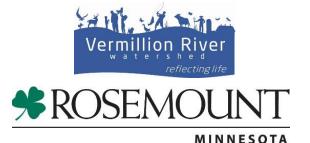
Bloomfield Single Family HOA 2021 Irrigation Audit



Key Findings

In 2021, Conserva Irrigation was hired by the City of Rosemount and the Vermillion River Watershed Joint Powers Organization (VRWJPO) to conduct a Stage 2 Irrigation Audit. The purpose of conducting the audit was to document and recommend upgrades to improve system efficiency. Key findings included:

- Three controllers operate a total of 32 irrigation zones, irrigating 3.63 acres or greenspace
 - The controller is not a smart (weather-based) controller capable of remote monitorization
- Locations of rain sensors were not suitable or couldn't be found to test them. Ensure all are working and in good open and testable locations.
- A number of rotor and spray heads were leaking
- All spray heads are using water-inefficient nozzles
- Zones have poor coverage/spacing that led to water sprayed onto roads or sidewalks
- Some spray head zones are running for longer than is needed.

Table 2. Financial Implications for Recommended Efficiency Upgrades

Efficiency Upgrade(s)	Estimated Cost	Estimated Annual Cost Savings	Return on Investment
Install EPA WaterSense approved smart controllers (22% water savings)	\$2,385	\$1,722	~ 1.5 years
Install high-efficiency spray nozzles (10% savings)	\$12,480	\$783	~ 16 years
Upgrade all rotors with proper nozzle size (10% savings)	\$8,580	\$783	~ 11 years

Ensuring your irrigation contractor performs 3-4 maintenance checks annually will alert you to broken equipment more quickly The VRWJPO has a service contract template to ensure your contractor is performing maintenance checks

Table 1. Critical Repairs and Adjustments

Critical Repair(s)	Estimated Cost	Count	Total Cost
Replace damaged 6" rotors	\$65/head	23	\$1,495
Replace broken spray heads	\$95/head	12	\$1,140
Install two rain sensors and move one sensor	\$175	2	\$350
	\$2,985		

Recommendations

There are a couple of items that can be implemented to increase the efficiency of Bloomfield Single Family HOA's irrigation system. However, prior to implementing recommended efficiency upgrades, the Board should implement the critical repairs in Table 1. Water and cost savings shown in Table 2 only apply when the system is operating without deficiencies (broken heads, unneeded heads, etc.). Annual cost savings associated with efficiency upgrades are based on City of Rosemount 2021 utility billing rates, historic use trends and audit findings.



