

# **United States Department of the Interior**

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# **Program Updates Summer 2025**

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 (SRC) met both in person in Port Alsworth and via teleconference on September 28, 2024. The next meeting will be in person in Pedro Bay or via teleconference on April 12, 2025.

## Subsistence Harvest Surveys of Port Alsworth and Nondalton

• Through funding provided by the National Park Service (NPS), the Alaska Department of Fish and Game (ADF&G) Division of Subsistence is conducting a study to document the harvest and use of wild resources by residents of communities in Lake Clark National Park and Preserve. Port Alsworth and Nondalton were surveyed in March 2022 by staff from ADF&G as well as the NPS and local hires. ADF&G staff conducted follow-up ethnographic interviews and presented the draft results in both communities in 2024. The final results will be available later in 2025.

## NATURAL RESOURCES DIVISION, BUCK MANGIPANE (907) 644-3635

## Coastal Bear Projects

- In May, park staff in conjunction with ADF&G will conduct a a black and brown bear survey of Game Management Unit 9A and 9B. This collaborative effort will seek to get density estimates for both GMU's as well as estimates for the park and preserve. This distance sampling survey will build on data collected collaboratively in 2003 and LACL efforts in GMU 9A in 2010 and 2019.
- Park staff will conduct bear trend counts of coastal salt marsh areas in June and July. Trend counts began in 2003 and have been conducted annually since. In 2024, two surveys were conducted, one on June 27 and one on July 24. There were 177 and 110 bears observed on the June and July surveys, respectively.

#### Moose Population Survey

• Moose surveys will be conducted in March 2025 in both the interior and coastal regions of Lake Clark. The interior has not been successfully surveyed since 2017. On the coast, efforts have been more successful, with a complete survey of the coast completed in 2019 and surveys of the Johnson River drainage each year through 2024. Data collected will allow an assessment of changes in moose abundance and distribution.

## Dall's Sheep Survey

• In July 2025, LACL will conduct an aerial Dall's sheep survey of habitat between of all Dall's sheep habitat in the park and preserve. The most recent survey completed in July-August 2019, estimated 1153 sheep in LACL. This was the second highest total among parkwide surveys. In much of Alaska, sheep have been declining, so monitoring the LACL population is important for understanding the factors affecting sheep throughout their range and how these affect our local population.

#### Sea Otter Surveys

• Aerial surveys to determine the numbers and distribution of sea otters along the Lake Clark coast are planned for each season of 2024. In 2024, 2 surveys were completed nt the Lake Clark coast. The surveys occurred on April 8 and June 14 and observed 41 sea otters and 7 sea otters, respectively. Surveys in 2025 are planned to help understand the seasonal use of the Lake Clark coast and continue to help track recolonization of the Lake Clark coast by sea otters.

### Newhalen River Counting Tower

- The park will be monitoring the Newhalen River sockeye salmon escapement again this summer. Monitoring on the Newhalen River has been ongoing since 2000 and provides information on salmon escapement, run timing, and population characteristics. The 202<u>4</u> estimated escapement was about 820,000 sockeye salmon, which was approximately 12% of the total Kvichak River return of 6.6 million. This year's escapement to the Newhalen River was the highest total since 2000 and more than double the 20-year average of 390,000 sockeye salmon. Run timing was later than average with the beginning of the run arriving approximately a week late and the mid-point 2 days later than average.
- In 2025, park and network staff will be working with Dr. Curry Cunningham of the University of Alaska Fairbanks to analyze sockeye salmon escapement data from the Newhalen and Telaquana rivers. The aim of this project is 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?

## Telaquana River Weir

• This summer the park will be operating the Telaquana River weir, in collaboration with the Alaska Department of Fish and Game. This was the 15th 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 111,154 sockeye salmon representing 16% of the total estimated escapement past the Kuskokwim River sonar and was 24% below the 10-year average. Estimated escapement for Chum salmon and Chinook salmon were 33 and 41, 66% and 57% lower than average respectively.

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

### Kijik National Historic Landmark Cultural Landscape Report

• In 2019 the park began a multi-year project to document the Kijik National Historic Landmark (NHL) cultural landscape and to develop a framework to manage the site that is informed by the perspectives and values of Dena'ina communities. We hope that the project will also clarify the roles and responsibilities of the NPS and Dena'ina communities in collaboratively managing the NHL in the future – for the benefit of all stakeholders, including non-Native resident zone communities and park visitors in addition to tribes. The project will also help to identify interpretive and educational opportunities for Dena'ina and other youth, and visitors. The park held consultation meetings with park-associated tribes in February 2020 and April 2024. In 2025, park staff and researchers will complete the report and prepare it for publication.

### Baseline Archaeological Survey of Three Riverine Corridors

• To date archaeological survey in the park has focused on lakeshores and coastal areas. Few of the numerous Dena'ina travel corridors have been the subject of archaeological research. This project aims to conduct archaeological survey and documentation along approximately 16 miles within three riverine corridors - Tommy Creek, and the low pass between Lake Clark and Kontrashibuna Lake; the lower reaches of Currant Creek; and a segment of the Upper Stony River near Two Lakes. With changing climate conditions these rivers are exposed to large glacial run-off and erosional forces that threaten cultural resources along their routes. Pedestrian reconnaissance and sub-surface testing of high-probability landforms will be undertaken to complete a Section 110 inventory.

## SOUTHWEST ALASKA INVENTORY AND MONITORING NETWORK, AMY MILLER (907) 644-3683

## Water Quality Monitoring

• Lake temperature has been monitored year-round in Lake Clark since 2006, and in Kijik Lake since 2010. In 2017, temperature monitoring also began in Telaquana Lake. In 2025,

monitoring will continue at all three sites. The monitoring uses 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 include pH, dissolved oxygen, specific conductivity, and turbidity, which are measured at the outlet of Lake Clark over the course of the summer (June-September), and at multiple points on the lake once per summer (July). A separate set of temperature loggers at a number of stream and beach locations in the Lake Clark basin measure water temperatures where sockeye salmon spawn. In 2025, we also plan to conduct summer measurements of water quality parameters at several smaller lakes, including Kijik, Crescent, and Hickerson lakes. Time permitting, we might also conduct measurements at one or more other small lakes (i.e., Snipe, Fishtrap, Lachbuna, and Portage lakes).

## Surface Hydrology Monitoring

• Streamflow near the outlet of Lake Clark has been estimated since 2009, and near the outlet of Kijik Lake since 2014, by measuring water levels hourly during the ice-free portion of the year. This work will continue during the 2025 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.

## **Bald Eagle Surveys**

• Lake Clark supports large populations of bald eagles. Their breeding success is influenced by habitat integrity and food availability, among other factors. Bald eagle surveys conducted in LACL show that nest occupancy has been highly variable since surveys were initiated in 1992. In 2025, bald eagle surveys will again be flown in May and June-July to determine how many eagle nests are occupied by eagles, and how many chicks are observed in each nest.

### Vegetation Monitoring

• Vegetation monitoring in Lake Clark provides information regarding long-term changes in species richness, cover and diversity across a range of vegetation types. Monitoring in 2025 will occur in forest habitats, including areas that have experienced beetle kill, between June-August. We plan to revisit sites near Two Lakes, Telaquana, Portage, Lachbuna, Upper Tazimina, Currant Creek, and around upper Lake Clark.

## Cold Water Refugia

• In 2025 we will continue a multi-year project to characterize cold water refugia in three park units in southwest Alaska. Cold water refugia are important freshwater locations where fish species can find relief as water temperatures approach or exceed thermal thresholds. In 2024, we used aerial surveys and thermal imaging equipment to map the spatial distribution of cold water refugia in select salmon streams. In 2025, we will assess the persistence of these areas through time by flying additional surveys and installing water temperature loggers.

## Weather Stations

• Lake Clark's five weather stations (Chigmit, Silver Salmon Creek, Snipe, Port Alsworth, Stoney) will receive annual maintenance between May and August 2025.

### INTERPRETATION, EDUCATION, PARTNERSHIPS, AND PUBLIC AFFAIRS, CHELSEA NILES (907) 644-3637

## Youth Programs

- We will be reaching out to tribal councils and administrators over the next few months to hear how best to provide summer youth programs in communities this summer. The park plans to hold in-person day camp programs in at least two communities between July and August.
- The park will host weekly Junior Ranger throughout the summer in Port Alsworth on Tuesday mornings.

### School Programs

• In person and virtual education opportunities are available on request this year. Please reach out to schedule!

### **Projects**

- Park Film: The park received funding through a national competitive process to create a park film. In 2022, the park engaged in an extensive tribal consultation process and the film crew completed the bulk of the filming. In 2023, the park completed all onsite filming and a rough cut. In 2024, the park engaged in another round of tribal consultation in August for the final cut. In 2025, final storytelling decisions, editing, and tribal review of drafts and input regarding audio will continue, with the final product anticipated by the end of the year.
- Traditional Foodways: Lake Clark is working with a Mellon Postdoctoral Fellow to research and document traditional foodways in Lake Clark. Research, planning, and consultation will take place in 2025 with assets and products coming in 2026.
- Viewshed: Lake Clark was awarded funding to create and install exhibit panels in high-volume areas in Anchorage and the Kenai Peninsula to promote viewshed awareness of Lake Clark as both park and homeland.
- New Education Program: Lake Clark will create a new distance learning program this year focused on the cultural and natural resources of the Telequana River.
- Water Trail: The park is working on a "water trail" resource guide for Lake Clark which will highlight paddling routes, camping and public use cabin locations, and Dena'ina placenames of the region.
- Visitor Center Outdoor Interpretive Area: The Port Alsworth Visitor Center will be under construction this summer as we improve accessibility, safety, and general experience through regrading/landscaping, moving exhibits, revegetation, and more.

### FACILITIES MANAGEMENT, WARREN HILL (907) 727-3117

#### **Backcountry Facility Improvements**

• Planned work includes deferred maintenance at the ranger cabins at Chinitna Bay and Silver Salmon Creek on the Cook Inlet coast, and general improvements to the Weissers Cabin at Upper Twin Lakes for administrative use.

#### Hansen Cabin Improvements

• Park staff will make minor improvements to the structures and conduct a general clean-up of the area to facilitate potential use of the site as a public use cabin or campsite associated with a future Water Trail on Lake Clark.

#### Visitor Center landscaping and trailhead access

• The park will be working with the Regional Maintenance Action Team and the Student Conservation Association, to rearrange and revegetate the grounds around the visitor center and its outdoor exhibits to create a more logical and aesthetic approach for pedestrians as well as create more space for outdoor programs and exhibits. The work will also include signage and a foot trail to access the newly constructed Lakeview Tinitun trailhead.

For questions relating to the Visitor and Resource Protection Division please contact acting Chief Ranger Joe Dallemolle at (907) 644-3647.