

Mount Olivet Stream Restoration Project
12235 Old Rockford Road & 12055 41st Avenue North, Plymouth
Bassett Creek Watershed Project #ML-20



FINAL REPORT
December 2023



I. Project Overview

This BCWMC Capital Improvement Project in the City of Plymouth restored 1,300 linear feet of streambanks along a stream channel from Old Rockford Road and continuing downstream (south) toward Clifton E. French Regional Park. The project stabilized the streambanks in four distinct reaches by utilizing techniques such as root wads and live stakes and hard armoring techniques such as rock cross vanes and rock toes.

The project improved habitat, significantly reduced erosion, and reduced total phosphorus loads and total suspended solids loads by 5.3 and 10,560 lbs per year, respectively. The restoration work was completed in winter 2021-2022 with design and construction being implemented through an agreement with the City of Plymouth. In 2022 & 2023, additional vegetation was established along the banks and some minor repairs to a few areas was completed.

II. Project Description and Outcomes

The Mount Olivet Stream Restoration Project stabilized and restored streambanks along both sides of a stream channel within the City of Plymouth for approximately 1,300 feet between Old Rockford Road and continuing downstream (south) into Clifton E. French Regional Park.

The project reduced total phosphorus and suspended sediment loading to the stream by an estimated 5.3 and 10,560 lbs per year, respectively. These pollutant reductions also improved the water quality of downstream resources including Medicine Lake and the Mississippi River. The project also improved the in-stream and near stream habitat along the creek.

Four reaches were stabilized and restored as part of the project. Techniques included clearing and thinning trees to open the canopy and allow more sunlight to reach the streambanks, restoring the vegetative buffer along the stream; re-connecting the stream with its floodplain, where applicable; wetland restoration, which restored the hydrology and vegetation in an existing degraded wetland by dredging a basin and installed native vegetation on the slopes and in the bottom of the basin. Additionally, the project removed large woody debris and installed a variety of stream stabilization measures, including riprap, root wads, toe wood, vegetated reinforced soil stabilization (VRSS), rock or log vanes, and stone toe protection.

Through an agreement with the BCWMC, the City of Plymouth implemented this project. The city hired WSB. to design the project and provide construction oversight and contracted with Sunram Construction to construct the project.

III. Timeline and Key Documents

Many of these documents and this final report can be found at:

[Mt. Olivet Stream Restoration Project - BCWMC Webpage](#)

- August 2019: Feasibility study proposal by BCWMC Engineers approved
- February 2020: Public open house held to gather input during feasibility study
- May 2020: Feasibility report by BCWMC Engineers approved (Alternative #1)
- September 2020: Public hearing on the project
- September 2020: Project officially ordered
- September 2020: Agreement with City of Plymouth to implement project approved
- June 2021: 60% design plans by WSB approved
- August 2021: 90% design plans by WSB approved
- December 2021: Project construction started
- May 2022: Project construction completed
- Summer 2022 & 2023: Vegetation management and small repairs completed; project closed

IV. Project Budget and Funding

The BCWMC CIP budget for this project was set at \$178,100 funded through an ad valorem tax levied on watershed residents in 2021. Unfortunately, project expenses including design and construction were considerably higher than projected. The City of Plymouth utilized city funds to complete the project.

Project Expenses:

BCWMC Feasibility Study: \$35,994

BCWMC Administrative Expenses: \$3,562

BCWMC Design Review: \$3,602

Project Design & Construction: \$191,821

Total Expenses: \$234,979

Funding Source:

BCWMC CIP Funds: \$178,100

City of Plymouth: \$56,879

Total Funding: \$234,979

V. Lessons Learned

During this project, the City worked with adjacent landowners to implement the project and address concerns with the project as they came up. Staff learned that the early and earnest engagement with the public, and in particular with adjacent landowners, is important to the overall success of the project.

VI. Maintenance

The City of Plymouth will undertake vegetation maintenance in perpetuity for this project. It is anticipated that staff will continue to contract with a certified vegetation management contractor to manage invasive species, revegetate bare soils with appropriate native seed mix and/or plugs of native vegetation and identify longer term maintenance needs for the corridor.

VII. Photos

Before construction: Summer/Fall 2021

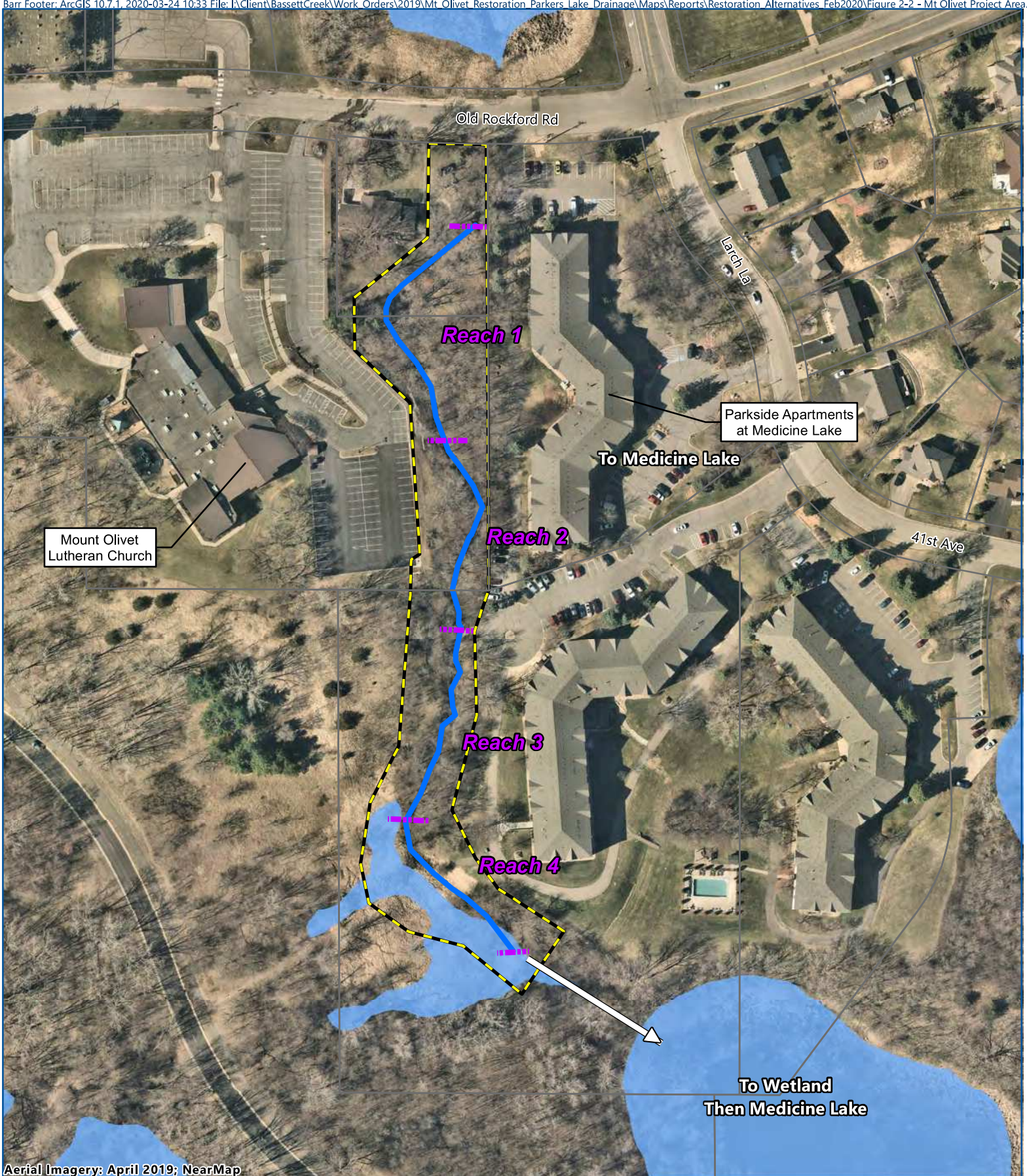


During construction: Winter 2021-2022









After construction: August 2022






Aerial Imagery: April 2019; NearMap

-  Stream Path
-  Reach Boundary
-  Project Area
-  Ponds and Wetlands
-  Parcels


0 150 300
Feet



MT. OLIVET
PROJECT AREA
Mt. Olivet/Parkers Lake
Feasibility Study

FIGURE 2-2