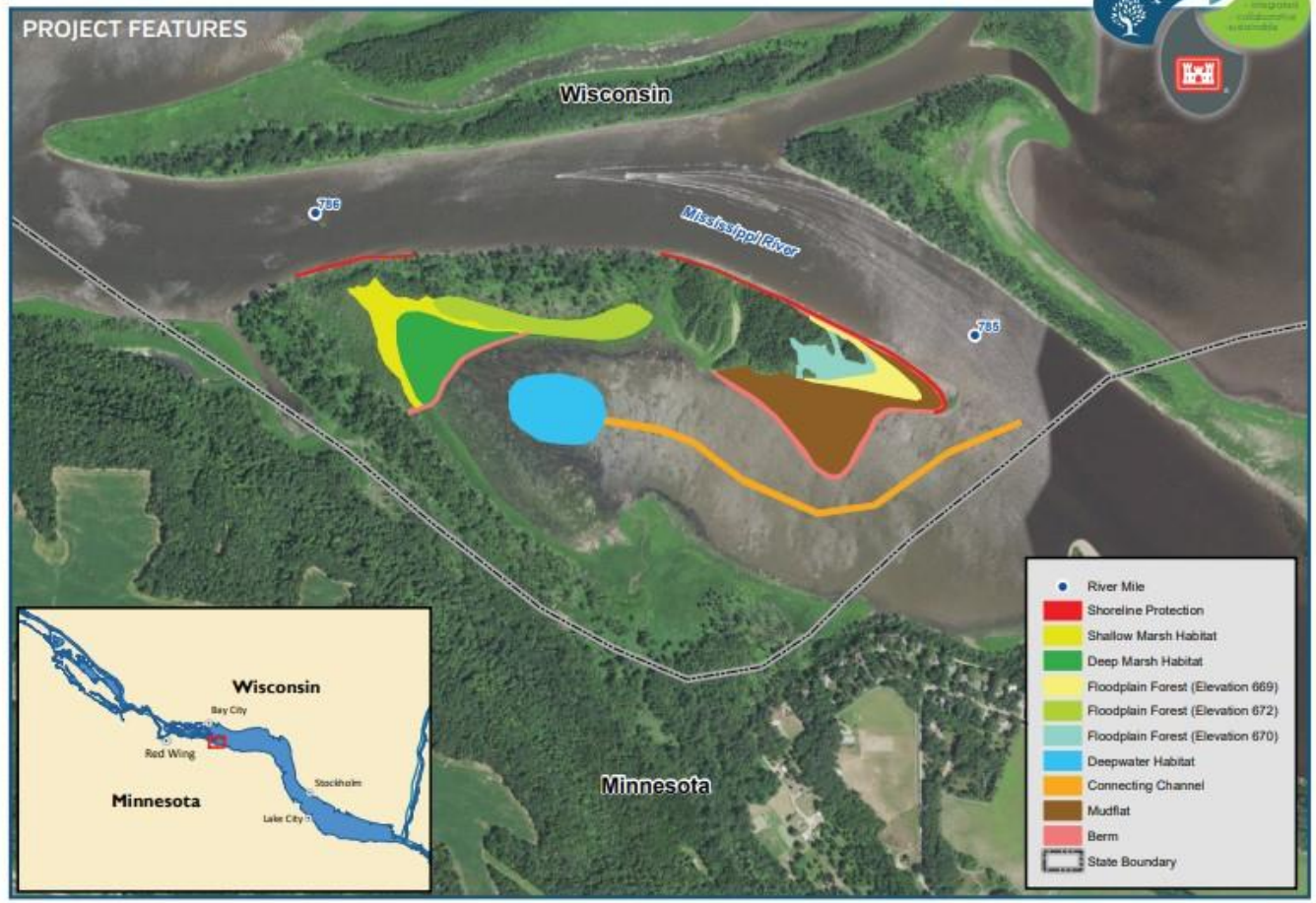
- Peninsula Building and Enhancement
- Forest Enhancement and Creation
- Backwater Restoration/Dredging
- Shoreline Protection
- Use of Dredged Material for Emergent Wetlands and Mudflats

PROJECT STATUS

- Project Delivery Team drafted the alternatives which are now in modeling and analyses
- Project Implementation Report to be completed FY2024
- Construction Contract Award anticipated in FY2025-26

COMMENT

PROJECT FEATURES



ESTIMATED COST ~$12M

PROJECT SCHEDULE

TSP MILESTONE	JUNE	DISTRICT QUALITY CONTROL	AUGUST	ATR, PUBLIC, AND LEGAL & POLICY REVIEW	NOVEMBER	FONSI SIGNED
23 MAY	DRAFT REPORT COMPLETE	JUNE	PUBLIC OUTREACH	SEPTEMBER	SUBMIT FINAL REPORT	DECEMBER

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