



United States Department of the Interior

National Park Service

Lake Clark National Park and Preserve

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Program Updates Fall 2026

Lake Clark National Park and Preserve

Southwest Area Inventory and Monitoring Network (SWAN)

SUBSISTENCE DIVISION, LIZA RUPP (907) 644-3648

Lake Clark National Park Subsistence Resource Commission

- The Lake Clark Subsistence Resource Commission met in Nondalton on April 28, 2026. The fall meeting will be in Port Alsworth on October 3, 2026.

NATURAL RESOURCES DIVISION, BUCK MANGIPANE (907) 717-7044

Coastal Bear Survey

- Four coastal bear trend counts were completed in the summer of 2026. Since initiating coastal trend counts in 2003, this is only the second year in which 4 surveys were completed. On June 2, 2026, park staff flew a survey of the coastal salt marsh areas. The flight resulted in 70 brown bears observed. None of the prior surveys were conducted this early in the season, so no direct comparison can be made. The second survey was June 24 with 231 brown bears observed. This number is above the average, 195 brown bears, of 20 prior late June surveys (Between June 15 and June 30). The third survey was completed on July 10, 2026, and 298 brown bears were observed. There have been 15 surveys completed in early July (July 1 – July 15) previously, with an average of 183 bears observed. The 2026 survey was noticeably above average. Early July surveys have high variability in brown bears observed, ranging from a low of 34 on July 1, 2019 to a high of 330 on July 10, 2017. In 2026, we also completed our third early August survey. On August 8, 2026, we observed 141 brown bears. This is the latest trend count we've completed and also represents the highest number observed among the 3 August surveys. Overall, 2026 surveys found higher than average numbers of brown bear throughout the season.

Dall's Sheep Survey

- In July 2026, staff attempted to complete an aerial Dall's sheep survey of all sheep habitat in LACL. Due to poor weather conditions, only 1 day of flights were completed with no population estimate possible. Given the results of the parkwide survey completed in July 2025, data this year would have provided information to understand the population response to the observed sheep decline in LACL. We will begin to explore options to collect data in the summer of 2027.

Newhalen River Counting Tower

- Monitoring on the Newhalen River has been ongoing since 2000 and provides information on salmon escapement, run timing, and population characteristics. The 2026 estimated escapement was about 428,000 sockeye salmon, which was approximately 14% of the total Kvichak River return of 3.0 million. This year's escapement to the Newhalen River had two distinct peaks with a peak on 7/10 and 7/26 with the midpoint of the run on 7/22. Preliminary assessment of age and size data indicates the run was primarily comprised of older, 3-ocean salmon. This is consistent with accounts from local subsistence users who indicated the salmon were early, bright, and large.

Telaquana River Weir

- This was the 17th year of this collaborative project with the state of Alaska and provides a reliable estimate of salmon escapement to one of the few lake-rearing sockeye salmon populations in the Kuskokwim River drainage. This year's return to Telaquana was 89,105 sockeye salmon representing 18% of the total estimated escapement past the Kuskokwim River sonar. This was the first year that the Telaquana sockeye escapement was below 100 thousand since 2016 and was 43% below the ten-year average of 157 thousand sockeye. Escapement for Chum salmon and Chinook salmon were 103 and 31, 20% higher and 60% lower than average respectively.

Analysis of Salmon Escapement

- In 2027, park and network staff continued working with Dr. Curry Cunningham of the University of Alaska Fairbanks to analyze sockeye salmon escapement data from the Newhalen and Telaquana rivers. This project aims to answer four key questions about each site: (1) Is the annual escapement of sockeye salmon changing over time? (2) Which covariates best explain year-to-year differences in escapement? (3) Do these covariates differ from what's driving escapement at broader scales? (4) Can we forecast one-year ahead escapement with models like those used for other Bristol Bay stocks?

Dragonfly and Mercury Monitoring

- Park staff continued their monitoring of dragonflies in waterbodies throughout the park. This sampling effort was part of a nationwide Dragonfly Mercury Project that has sampled over 500 sites since 2014. This season, staff plan to collect dragonfly larvae from three water bodies including the Beaver Pond near Port Alsworth, and two other

water bodies in the park. Samples will be processed by the U.S. Geological Service and will provide an assessment of environmental mercury contamination in the park in relation to sites throughout the country.

Soundscape Monitoring

- Soundscape monitoring continued in 2026 with a new sound station deployed in the Lower Tazimina Lake drainage. This was part of the larger soundscape inventory of the park and baseline acoustic monitoring for the new conservation easement with Kijik Corporation.

CULTURAL RESOURCES DIVISION, LIZA RUPP (907) 644-3648

Chulitna River and Lower Tazimina Lake Baseline Cultural Resources Surveys

- In 2024, the NPS purchased a conservation easement from Kijik Corporation that covers approximately 14,660 acres in the Chulitna River basin and near Lower Tazimina Lake. In 2025, NPS entered into a cooperative agreement with Kijik Corporation to complete the baseline documentation reports required by the terms of the easement. In June and August, NPS staff conducted cultural resources surveys in support of the baseline reports.

SOUTHWEST ALASKA INVENTORY AND MONITORING NETWORK,
HEATHER COLETTI (907) 644-3683

SWAN data and publications are publicly available on the NPS datastore:
<https://irma.nps.gov/DataStore/Reference/Profile/2311127>

Water Quality Monitoring

- Lake temperature has been monitored year-round in Lake Clark (since 2006), Kijik Lake (since 2010) and Telaquana Lake (since 2017). In 2026, monitoring continued at all three sites. The monitoring relies on the use of programmable data loggers attached at various depths to moored vertical temperature arrays. Data from the temperature arrays allow tracking of freeze-up and break-up dates, lake stratification, and large-scale wind events, all of which influence lake productivity. Additional water quality measurements, including pH, dissolved oxygen, specific conductivity, and turbidity, were measured hourly at the outlet of Lake Clark over the course of the summer (June-September), and at multiple points on Lake Clark and five smaller lakes in July. Lastly, temperature loggers installed at several stream and beach locations around Lake Clark measured surface and hyporheic water temperatures where sockeye salmon spawn.

Finalized water quality data are available for download at <https://irma.nps.gov/aqwebportal/>.

- In July, SWAN staff worked with members of the Igiugig Village Council to build and deploy a temperature array near the outlet of Lake Iliamna. This work is part of a cooperative agreement between the park and the Village of Igiugig to expand water monitoring efforts in the Kvichak watershed.

Surface Hydrology Monitoring

- Streamflow near the outlet of Lake Clark has been estimated since 2009 by measuring water levels hourly during the ice-free portion of the year. In 2014, a second streamflow monitoring site was established near the outlet of Kijik Lake. This work continued during the 2026 field season. The data are useful for understanding patterns observed in aquatic systems because streamflow affects many processes, from nutrient loading to the timing and success of fish spawning. Finalized surface hydrology data are available for download at <https://irma.nps.gov/aqwebportal/>.

Weather Stations

- All five of Lake Clark's remote automated weather stations (RAWS) received annual maintenance in June 2026. A team consisting of a SWAN Experienced Service Professional, the Denali fire helicopter crew, and individuals from Lake Clark's maintenance crew also addressed a backlog of repair issues with the stations and the stations continue to be fully operational with the exception of the Port Alsworth station where 2 of 5 soil temperature and moisture sensors need to be replaced.
- All four of Katmai's remote automated weather stations (RAWS) received annual maintenance in July 2026, conducted by a team consisting of a SWAN Experienced Service Professional and dedicated individuals from Katmai's resource and law enforcement teams. This crew restored two previously non-operational stations and addressed a significant backlog of repair issues. All of the stations continue to be fully operational.

Vegetation Monitoring

- Vegetation monitoring in Lake Clark provides information regarding long-term changes in the vegetation structure, species composition, and abundance of plants across a range of vegetation types. We resurveyed 22 monitoring plots in Lake Clark at Currant Creek, Lower Twin Lake, and Lachbuna Lake, and 8 monitoring plots in Katmai NP&P at Mirror Lake and Coville Lake.

Cold-Water Refuges

- In Summer 2024, SWAN and LACL began a new project to map and characterize thermal refuges in high-priority, anadromous streams in Lake Clark and Katmai National Parks and Preserves. These cold-water refuges are important freshwater locations where fish

species can find relief as water temperatures approach or exceed biological thermal thresholds. Initial efforts used aerial surveys with an infrared camera to locate refuges in 21 salmon streams covering approximately 415 river kilometers. In Summer 2025, additional thermal flights were conducted in Lake Clark, Katmai, and Kenai Fjords National Park to locate additional thermal refuges and better inform those previously identified. From the numerous refuges identified, a subset was selected to be outfitted with water temperature loggers to help characterize their extent and persistence over time. In 2025, loggers were installed at five refuges and, in 2026, loggers were installed at another nine refuges. This summer also involved flying repeat surveys of those 14 refuges with installed loggers at three time points to collect data over changing river flow conditions. We have also been able to download water temperature data from a number of our 2025 logger installs and are presently pairing those data with the imagery analyses.

Bald Eagle Surveys

- Lake Clark supports large populations of bald eagles. In May, June, and July 2026, bald eagle surveys were flown in LACL to estimate nesting occupancy and determine nest productivity. The early occupancy surveys were completed in May and June, with the late productivity survey completed in late July. We continue to work on refining the GIS data collection applications to enhance the accuracy and lessen the data processing time of earlier methods.