

Water Quality Monitoring in Story County: 2021 Highlights

Accomplishments in 2021

- Local partners released a 10-year plan for water quality monitoring in Story County. Prairie Rivers of Iowa gave 12 presentations about the plan to stakeholders.
- Staff and volunteers from 9 organizations met 7 times in 2021 to implement the plan and provide direction and support for monitoring efforts.
- The City of Ames Water & Pollution Control laboratory tested water samples from 15 stream sites monitored monthly and 3 sites monitored weekly.
- Story County Conservation launched a volunteer monitoring program. Staff, 17 volunteers, and one business used field kits to monitor streams and lakes around the county.
- Story County Conservation partnered with Iowa DNR to do weekly bacteria testing of 2 swimming beaches at county lakes: Peterson Park West and Hickory Grove Lake.
- Local partners engaged new volunteers through 2 water monitoring events, a training event with the Izaak Walton League, and a cleanup of trash in Loway Creek. In addition, local partners organized 4 in-person events and 3 webinars that offered opportunities for Story County residents to learn about water quality issues and solutions.
- Prairie Rivers of Iowa used special equipment to collect 40 samples of runoff from creeks and storm sewers during 5 rainstorms, with the help of volunteers.
- Prairie Rivers of Iowa published 12 articles about water quality and watersheds on their blog, as well as posting regular water quality updates and real-time data streams on a web page dedicated to monitoring efforts in Story County



Find the full report and updates on water quality in Story County at:

www.prrcd.org/story-county-water-monitoring



Key Findings from 2021 monitoring

Issues	Metrics	Findings
Recreation and waterborne illnesses	<i>Escherichia coli</i> (<i>E. coli</i>) bacteria	<i>E. coli</i> was usually low at swimming beaches and parts of the South Skunk River, but high in most creeks. We can narrow down likely sources of contamination by checking whether bacteria is highest during low flows or high flows.
Gulf Hypoxia and nutrient losses	Nitrogen and phosphorus load	This year was too dry to have much influence on Gulf Hypoxia. Focusing on normal-to-wet periods will help to identify hot spots where conservation practices are needed and evaluate whether conservation practices are working.
Nutrient enrichment and algae blooms in lakes and streams	Total phosphorus, orthophosphate, nitrate	During dry conditions, the highest nutrient levels are below wastewater treatment plants.
Fish and the insects they eat, stream and lake ecology	Index of benthic macroinvertebrates, dissolved oxygen, chloride	Low dissolved oxygen is harming invertebrates in some streams. Effluent from wastewater treatment plants could be a factor, but some patterns are still unexplained.
Erosion and sediment impacts on aquatic life	Total suspended solids, transparency	Untreated stormwater from older neighborhoods can have extremely high levels of sediment, phosphorus, and bacteria.