Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2013 Accomplishment Plan

Date: October 29, 2012

Program or Project Title: Pelican Lake Enhancement

Funds Recommended: $2,000,000

Manager's Name: Ricky Lien
Title: Wetland Habitat Team Supervisor
Organization: Minnesota Department of Natural Resources
Street Address: 500 Lafayette Rd
City: St. Paul, MN 55155
Telephone: 651-259-5227
E-Mail: ricky.lien@state.mn.us
Organization Web Site: www.mndnr.gov

Legislative Citation: (to be completed when signed by Governor)

County Locations: Wright ,

Ecological Planning Regions:

- Metro / Urban

Activity Type:

- Enhance

Priority Resources Addressed by Activity:

- Wetlands

Abstract:

Construction of a gravity outlet, water control structure, and pump lift station, allowing for drawdown of Pelican Lake, the next phase in the process of restoring what was once one of the region's premier waterfowl and wetland wildlife habitats.

Activity Detail

Design and Scope of Work:

Pelican Lake, located in eastern Wright County within ½ hour of the Twin Cities metro area is a shallow lake known statewide for its waterfowl production,

migration, habitat, and hunting opportunities. Pelican Lake is one of 47 state-designated wildlife lakes in Minnesota. This shallow lake basin has no natural watercourse inlets or outlets. Since the late 1950s and particularly, since the late 1970s, Pelican Lake has experienced a decline in water quality and a loss of the extent and quality of aquatic plant communities that once supported wetland wildlife habitat. This decline in water quality and loss of plant communities is associated with high lake levels and watershed land uses that increase water runoff. Agricultural land uses such as tiling and ditching within the Pelican Lake watershed have altered the natural hydrology and contributed to the decline in water quality. High water levels in Pelican Lake have contributed to persistent and increased rough and game fish populations, as well as a shift from rooted aquatic plants (macrophytes) to algae-dominated (plankton) communities. Increased turbidity due to re-suspension of bottom sediments and algae has resulted in the absence of rooted macrophytes from large areas of the lake. These macrophytes, when present, moderate wave action, stabilize bottom sediments, uptake nutrients, and provide habitat for invertebrates. These factors have resulted in Pelican Lake changing over time from a “clear water state” to a “turbid state”. These changes have resulted in negative effects on lake productivity for waterfowl and shorebirds that historically used Pelican Lake as a migration stopover destination. The loss of important food sources associated with diverse macrophyte and invertebrate communities is the primary factor associated with declining use of the lake by waterfowl and shorebirds.

The work needed to restore Pelican Lake to former condition will be extensive and will rely on strong partnerships to implement the planned multiple phases. The total scope of the project includes reducing high water levels, constructing an outlet weir, constructing new segments of stream channel, restoring a 180-acre wetland, stabilizing the lower reaches of Regal Creek, and constructing a velocity-tube fish barrier. The components of the work to restore Pelican Lake will be completed in phases as funding is secured, to meet timeline requirements (i.e. Item A has to be done before Item B is installed), and to complete the work as efficiently as possible.

For this specific funding request, the Minnesota Department of Natural Resources (MDNR), in cooperation with Ducks Unlimited, proposes to enhance Pelican Lake through managed drawdowns to lower the current historically high lake levels. The project focuses on the construction of a variable crest outlet weir and pump lift station which would allow for the gradual dewatering of the basin. The current lake elevation is just 3 feet below the breach runout elevation of Pelican Lake. The project proposes to include the installation of a lake outlet that will lower the lake by 1.8 feet, which would bring it close to the established ordinary high water (OHW) level. The addition of a pump lift station will provide an opportunity for temporary lake management drawdowns. A management drawdown of Pelican Lake will likely improve water quality by stimulating emergent and submerged vegetation, reducing/eliminating nuisance rough-fish populations, and binding and reconsolidating nutrient-rich lake sediments.

The Pelican Lake outlet will include construction of a stoplog weir structure. An intake pipe will placed within the bed of Pelican Lake. A pump station and force main will be installed to pump water from Pelican Lake to a point north of School Lake where Wright County Ditch No. 21 currently outlets from School Lake. Construction of the stoplog weir structure will be at the mouth of an existing private ditch that

flows into Pelican Lake. The top of the weir is proposed to be approximately three feet wide. The stoplog weir will pass flows during normal operating periods and will be designed to manage Pelican Lake at an elevation of 952.2 feet (above mean sea level), the established ordinary high water level (OHW). A pump station will be constructed at the existing edge of the eastern-most bay of Pelican Lake. A 24-inch intake pipe will be installed from this point for 900 feet into the lake and be set at an invert elevation of 942.0 feet. The lift station intake pipe will involve placement of a structure within the lakebed to support the intake pipe at the proper invert elevation. A short, 24-inch forcemain will outlet into the new channel on the downstream side of the weir. A pump configuration will be installed to facilitate management drawdowns to a lower elevation than what would be possible with a weir structure alone.

The water level management described in this proposal is informed and supported by the Pelican Lake Management Plan (2012). The proposed project was also reviewed formally in a mandatory Environmental Assessment Worksheet (EAW) in 2009, which was put out for public comment. The Pelican Lake Outlet Feasibility Study completed in April 2005 discusses potentially viable alternatives for the project. The Pelican Lake Work Group reviewed options and organized and evaluated criteria from the study that formulated the basis of the proposed project.

In 2012, Ducks Unlimited completed bioengineering designs and preliminary construction plans for the Pelican Lake project and will be the construction deliverable partner at Pelican Lake, providing bioengineering expertise and construction supervision for each facet of this complex shallow lake enhancement project. Ducks Unlimited, while not the contractor for this project, will use grant funds for project implementation and will continue to make substantial in-kind contributions to this project.

Planning

MN State-wide Conservation Plan Priorities:

- H4 Restore and protect shallow lakes
- H5 Restore land, wetlands and wetland-associated watersheds

Plans Addressed:

- A Vision for Wildlife and Its Use -- Goals and Outcomes 2006-2012
- Ducks Unlimited Living Lakes Initiative
- Long Range Duck Recovery Plan
- Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife
- Minnesota DNR Strategic Conservation Agenda
- National Audubon Society Top 20 Common Birds in Decline
- North American Waterbird Conservation Plan
- North American Waterfowl Management Plan
- Northern Plains Prairie Potholes Regional Shorebird Conservation Plan
- Outdoor Heritage Fund: A 25 Year Framework
- State Comprehensive Outdoor Recreation Plan

- Tomorrow's Habitat for the Wild and Rare
- U.S. Fish and Wildlife Service Strategic Habitat Conservation Model

LSOHC Statewide Priorities:

- Are ongoing, successful, transparent and accountable programs addressing actions and targets of one or more of the ecological sections
- Produce multiple enduring conservation benefits
- Are able to leverage effort and/or other funds to supplement any OHF appropriation
- Restore or enhance habitat on state-owned WMAs, AMAs, SNAs, and state forests
- Use a science-based strategic planning and evaluation model to guide protection, restoration and enhancement, similar to the United States Fish and Wildlife Service's Strategic Habitat Conservation model
- Address wildlife species of greatest conservation need, Minnesota County Biological Survey data, and rare, threatened and endangered species inventories in land and water decisions, as well as permanent solutions to aquatic invasive species
- Provide Minnesotans with greater public access to outdoor environments with hunting, fishing and other outdoor recreation opportunities
- Ensures activities for "protecting, restoring and enhancing" are coordinated among agencies, non profits and others while doing this important work
- Target unique Minnesota landscapes that have historical value to fish and wildlife

LSOHC Metro Urban Section Priorities:

- Protect, enhance, and restore riparian and littoral habitats on lakes to benefit game and nongame fish species

Relationship to Other Constitutional Funds:

- Environmental and Natural Resource Trust Fund
- Clean Water Fund

Interest in Minnesota's wetland and shallow lake habitats has resulted in initiatives with a variety of funding sources, including the Environmental and Natural Resource Trust Fund and Clean Water Fund. The work from this proposal will complement the goals of other funds, especially in terms of water quality, habitat, and wildlife benefits.

Accelerates or Supplements Current Efforts:

The DNR Division of Fish and Wildlife is funded primarily from the Game and Fish Fund, the majority of which is related to the sale of licenses. In the last fiscal year, the Game and Fish Fund totaled over $95 Million, of which the Division was

budgeted $63 Million. Total Division expenditures on wetland restoration, enhancement, and wetland water control infrastructure totaled just over $1.8 Million, or about 2.8% of the Division's Game and Fish budget. In the last fiscal year, the Division reported 21,621 acres of accomplishments in wetland enhancement, restoration, and development. Meeting the goals put forth in the DNR's Shallow Lakes Plan and Long Range Duck Recovery Plan will require both an impetus of funding and acceleration of work.

For specific projects, such as Pelican Lake, the scale and associated costs of the multiple phases are large. Partnerships are used to leverage resources and to bring specific partner strengths to bear on the project. Likewise, a variety of funding sources are often needed to ensure that the required work is accomplished. Pelican Lake involves land acquisition by state and federal agencies, watershed work by the county, engineering and design by Ducks Unlimited, just to name a few.

Sustainability and Maintenance:

The management of enhanced wetlands and shallow lakes once construction is completed will fall on existing staff of the Department of Natural Resources. These staff are funded through license fees and legislative appropriations. Periodic enhancements such as invasive species removal, supplemental vegetation planting, or water control structure installation, maintenance, or replacement, will be accomplished through annual funding requests to a variety of funding sources including, but not limited to, the Game and Fish Fund, bonding, gifts, the Environmental and Natural Resources Trust Fund, the Outdoor Heritage Fund, and federal sources such as North American Wetlands Conservation Act grants.

Is the activity on permanently protected land and/or public waters per MS 103G.005, Subd. 15? - **Yes (WMA, Public Waters)**

Accomplishment Timeline

Activity	Approximate Date Completed
Construct gravity outlet and water control structure on Pelican Lake	December, 2015
Construct pump lift station on Pelican Lake	December, 2015
Drawdown underway on Pelican Lake, according to the Pelican Lake Management Plan	June, 2017

Outcomes

Programs in metropolitan urbanizing region:

- A network of natural land and riparian habitats will connect corridors for wildlife and species in greatest conservation need
- Core areas protected with highly biologically diverse wetlands and plant communities, including native prairie, Big Woods, and oak savanna
- Improved aquatic habitat indicators

Budget Spreadsheet

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan

Total Amount of Request: $2,000,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
Personnel	$100,000	$50,000		$150,000
Contracts	$1,875,000	$0		$1,875,000
Fee Acquisition w/ PILT	$0	$0		$0
Fee Acquisition w/o PILT	$0	$0		$0
Easement Acquisition	$0	$0		$0
Easement Stewardship	$0	$0		$0
Travel (in-state)	$10,000	$0		$10,000
Professional Services	$5,000	$0		$5,000
Direct Support Services	$0	$0		$0
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$0	$0		$0
Other Equipment/Tools	$0	$0		$0
Supplies/Materials	$10,000	$0		$10,000
DNR IDP	$0	$0		$0
Total	$2,000,000	$50,000	-	$2,050,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
DU Professional Bioengineering Staff	1.60	2.00	$100,000	$50,000	Ducks Unlimited	$150,000
Total	1.60	2.00	$100,000	$50,000	-	$150,000

Budget and Cash Leverage by Partnership

Budget Name	Partnership	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
Personnel	Dept Nat Res	$0	$0		$0
Contracts	Dept Nat Res	$0	$0		$0
Fee Acquisition w/ PILT	Dept Nat Res	$0	$0		$0
Fee Acquisition w/o PILT	Dept Nat Res	$0	$0		$0
Easement Acquisition	Dept Nat Res	$0	$0		$0
Easement Stewardship	Dept Nat Res	$0	$0		$0
Travel (in-state)	Dept Nat Res	$0	$0		$0
Professional Services	Dept Nat Res	$0	$0		$0
Direct Support Services	Dept Nat Res	$0	$0		$0
DNR Land Acquisition Costs	Dept Nat Res	$0	$0		$0
Capital Equipment	Dept Nat Res	$0	$0		$0
Other Equipment/Tools	Dept Nat Res	$0	$0		$0
Supplies/Materials	Dept Nat Res	$0	$0		$0
DNR IDP	Dept Nat Res	$0	$0		$0
Total	-	$0	$0	-	$0

Budget Name	Partnership	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
Personnel	Ducks Unl.	$100,000	$50,000		$150,000
Contracts	Ducks Unl.	$1,875,000	$0		$1,875,000
Fee Acquisition w/ PILT	Ducks Unl.	$0	$0		$0
Fee Acquisition w/o PILT	Ducks Unl.	$0	$0		$0
Easement Acquisition	Ducks Unl.	$0	$0		$0
Easement Stewardship	Ducks Unl.	$0	$0		$0
Travel (in-state)	Ducks Unl.	$10,000	$0		$10,000
Professional Services	Ducks Unl.	$5,000	$0		$5,000
Direct Support Services	Ducks Unl.	$0	$0		$0
DNR Land Acquisition Costs	Ducks Unl.	$0	$0		$0
Capital Equipment	Ducks Unl.	$0	$0		$0
Other Equipment/Tools	Ducks Unl.	$0	$0		$0
Supplies/Materials	Ducks Unl.	$10,000	$0		$10,000
DNR IDP	Ducks Unl.	$0	$0		$0
Total	-	$2,000,000	$50,000	-	$2,050,000

Personnel - Ducks Unl.

Position	FTE	Over # of years	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
DU Professional Bioengineering Staff	1.60	2.00	$100,000	$50,000	Ducks Unlimited	$150,000
Total	1.60	2.00	$100,000	$50,000	-	$150,000

Output Tables

Table 1. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	3,800	0	0	0	3,800
Total	3,800	0	0	0	3,800

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0
Enhance	$2,000,000	$0	$0	$0	$2,000,000
Total	$2,000,000	$0	$0	$0	$2,000,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	3,800	0	0	0	0	3,800
Total	3,800	0	0	0	0	3,800

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	$0	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0	$0
Enhance	$2,000,000	$0	$0	$0	$0	$2,000,000
Total	$2,000,000	$0	$0	$0	$0	$2,000,000

Table 5. Target Lake/Stream/River Miles

0 miles

Parcel List

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

Section 1 - Restore / Enhance Parcel List

Wright

Name	TRDS	Acres	Est Cost	Existing Protection?
Pelican Lake	12024211	3,800	$2,000,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.