

Evaluating the Cedar Creek and its Watershed

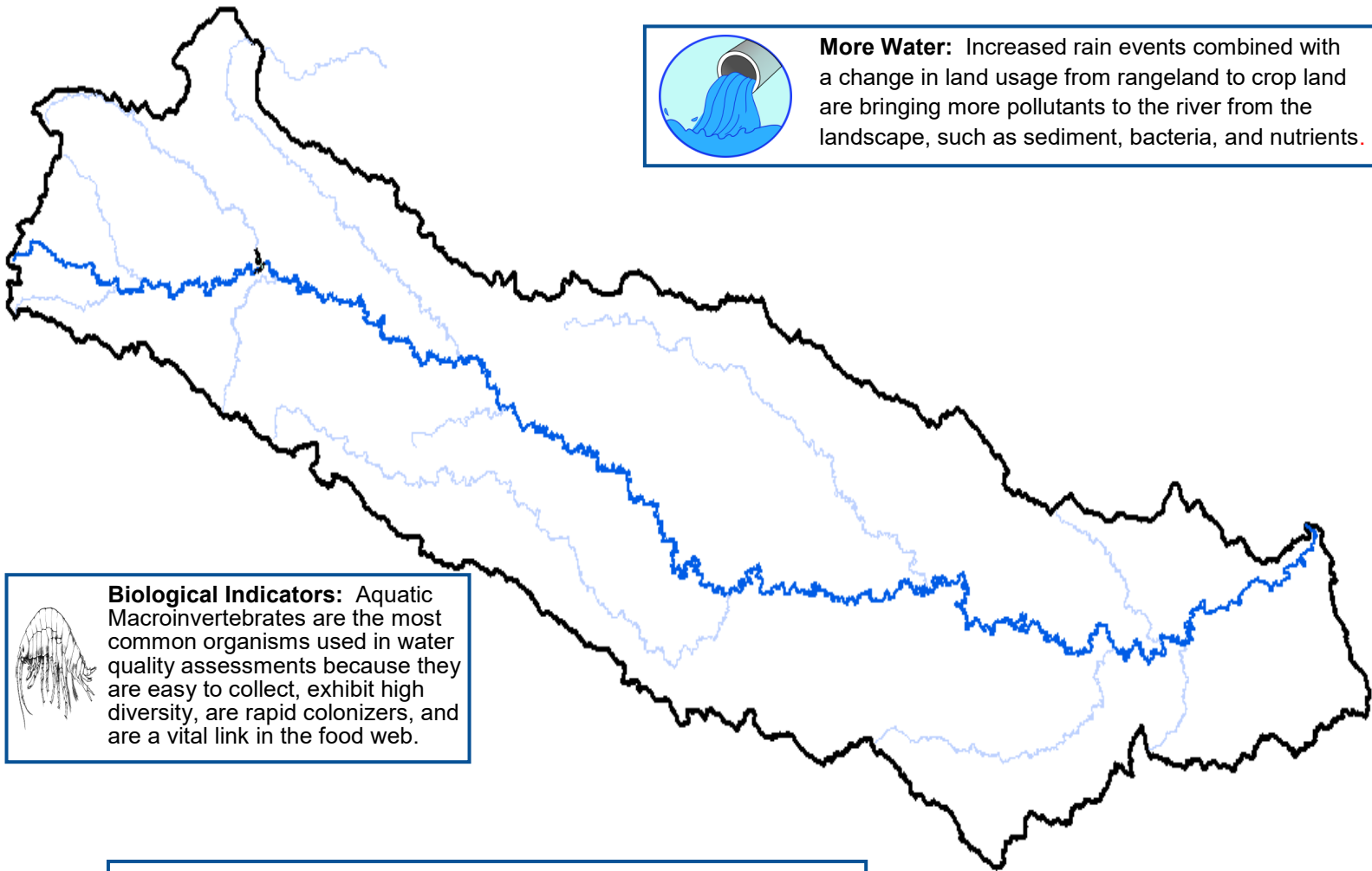
From North of Bowman, ND to the confluence with the Cannonball River



Fish Species: The three most abundant fish species are non-game species, 1) Fathead Minnow, 2) White Sucker, and 3) Black Bullhead.



More Water: Increased rain events combined with a change in land usage from rangeland to crop land are bringing more pollutants to the river from the landscape, such as sediment, bacteria, and nutrients.



Biological Indicators: Aquatic Macroinvertebrates are the most common organisms used in water quality assessments because they are easy to collect, exhibit high diversity, are rapid colonizers, and are a vital link in the food web.



Downstream Damage: Cedar Creek is a tributary of the Cannonball River. Pollutants continue flow from the Cannonball River into the Missouri River and contaminate water that flows through 5 more states downstream. What are our responsibilities to our neighbors?



Swimmers and Boaters Beware: Harmful Algal Blooms (HABs) are becoming more prevalent in recreational waterbodies. HABs cause toxins that can be harmful to humans, pets, and livestock.

The Big Picture



An important tributary. Cedar Creek is approximately 185 miles long, running from north of Bowman, ND to the Cannonball River, and drains an area of 2,237 square miles.

An impacted river. Land use in the Cedar Creek Basin is about equal agricultural and grassland. (46% crop cover and 45% of grassland/pasture).

Sediment. 18,589 US tons of sediment moves through Cedar Creek in North Dakota annually. That is 465 semi-loads!

Pesticides. In 2021 the Cedar Creek had 1 pesticide detection, The detection did not exceed the Aquatic Life Benchmark. * For more information on pesticides visit nd.gov/ndda

Nutrients. Nutrient loads have increased 20% over the last 20 years. This is likely due to the land use in the watershed.

Moving nutrients. On average Cedar Creek moves 10 US tons of phosphorus and 103 US tons of nitrogen through ND yearly.

Phosphorus: 0.25 semi-loads



Nitrogen: 2.5 semi-loads



Harmful Algal Blooms (HABS)

There have not been HABS advisories or warnings in lakes within the Cedar Creek watershed. Keeping nutrient loads low within the watershed will decrease the chances of HABS occurring in these lakes.



Tributaries in trouble

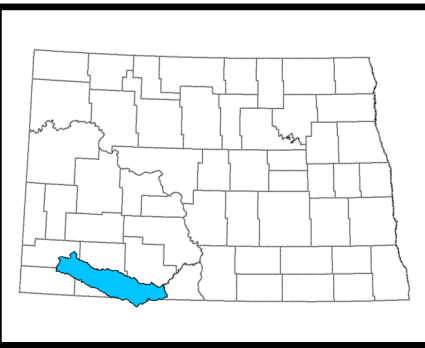
Many tributaries to Cedar Creek are negatively affected by agriculture. Run off from crops and cattle are a large contributor to nutrients, sediment, and *E. coli*.

Major pollutants in Cedar Creek

Phosphorus and Nitrogen. It fuels harmful algal blooms and excessive plant growth.

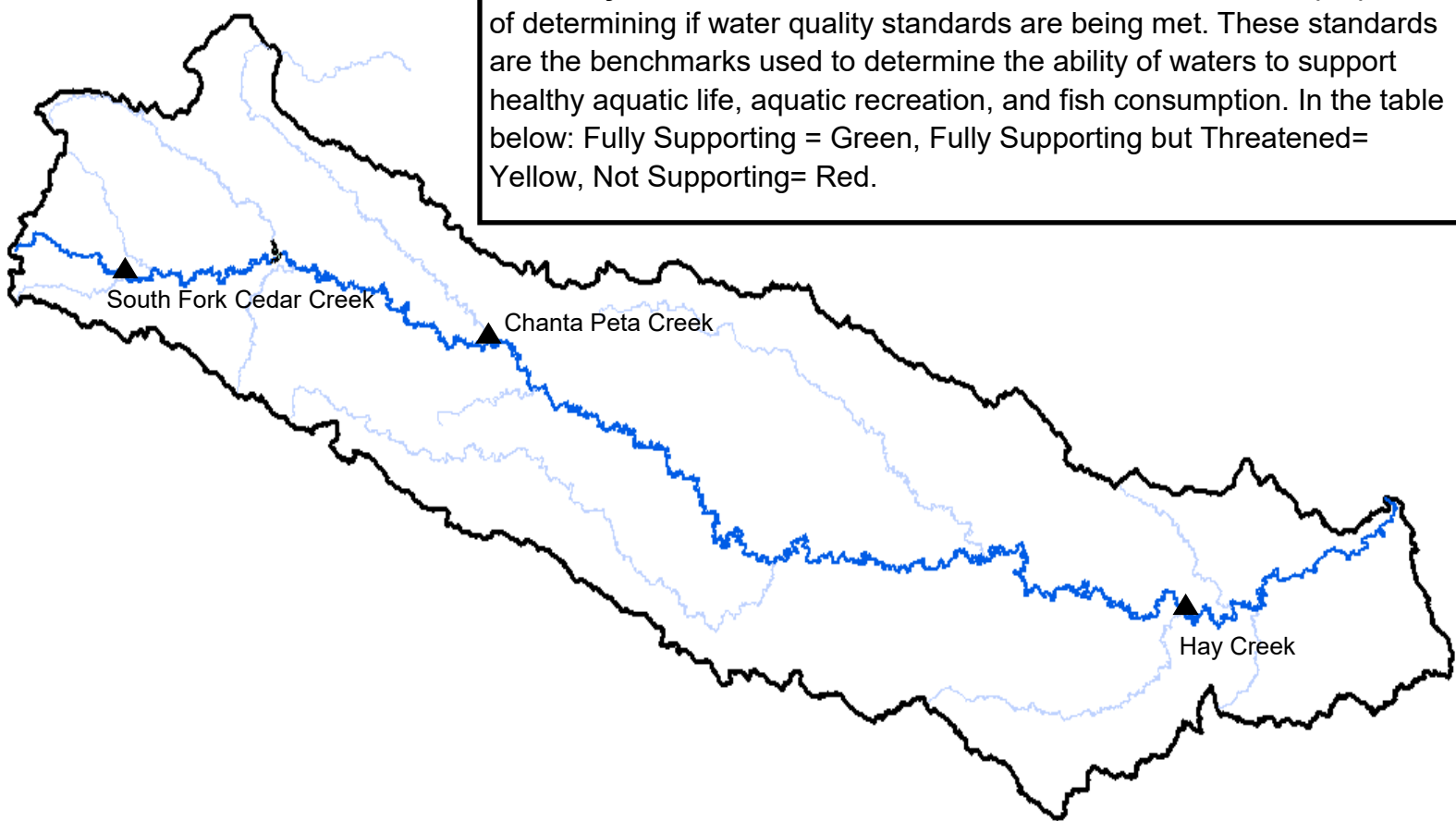
Bacteria. Mainly from cow manure.

Sediment. Eroding banks and fields as a result of human impact.

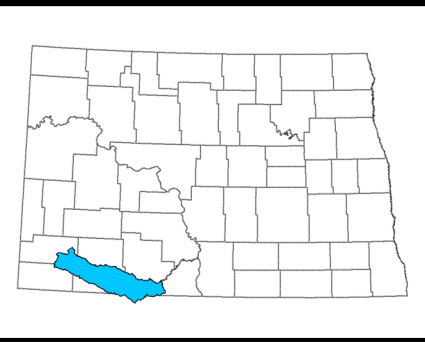
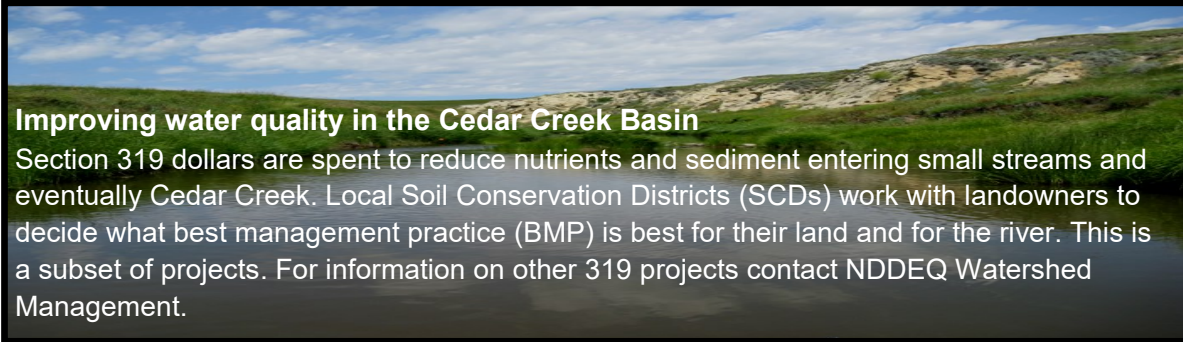


Cedar Creek: Evaluating its Health

Reach by reach: Cedar Creek is divided into “reaches” for the purpose of determining if water quality standards are being met. These standards are the benchmarks used to determine the ability of waters to support healthy aquatic life, aquatic recreation, and fish consumption. In the table below: Fully Supporting = Green, Fully Supporting but Threatened= Yellow, Not Supporting= Red.



Reach Description	Aquatic Life	Recreation	Impairments
	Cedar Creek from its confluence with Hay Creek , downstream to its confluence with the Cannonball River. Located on the boarder of Grant and Sioux Counties.		
Cedar Creek from Cedar Lake, downstream to its confluence with Chanta Peta Creek . Located in Adams County.			<ul style="list-style-type: none"> Not Supporting Aquatic Life due to Benthic-Macroinvertebrate Bioassessments.
Cedar Creek from its confluence with South Fork Cedar Creek , downstream to Cedar Lake. Located in Slope and Bowman County.			<ul style="list-style-type: none"> Fully Supporting, but Threatened Aquatic Life due to Sedimentation/ Siltation.
Cedar Creek upstream from its confluence with South Fork Cedar Creek , including all tributaries. Located in Bowman and Slope counties.			<ul style="list-style-type: none"> Fully Supporting, but Threatened Aquatic Life due to Sedimentation/ Siltation.



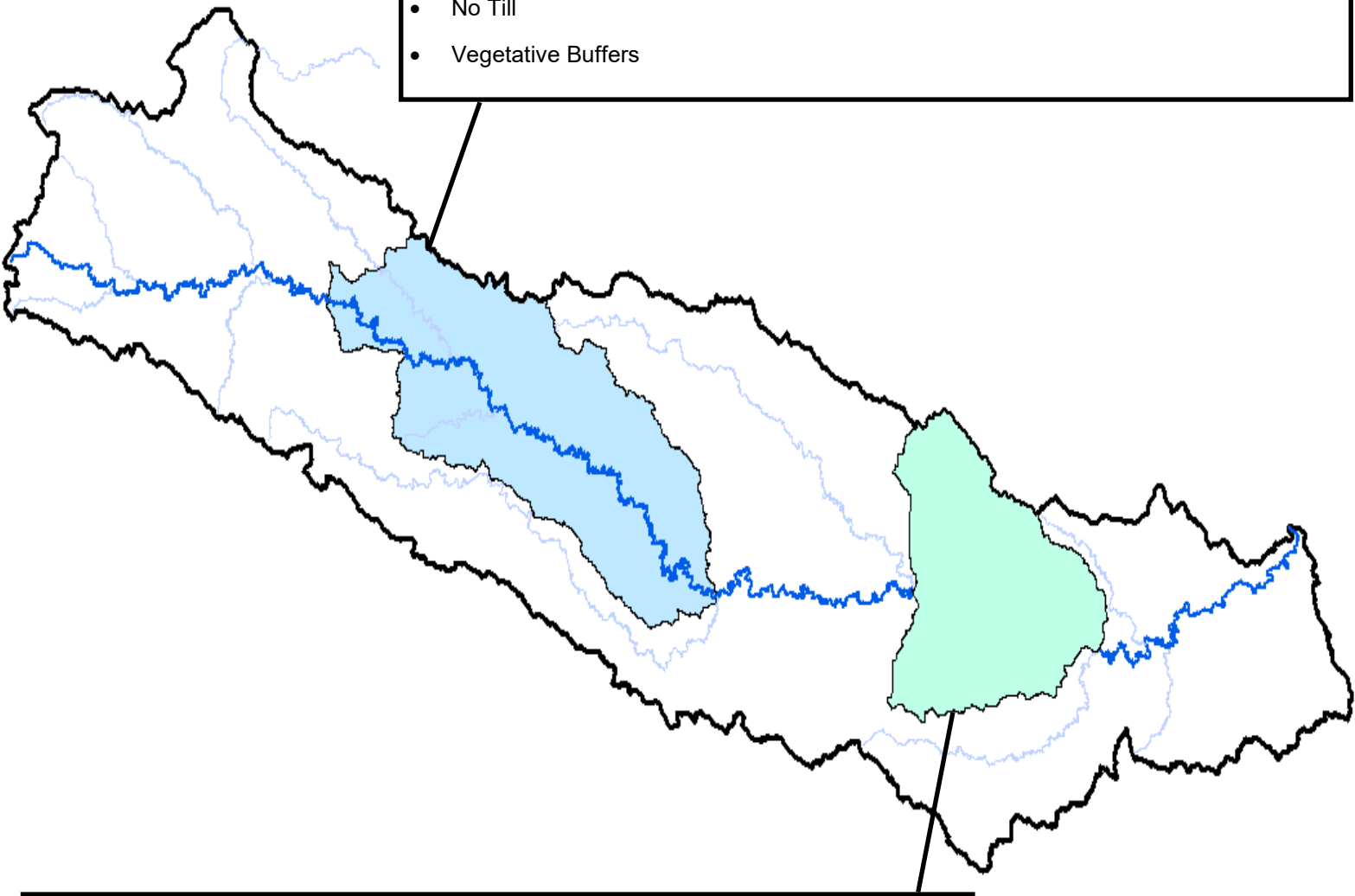
Improving water quality in the Cedar Creek Basin

Section 319 dollars are spent to reduce nutrients and sediment entering small streams and eventually Cedar Creek. Local Soil Conservation Districts (SCDs) work with landowners to decide what best management practice (BMP) is best for their land and for the river. This is a subset of projects. For information on other 319 projects contact NDDEQ Watershed Management.

The Middle Cedar Creek Watershed: The primary goal of the project is to achieve and/or maintain “fully supporting” status for the aquatic life uses of the middle Cedar watershed by decreasing the mean annual sediment phosphorus concentrations entering the Cedar Creek.

Practices Implemented Include:

- No Till
- Vegetative Buffers



Crooked Creek and Brushy Creek Watershed: The primary goal of the Crooked Creek and Brushy Creek implementation project is to achieve the target for nutrient, suspended solids and fecal coliform bacteria reduction to restore fully supporting the beneficial uses of aquatic life and recreation in the Crooked Creek and Brushy Creek Watershed.

Practices Implemented Include:

- Fencing
- Water Wells