



LOWER MINNESOTA RIVER WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, December 11, 2024

Agenda Item

Item 9. B. – Seminary Fen Ravine Stabilization update

Prepared By

Linda Loomis, Administrator

Summary

Brent Alcott, Water Resource Coordinator for the City of Chaska, has provided an update on this project. The LMRWD committed to partial funding of this project through its Implementation Program, however, the city has been able to obtain enough funding that they do not think they will need any funding from the LMRWD.

Attachments

Seminary Fen Ravine C-2 Stabilization Project Update dated December 2, 2024

Recommended Action

No action recommended – for information only



City of Chaska

Memorandum

To: Linda Loomis, Lower MN River Watershed District Administrator
From: Brent Alcott, Chaska Water Resources Coordinator
Date: December 2, 2024
Subject: Seminary Fen Ravine C-2 Stabilization Project Update

The Seminary Fen Wetland Complex, located on Chaska's southeastern border near Audubon Road and CSAH 61 is a nationally known rare wetland complex. More than 8,000 years in the making, the 73-acre natural area consists of a large complex located at the foot of the steep valley side slopes. The fen wetland area is comprised of peat soil, offering natural flood control to filter pollutants while providing habitat for native species that are rare or nonexistent outside of calcareous fens. Assumption Creek, which flows through the site is one of only a few cold-water trout streams remaining in the Twin Cities metro area. Mineral rich groundwater sources combined with overland drainage fed by neighboring ravines provide the water resources necessary to sustain the fen complex, keeping soils hydrated. The unique hydrology, soils, plants, and animals make the area highly sensitive to water quality and sedimentation stress. The future of its rare features relies heavily on local decisions in urbanizing areas beyond the boundaries of the complex.

In efforts to protect, maintain, and restore areas that support the fen complex, a comprehensive study led by the city was completed. The study identified key areas within the community for projects that offer wetland protection and restoration opportunities. The outcome has provided the general guidance leading to multiple projects over the last decade with successful partnerships between the city, state, and watershed agencies. Most recent in 2016, Chaska partnered with the DNR and Lower Minnesota Watershed for its first ravine restoration project, labeled C-1 on the attached map. The ravine labeled as C-1 was the first ravine restoration project completed that reduced sediment discharge that directly impacts the fen area. Separate from the wetland, another factor with the project was to reduce erosion occurring over properties along the ravine where slopes were encroaching due to the erosion prone soils.

In 2022, a new feasibility study was conducted in partnership with the Lower MN Watershed District and Carver County Water Management Organization for the next ravine area identified labeled (C-2) on the exhibit. Like the previous project, the study evaluated causes of erosion and developed options with similar objectives. The study identified similar concerns with erosion sediment loss as the primary issue causing further degradation to the downstream wetlands and the adjoining properties to recommend an option that best meets the goals and objectives. The design concept provides for a small stormwater basin over the City neighborhood Bluff Park property

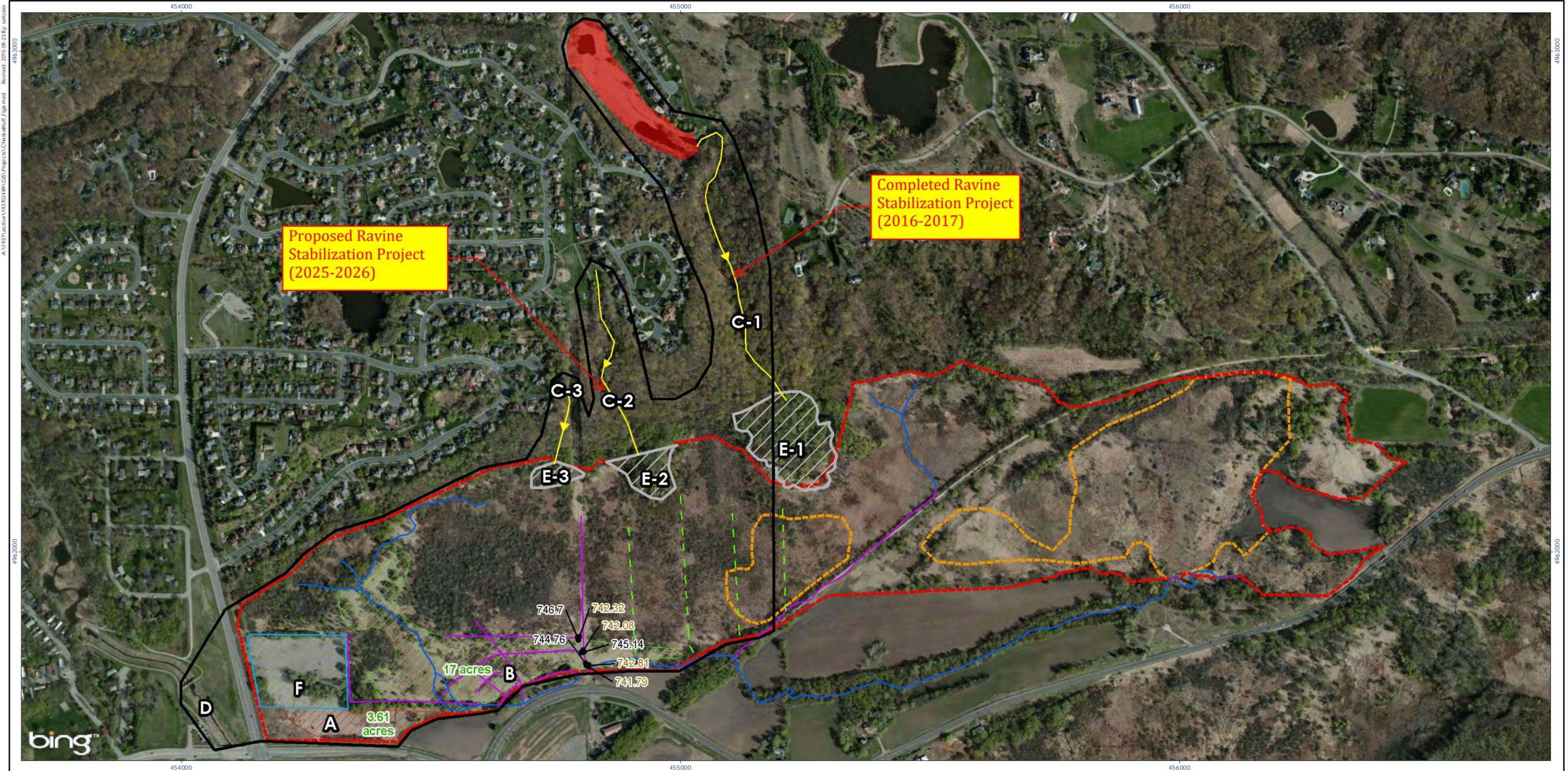
combined with a downstream rock-lined channel, and vegetating ravine side slopes. The total project cost for the repair and restoration is currently estimated at \$1,010,000.

This spring the City was awarded grant funds from the Board of Water and Soil Resources Watershed Based Implementation and Clean Water Funds which fund most of the project. Now that grants have been secured, City staff have begun engaging with those property owners who neighbor the project. Portions of the project are currently planned within the easements that were dedicated to the ravine area which still need to be further defined. The overall schedule would be to complete a design over the fall and winter timeframe for a project being scheduled for construction in the fall/winter of 2025.

Future Seminary Fen Restoration, Protect, and Restoration Projects

As the final construction plan is developed and work begins to stabilize the Seminary Fen C-2 Ravine, the City will begin to evaluate additional project areas to restore, protect, and restore the overall wetland complex. The 2015 Seminary Fen Investigation Report, the Seminary Fen Stewardship Plan, and the Assumption Creek Hydrologic and Hydraulic study will all be used to develop and prioritize potential project area. The City appreciates the LMRWD partnership and looks forward to continuing to work with the District on future projects.

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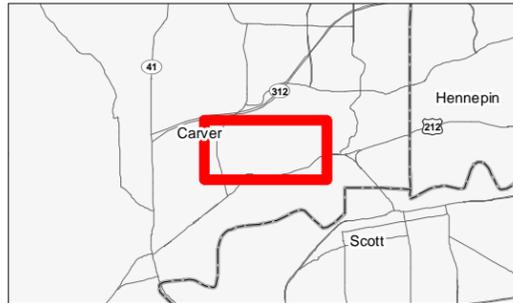


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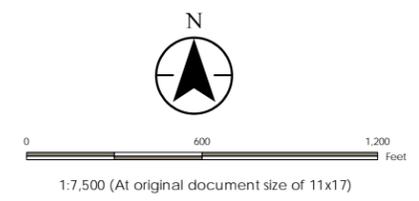
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- Legend**
- Project Site
 - Seminary Fen Wetland Complex (B)
 - Calcareous Fen (Southeastern)
 - Sedimentation Plumes (E-1, E-2, E-3)
 - Barr Restoration and Management Data
 - Natural Drainageway
 - Potential Tile (No tile observed)
 - Surface Ditch
 - 745.14 Ditch Top Elevations
 - 742.32 Ditch Bottom Elevations
 - 2011 Wetland Restored (F)
 - Potential Purchase and Wetland Restoration Area (A)
 - Proposed Wetland Restoration Area (B)
 - Hazeltine Bluff Wetland
 - Ravines (C-1, C-2, C-3)



Notes
 1. Coordinate System: NAD 1983 UTM Zone 15N
 2. Data Sources Include: Stantec, USGS, and ESRI
 3. Orthophotography: Microsoft Corporation, with permission

Figure No. **1**
 Title **Seminary Fen Investigation Report For The Area Within Chaska**
 Client/Project **City of Chaska**
 Project Location **1116, R23, S34 C. of Chaska Carver Co., MN**
 193702489
 Prepared by CS on 2015-03-05
 Technical Review by JS on 2015-09-18



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