# Lessard-Sams Outdoor Heritage Council Nelson Slough – East Park WMA

Proposal ID# WRE02





Watershed planning started in 2016 through which the Middle-Snake-Tamarac Rivers Watershed District (MSTRWD) and the Minnesota Department of Natural Resources (DNR) have been cooperatively working to develop a plan to provide improved water level management capabilities and wildlife habitat.

Over the past few years, traces of Sheathed Pondweed (an Minnesota endangered Species) was observed in Nelson Slough which increases the importance of the project to keep not only this plant but also numerous others protected.

The project design incorporates a new outlet structure that enables the operators to manage water levels to the appropriate elevation in different seasons of the year to maximize natural resource benefits. The project design also includes increasing the levee height to meet today's dam safety standards, as the existing levee lacks the required freeboard.

Whether we call it climate change or the new normal, it is obvious we are having heavier and flashier rain fall events, making water elevation management in the facility a tough task and detrimental to the wildlife habitat within.

# **Project Partners**

- MSTRWD
- Minnesota DNR
- LSOHC
- FDR
- RRWMB
- JDA
- Townships

### About the Project

The project is located in northwest Minnesota in Marshall County close to Roseau and Kittson counties. The project footprint covers approximately 3 square miles which includes the well known East Park WMA.

The Nelson Slough within the East Park WMA is an on-channel multi-purpose impoundment site constructed in 1971 and has undergone significant degradation over the years with hybrid cattail growth and water levels consistently above normal pool levels.

# **Project Benefits**

#### Natural resource enhancement

- Improve the Nelson Slough shallow lake
- Improve over water nesting birds habitat
- Improve habitat for migratory birds
- Improve biodiversity and aquatic plants
- Improve mix of open water and vegetated areas within impoundment
- Enhance diversity and composition of wetland plant communities and aquatic invertebrate populations

#### Recreational aesthetic

- · Hunting and bird watching
- · Scientific research potential
- Canoeing and kayaking

#### Water quality

- Improve stability of Judicial Ditch (JD) 19
- Reduce sediment transfer downstream

#### Flood control

- Provide local and Red River flood damage reduction
- Improve hydrologic conditions within the JD 19 sub-watershed

# **Project Readiness**

Project Design 85% complete **Permitting** Applications submitted and process underway Joint Powers Agreement 95% complete

Operations & Maintenance Plan 95% complete

Cost Share RRWMB committed \$2.9 million

# How it Fits in with Existing Plans

- Minnesota Prairie Conservation Plan: The East Park Prairie Core Area has a wetland goal shortfall of more than 15,000 ac – though this project will not decrease those acres, improved management of the impoundment will enhance existing wetland acres in the Core Area
- DNR Shallow Lakes staff has been monitoring this impoundment for many years, monitoring water quality, aquatic plant assemblages, expansion of non-native cattail, and endangered species, as well as noting wildlife use
- The existing structure does not allow for ease of management should a drawdown or other management be necessary

- DNR Wildlife has been managing cattails with herbicides – the updated structure may make management easier by eliminating or reducing the number of floating cattail bogs
- Shallow Lakes are listed as a Target Habitat in Minnesota's Wildlife Action Plan, 2015-2025 for the Aspen Parklands Conservation Focus Area
- East Park WMA has a "High" score within the Aspen Parklands Conservation Focus Area in the Wildlife Action Network
- A number of non-forested wetland communities within the Aspen Parklands are also listed as target habitats

   many of which are likely found within Nelson Slough



### Plants in the Impoundment

- Sheathed pondweed, a state-endangered plant, is found in the impoundment one of only a dozen noted occurrences in the state
- While coverage of submerged aquatic plants has been good over the past few surveys, it is somewhat limited by floating cattail bogs which as stated above, should be limited with the new structure
  - Submerged plants provide food for waterfowl and other wildlife, refuge for important invertebrates, and play a major role in maintaining water quality

### Birds in the Impoundment

- Colonial waterbirds nest at Nelson Slough and are intolerant of bounce in water levels once they've begun nesting.
- Black terns have been noted on the impoundment and are declining nationally. These terns nest in freshwater marshes and tolerate little disturbance.
- Over the past few seasons, we've seen repeated, rapid water level rises in late spring and early summer when waterbird nests are most at-risk of flooding the new structure should help reduce the impacts from those events



- Other non-game waterbirds noted include common loons, pied-billed and red-necked grebes, common and Forsters's terns, American white pelicans, double-crested cormorants, bald eagles, and trumpeter swans. Sandhill cranes, a State Watchlist species has also been noted at Nelson Slough
- 21 bird species of greatest conservation need (SGCN) could benefit from this project, 8 of which have been noted in previous surveys (others are secretive or migratory and less likely to show up on summer surveys)
- Impacts to upland areas will be limited any loss of upland nesting will be offset by improved conditions within the impoundment



#### Other

• Part of the impoundment is open for hunting and other recreation. Floating cattail bogs make navigation of the impoundment difficult. Limited bounce associated with the new structure should limit floating cattail bog activity