

Project Category: Water Quality/Water Capacity

Project Title: Water Retention Pond in Medicine Lake's Jevne Park

Total Estimated Cost: \$284,250

BCWMC Project Number: [Staff will assign number]

Description:

This project in the City of Medicine Lake will increase the capacity of an existing pond and wetlands located within the city's Jevne Park to collect and store stormwater runoff during heavy rainfall.

This project also seeks to improve the quality of the outflowing water (from the Park pond into Medicine Lake) by diverting the water through a swale and a series of culverts before it reaches Medicine Lake.

Lastly, this project will increase the holding capacity of wetlands located on private properties adjacent to the Park so as to minimize flooding from excess stormwater both in the Park, on Peninsula Road, and on homeowners' lawns and driveways.

Source of Project Funding	2017 & 2018	2019	2020	2021	2022
CIP Account –BCWMC ad valorem tax levy through Hennepin County	Year#1 -- \$150,820 Year#2 -- \$133,430				

Justification:

As the city of Medicine Lake is nearly surrounded by Medicine Lake, maintaining and improving the quality of the lake itself is paramount. **IMPORTANT:** When Medicine Lake levels are abnormally high, water from the lake flows back onto the peninsula. *This project does not seek to remedy backflow.* Rather, the construction of an improved water retention pond in Jevne Park will result in:

- better management of storm water runoff as the city has no municipal storm sewer system
- increased capacity for stormwater storage within the pre-existing natural pond and swale in Jevne Park
- better way to route, carry and store excess stormwater which can minimize flooding within Jevne Park and on adjacent residential properties (approximately 15)
- reduced sediment and phosphorus loading to Medicine Lake therefore *improved water quality of Medicine Lake*
- reduced city of Medicine Lake capital and maintenance expenditures associated with road and culvert repair caused by excessive volumes and rates of runoff
- sustainability of existing waterfowl and wildlife habitats

Project Specifications & Estimated Cost: \$284,250

SITE PREPARATION: Estimate \$10,670 | Completion target: Year#1
Includes trees, dead falls, stumps, misc. vegetation/invasive plants within proposed pond site.

SOIL EXCAVATION & REMOVAL: Estimate: \$127,150 | Completion: Year #1
Estimate is based upon removal of 1850 cu yds. soil from Jevne Park. Estimate also includes: Excavation and removal 216 cu yds. of soil and pond expansion along south side of Peninsula Road across across from Jevne Park. Note: Price could escalate by 30-percent or more if contaminated soil is found.

POST-CONSTRUCTION COSTS: Estimate: \$39,250 | Completion: Year#1 & #2
Bank and soil stabilization costs; includes erosion prevention along roadside using stone Rip-rap and with vegetation in the Park.

WATER DIVERSION & MODIFICATIONS TO SWALE: Estimate: \$47,450
Completion: Year#2 The existing diversion swale will be enhanced so as to channel stormwater runoff from street to retention pond within Jevne Park; berm formed at mouth (east entrance) of the park to separate inflow from outflow.

STREET INFRASTRUCTURE: Estimate: \$41,760 | Completion: Year#2
Includes increasing size and direction of culverts to redirect water flow. Mill and



Image 1) Medicine Lake plat map and Jevne Park delineation
Image 2) Aerial view of Medicine Lake, Jevne Park. Blue = probable wetland. Yellow = potential wetland.
SOURCE: Hennepin County GIS Interactive Maps, Natural Resources division.

<p>overlay to select portion of Peninsula Road to redirect water to retention pond at entrance point.</p> <p>HABITAT REHABILITATION: Estimate: \$17,970 Completion: Year#2 Includes restoration of areas disturbed by construction. Lawn replaces lawn and playing fields' sod, native plantings in new (Continue page2) retention pond; bird/fish/amphibian habitat upgraded. Scheduling and Project Status: <i>[Staff to provide this information.]</i> Relationship: The improved and reclaimed water retention pond envisioned for Jevne Park mirrors the three already-functioning holding ponds in Plymouth located on the West Beach, the East Beach and near the At-the-Lake Apartments.</p> <p>Federal and state law, including the federal Clean Water Act (1972) as well as the Metropolitan Surface Water Management Act (1982) provide the foundation for surface water and non-point pollution treatment. The purpose of the 1982 Minnesota law is to reduce, to the greatest practical extent, public expenditures related to the quantity of stormwater runoff. SOURCE: Plymouth Surface Water Management Plan, April 14, 2009</p> <p>City of Medicine Lake Comprehensive Plan (2008) (includes city's Surface Water Management Plan)</p> <p>Bassett Creek Watershed Management Commission & Plan: BCWMC works to protect and improve the condition of lakes, streams, wetlands, and ponds within its borders.</p> <p>Medicine Lake Watershed Implementation Plan (2001)</p> <p>Medicine Lake City Code Medicine Lake Flood Plain Ordinance & Federal Emergency Management Agency (FEMA) flood hazard maps</p> <p>Effect on Annual BCWMC Operating Costs: Negligible or no effect</p>	<p>Image 3) Existing pond, wetlands inside Jevne Park on the east-end entrance near the "Y" on Peninsula Road. SOURCE: Google Maps.</p>
<p>CIP Medicine Lake request factsheet_ final\$submission1.26.17.doc</p>	