RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

Riley Creek | Purgatory Creek | Bluff Creek
2025 CREEK UPDATE

Keeping creeks healthy requires several tools and strategies. Conducting projects to stabilize streambanks and restore stretches of stream is one strategy. Cleaning and slowing rainwater runoff before it reaches the creek is another. Before either of these can be done, we need to understand how the creek is doing and where it needs the most help.

District staff began stream monitoring in the 1970s. The District developed a tool to assess creeks: the Creek Restoration Action Strategy (CRAS) in 2017. CRAS uses water quality data, as well as information on erosion and habitat, to rank which creek stretches (sections) are doing the best and which are doing the poorest. CRAS scores for each stretch of stream are located on the next page.

Creek Stats

ATTRIBUTE	Bluff Creek	Riley Creek	Purgatory Creek
Length	6.8 miles	9.6 miles	12 miles
Elevation change	232 feet	230 feet	178 feet
Watershed size	5.6 square miles	11 square miles	30 square miles
Cities	Chanhassen, Chaska	Chanhassen, Eden Prairie	Minnetonka, Eden Prairie, Deephaven, Bloomington, Shorewood
Lakes in watershed	None	Lucy, Ann, Susan, Rice Marsh, and Riley lakes	Silver, Lotus, Duck, Mitchell, Red Rock, and Staring lakes
Impaired Waters listing	Turbidity, fish	Fish, macroinvertebrates, turbidity, E. coli	Macroinvertebrates, E. coli
Common fish	Brook Stickleback, Northern Fathead Minnow	Green Sunfish, Fathead Minnow, Bluntnose Minnow	Bluegill, Northern Pike, Largemouth Bass, Yellow Perch, Pumpkinseed Sunfish

The Three Creeks of the Watershed District

Bluff Creek

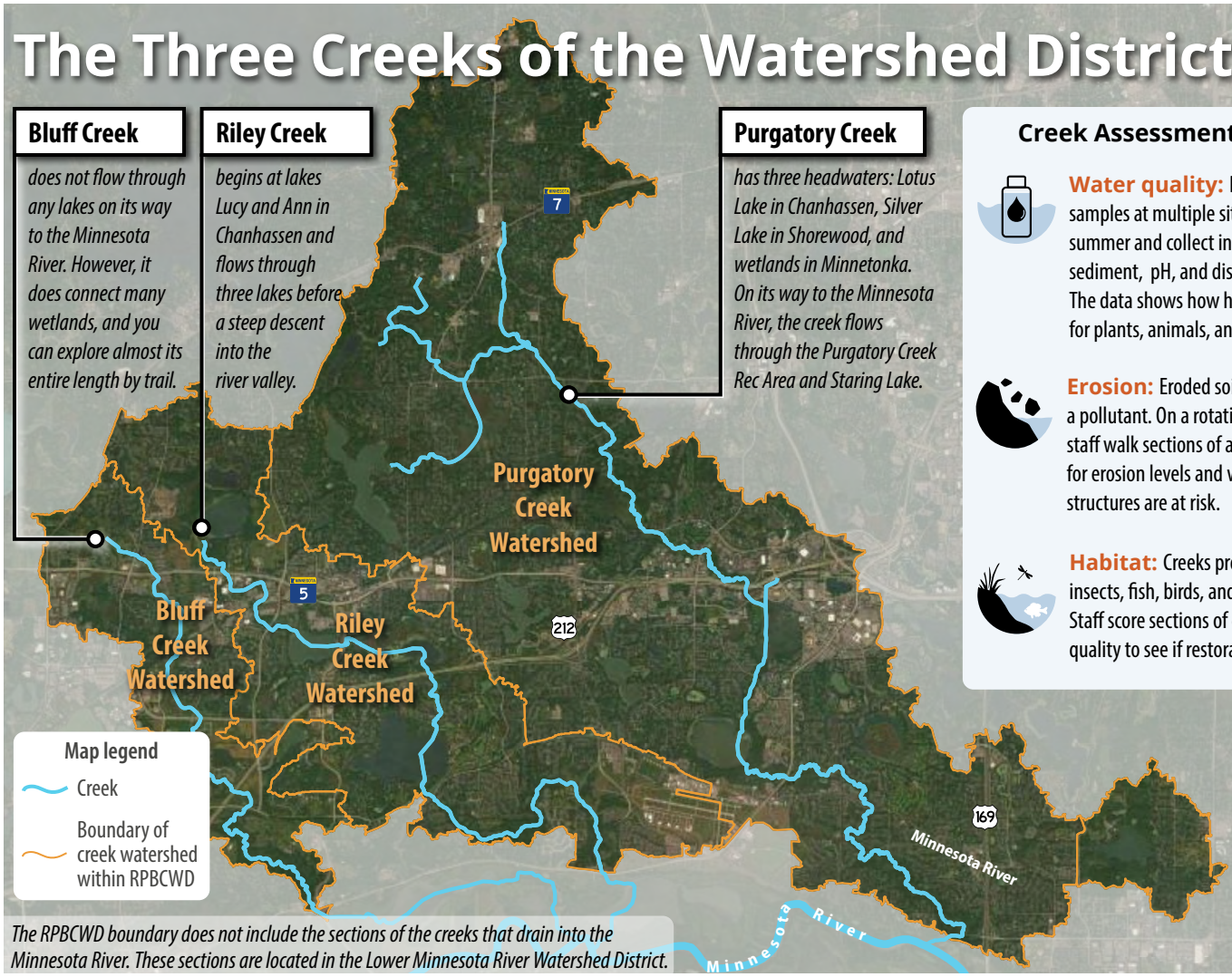
does not flow through any lakes on its way to the Minnesota River. However, it does connect many wetlands, and you can explore almost its entire length by trail.

Riley Creek

begins at lakes Lucy and Ann in Chanhassen and flows through three lakes before a steep descent into the river valley.

Purgatory Creek

has three headwaters: Lotus Lake in Chanhassen, Silver Lake in Shorewood, and wetlands in Minnetonka. On its way to the Minnesota River, the creek flows through the Purgatory Creek Rec Area and Staring Lake.



The RPBCWD boundary does not include the sections of the creeks that drain into the Minnesota River. These sections are located in the Lower Minnesota River Watershed District.

Creek Assessment Factors

Water quality: District staff take samples at multiple sites during the summer and collect info about nutrients, sediment, pH, and dissolved oxygen. The data shows how healthy the creek is for plants, animals, and people.

Erosion: Eroded soil is considered a pollutant. On a rotating schedule, staff walk sections of a creek. They look for erosion levels and whether any structures are at risk.

Habitat: Creeks provide habitat for insects, fish, birds, and other animals. Staff score sections of creek on habitat quality to see if restoration is needed.

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2025 Stream Monitoring Overview

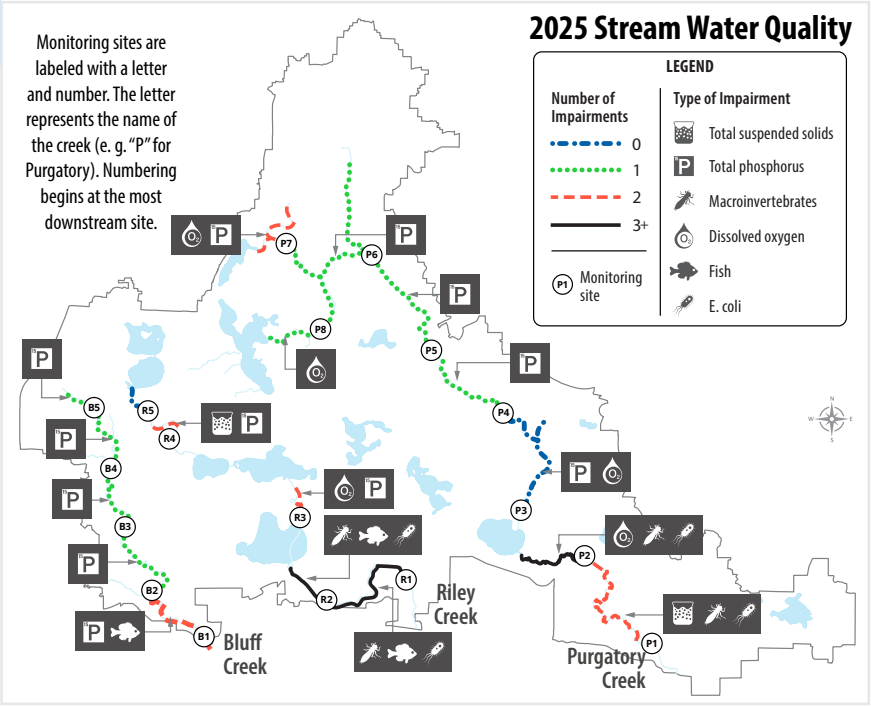
Stream Water Quality Monitoring

In 2025, RPBCWD and its partners collected water quality samples and performed data analysis on 28 sampling sites in total along Riley Creek, Bluff Creek, and Purgatory Creek. Eighteen of these were regular water quality monitoring sites visited biweekly April to September. The District monitors six impairment categories based upon standards set by the Minnesota Pollution Control Agency.

Stream water quality improved in 2025 from the previous year. In 2025:

- Bluff Creek had 6 impairments
- Riley Creek had 10 impairments
- Purgatory Creek had 14 impairments

None of the regular creek sampling sites met all water quality standards. Phosphorus was the most frequent impairment (12 of 18 regular sites). Two sites failed to meet the total suspended solids standard, and five sites fell below the dissolved oxygen standard. The lower reaches of both Riley and Purgatory creeks had macroinvertebrate and *E. coli* impairments, and the lower reaches of Riley and Bluff creeks had fish impairments.

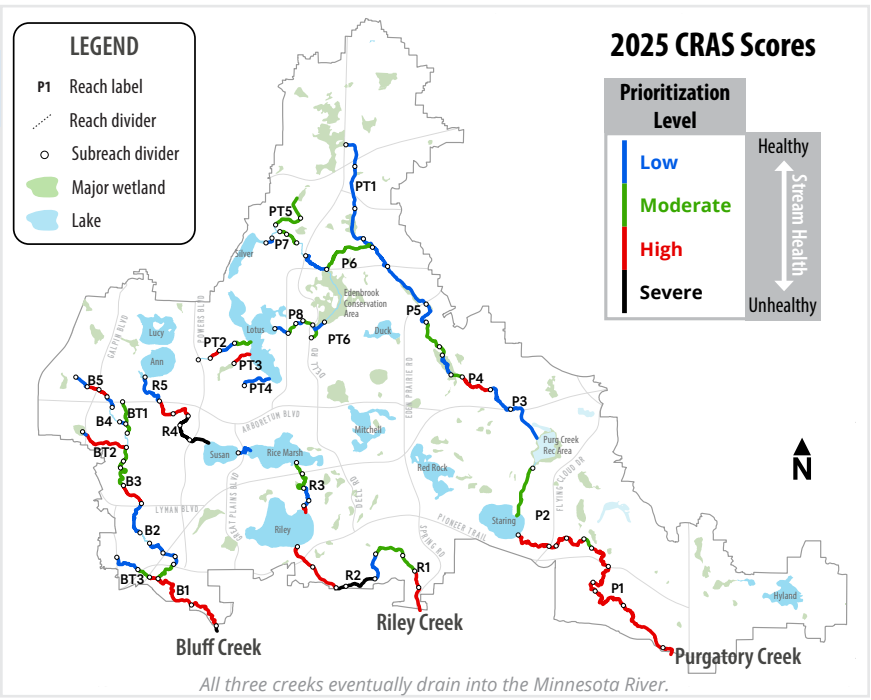


CRAS Scores for Stream Restoration Planning

The District developed the Creek Restoration Action Strategy (CRAS) to prioritize creek reaches, sub-reaches, or sites, in need of stabilization and/or restoration. The District identified eight categories of importance for project prioritization:

- Infrastructure risk
- Erosion and channel stability
- Public education
- Ecological benefits
- Water quality
- Project cost
- Partnerships
- Watershed benefits

These categories were scored using methods developed for each category based on a combination of published studies and reports, erosion inventories, field visits, and scoring sheets from specific methodologies. Final tallies of scores for each category, using a two-tiered ranking system, were used to prioritize sites for restoration/ remediation. Learn more at rpbcwd.org/CRAS.



All three creeks eventually drain into the Minnesota River.

Severe Sites List

District staff use CRAS scores to identify the most degraded creek sub-reaches for restoration prioritization.

Reach Name	Subreach Name*	Location	Tier I Score	Tier I Rank	Tier II Score	Tier II Rank	Restoration Status
R4	R4E	Powers Blvd to Lake Susan	22	5	26	1	Planning stage
R4	R4D	Railroad Bridge to Powers Blvd	22	8	22	2	Planning stage
R4	R4C	Park Road to Railroad Bridge	24	2	20	3	Planning stage
B5	B5C	Galpin Blvd to West 78th Street	22	7	18	4	Planning stage
B1	B1D	475 ft US of Great Plains Blvd to Great Plains Blvd	22	6	16	5	Access Issue
R2	R2C	720 ft US of Dell Trail to Dell Road	24	1	14	6	--
R2	R2D	Upper Third between Dell Road and Eden Prairie Road	22	3	10	7	--

* Name codes: R=Riley Creek, P=Purgatory Creek, B=Bluff Creek; number=stretch designation; second letter=subreach designation (A-G)