photo credit to the City of Maplewood, MN

Fish Creek

www.metrocouncil.org
ENVIRONMENTAL SERVICES

Fish Creek is located in the central eastern metropolitan area. It begins at Carver Lake outlet in Woodbury and continues to flow through Maplewood and Saint Paul, running through Fish Creek Natural Area Greenway, before discharging into the Mississippi River.

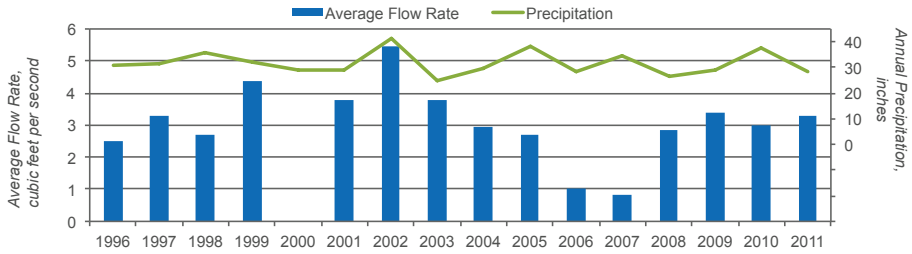
Flow

Stream flow, or the rate of water flowing in a stream, affects aquatic life and the ecosystem. High flows can lead to flooding and erosion, and transport pollutants.

Fish Creek flows year-round and is influenced by discharge from Carver Lake, along with how much rain or snow has fallen in any given year.

Since 2003, the average flow in Fish Creek is nearly 2.5 cubic feet-per-second. At that rate, it would take the creek almost 105 days to fill the Target Center in Minneapolis.

Fish Creek Annual Flows and Precipitation



Chloride

Chloride, one component of salt, is typically used for winter road, parking lot, and sidewalk maintenance and home water softening. While all of the Mississippi River urban streams have high concentrations of chloride, Fish Creek is among the highest, reflecting the dense network of roads and highways in the watershed.

Nutrients

Nutrients, like nitrogen and phosphorus, are necessary for stream health. However, elevated nutrient levels, caused by materials like fertilizers, animal manure, pet waste or grass clippings, can cause excessive algae growth and harm aquatic wildlife, insects and fish.

Fish Creek has a slightly higher concentration of nitrogen (measured as nitrate) compared to other urban streams in the Mississippi River basin. Phosphorus concentration in Fish Creek is higher than most of the other streams in the basin.

Sediment

Sediment from poorly-managed construction sites or eroded stream banks and gullies can decrease the light available in streams and harm aquatic life.

FAST FACTS

Major river basin: Mississippi River

Water source: Surface water runoff, lake outflow

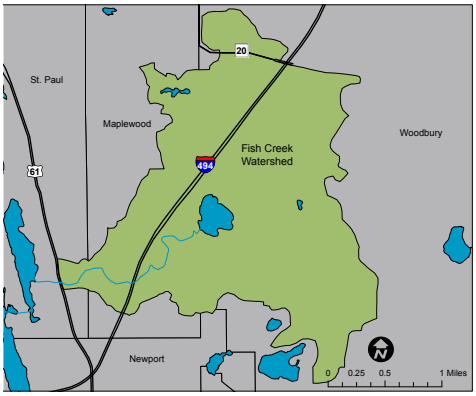
Length: 1.8 miles

Watershed area: 4.6 square miles

Watershed land use: Urban and forested park land

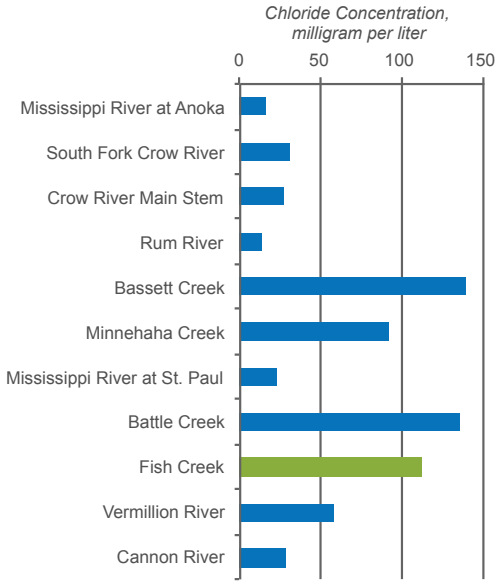
Cooperator organizations: Ramsey Washington Metro Watershed District

Year first monitored: 1995

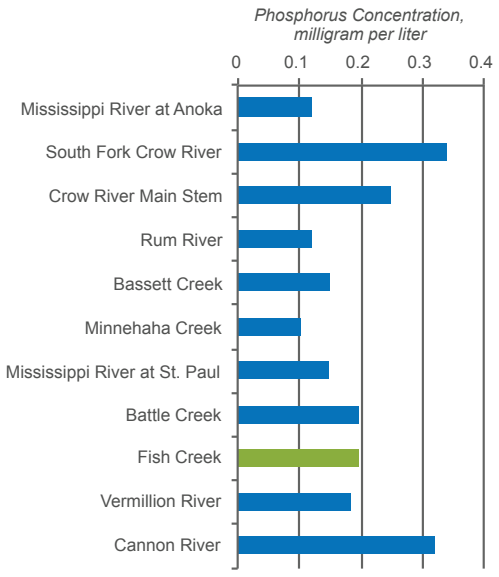


METROPOLITAN COUNCIL

Median Chloride Concentrations in the Mississippi River and Tributary Streams, 2003–2012



Median Phosphorus Concentrations in the Mississippi River and Tributary Streams, 2003–2012



Another term for sediment is “total suspended solids.”

Fish Creek carries an average of 470,000 pounds of sediment into the Mississippi River each year (enough to fill 14 15-ton dump trucks), and its sediment concentrations are slightly higher than other urban streams in the Mississippi River basin.

Aquatic Insects

Aquatic insects are excellent indicators of the overall health of a stream since they spend the majority of their lives in the water, and are an important food source for fish, birds and other wildlife. Fish Creek has a consistent population of aquatic insects, but analysis indicates they are being affected by pollutants. Improved water quality would likely increase the number of aquatic insects in the stream.

Preserving our Creeks

The Ramsey Washington Metro Watershed District is the local governing body responsible for maintaining the watershed. They partner with private landowners, cities and Ramsey County to complete various improvement projects, including:

- Installing porous pavement
- Restoring and repairing the stream channel
- Acting as protector and steward of the creek corridor

Is the Stream Improving?

Long-term analysis and computer modeling indicate that Fish Creek’s water quality has improved because phosphorus, nitrate and sediment levels have decreased. However, since Fish Creek’s levels of phosphorus and chloride are higher than the Mississippi River at Anoka, the creek could potentially contribute to the degradation of the river. But Fish Creek’s nitrate concentration is lower than the Mississippi River at Anoka, which could potentially contribute to the improvement of the river.

Protecting the Region’s Water Resources

This work supports the regional polices established in the Metropolitan Council’s Thrive MSP 2040 and Water Resources Policy Plan to collaborate with partners to promote the long-term sustainability and health of the region’s water resources, including surface water, wastewater and water supply.

For more information

About this fact sheet, contact Emily Resseger:
emily.resseger@metc.state.mn.us, 651-602-1033

About stream monitoring, contact Cassie Champion:
cassandra.champion@metc.state.mn.us, 651-602-8745

Visit www.metrocouncil.org/streams for the full results of the Comprehensive Water Quality Assessment of Select Metropolitan Area Streams.

Metropolitan Council
390 Robert Street North
Saint Paul, MN 55101
Main: 651.602.1000
TTY: 651.291.0904
Public Information: 651.602.1500
public.info@metc.state.mn.us

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