

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Stephanie Johnson) and Laura Jester (BCWMC Administrator)
Subject: Item 5D – Consider Approval of Scope of Work and Budget for Assistance with Medicine Lake Task Force
Date: July 9, 2026

5D. Consider Approval of Scope and Budget for Assistance with Medicine Lake Task Force

Recommendations

- a) Consider approving the proposed scope of work and budget for Commission Engineer assistance with convening and facilitation of Medicine Lake Task Force

Background

At the BCWMC meeting in May 2026 there was consensus that the BCWMC should participate and assist with convening and facilitating a Medicine Lake Task Force. While the Task Force will have no decision-making authority, the goals of the task force are:

1. To develop a shared understanding of the lake's challenges and current conditions.
2. To understand lake residents' and users' observations and indicators of a healthy lake.
3. To facilitate a discussion among experts on methods to improve overall lake health including water quality, ecology, and recreational suitability.
4. To develop recommendations for projects or programs needed to improve water quality and lake ecology and manage aquatic invasive species while considering permitting constraints.
5. To inform expenditure of the BCWMC's CIP funds for "projects resulting from the Medicine Lake TMDL Assessment" as included in Table 4-6 of the 2026 Watershed Management Plan as CIP #1.

Medicine Lake is on the Minnesota Pollution Control Agency's (MPCA) impaired waters list for excess nutrients and fish bioassessments. The lake is also known to be infested with aquatic invasive species including starry stonewort, curly-leaf pondweed, Eurasian water milfoil, and zebra mussels.

In 2010, a total maximum daily load (TMDL) study was prepared for Medicine Lake to address the excess nutrient (more specifically, phosphorus) impairment within the waterbody. The TMDL study identified the major sources of phosphorus such as stormwater runoff from the surrounding watershed and internal sources such as phosphorus release from lake bottom sediments and the mid-summer die-off of curly-leaf pondweed. The study estimated the maximum amount of phosphorus that Medicine Lake can receive without violating water quality standards, estimated the amount of pollutant reduction needed to meet the state standards, and allocated that amount among the pollutant sources through the assignment of wasteload allocations (WLAs). The BCWMC was identified as the "convener" of a categorical WLA meaning the BCWMC cooperates with the member cities to identify and implement water quality improvements to reduce phosphorus pollution in the lake.

In addition to efforts to reduce pollutant loadings, Medicine Lake is also being actively managed for aquatic invasive species, including starry stonewort and curly-leaf pondweed. The lake is also infested with Eurasian watermilfoil and, in 2017, zebra mussels were discovered within the lake. Aquatic vegetation management within Medicine Lake is guided through a Lake Vegetation Management Plan, approved by the Minnesota Department of Natural Resources in 2022. The Lake Vegetation Management Plan outlines how aquatic plants within the lake will be managed and works to find a balance between the conservation of native plant communities and recreational and access needs of lake users. The BCWMC cooperates with the Three Rivers Park District to manage aquatic invasive species within Medicine Lake.

One of the top priorities in the BCWMC's 2026-2035 Watershed Management Plan is improving water quality in Medicine Lake so that it meets nutrient water quality standards. The Plan also includes a goal to maintain or improve the lake floristic quality indices (FQIs) and number of aquatic plant species within Medicine Lake as associated with state standards for aquatic vegetation.

In 2025, the BCWMC completed [a study](#) to assess progress toward meeting the Medicine Lake TMDL requirements, including an assessment of significant water quality projects completed since the 2010 TMDL study, pollution reductions achieved, current lake water quality compared to state standards, and additional pollutant reductions and projects needed to achieve the lake's water quality goals. Findings from the 2025 study note significant pollution reductions in watershed loading to Medicine Lake have been achieved, although the lake continues to not meet water quality standards. As a result, the study recommends focusing management strategies on internal nutrient sources, including an alum treatment to reduce internal phosphorus loading.

The study also acknowledges that meeting the nutrient water quality standard for Medicine Lake could have some unintended consequences for the lake's biological response from aquatic invasive species. As a result, the study recommends considering AIS response as part of any treatment planning and taking an adaptive management approach to AIS control if/when a treatment is undertaken.

The BCWMC's 2026-2031 Capital Improvement Program (CIP) currently includes \$2,000,000 budgeted in the years 2028-2029 for the implementation of water quality improvements at Medicine Lake ("Projects resulting from the Medicine Lake TMDL Assessment, CIP #1). In addition to the TMDL assessment report, the BCWMC and City of Plymouth wish to gain input on potential management practices from a group of key technical partners and impacted lakeshore property and business owners.

Creation of a Medicine Lake Task Force is proposed to gather this input. Information gathered from the Task Force over the next several months would be used in combination with previously completed technical studies (such as the 2025 TMDL Assessment Project) to inform implementation strategies. This effort is analogous to a feasibility study for a CIP project.

Scope of Work

Work on the Medicine Lake Task Force is proposed to begin the summer of 2026 and extend through approximately June of 2027. Work will begin with a public engagement effort and public survey to gather input from lakeshore residents and lake users. Information gathered from the survey will be used to help inform the Task Force's focus.

1. Resident and Lake Users Engagement and Surveys

Prior to convening the Task Force group, the Commission Administrator will work with the Cities of Plymouth and Medicine Lake to develop and distribute a survey for lake residents and lake users. The survey will be used to gather insights and observations and to understand the conditions residents and users would consider indicators of a healthy lake. The survey will be hosted online by the City of Plymouth. The City of Plymouth will mail postcards to lake residents within Plymouth with a QR code to access the survey. Postcards, flyers, or emails will similarly be distributed to Medicine Lake residents. Flyers with the QR code will also be posted at public access points to capture input from lake users.

The Commission Administrator and Plymouth staff will collect and summarize the survey results which will be used to inform discussions of the Task Force and to plan for the public meeting/open house described later in this scope.

2. Development and Convening of the Medicine Lake Task Force

Following completion of the public engagement efforts, the BCWMC will work with the Cities of Plymouth and Medicine Lake to convene a group of technical experts and key area representatives to discuss and share information on Medicine Lake. Topics to be discussed within the Task Force will include: the lake's natural processes and natural resource management considerations, challenges that Medicine Lake is currently facing, top priorities for the lake's management over the next 5-10 years, management efforts currently being undertaken, permitting considerations, and the current roles and responsibilities of agencies and organizations represented on the task force.

The Medicine Lake Task is expected to consist of representatives from the Minnesota Department of Natural Resources (MnDNR), Minnesota Pollution Control Agency (MPCA), Hennepin County, Three Rivers Park District, City of Plymouth, City of Medicine Lake, BCWMC, Barr Engineering Co., PLM Lake & Land Management, and the Minnesota Aquatic Invasive Species Research Center (MAISRC), as well as 2 - 3 key representatives for lakeshore property owners and lake recreational users.

It is anticipated that the Medicine Lake Task Force will convene over a series of 4-5 meetings during the fall of 2026 through winter of 2027. It is expected that meetings will cover topics such as:

- **Meeting #1: Background and Introduction to Medicine Lake**
Summary of limnology 101, brief history of Medicine Lake water quality and management approaches within the lake, overview of participants' roles and responsibilities; review of survey results from lake users.
- **Meeting #2: Medicine Lake Ecology: Aquatic vegetation, macroinvertebrates, fish, AIS, etc.**
Current conditions and management within the lake; known stressors; applicable regulations; AIS management in other lakes and/or research outcomes – what's working and what's not working; areas where more information is needed.
- **Meeting #3: Medicine Lake Water Quality: Nutrients and other pollutants**
Current conditions within the lake; known stressors; applicable regulations; management actions currently underway; areas where more information is needed.

- **Meeting #4: Discussion and Recommendations**

Task Force members will discuss what they learned from the previous meetings and develop viable implementation options for projects or programs to improve water quality and lake ecology and manage aquatic invasive species.

Task Force meetings will be held in person, with a remote option (after the first meeting) for participants that are not able to attend in-person.

BCWMC and City of Plymouth staff will act as co-leaders for the Medicine Lake Task Force development and engagement effort, with Barr staff providing support throughout the process and with City of Medicine Lake representatives' involvement, as desired. Communications and coordination with the Task Force members will be led by BCWMC staff. The planning for Task Force meetings will be undertaken jointly by BCWMC, City of Plymouth, and Barr staff. Barr staff will also support by providing technical expertise and participating as Task Force technical members.

The proposed budget assumes Barr's participation in one planning meeting in advance of each Task Force meeting. We assume that no new technical analyses will be performed by Barr as part of this effort, but rather that Barr's representation on the Task Force and presentations will draw primarily from technical content and materials previously developed for past studies, planning, and presentations on Medicine Lake water quality, assessments, AIS, and management topics. We have budgeted up to 20 hours for the refinement and revisions to these materials for the purposes of presentation and engagement with the Task Force.

Assumptions and Limitations:

The Task Force will concentrate its work on in-lake conditions and in-lake management options. There are several topics that will not be addressed nor discussed by the Task Force including external sources of pollutants, lake water levels, boating or wake boats, boat launch inspection schedules or launch closures, or private property conditions.

Meetings of the Task Force will not be considered public meetings and will not be open to the public in order to maximize limited time and concentrate on pertinent information.

3. Report on Task Force Outcomes

At the completion of the Task Force's convening, Barr will prepare a draft report on the Task Force meetings to summarize the process, key information shared, input received from participants, and Task Force recommendations. A first draft of the report will be completed and provided for review and comment from BCWMC and City of Plymouth staff. Comments will be incorporated into a revised draft.

The revised draft report will be shared with Task Force members and a meeting will be held for presentation on the key takeaways of the effort and to receive feedback on implementation priorities and next steps. The BCWMC TAC may also receive a presentation of the draft report and provide input or recommendations to the Commission. Following these meetings, a final report will be completed incorporating information from feedback during those discussions.

This final report will be presented at a regularly scheduled meeting of the City of Plymouth's Environmental Quality Committee and at a BCWMC meeting. The final report will also be provided via city staff to the City of Plymouth City Council.

4. Informational Meeting for Lake Residents and Users

Following the culmination of the Task Force's work, the BCWMC and City of Plymouth will host an informational meeting or public open house. The event will be an opportunity for lake residents and users to review information on current lake conditions, hear about Task Force recommendations, ask questions, and learn how they can help protect and improve the lake. BCWMC and Plymouth staff have heard from residents that this would be an important activity to help inform the public and provide transparency on the work of the Task Force and next steps. A public hearing in September 2027 is also expected to precede the action of officially ordering the resulting CIP project for 2028.

Proposed Timeline and Commission Engineers' Estimated Costs

The following table summarizes the estimated budget for Commission Engineers and the anticipated schedule for the Medicine Lake Task Force effort. Similar to a CIP feasibility study, the funding source for this effort is the budget for the CIP project (CIP #1) for "projects resulting from the Medicine Lake TMDL Assessment." | As typical for CIP engagement efforts or assistance with CIP feasibility studies, costs associated with Commission Administrator time or other staff time are not included here and will be allocated to their regular budgets.

Task	Estimated Budget	Estimated Schedule
1. <u>Resident and Lake Users Engagement and Surveys</u> Support and assistance, as needed	\$1,000	July – September 2026
2. <u>Development and Convening of the Medicine Lake Task Force</u> Planning, preparation, and participation in the Medicine Lake Task Force	\$21,300	October 2026 – April 2027
3. <u>Report on Task Force Outcomes</u> Report development & presentations to Task Force, TAC, and BCWMC	\$21,100	June 2027
4. <u>Informational Meeting for Lake Residents and Users</u> Support and assistance, as needed	\$1,000	July 2027
Total	\$44,400	