



## Lessard-Sams Outdoor Heritage Council

### Albert Lea Lake Management and Invasive Species Control Structure Laws of Minnesota 2013 Final Report

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#### General Information

**Date:** 03/20/2025

**Project Title:** Albert Lea Lake Management and Invasive Species Control Structure

**Funds Recommended:** \$1,127,000

**Legislative Citation:** ML 2013, Ch. 137, Art. 1, Sec. 2, Subd. 5(h)

**Appropriation Language:** \$1,127,000 in the first year is to the commissioner of natural resources for an agreement with the Shell Rock River Watershed District to construct structural deterrents and lake level controls to enhance aquatic habitat on Albert Lea Lake in Freeborn County. A list of proposed land restorations and enhancements must be provided as part of the required accomplishment plan. ML 2014, Ch. 137, Art. 1, Sec. 2, Subd 5 (l) Albert137ea Lake Management and Invasive Species Control Structure - Supplement \$700,000 in the second year is added to the appropriation contained in Laws 2013, chapter 137, article 1, section 2, subdivision 5, paragraph (h), to the commissioner of natural resources for an agreement with the Shell Rock River Watershed District to construct structural deterrents and lake level controls.

#### Manager Information

**Manager's Name:** Andy Henschel

**Title:**

**Organization:** Shell Rock River Watershed District

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#### Location Information

**County Location(s):** Freeborn.

**Eco regions in which work will take place:**

Prairie

**Activity types:**

Restore

Enhance

**Priority resources addressed by activity:**

Habitat

## Narrative

### Summary of Accomplishments

The Albert Lea Lake Management project replaced the previous Albert Lea Lake fix-crest dam with a 3-in-1 structure that included a rock riffle dam, a lake level management structure, and an electric fish barrier. The benefits from this project include improved aquatic and waterfowl habitat, invasive species management, and improved desirable fish populations.

### Process & Methods

The Shell Rock River Watershed District (SRRWD) encompasses 246-square miles in Freeborn County. The District includes 11 lakes that drain to the Shell Rock River, which flows into the Cedar River. Among the District's lakes are Fountain Lake and Albert Lea Lake, located within the City of Albert Lea. These lakes are central to Albert Lea's tourism industry and its identity.

The previous Albert Lea Lake outlet structure and access bridge, installed in 1922, was in need of repair. The Albert Lea Lake Management and Invasive Species Control Project replaced the fixed-crest dam with a rock-arch rapids feature to control water levels. A lake level management structure was also constructed, as well as an electric fish barrier to prevent silver, bighead, and common carp and other benthic feeding fish from entering the lake.

The project is expected to result in improved aquatic habitat, improved waterfowl nesting, breeding, and feeding habitat, an increase in desirable fish populations, and improved water quality and clarity for years to come. Specific benefits are outlined below.

1. Rock-Arch Water-Level Control: The SRRWD replaced the old fixed-crest dam with a series of rock arches to provide a naturalized outlet to Albert Lea Lake. The upper-most rock arch is controlling the normal water level with the help of metal sheeting. There are two more rock arches behind the first, totaling 3 rock arches.

2. Lake Level Management Structure: The installation of the structure to facilitate lake-level management gives the SRRWD flexibility to take action benefiting the health of the lake. Periodic lowering of lake elevations allows maximum in-lake sediment compaction, improvement of water clarity due to reduction in wind-generated turbidity, and time for plant colonization of shoreline and shallow-water areas. The resulting improvement in aquatic plant health benefits the entire lake system.

3. Electric fish barrier: An electric fish barrier was installed and is used to reduce the population of common carp (*Cyprinus carpio*) in Albert Lea Lake and to prevent the introduction of Bighead and Silver (Asian) Carp. Common carp uproot and consume aquatic vegetation, disturb and re-suspend phosphorous-rich sediments. The resulting increase in turbidity reduces light penetration—discouraging rooted plant growth—and contributes to algal blooms responsible for oxygen depletion. The destruction of aquatic vegetation by large populations of foraging fish also impacts waterfowl nesting, breeding, and feeding habitat, shoreline and littoral habitat, and game fish spawning habitat.

Design and engineering of the project started in late 2013. Contracts and associated agreements for the dam were made in early 2014. The order of operations for the construction of the project includes:

- Installation of the cofferdam
- Construction of the water diversion channel
- Removal of the old dam and bridge
- Installation of the metal sheeting that holds the lake level
- Placement of the first rock arch along the sheeting
- Installation of the footings for the concrete work
- Concrete work for the fish barrier
- Concrete work for the draw down structure
- Finalize/seal all concrete
- Placement of remaining rock arches
- Removal of the cofferdam and water diversion channel
- Installation and fine tuning of the fish barrier component

The main construction of the projects were completed in the spring of 2015. At the end of 2015, some calibrations of the electric components were needed on the electric fish barrier. After the ice melt in the spring of 2016, those changes were made to fine tune the barrier. The Albert Lea Lake Management and Invasive Species Control Structure is now fully complete.

The outlet, fish passage, and fish barrier worked in harmonization as part of the District’s overall management plan. Similar to the Wedge Creek, White Lake, and Mud Lake efforts, the anticipated outcome for Albert Lea Lake is restoration of rooted aquatic vegetation, fish and wildlife habitat, and enhanced water quality—all of which will serve to increase community use of this important recreational resource.

### **Explain Partners, Supporters, & Opposition**

The SRRWD partnered with Freeborn County, who are the primary owners of the Albert Lea Dam.

### **Exceptional challenges, expectations, failures, opportunities, or unique aspects of program**

The Albert Lea Lake Outlet Structure project is unique in that instead of creating yet another simple fixed crest concrete structure, the District saw the opportunity to implement a complex 3-in-1 structure. This project is tailored to Albert Lea Lake and the receiving Shell Rock River. This project was uniquely designed and technically engineered using state of the art technology to produce results that protect, enhance, and restore natural resources.

### **What other dedicated funds may collaborate with or contribute to this program?**

N/A

### **What is the plan to sustain and/or maintain this work after the Outdoor Heritage Funds are expended?**

The Shell Rock River Watershed District, and Freeborn County, will plan to sustain and/or maintain this project.

## Budget

### Totals

| Item                       | Requested          | AP Amount          | Spent              | Leverage         | Received Leverage | Leverage Source                    | Original Total     | Final Total        |
|----------------------------|--------------------|--------------------|--------------------|------------------|-------------------|------------------------------------|--------------------|--------------------|
| Personnel                  | -                  | -                  | -                  | \$62,500         | \$62,500          | In-kind Services, In-kind Services | \$62,500           | \$62,500           |
| Contracts                  | \$519,900          | \$1,239,900        | \$1,239,900        | \$173,200        | \$173,200         | Local Option Sales Tax             | \$693,100          | \$1,413,100        |
| Fee Acquisition w/ PILT    | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Fee Acquisition w/o PILT   | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Easement Acquisition       | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Easement Stewardship       | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Travel                     | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Professional Services      | \$172,900          | \$88,000           | \$88,000           | \$58,400         | \$58,400          | Local Option Sales Tax             | \$231,300          | \$146,400          |
| Direct Support Services    | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| DNR Land Acquisition Costs | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Capital Equipment          | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Other Equipment/Tools      | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| Supplies/Materials         | \$434,200          | \$499,100          | \$499,100          | \$144,700        | \$144,700         | Local Option Sales Tax             | \$578,900          | \$643,800          |
| DNR IDP                    | -                  | -                  | -                  | -                | -                 | -                                  | -                  | -                  |
| <b>Grand Total</b>         | <b>\$1,127,000</b> | <b>\$1,827,000</b> | <b>\$1,827,000</b> | <b>\$438,800</b> | <b>\$438,800</b>  | -                                  | <b>\$1,565,800</b> | <b>\$2,265,800</b> |

### Personnel

| Position | Annual FTE | Years Working | Amount Spent | Leverage | Leverage Source  | Total    |
|----------|------------|---------------|--------------|----------|------------------|----------|
| Tech 1   | 0.3        | 2.0           | -            | \$37,500 | In-kind Services | \$37,500 |
| Tech 2   | 0.25       | 0.0           | -            | \$25,000 | In-kind Services | \$25,000 |

### Explain any budget challenges or successes:

Due to the complexity of the 3-in-1 project, the challenge was that the original engineers estimate was below the actual cost. Because of this, the District had to ask the council for additional funding.

**Total Revenue:** -

**Revenue Spent:** -

**Revenue Balance:** -

**Of the money disclosed above, what are the appropriate uses of the money:**

## Output Tables

**Acres by Resource Type (Table 1)**

| Type                                     | Wetland (AP) | Wetland (Final) | Prairie (AP) | Prairie (Final) | Forest (AP) | Forest (Final) | Habitat (AP) | Habitat (Final) | Total Acres (AP) | Total Acres (Final) |
|--|--------------|-----------------|--------------|-----------------|-------------|----------------|--------------|-----------------|------------------|---------------------|
| Restore                                  | 0            | 0               | 0            | 0               | 0           | 0              | 0            | 0               | 0                | 0                   |
| Protect in Fee with State PILT Liability | 0            | 0               | 0            | 0               | 0           | 0              | 0            | 0               | 0                | 0                   |
| Protect in Fee w/o State PILT Liability  | 0            | 0               | 0            | 0               | 0           | 0              | 0            | 0               | 0                | 0                   |
| Protect in Easement                      | 0            | 0               | 0            | 0               | 0           | 0              | 0            | 0               | 0                | 0                   |
| Enhance                                  | 0            | 0               | 0            | 0               | 0           | 0              | 3,100        | 3,100           | 3,100            | 3,100               |
| <b>Total</b>                             | <b>0</b>     | <b>0</b>        | <b>0</b>     | <b>0</b>        | <b>0</b>    | <b>0</b>       | <b>3,100</b> | <b>3,100</b>    | <b>3,100</b>     | <b>3,100</b>        |

**Total Requested Funding by Resource Type (Table 2)**

| Type                                     | Wetland (AP) | Wetland (Final) | Prairie (AP) | Prairie (Final) | Forest (AP) | Forest (Final) | Habitat (AP)       | Habitat (Final)    | Total Funding (AP) | Total Funding (Final) |
|--|--------------|-----------------|--------------|-----------------|-------------|----------------|--------------------|--------------------|--------------------|-----------------------|
| Restore                                  | -            | -               | -            | -               | -           | -              | -                  | -                  | -                  | -                     |
| Protect in Fee with State PILT Liability | -            | -               | -            | -               | -           | -              | -                  | -                  | -                  | -                     |
| Protect in Fee w/o State PILT Liability  | -            | -               | -            | -               | -           | -              | -                  | -                  | -                  | -                     |
| Protect in Easement                      | -            | -               | -            | -               | -           | -              | -                  | -                  | -                  | -                     |
| Enhance                                  | -            | -               | -            | -               | -           | -              | \$1,127,000        | \$1,827,000        | \$1,127,000        | \$1,827,000           |
| <b>Total</b>                             | <b>-</b>     | <b>-</b>        | <b>-</b>     | <b>-</b>        | <b>-</b>    | <b>-</b>       | <b>\$1,127,000</b> | <b>\$1,827,000</b> | <b>\$1,127,000</b> | <b>\$1,827,000</b>    |

**Acres within each Ecological Section (Table 3)**

| Type                                     | Metro / Urban (AP) | Metro / Urban (Final) | Forest / Prairie (AP) | Forest / Prairie (Final) | SE Forest (AP) | SE Forest (Final) | Prairie (AP) | Prairie (Final) | N. Forest (AP) | N. Forest (Final) | Total (AP)   | Total (Final) |
|--|--------------------|-----------------------|-----------------------|--------------------------|----------------|-------------------|--------------|-----------------|----------------|-------------------|--------------|---------------|
| Restore                                  | 0                  | 0                     | 0                     | 0                        | 0              | 0                 | 0            | 0               | 0              | 0                 | 0            | 0             |
| Protect in Fee with State PILT Liability | 0                  | 0                     | 0                     | 0                        | 0              | 0                 | 0            | 0               | 0              | 0                 | 0            | 0             |
| Protect in Fee w/o State PILT Liability  | 0                  | 0                     | 0                     | 0                        | 0              | 0                 | 0            | 0               | 0              | 0                 | 0            | 0             |
| Protect in Easement                      | 0                  | 0                     | 0                     | 0                        | 0              | 0                 | 0            | 0               | 0              | 0                 | 0            | 0             |
| Enhance                                  | 0                  | 0                     | 0                     | 0                        | 0              | 0                 | 3,100        | 3,100           | 0              | 0                 | 3,100        | 3,100         |
| <b>Total</b>                             | <b>0</b>           | <b>0</b>              | <b>0</b>              | <b>0</b>                 | <b>0</b>       | <b>0</b>          | <b>3,100</b> | <b>3,100</b>    | <b>0</b>       | <b>0</b>          | <b>3,100</b> | <b>3,100</b>  |

## Total Requested Funding within each Ecological Section (Table 4)

| Type                                     | Metro / Urban (AP) | Metro / Urban (Final) | Forest / Prairie (AP) | Forest / Prairie (Final) | SE Forest (AP) | SE Forest (Final) | Prairie (AP)       | Prairie (Final)    | N. Forest (AP) | N. Forest (Final) | Total (AP)         | Total (Final)      |
|--|--------------------|-----------------------|-----------------------|--------------------------|----------------|-------------------|--------------------|--------------------|----------------|-------------------|--------------------|--------------------|
| Restore                                  | -                  | -                     | -                     | -                        | -              | -                 | -                  | -                  | -              | -                 | -                  | -                  |
| Protect in Fee with State PILT Liability | -                  | -                     | -                     | -                        | -              | -                 | -                  | -                  | -              | -                 | -                  | -                  |
| Protect in Fee w/o State PILT Liability  | -                  | -                     | -                     | -                        | -              | -                 | -                  | -                  | -              | -                 | -                  | -                  |
| Protect in Easement                      | -                  | -                     | -                     | -                        | -              | -                 | -                  | -                  | -              | -                 | -                  | -                  |
| Enhance                                  | -                  | -                     | -                     | -                        | -              | -                 | \$1,127,000        | \$1,827,000        | -              | -                 | \$1,127,000        | \$1,827,000        |
| <b>Total</b>                             | -                  | -                     | -                     | -                        | -              | -                 | <b>\$1,127,000</b> | <b>\$1,827,000</b> | -              | -                 | <b>\$1,127,000</b> | <b>\$1,827,000</b> |

## Target Lake/Stream/River Feet or Miles

35

## Explain the success/shortage of acre goals

The targeted acre goals were successfully reached.

## Outcomes

### Programs in prairie region:

Protected, restored, and enhanced shallow lakes and wetlands ~ *Outcomes will be measured by the improved aquatic and waterfowl habitat, the improved invasive species management, and improved desirable fish populations.*

Other ~ *Outcomes will be measured by the improved aquatic and waterfowl habitat, the improved invasive species management, and improved desirable fish populations.*

Protected, restored, and enhanced habitat for waterfowl, upland birds, and species of greatest conservation need ~ *Outcomes will be measured by the improved aquatic and waterfowl habitat, the improved invasive species management, and improved desirable fish populations.*

## Parcels

### Sign-up Criteria?

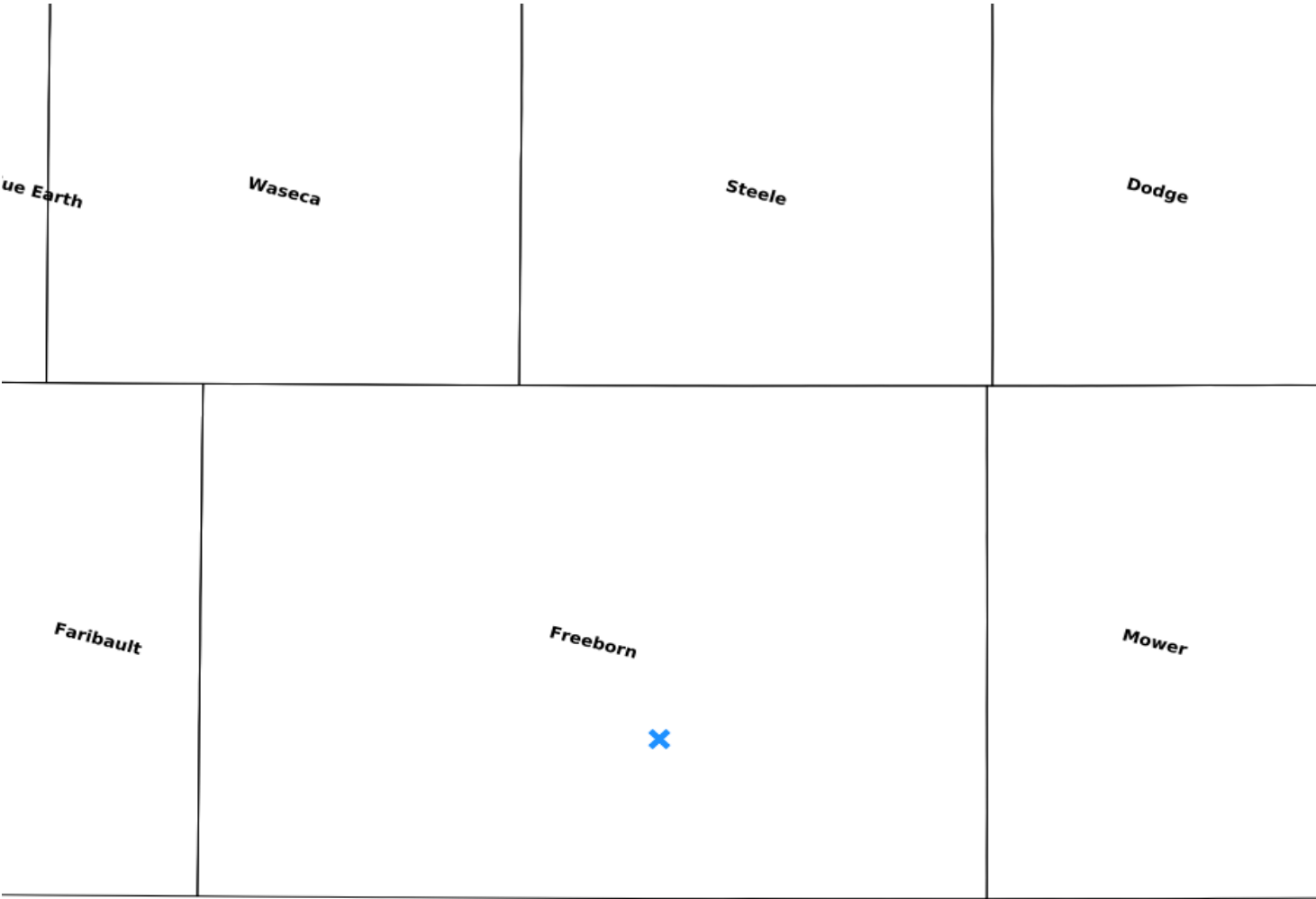
No

### Restore / Enhance Parcels

| Name                | County   | TRDS     | Acres | Est Cost    | Existing Protection | Description |
|---------------------|----------|----------|-------|-------------|---------------------|-------------|
| Parcel # 08-025-044 | Freeborn | 10221225 | 17    | \$0         | Yes                 | -           |
| Parcel# 08-025-044  | Freeborn | 10221225 | 3,100 | \$1,827,000 | Yes                 | -           |



Parcel Map



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other