Update: Protecting Upper Mississippi River from Invasive Carp

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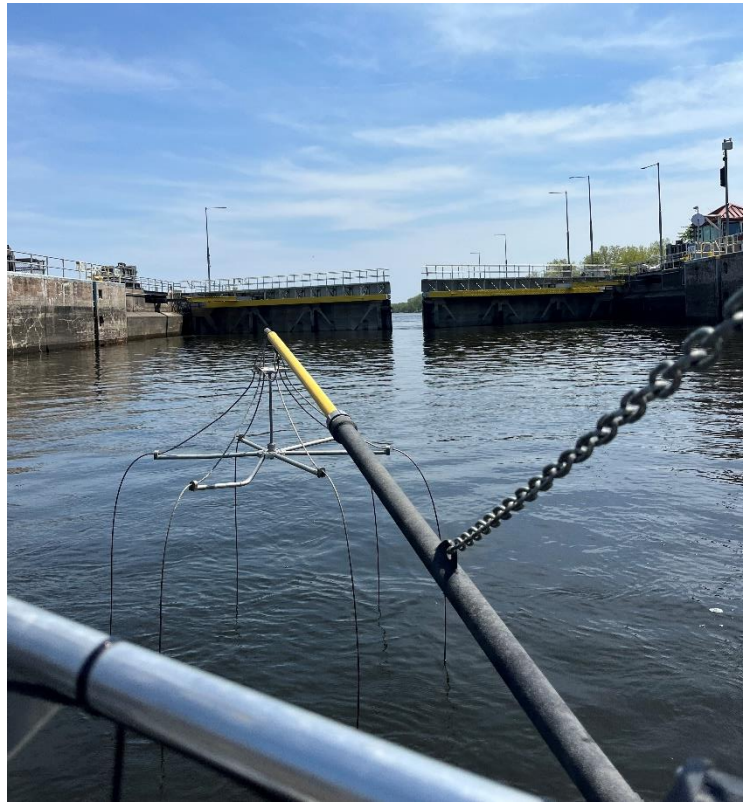
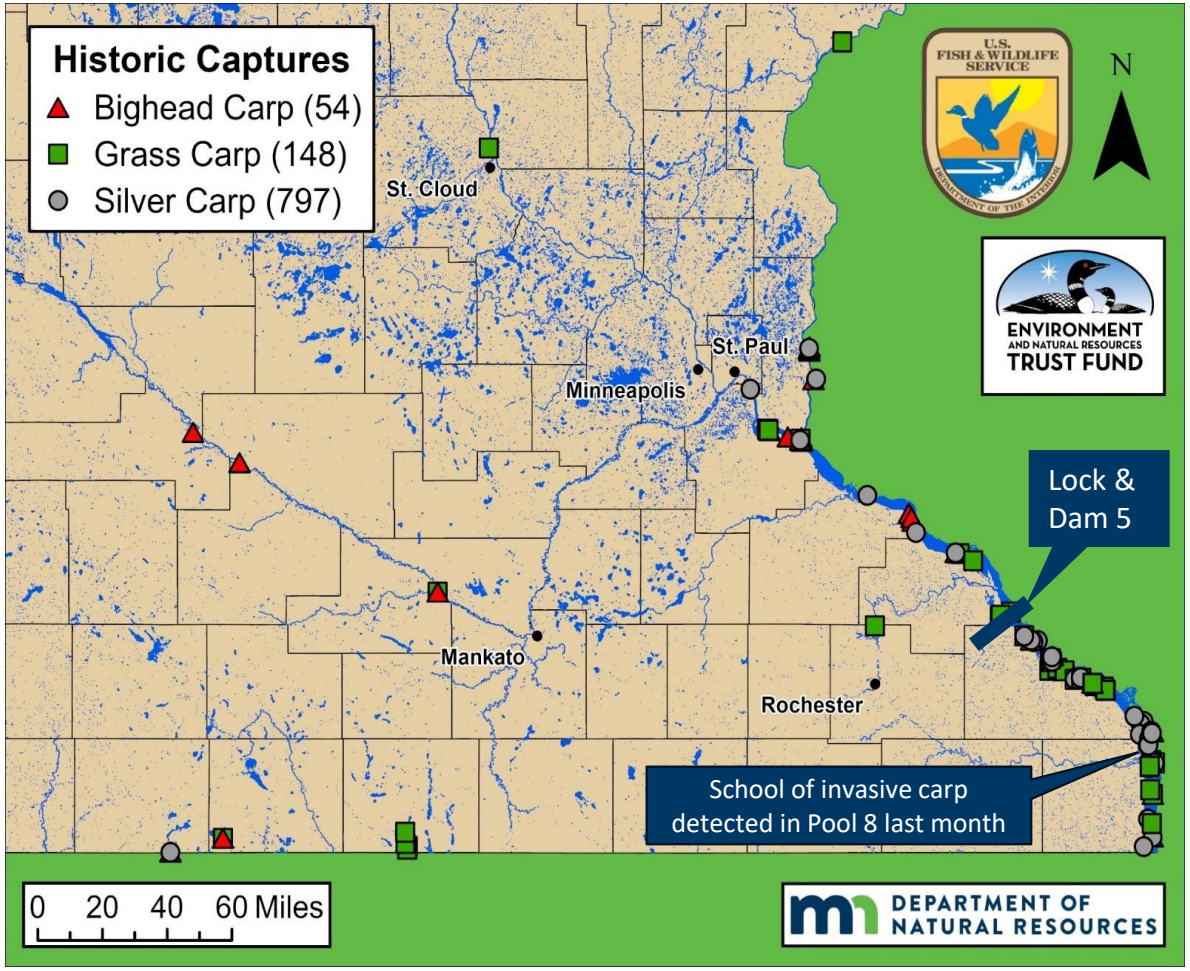
MINNESOTA

Update: Protecting Upper Mississippi River from Invasive Carp

1. Project Background
2. Scoping Phase Updates
3. Upcoming Project Activities: Design and Permitting



Invasive Carp in Minnesota

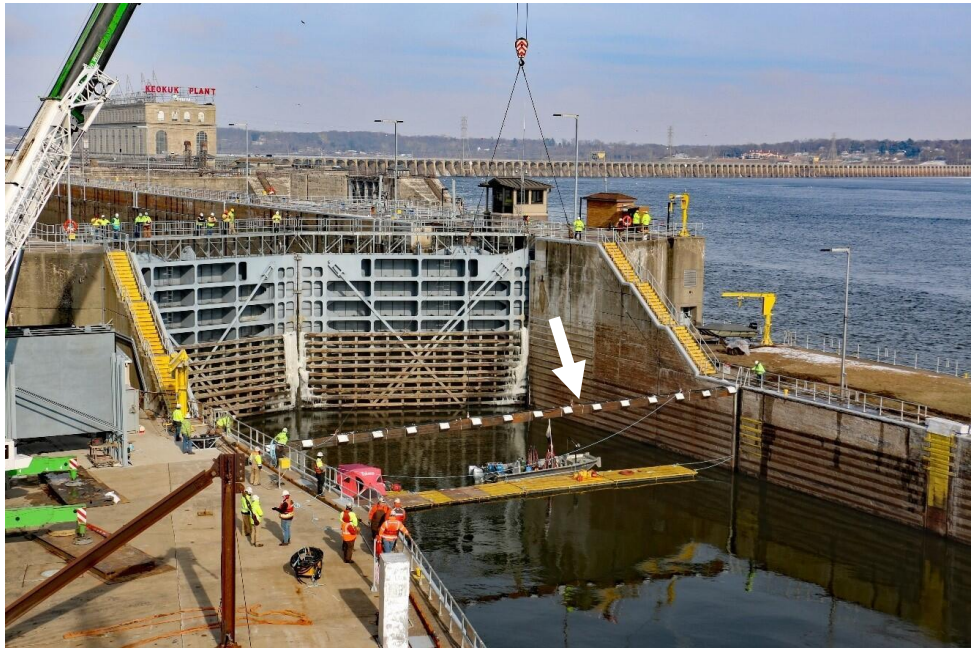


Lock and Dam 5 (LD5)

Photo courtesy of Andrea Fritts, USGS

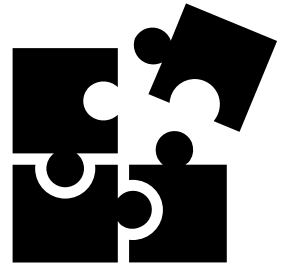
Selective Invasive Carp Deterrents

- Two experimental installations of sound-based deterrents
- Both reduce invasive carp passage through the locks by ~50%, little to no impacts on native species studied



Accomplishment Plan Overview

Activities:
Interagency Project Plan → Scoping → Design → Permitting →
Installation and Construction - - > Operations and Maintenance



Components:
Invasive carp deterrent in the lock

Technologies to support effectiveness of the deterrent:

- Trap & Sort
- Dam Gate Deterrents
- Dam Gate Flow Optimization
- Downstream Removal

Entering Design Phase:

1. Lock Deterrent

Scoping:

2. Trap and Sort at one of these locations
3. Dam Gate Deterrents

Ongoing, separately funded:

4. Dam Gate Flow Optimization
5. Downstream Removals

LD5 Structure and Components of Deterrent System (draft)

Interagency Project Team

USGS
science for a changing world

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IN THE STATE OF MINNESOTA

US Army Corps
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St. Paul District

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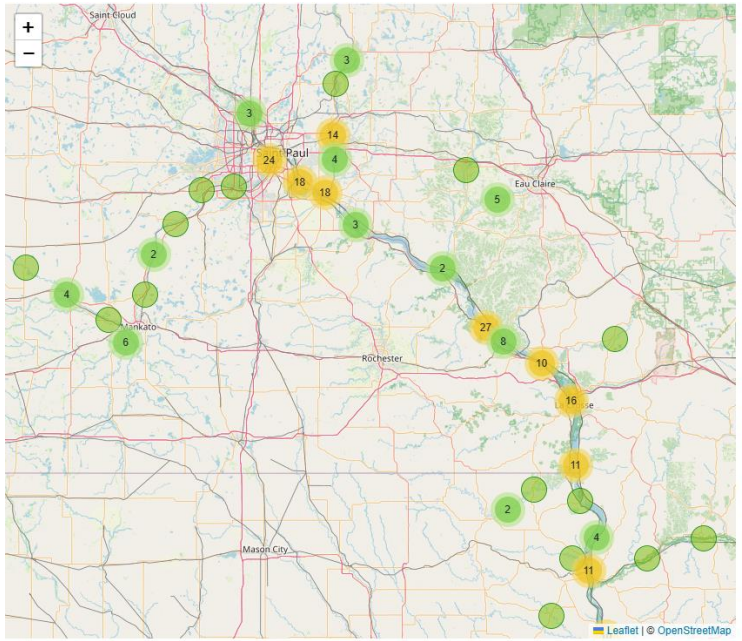
Project Capacity

Lock and Dam 5 Project Coordinator: Carli Wagner

Invasive Carp Contracts and Grants Coordinator: Mike Noreen

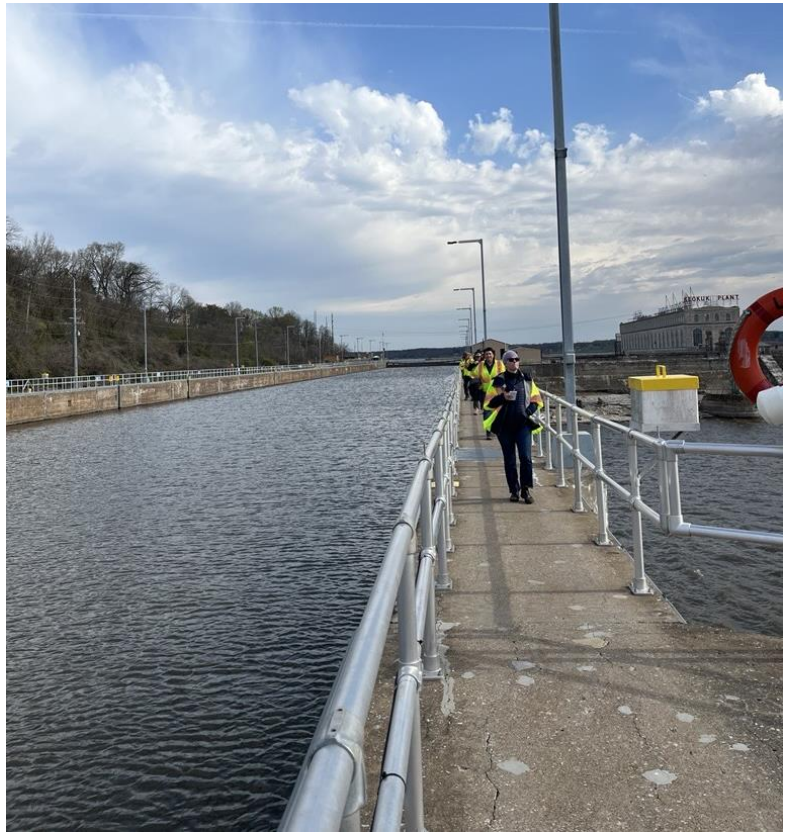
Scoping Updates

- Developed plan to monitor fish passage at LD5
- Tagging efforts began this spring



Scoping Updates

- Scoping for the lock deterrent: toured experimental deterrent installations in IA and KY



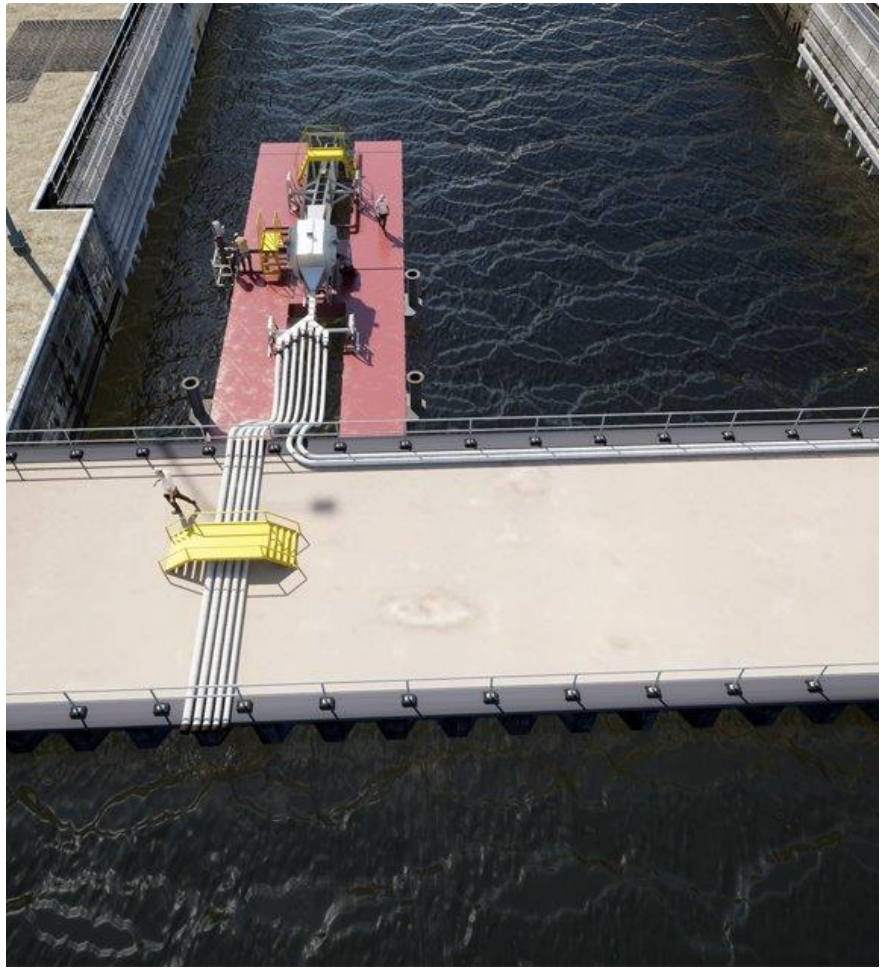
Scoping Updates

Ongoing as the deterrent design is developed:

- Operations and maintenance planning
- Scoping technologies to support the effectiveness of the deterrent

<u>Trap and Sort</u>

- Lock and Dam 5 Selective Native Fish Passage Feasibility Study
  - Contract with WSB LLC., 2023 Invasive Carp Appropriation
  - Report expected August 2025



Scoping Updates

- Cooperative Research and Development Agreement (CRADA) with the U.S. Army Engineer Research and Development Center (ERDC)
- The CRADA will facilitate scoping, design, permitting and installation of the lock deterrent

ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER

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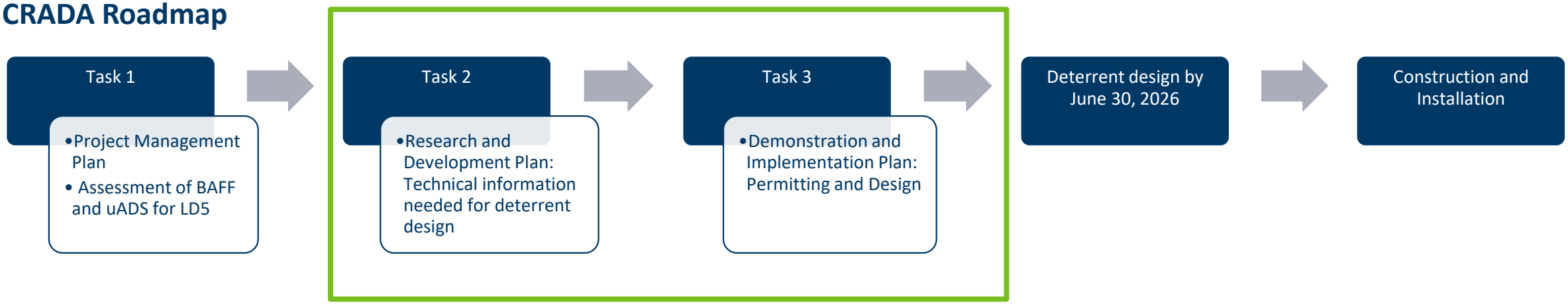
Task 1 under the CRADA

- Project Management Plan
- Assessment of deterrent technologies for LD5

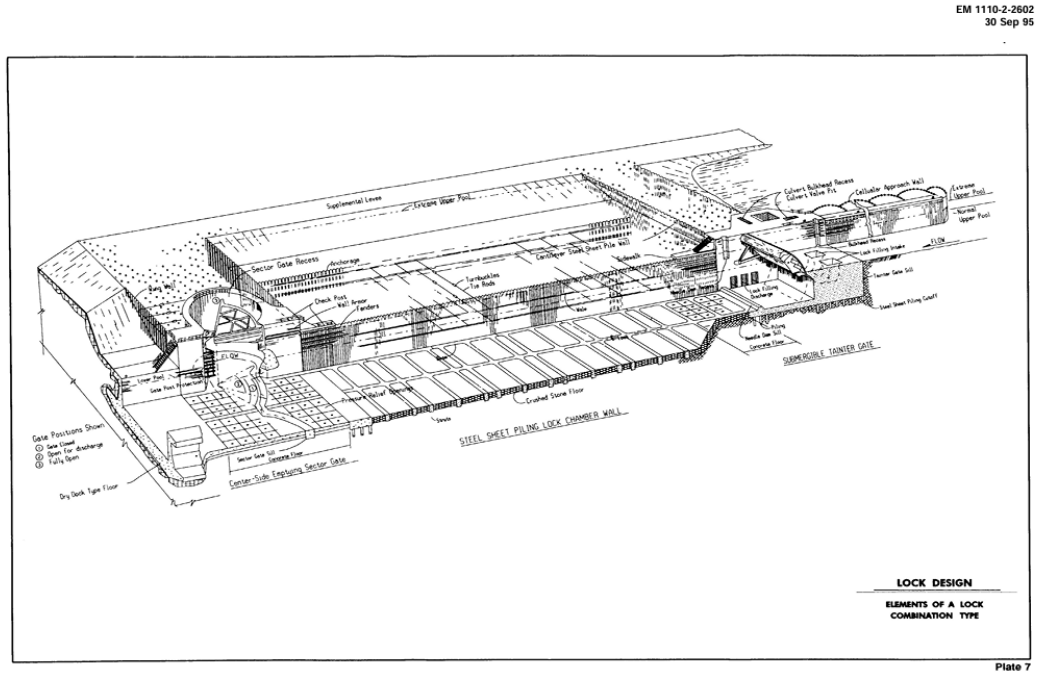
Upcoming Project Activities

CRADA Roadmap



Upcoming Project Activities

- DNR selecting a deterrent to advance to the design phase
- Activities 3 and 4: Design and Permitting
- Estimate of $3 million to cover project activities through June 30, 2026
  - Design and permitting for the deterrent
  - Ongoing operations and maintenance planning, scoping supporting technologies for the deterrent



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Thank You!

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