



Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 5A: Medicine Lake Lift Station Rehabilitation and Temporary Variance Request –
Medicine Lake, MN
BCWMC November 16, 2022, Meeting Agenda
Date: November 9, 2022
Project: 23270053 2022 2297

5A Medicine Lake Lift Station Rehabilitation and Temporary Variance Request– Medicine Lake, MN BCWMC 2022-17

Summary:

Project Proposer: City of Medicine Lake

Proposed Work: Reconstruction of sanitary lift station

Basis for Review at Commission Meeting: Fill in floodplain; temporary variance request

Impervious Surface Area: No change

Project Schedule: Constructed summer 2022

Recommendation: Consider approval of the variance and conditionally approve the project

General Project Information

The City of Medicine Lake reconstructed a sanitary lift station on Kaiser Avenue that resulted in 81 cubic yards of fill below the Medicine Lake 100-year floodplain. The city had initially intended to construct the lift station and provide compensatory storage as part of the BCWMC #2021-36 Peninsula Road Street and Utility Improvements project that was reviewed and approved at the BCWMCs March 18, 2022, meeting, but the street project was delayed. According to the City, the sanitary lift station improvements were separated from the street project and the schedule was accelerated due to the poor condition of the existing lift station and concerns about failure. Therefore, the City completed the lift station reconstruction project during the summer of 2022 with no compensatory storage.

The City of Medicine Lake is requesting “after-construction” approval of the referenced project and a temporary variance to BCWMC Rule 4.8 (Policy 38), which requires “that projects within the floodplain maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system.” The city is requesting a temporary variance until December 31, 2024.

Floodplain

The project includes work in the BCWMC (Medicine Lake) 1% annual-chance (base flood elevation, 100-year) floodplain. The February 2021 BCWMC Requirements for Improvements and Development Proposals (Requirements) document states that projects within the floodplain must maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at

least a precision of 0.00 feet). The 1% annual-chance (base flood elevation, 100-year) floodplain elevation of Medicine Lake is 890.4 feet NAVD88. The proposed project resulted in 81 cubic yards of floodplain fill and no compensating storage.

Temporary Variance Request

The City of Medicine Lake requested a temporary variance to Rule 4.8 of the BCWMC Requirements document for the requirement of providing compensatory storage. The city initially planned to provide compensatory storage as part of the City Street and Utilities Project (BCWMC #2021-36 Peninsula Road Street and Utility Improvements). However, the city is unable to move forward with the street and utilities project due to high bid prices, increased borrowing costs, and failure of the State Legislature to pass a bonding bill. Therefore, the city is requesting a temporary variance to provide the compensatory storage later, when the street and utility project moves forward. The city is also exploring other compensatory storage options in case the street project is delayed further. The temporary variance is requested until December 31, 2024.

Section 3.3 of the BCWMC Requirements document indicates that in granting variances, the Commission shall make a finding showing that all the following conditions exist. The October 20, 2022 memorandum from the city's consultant addressed these conditions, as follows.

1. There are special circumstances or conditions affecting the property such that the strict application of the provisions of these standards and criteria would deprive the applicant of the reasonable use of the applicant's land.

"The site is too small to include mitigation within the available property. Additional easement on private property would be required to excavate the required volume for mitigation. Mitigation was planned as part of another project (BCWMC #2021-36 Peninsula Road Street and Utility Improvements), which was delayed due to unforeseen circumstances."

2. The variance is necessary for the preservation and enjoyment of a substantial property right of the applicant.

"Excavation would be detrimental to the private property owner as well as the lift station and City street."

3. The granting of the variance will not be detrimental to the public welfare or injurious to the other property in the territory in which the property is situated.

"Storage lost due to delayed mitigation would increase the high-water level of the lake less than 0.0015 inches during a 100-year flood until mitigation is accomplished. This temporary increase would be negligible and would not be detrimental to the public welfare of injurious to other property in the territory."

4. In applications relating to a use in the 1% (base flood elevation, 100-year flood) floodplain set forth in Table 2-9 of the Watershed Management Plan, the variance shall not allow a lower degree of flood protection than the current flood protection.

"Storage lost due to delayed mitigation would increase the high-water level of the lake less than 0.0015 inches until mitigation is accomplished, which would be a negligible decrease in the degree of flood protection."

5. The granting of the variance will not be contrary to the intent of taking all reasonable and practical steps to improve water quality within the watershed.

"Granting variance will have no effect on water quality"

It is the opinion of the Commission engineer that the temporary 81 cubic yards of fill in the Medicine Lake floodplain will have a negligible impact on the flood level of Medicine Lake and at any point along the trunk system to at least a precision of 0.00 feet.

Wetlands

The BCWMC is the local government unit (LGU) responsible for administering the Wetland Conservation Act (WCA) in the City of Medicine Lake. There are no wetlands impacted by the lift station project, therefore, BCWMC wetland review is not required.

Rate Control

The lift station project does not create one or more acres of net new impervious surfaces; therefore, BCWMC rate control review is not required.

Water Quality

The lift station project does not create one or more acres of net new impervious surfaces; therefore, BCWMC water quality review is not required.

Erosion and Sediment Control







The lift station project does not result in more than 10,000 square feet of land disturbance or 200 cubic yards of cut and fill; therefore, BCWMC erosion and sediment control is not required.

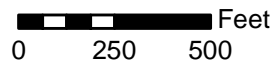
Recommendation

Approval of the temporary variance and conditional approval of the project, based on the following comments:

1. The BCWMC 100-year floodplain elevation for the project site (890.4 feet NAVD88) must be shown on the drawings.
2. The limits of the floodplain fill and calculations showing the fill volume below the 100-year floodplain (for the lift station project) must be shown on the drawings.
3. As discussed with the applicant, we understand Exhibit 1 (Floodplain Earthwork 2022 Street & Utility Imp.) from the February 25, 2022 resubmittal for BCWMC #2021-36 Peninsula Road Street and Utility Improvements has been revised. The revised exhibit that shows cut/fill computations for both the street project and the lift station project must be provided.
4. Compensatory storage must be provided when the street and utility project moves forward or by other storage options before December 31, 2024. Final compensating storage plans must be provided to the Commission Engineer for future review.



-  Project Location
-  Municipality
-  BCWMC Legal Boundary
-  Major Subwatershed
-  BCWMC Hydrologic Boundary
-  Bassett Creek



BCWMC #2022-17
 MEDICINE LAKE
 LIFT STATION
 REHABILITATION
 Medicine Lake, MN
 LOCATION MAP