



2023 Water Conservation Initiatives



Overview

Continued drought conditions, coupled with the amount of time it takes to accumulate water in local aquifers (where drinking water is sourced), has resulted in greater attention on regional water conservation. In 2023, the City of Lakeville continued to implement various initiatives aligning with goals in the adopted Wellhead Protection Plan (WPP), in an effort to support sustainable use of the City's public water supply.

This year, five Homeowner Associations (HOAs) participated in the irrigation system assessment program, funded substantially by the Metropolitan Council's Water Efficiency Grant Program. Following an on-site system review, participants were provided a report that:

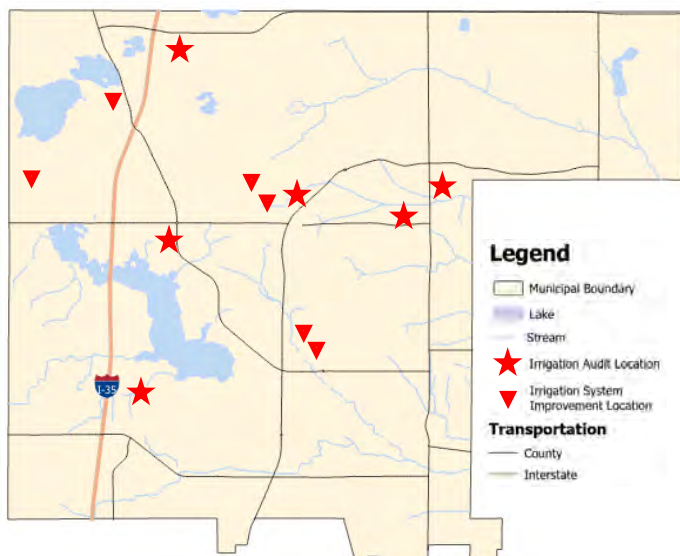
- Detailed historic irrigation water use and utility billing
- Compared the in-place irrigation regime to what is needed to support onsite turf
- Itemized recommended improvements to increase irrigation system efficiency
- Provided improvement costs and return on investments for HOA Board budgeting purposes.

HOAs that had audits completed as a part of the program were then offered cost-share to implement recommended system improvements. In 2023, three HOAs implemented weather-based irrigation controllers, as well as overall system maintenance items to save valuable potable water and residential dollars wasted on inefficient irrigation.

To further water efficiency practices on City-owned properties, the City also funded:

- Irrigation system improvements at the Water Treatment Facility, City Hall and Fire Station 4
- An irrigation system assessment at the Police Station.

Practices will result in an annual water savings of **3.3 million gallons!**



Funding

Met Council: \$23,887
 HOAs: \$ 25,089
 City of Lakeville: \$ 6,472

Project Cost: \$55,448

Practices

- ♦ Water conservation
- ♦ Sustainable suburban landscapes
- ♦ Civic engagement and education

Project Benefits

- ♦ Source water protection
- ♦ Reduction in infrastructure costs
- ♦ Reduction in water treatment costs
- ♦ Improved turf health

Partners

- ♦ Metropolitan Council
- ♦ Various HOAs

Contractors

- ♦ Water in Motion
- ♦ Irrigation by Design
- ♦ Various HOA contractors

Timeline

- ♦ Audits and improvements—
Summer,

Project made possible with funding assistance from Minnesota's Clean Water Fund





(Above) Due to the nature of irrigation systems running during late night or early morning hours, system breakages like the one seen above are often left unaddressed. Breakages contribute to substantial potable water loss that is easily preventable.



(Right) All audits found that the most profound water savings can be achieved by scheduling monthly system walk-throughs to catch breakages that can be missed due to early morning or late night operation times.



(Left) Sprinklers that are not aligned appropriately can waste at least 50% of water thrown from irrigation heads. Ensuring the appropriate nozzle pressure is equally as important as nozzle placement and alignment.



(Above) The sprinkler above, found during one of the HOA system assessments, was estimated to waste half of a gallon of water per minute.

(Below) Data from HOA audit reports shows the large amount of cost-savings that could be achieved by participants that invest in improving the efficiency of their irrigation systems.

Homeowner Association	Average Annual Irrigation Cost	Cost for On-site Turf Needs	Potential Annual Cost Savings
A	\$18,226	\$8,452	\$9,774
B	\$17,610	\$9,795	\$7,815
C	\$7,420	\$6,119	\$1,301
D	\$9,156	\$7,262	\$1,894
E	\$2,418	\$1,972	\$446