

# Biological Opinion: Operation & Maintenance of the 9-ft Navigation Channel

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RRAT Trip

September 2023

# Biological Opinion

Upper Mississippi River 9-ft Navigation Channel – MVS,  
MVR, MVP

Started 1998 & concluded in 2000

## Direct Effects:

- Navigation Channel Dredging
- Dike & Revetment maintenance
- Water Level Management
- Management of Corps managed lands

## Indirect Effects:

- Navigation traffic
- Recreation

## Cumulative Effects

# Biological Opinion

## Species Covered

- **Indiana Bat** - Not likely to adversely affect. Impacts negligible or offset by management actions
- **Decurrent false aster** - likely to adversely affect, not likely to jeopardize
- **Bald eagle** -> removed from endangered species list in 2007
- **Least tern** -> removed from endangered species list in 2021
- **Pallid sturgeon** - likely to jeopardize the continued existence of the species or adversely modify critical habitat
- Higgins' eye pearlymussel
- Winged mapleleaf mussel

## Species not included (extirpated)

- Pink mucket pearlymussel
- Fat pocketbook mussel

# ESA Definitions

**Reasonable & Prudent Alternatives (RPA)** – alternative actions that:

- Can be implemented consistent with intended purpose of action
- Can be implemented consistent with agency's authority & jurisdiction
- Are economically & technologically feasible
- Avoid the likelihood of jeopardizing the continued existence of a listed species

**Incidental take** – take that is not intended as part of the agency action

**Reasonable & Prudent Measures (RPM)** – actions necessary to minimize take

**Terms & Conditions** – measures & reporting/monitoring requirements necessary to implement the RPMs

# Outcomes: Pallid sturgeon

## Reasonable & Prudent Alternatives (RPA) –

- **Conduct a pallid sturgeon habitat study in the MMR**
- **Facilitate development of a pallid sturgeon conservation & restoration plan**
- **Implement long-term aquatic restoration program**
- **Implement short-term restoration measures that may reasonably be expected to benefit pallid sturgeon**

## Reasonable & Prudent Measures (RPM) –

- **O&M of dikes & revetment incorporate modifications to improve habitat diversity**
- **Use dredge materials to restore habitat or other beneficial use**
- **Dredge window restriction**

Terms & Conditions – measures & reporting/monitoring requirements necessary to implement the RPMs

# Outcomes: River Resources Action Team

Established in 2002

Enhance & formalize a coordination process

Collaboration for planning, prioritizing, and operating future UMRS projects/actions

To provide a mean for effective implementation of the RPAs & RPMs for the pallid sturgeon & least tern

# Pools

Evaluate mussel resources

Implement dike modification projects

- Blackbird Island (adj to Ted Shanks) - Completed
- Gilbert Island - Awarded
- Angle island - Planning
- Perry Island – Planning

O&M Coordination

- Dike & revetment evaluations
- Gradual sloped revetment

Beneficial Use of Dredge Material

# Open River

## Island & Sandbar Creation Pilot Project

- RM 103R & RM 174L
- Proposed: Pike dike construction + dredge material
- Monitoring: Benthic trawls (fish; MDC) & sleds (invertebrates; ERDC)
- Environmental Assessment – In public review until 30 September

Implement dike modification projects

Mosenthein – COR Habitat Enhancement

O&M Coordination

Beneficial Use of Dredge Material



# Open River

## Island & Sandbar Creation Pilot Project

### Implement dike modification projects

- Calico Chute (RM 148)
- Salt Lake Chute (RM 137)
- Establishment (RM 132)
- RM 129
- Moro Island (RM 122)
- Beaver Island (RM 116)
- Liberty (RM 103)
- Picayune (RM 57)
- Upper Santa Fe (RM 42)
- Santa Fe (RM 41)
- Billings (RM 34)
- Buffalo (RM 24.8)
- Boston Bar (RM 12)

### Mosenthein – COR Habitat Enhancement

### O&M Coordination

### Beneficial Use of Dredge Material

# Open River

Island & Sandbar Creation Pilot Project

Implement dike modification projects

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Island & Sandbar Creation Pilot Project

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Mosenthein – COR Habitat Enhancement

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Beneficial Use of Dredge Material

- RM 103 - completed
- RM 100 - completed
- RM 28 - tentative



Sentinel Hub 8/28/23

Site visit 8/15/23

