

Vermillion River Watershed Joint Powers Organization Capital Improvement Project Tour - September 25, 2025



Top left: Foxborough Park stormwater treatment, Lakeville. Top right: Invasive carp and goldfish pulled from East Lake, Lakeville. Bottom left: Aerial view of the Rosemount Public Works and Police Campus. Bottom right: Hoffman Rain Garden, Rosemount.

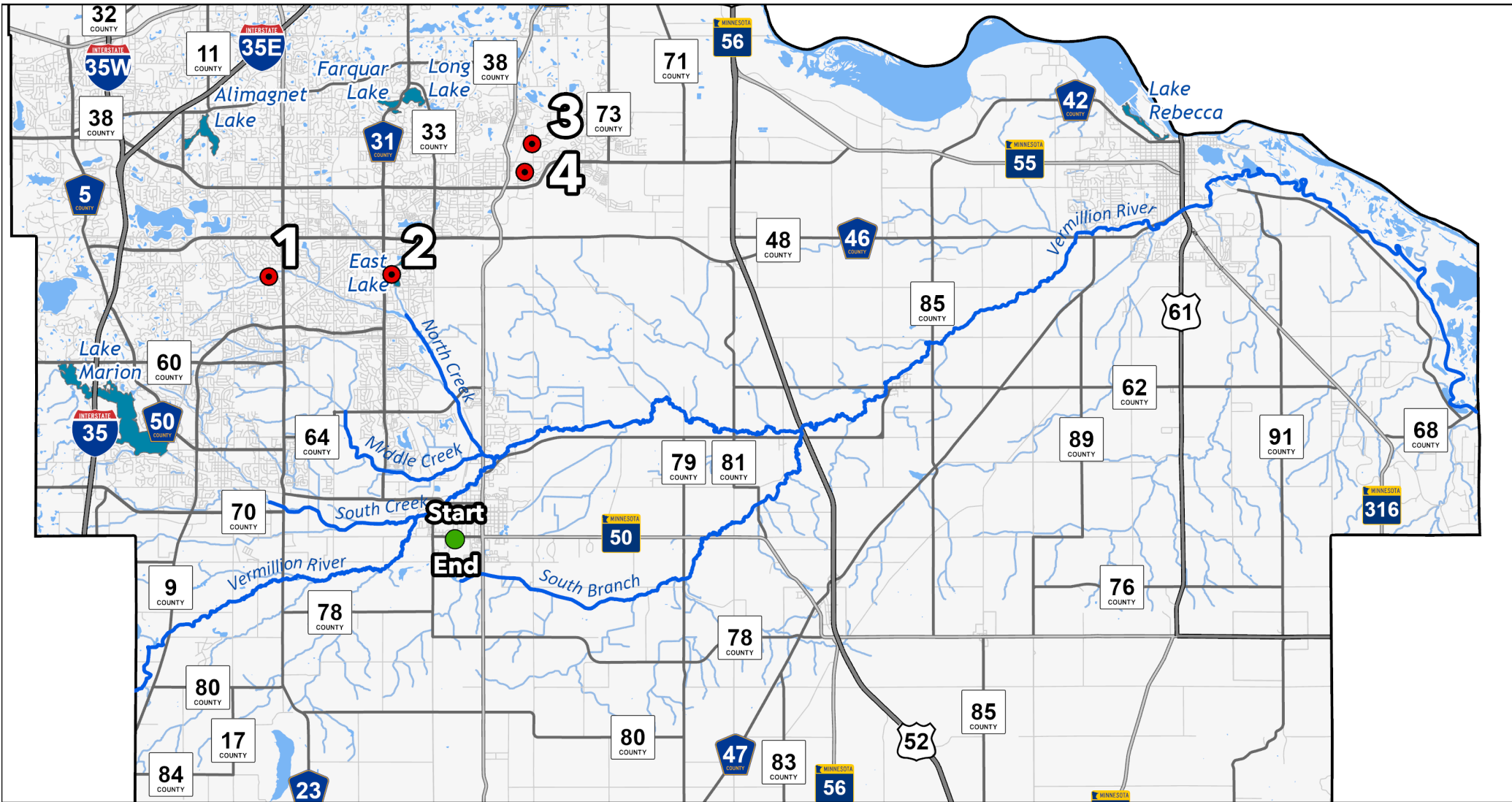
Special thanks to our project partners:



Itinerary

Time	Location & Activity	Speakers
8:30 a.m.	Check-in at Dakota County Extension and Conservation Center, Large Conference Room (coffee and refreshments provided)	
9:00 a.m.	Welcome	Vermillion River Watershed Joint Powers Organization (VRWJPO) Leadership
9:10 a.m.	Board bus and depart for Foxborough Park (<i>appx. 15-minute drive</i>)	
9:30 a.m.	Stop 1: North Creek at Foxborough Park Total Suspended Solids (TSS) Reduction	Mac Cafferty, City of Lakeville Jeff Dunn, VRWJPO
9:50 a.m.	<i>Depart for East Lake (appx. 10-minute drive)</i>	
10:10 a.m.	Stop 2: East Lake Invasive Fish Barrier	Mac Cafferty, City of Lakeville Kelly Perrine, VRWJPO
10:35 a.m.	<i>Depart for City of Rosemount Public Works and Police Campus (appx. 12-minute drive)</i>	
10:50 a.m.	Stop 3: City of Rosemount Public Works and Police Campus Stormwater Infiltration Basins	Nick Egger, City of Rosemount Jeff Dunn, VRWJPO
11:10 a.m.	<i>Depart for Hoffman Raingarden (appx. 5-minute drive)</i>	
11:20 a.m.	Stop 4: Hoffman Landscaping for Clean Water Raingarden	Curt Coudron, Dakota County Soil and Water Conservation District
11:40 a.m.	<i>Depart for Extension and Conservation Center (appx. 20-minute drive)</i>	
12 noon	Return to Dakota County Extension and Conservation Center	

Watershed Map



Tour Stops

- Tour Start/End - Dakota County Extension and Conservation Center
- Stop 1 Foxborough Park North Creek TSS Reduction
 - Stop 2 East Lake Invasive Fish Barrier & Removals
 - Stop 3 City of Rosemount Public Works/Police Campus
 - Stop 4 Hoffman Raingarden

Site summaries

Stop 1: North Creek Foxborough Park Total Suspended Solids Reduction

Lakeville

Overview

Much of the area draining to the North Creek tributary of the Vermillion River was developed before stormwater requirements were implemented. Many of its neighborhoods don't have stormwater treatment practices that decrease flow rates or improve water quality. A large portion of the stormwater runoff in the 220-acre subwatershed drains directly into North Creek. Lakeville's Foxborough Park had the highest estimated pollutant loading area of all those evaluated along this reach of North Creek.

To address impairments, the VRWJPO, Dakota County, and the City of Lakeville constructed a dry pond with a wet sedimentation forebay in Foxborough Park to prevent untreated runoff with total suspended solids (TSS) and total phosphorus (TP) from reaching North Creek. The forebay has a permanent pool to trap sand, debris, and sediment. A rock gabion wall and sand filter bench were constructed to trap smaller pollutants and remove phosphorus.

It is estimated that the project will reduce TSS loading by 18.4 tons/year and TP by 31.8 pounds/year, as well as improve in-stream habitats and provide stormwater flow rate control to the area. The project was completed alongside North Creek channel improvements to reduce TSS and supported by a Clean Water Fund competitive grant from the Minnesota Board of Water & Soil Resources (BWSR).

Costs and Contributions

Total project cost: \$438,161

Contributors:

- BWSR: \$346,500 in competitive Clean Water Fund grant funds for engineering and project construction
- VRWJPO: \$5,036 for in-kind grant administration/coordination; \$28,875 cash match for construction
- City of Lakeville: \$28,875 cash match for engineering, permitting, and construction management
- Dakota County: \$28,875 cash match for construction



VRWJPO Water Resources Engineer Jeff Dunn explains the benefits of the Foxborough Park TSS reduction project while shooting a promotional video with City of Lakeville staff, May 2025.

Stop 2: East Lake Invasive Fish Barrier and Removals

Lakeville

Overview

East Lake, a shallow lake in the city of Lakeville, is on the Minnesota Pollution Control Agency's Impaired Waters List due to excess phosphorus. While the nutrient can be sourced from watershed runoff, invasive common carp and goldfish are known to exacerbate the issue due to their nature of searching for food in the phosphorus-bound lake bottom sediments. These fish species can make their way into the connected North Creek tributary of the Vermillion River and disrupt ecosystems there as well. Studies found that carp and goldfish biomass within East Lake had reached 192 pounds/acre, with negative water quality impacts associated with these bottom-feeding fish known to take place at biomass densities of 100 lbs/ac.

Blocking East Lake's connection with North Creek would isolate the waterbody and allow staff to manage the in-lake invasive fish populations. In 2023, the VRWJPO, partnering with the City of Lakeville, received a competitive Clean Water Fund (CWF) grant from BWSR to install a low-voltage electric fish barrier between East Lake and its connection with North Creek in a Dakota County Park Conservation Area. The barrier began operating in spring 2024 and runs during non-winter seasons.

The CWF grant also incorporated two years of invasive fish removals. A contractor experienced in carp and goldfish removals was hired and utilized their attraction to cracked corn to optimize efforts. The contractor baited underwater box nets with cracked corn to congregate fish inside them. The nets were tied to metal poles and suspended out of the water. To remove the fish, the contractor would lift the poles out of the water and put the carp and goldfish into a bucket for safe disposal. They also removed some fish by electrofishing, which was used to define pre- and post-removal fish biomass.

In 2024, 2,798 pounds of invasive fish were removed. 2025 saw even higher numbers, with 5,930 pounds of fish removed. Surveys were conducted before and after removals to assess success in reducing invasive fish biomass, which is now below 100 lbs/ac.

Costs and Contributions

Total project costs: \$390,597

Contributors:

- BWSR: \$300,000 competitive Clean Water Fund grant for engineering, technical assistance, and barrier construction
- VRWJPO: \$15,597 for in-kind grant administration/coordination; \$37,500 cash match for construction of barrier and fish removals
- City of Lakeville: \$37,500 cash match for barrier and fish removals
- Dakota County Parks Department: Maintenance of barrier and site vegetation



The low-voltage electric barrier deterring invasive fish from moving between East Lake and North Creek.

Stop 3: City of Rosemount Public Works and Police Campus Stormwater Infiltration Basins

Rosemount

Overview

The City of Rosemount completed construction on a new Public Works and Police Campus in 2024, allowing more capacity for services to a community that has tripled in population since the late 1980s. When designing the campus, the City included two stormwater infiltration basins that went above and beyond VRWJPO Standards' design requirements for runoff volume reduction. Stormwater infiltration measures like this can reduce stormwater runoff pollution; reduce local flooding risk; and provide groundwater recharge.

Seeking to maximize local partnerships in constructing the facility, the City contacted the VRWJPO about cost-share opportunities. Because the proposed infiltration basins exceeded the watershed's design standards, the VRWJPO offered \$25,000 in cost-share. This included excavation, grading, soil amendments, plantings, and other ancillary costs associated with the work. Landscapers planted native plant species alongside the basins.

The new campus has been open to the public since December 2024. It hosted a session of the Dakota County Soil and Water Conservation District's Landscaping for Clean Water Design Course in spring 2025, as well as many group facility tours.

Costs and Contributions

Total project costs: \$25,000 in VRWJPO cost-share

Contributors:

- City of Rosemount
- VRWJPO



Basin near completion, October 2024. Photo courtesy of City of Rosemount.



One of the basins at work, August 2025.

Stop 4: Hoffman Landscaping for Clean Water Raingarden

Rosemount

Overview

While VRWJPO staff work with local governments to implement large-scale projects, the counties' soil and water conservation districts (SWCDs) take the lead on direct landowner outreach. One way the Dakota County SWCD does this is the Landscaping for Clean Water (LCW) Program, founded in 2009 to help Dakota County residents plant raingardens, native gardens, and shoreline restorations.



In LCW, people learn from Dakota SWCD staff how gardens can benefit local water quality and wildlife habitat, then design gardens or shoreline restorations for their own yards. Participants can apply for \$250 grants for their projects, funds provided by Dakota County watershed management organizations. Applicants often apply for additional grants from their cities.

The value of LCW is greater than money alone. Grant recipients receive on-site technical assistance from SWCD staff before, during, and after project installation. There is also a free Garden Maintenance class each year. Completed projects include small interpretive signs, educating community members about the environmental benefits of LCW.

Rosemount homeowners Chris and Ashley Hoffman installed this 275-square foot raingarden at their home after taking LCW classes in 2024, using all native plants. Below are photos from before and during the installation. The finished raingarden is featured on the cover page.

Costs and Contributions

Total project costs: \$820

Contributors:

- Landowner: Project design and installation
- Dakota County SWCD: Design and technical assistance
- VRWJPO: \$250 in cost-share for LCW grant



Acknowledgements

The Vermillion River Watershed Joint Powers Board

- Tom Wolf, Chair, Scott County Commissioner
- Bill Droste, Vice Chair, Dakota County Commissioner
- Mary Liz Holberg, Secretary-Treasurer, Dakota County Commissioner

The Vermillion River Watershed Community Advisory Committee

- Josh Borton, Chair, Farmington
- Brad Blackett, Vice Chair, Apple Valley
- Kevin Chamberlain, Nininger Township
- Steve Hamrick, Lakeville
- Jim Kotz, Rosemount
- John Nicolai, Rosemount
- Andy Riesgraf, Apple Valley
- Sandy Weber, Castle Rock Township

Featured Project Partners

- Minnesota Board of Water and Soil Resources
- City of Lakeville Environmental Resources Department
- City of Rosemount Public Works Department
- Dakota County Environmental Resources and Parks Departments
- Dakota County Soil and Water Conservation District
- Chris and Ashley Hoffman

VRWJPO Staff

- Travis Thiel, Watershed Administrator
- Melissa Bokman Ermer, Watershed Co-Administrator
- Jeff Dunn, Water Resources Engineer
- Brita Moore-Kutz, Communications and Outreach Specialist
- Kelly Perrine, Senior Watershed Specialist

Thank you!

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