

## MEMORANDUM

**To:** MCWD Board of Managers  
**From:** Renae Clark and Laura Domyanch  
**Date:** December 15, 2016  
**Re:** Highway 101 Shoreline and Jennings Bay Floodplain Mitigation Construction Updates

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### Background

The Hennepin County Highway 101 Causeway shoreline reconstruction project and the Jennings Bay floodplain mitigation projects were concurrently completed between October 15 and December 15, 2016. Through a Cooperative Agreement with Hennepin County the District completed bioengineering and shoreline vegetation restoration along the Grays/Wayzata Bay causeway coordinated with the County Road 101 road improvements. The causeway work includes a \$30,000 reimbursement from Hennepin County. The shoreline restoration work satisfied MCWD Rule requirements for the County Road 101 reconstruction project and mitigates hazardous conditions from the lake waves freezing on the roadway during winter. The shoreline reconstruction project also provides approximately 900 lineal feet of revegetated shoreline restoration through the corridor in a carefully designed way that meets community goals related to views and aesthetics.

The Jennings Bay Floodplain Mitigation project provides for a 1:1 mitigation of 750 cubic yards of floodplain fill resulting from the Highway 101 shoreline reconstruction and restoration project, 500 cubic yards of floodplain fill required for emergency repair to Enchanted Lane in Minnetrista during the 2014 flooding, and an additional 110 cubic yards of storage, which the City of Minnetrista will claim for future use. The project is sited on a city-owned parcel adjacent to the Painter Creek outlet into Jennings Bay. The District's cooperative agreement with the City of Minnetrista provides for the City to transfer the fee interest in the project parcel to the District. This, however, requires legislative action because the parcel is former tax-forfeit land subject to a reverter interest in the State of Minnesota. This legislative action has not been secured, however the agreement further provides that absent such a transfer, the District may enter the parcel to construct and maintain the project indefinitely.

### Highway 101 Causeway Shoreline Reconstruction

The Highway 101 Causeway Shoreline Reconstruction project began on October 19 and was substantially complete on December 5. Hydroseeding the vegetated wall will occur in the spring, which was determined optimal for germination success. Spring work will also include planting vines that were not available this fall and installation of the irrigation system. Construction was according to the accepted contractor's schedule and regularly observed by staff and by Wenck as part of their construction oversight contract. One irregularity with respect to bid quantities has occurred. Fill material used behind the riprap was approximately double the estimated quantities in the bid. The discrepancy in volume was evaluated by

Wenck and determined to be primarily due to a combination of field construction variability and an under-estimation of on-site back fill material below grade. These factors have also resulted in some material quantities to be lower than estimated. The impact to the construction budget is approximately \$9,000 of additional cost. The construction budget summary is provided below.

**Jennings Bay Floodplain Mitigation**

Site preparation, including tree clearing and buckthorn removal, began on October 31, and site excavation and construction of the basin began on November 8 and will be completed this week. Site restoration has occurred in phases directly following construction of the project.

Two issues arose during the construction of the project. After excavation of the pond and placement of the 18” pipe that allows flood flow into the site from Jennings Bay, an as-built survey determined that the pipe elevation was 1-foot lower than the design plans and the pond depth was approximately 4-inches above the design elevation. During construction, the contractor’s survey equipment lost calibration and provided incorrect elevations. The contractor has since rectified the situation by completing the additional excavation and resetting the pipe at the correct elevation. It is the responsibility of the contractor to deliver the project to design standards, thus construction corrections were completed at the cost of the contractor.

The second issue requiring correction is related to site access. The City-approved access road to the site became buckled and broken as the contractor was hauling excavated material off-site. The City is concerned about the road’s future utility and the ability to access their lift station at the end of the access road and is requesting replacement. The road will be replaced in spring 2017 and that the cost of replacement be shared equally between the City, the contractor, and MCWD. The total replacement cost will be approximately \$10,000.

In addition to creating floodplain storage, MCWD is also restoring vegetation on the site. Beyond invasive species removal, approximately 40 trees were removed to provide for construction access or due to poor condition. These have been replaced by over 300 trees and shrubs of desirable native species. The channel to the east of the project site where Painter Creek flows into Jennings Bay was also cleared of many fallen trees, and the bank has been stabilized with 775 live stake plantings.

**Budget Summary**

	<b>Contractor Bid Award</b>	<b>Total Actual Construction Cost (estimated)</b>	<b>Board Authorized Construction Budget</b>
101 Causeway Shoreline Project	\$835,943	\$845,823 (+1%)	\$919,537
Jennings Bay Floodplain Mitigation Project	\$144,744	\$147,744 (+2%)	\$159,518

Additional questions, comments, or ideas related to the Highway 101 Shoreline or Jennings Bay Mitigation projects can be directed to Renae Clark at [rclark@minnehahacreek.org](mailto:rclark@minnehahacreek.org) / 952.641.4510 or Laura Domyancich at [ldomyancich@minnehahacreek.org](mailto:ldomyancich@minnehahacreek.org) / 952.641.4582 respectively.