

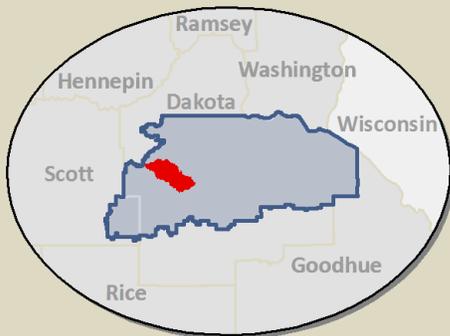


How can  
you improve  
local waters?



# Middle Creek Subwatershed

## Middle Creek Subwatershed



### Includes:

- East Central Lakeville,
- West Central Farmington, and
- Middle Creek and all of its tributaries.

## Strategies for a healthy subwatershed

The land area around Middle Creek (and smaller streams that run into Middle Creek) make up the Middle Creek Subwatershed. The Middle Creek subwatershed (shown in red on map, left) is part of the Vermillion River Watershed (shown in blue). Land and water in this area drain to Middle Creek.

The Middle Creek Subwatershed includes predominantly residential land use surrounding a central area of commercial, agricultural, and recreational uses. Changes in land-use (from development, new infrastructure, or shifting farming practices) alter the natural flow of water. This allows rain water to move more quickly from where it falls. Runoff carries pollutants such as sediment and bacteria to rivers and streams.

For example, urban roads, parking lots, and pavement allow stormwater (and pollutants) to quickly move to water bodies. Overland flow from agricultural land also drains stormwater from fields into rivers and streams. Practices that slow stormwater and soak up the rain can improve water quality – in residential areas, on farms, and in commercial zones.

Healthy land and water resources depend on everyone. Find out more about what you can do to improve the Middle Creek Subwatershed's water resources.

Project Highlight  
CSAH 64 Stream Restoration  
Healthy streams need bends, stable banks, and good connection to the flood plain. The Minnesota Department of Natural Resources (DNR) began a project on Middle Creek to reshape the stream in 2006. In 2016, the DNR, VRWJPO, and Farmington School District finished the restoration in conjunction with Dakota County's upgrade of CSAH 64 in Farmington. The restoration was made possible by a Flood Damage Reduction Grant from the DNR.



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#### Vermillion River Watershed Joint Powers Organization

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The Vermillion River Watershed encompasses an area of approximately 335 square miles, including portions of two counties and all or portions of 20 cities, towns, and townships. The main stem of the river begins in southeastern Scott County in New Market Township flowing east through central Dakota County, passing over a waterfall in the City of Hastings, and then discharging to the Mississippi River both through a northerly flowing outlet near the City of Hastings as well as through a southerly flowing outlet near the City of Red Wing, Minnesota.

## Best Management Practices (BMPs) for the Middle Creek Subwatershed

### What are the water-quality issues?

- *E.coli* bacteria in streams
- Excess sediment in streams
- Inconsistent stream flow – too low during dry periods and too high during big rainstorms

### What are we (and partners) doing?

- **Stream restoration** to build natural curves and variation into straightened reaches, reconnect the flood plain to manage high water events, and reduce erosion.
- **Streambank stabilization** and vegetation to prevent erosion and filter out pollutants before they reach the stream.
- **Stormwater re-use for irrigation** using ponds to collect and treat stormwater then using the water to irrigate King Park.
- Planning future **bacteria reduction** feasibility studies and projects.

### What can you do at home?

- Pick up and properly **dispose of pet wastes** in the trash.
- **Install a raingarden** to soak up the rain, filter pollutants, and provide habitat.
- **Install a rain barrel** to capture stormwater and use it to water your lawn and garden.
- **Disconnect your rooftop** from sidewalks and driveways by redirecting your downspout.
- **Stabilize and vegetate streambanks** to prevent erosion, filter pollutants, and provide habitat for wildlife.

### What can you do on the farm?

- **Keep livestock out of streams** and properly manage manure to reduce bacteria loads.
- **Install filter strips** along Middle Creek and its tributaries to stabilize streambanks with deep-rooting native plants, prevent erosion, filter out pollutants, and provide habitat.
- **Use cover crops** on cropland when the soil would otherwise be bare to reduce erosion and runoff. Common cover crops in Minnesota include rye and other small grains.
- Follow University of Minnesota Extension's [best management practices](#) for nitrogen use.

Visit our website for more information:  
[www.vermillionriverwatershed.org](http://www.vermillionriverwatershed.org)