



From Coast to Creek: Monitoring Alaska's Water Quality in 2025

Written by Jeff Fisher, DEC

June 25, 2025

Water quality data is the foundation of sound water resources management. It helps identify pollution risks early, supports science-based decisions, and drives long-term stewardship. For DEC field staff, this is where insights begin—stones are unturned, and each sample reveals a deeper part of the story beneath the surface. What we're learning now is directly shaping how Alaska's waters are managed, restored, and protected.

This summer, DEC water quality staff are out in the field monitoring streams and coastal waters across the state—from urban creeks to remote, pristine watersheds. These efforts are critical to understanding Alaska's water resources and how best to protect them for the future, or to identify problems that need addressed.

Safeguarding Alaska's Coastal Waters

Currently, DEC is collecting water samples at targeted sites out of Whittier and Valdez to test for enterococci and fecal coliform. In addition to pathogen sampling, staff record water temperature, turbidity, dissolved oxygen, and specific conductivity at each location. Continuous monitoring sensors are also being deployed in Seward, Juneau, and Ketchikan to capture water quality trends over time that individual samples might miss.

“Monitoring potential impacts from wastewater—especially discharges from cruise ships—will help inform actions to ensure clean water for Alaskans and the coastal communities they call home,” says water quality specialist Maryann Fidel.

As part of the National Coastal Condition Assessment (NCCA), DEC staff are also sampling the coastal region from Chenega to Kachemak Bay. Between late July and August, teams will collect water and



Captain Brian Mullaly of the R/V Nanuq assists with the deployment of the sediment grab sampler during a practice run for the coastal surveys. Photo by DEC staff Erin McCarthy staff.

sediment samples at 50 offshore sites to assess nutrient and metal levels, along with benthic macroinvertebrate communities. At 40 of those sites, commonly harvested fish species will be sampled for metals, mercury, and PFAS.

Water quality specialist Erin McCarthy is looking forward to seeing the data roll in. “The results from this survey will establish baseline or current conditions, and guide strategies to prevent future pollution,” she says.

Filling the Data Gaps in Southwest Alaska

In the Ahklun and Kilbuck Mountains ecoregion—an expansive, remote area bounded by Togiak, Bethel, and Aniak—DEC and UAA crews are currently sampling 50 streams. Over the 60-day field season, teams are collecting a wide range of water quality data, including nutrients, metals, dissolved oxygen, pH, turbidity, and temperature. They're also gathering detailed stream habitat and biological data. These data are essential to establishing baseline conditions in a region with limited monitoring history and will support better watershed management across Southwest Alaska.



DEC staff Paul Gabriel and National Park Service (NPS) staff Mia Taylor assess a stream in the Togiak region during Assessment, Inventory and Monitoring (AIM) surveys. Photo by DEC staff Amber Crawford

Testing the Waters: Eagle River and Chena River Pathogens Sampling

The 2025 field season marks the second and final year of pathogen sampling within the Eagle River watershed. This work began in response to elevated levels of fecal coliform and *E. coli* levels identified during the 2022 Anchorage Creeks and Lakes Survey (DEC). Sampling is currently underway on the North Fork and South Fork of the Eagle River, as well as the mainstem and Meadow Creek. Water samples are being analyzed for *E. coli* and fecal coliform, with in-stream parameters such as temperature, turbidity, dissolved oxygen, and conductivity also being recorded. Sampling includes DNA analysis to track bacteria host species.

“We’re excited to complete year two of sampling in the Eagle River watershed,” says DEC water quality specialist Jeff Fisher. “With two years of data, we’ll be able to determine whether waters are meeting water quality standards—and that’s critical to protecting the health of Alaskans who recreate in these waters.”

Earlier this spring, DEC staff kicked off the first year of Chena River sampling with spring-season data collection at three sites along the lower river. At each site, six samples were collected for pathogen analysis, along with temperature, turbidity, dissolved oxygen, and conductivity readings.

The remaining summer and fall sampling events are planned for later this year.



DEC staff Mary Inovejas carefully prepares an Eagle River Microbial Source Tracking (MST) sample for analysis. Photo by DEC staff Jeff Fisher

Every sample collected this season adds to the story of Alaska’s waters—where they’ve been, where they’re headed, and how we can protect or restore them. By filling data gaps, tracking changes, and building strong scientific understanding, DEC is equipping communities, agencies, and partners with the information they need to safeguard these resources. Because clean water doesn’t protect itself, it takes data, dedication, and action to ensure that Alaskans have safe, healthy waters to rely on for drinking, fishing, recreation, and culture, now and into the future.

Banner Photo: DEC staff Jeff Fisher and Mary Inovejas collect a water sample for pathogen analysis on Eagle River. Photo by DEC staff Laura Eldred