



# United States Department of the Interior

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## INFORMATION BULLETIN - September 2024

### ***Aerial Salmon Survey*** Contact: Truett Cawfield

Togiak Refuge has initiated an aerial surveys of the Salmon River which flows into the Kuskokwim Bay. The aim of this survey is to establish a baseline for salmon run timing and run size for this system. A weir will enumerate escapement on the Salmon River from 2023-2027 and is managed by the Kenai Fish and Wildlife Conservation Office, who is partnering with the Togiak Refuge staff on this project. The weir will be utilized to ensure the accuracy and precision of aerial surveys.

### ***Arctic Char Population Inventory*** Contact: Truett Cawfield

Togiak Refuge has developed a multi-year study to inventory Arctic char populations throughout the Refuge. This species was previously confirmed to occur in 27 lakes. Since the beginning of the study 36 lakes have been sampled, and Arctic char occurrence has been documented in 17 new lakes. We have collected size and genetic information from 374 fish and provided the UAF museum with voucher specimens. If you have any first-hand knowledge of small or unique Arctic char populations and would be willing to share that information please contact Truett Cawfield at the Togiak Refuge office.

### ***Mulchatna Caribou*** Contact: Andy Aderman

Togiak Refuge assisted ADF&G with telemetry and law enforcement flights, satellite data acquisition, data entry and database management. A July 2023 post-calving survey estimated the Mulchatna herd at 12,507 caribou, slightly up from 12,112 estimated in 2022, and well below the population objective of 30,000-80,000 caribou.

Togiak Refuge Manager Moos, under authority delegated by the Federal Subsistence Board, closed caribou hunting and closed Federal public lands in the RC503 hunt area for caribou hunting. We envision hunting will remain closed in line with the ADF&G moratorium in place for the Mulchatna Caribou Herd.

Togiak staff assisted ADF&G with caribou capture in March 2023 in the area north of Goodnews Bay. Sixteen adult cows were radiocollared and all appeared to be in good physical condition. On July 12 and July 18, 2023 we located 23 of 26 collars in 22 groups. We also observed 13 uncollared groups ranging from 1-45 caribou. The combined total for all groups was a minimum of 639 caribou. An October 2023 composition survey of 463 caribou in early October 2023 found 44.4 bulls and 46 calves per 100 cows, identical to an October 2022 composition survey of 253 caribou in the area west of the Matogak River in Unit 17A and south of the Carter Bay drainage in Unit 18 indicated 44.4 bulls and 45.9 calves per 100 cows.

***Nushagak Peninsula Caribou*** Contact: Andy Aderman

A photocensus of the Nushagak Peninsula Herd on June 28, 2024 found a minimum of 589 caribou in 4 groups, 119 more than the 2023 minimum count of 470. A total population estimate will be forthcoming. A composition survey in early October 2023 estimated 32.7 bulls and 62.7 calves per 100 cows. The calf to cow ratio was similar to October 2022 estimate of 63.3. The bull to cow ratio declined 8.6 points from the 2022 estimate.

The Nushagak Peninsula Caribou Planning Committee met via teleconference on July 25, 2024 to review results of previous hunts, population and lichen monitoring, and the harvest strategy. Hunters reported taking 24 caribou (8 bulls and 16 cows) during the 2023-2024 season. Three caribou kills were not reported. We deployed 15 additional radiocollars on caribou in this area in April 2024.

***Moose*** Contact: Andy Aderman

In 2024, 15 radiocollars were deployed on 10.5-month old female moose in Unit 17A and western Unit 17C. Calf production and twinning rates were not monitored due to a lack of pilots and poor flying weather.

During the 2023-2024 fall moose hunts in Unit 17A (RM 571, RM 573, and DM 570), hunters reported harvesting 50 moose (49 bulls, 1 cow) which was down from the 60 moose (55 bulls, 5 cows) taken the previous year. During the 2023-2024 winter moose hunts in Unit 17A (RM 575 and RM 576), hunters reported harvesting 7 moose (2 bulls, 5 cows) as of January 18, 2024. This hunt was open until February 29, 2024.

***Walrus*** Contact: Andy Aderman

Togiak Refuge has monitored Pacific walrus use of coastal haulouts since 1985 using a variety of methods and an increasing level of monitoring intensity. Monitoring methods have included daily ground counts restricted to spring-fall months (1985-2008), infrequent aerial surveys (2003-2012), and year-round time lapse photography using remote cameras (2010-2021). Increasing monitoring effort has resulted in an increasing understanding of when and where walruses use Togiak Refuge haulouts. Peak annual haulout counts have generally declined from 1985 through 2018, then for the past three years have returned to levels observed in the 1990s. The majority (80%) of haulout activity on Togiak Refuge haulouts takes place September – November and occurs on the Hagemeister Island haulout.

***Seabirds*** Contact: Janelle Trowbridge

The abundance of black-legged kittiwakes, common murre, and pelagic cormorants has been monitored at Cape Peirce since 1990. Monitoring was not conducted in 2015 and 2020. The average number of birds counted on study plots in 2024 was 558 kittiwakes, 210 murre, and 19 cormorants. Over the past 34 years, the average number of birds counted on study plots are 1,014 kittiwakes (range = 238-1,906), 2,369 murre (range = 53-4,490), and 80 cormorants (range = 15-149). Abundance has been below average for kittiwakes since 2021, and since 2014 for murre and cormorants.

***Invasive Plant Surveys*** Contact: Kara Hilwig

*Elodea spp.* is a highly invasive and difficult to control aquatic plant implicated in the degradation and loss of fish habitat across the world. It was confirmed present in Alaska in 2009 and is now found in several waterbodies across the State. Refuge and Park staff completed the sixth *Elodea* survey within the Togiak Refuge, Wood-Tikchik State Park and the surrounding area. Both aquatic and terrestrial invasive plants were evaluated at high use areas such as popular camps, float plane beaching areas, boat ramps, and docks. Surveys are currently underway. Thus far, no *Elodea* has been detected.

***Invasive Species Early Detection Rapid Response Project*** Team Contact: Ben Wishnek

The Regional USFWS Southwest/Southcentral EDRR project team is finishing year 2 of a multi-year project with Togiak NWR focusing on early detection and rapid response to multiple invasive species. 2023 was a baseline data collection year where there were terrestrial invasive plant surveys done at half-mile increments on the road system between Dillingham and Aleknagik as well as at critical access points. The team is working in 2024 on integrated pest management to control priority infestations detected in 2023 as well as early detection of new infestations of terrestrial plants. The team also visited Togiak village in 2024 to complete baseline surveys on the road system in the village as well as at critical access points and up the Togiak River. Refuge staff and the team will work together to determine best options for management of invasives detected in 2024 with the village in 2025. Surveys were also done in Togiak village for habitat suitability for invasive mussels as well as early detection for invasive European green crab. Results of the water quality surveys are forthcoming and there were no European green crabs detected. Finally, the team is meeting with local partners individually as well as conducting outreach via public presentation at UAF Bristol Bay campus to engage the community to help be on the lookout for invasive species that may harm fish, wildlife, and plants important to the Bristol Bay region.

***Water Temperature Monitoring*** Contact: Truett Cawfield

Stream temperature monitoring has been conducted at 21 locations on 14 rivers in Togiak Refuge since August 2001. Continuous hourly water temperatures were recorded at each site. Over 2.4 million temperature records were collected, quality-graded, and digitally stored in a database. The warmest month each year was July. The warmest temperatures were observed in the Kukaktlim Lake outlet and the coolest temperatures were observed in the Weary River. In addition to the stream temperature monitoring, we monitored lake temperature using moored all-season temperature arrays to record hourly temperatures throughout the water column in 2 lakes since 2011. The lakes differed significantly in surface area, water volume, and elevation with Ongivinuk Lake being smaller and at higher elevation than Snake Lake. We observed variation in lake ice timing and fewer days of ice cover on Snake Lake than on Ongivinuk Lake. We observed that both lakes turn over in spring and fall. We observed water temperatures in excess of standards for fish rearing and migration habitats during summer down to 12.5 m in Snake Lake and down to 5 m in Ongivinuk Lake. Project reports are available upon request.

***Quantifying River Discharge*** Contact: Truett Cawfield

Togiak Refuge and the USFWS Water Resources Branch have worked cooperatively since 1999 to acquire hydrologic data of the flow regime (magnitude, duration, timing, frequency, and rate of change) and water quality on rivers throughout the Refuge. A network of stream discharge gages collected stream flow data from 1999-2005 at 20 locations. A subset of five of these stations continued to collect data through fall 2009, after which three of the five stations were removed. We continue to monitor discharge in the Togiak and Kulukak Rivers, although due to Covid-19 travel restrictions, the gages were inoperative in 2020-2021. Both stations were brought back into operation in July 2022.

***Education and Outreach*** Contact: Terry Fuller

Togiak Refuge has a very active education and outreach program. From an education standpoint, during a normal school year, Refuge staff conducts an average of 60+ classroom visits throughout 12 Bristol Bay villages annually. Classroom visits include lessons about the Migratory Bird Calendar, National Wildlife Refuge Week, careers in natural resource conservation, and numerous teacher requested classroom presentations. The Refuge works with several school districts and private schools including the Southwest Region, Lower Kuskokwim, Dillingham City school districts and the Dillingham 7<sup>th</sup> Day Adventist School. Some topics often include bird walks, wilderness survival skills, salmon life cycles, aquatic resources, and bear safety. The refuge website, one of our educational tools, is undergoing a migration to a new platform, and we are excited about better access it will allow and the content it will provide.

During Spring 2024 Togiak Refuge launched a National Archery in the Schools Program in conjunction with Dillingham Elementary School. We are excited for the potential of this program and hope to grow it in the next school year.

Togiak Refuge, in partnership with ADF&G and the Southwest Region School District, also conducts hunter safety courses throughout western Bristol Bay Villages. Classes have impacted more than 100 students in Manokotak, Dillingham, Twin Hills, Togiak, Aleknagik and Quinhagak. The refuge plans to continue these courses, as requested, in the future.

The Refuge education program also produces Bristol Bay Field Notes, an award-winning weekly radio program on KDLG 670 AM that covers an array of outdoor-related topics (past episodes can be found on KDLG's website). Togiak Refuge has an active and heavily followed Facebook page which disseminates information on a daily basis to a rapidly growing global audience.

The Refuge normally hosts an Open House event, in celebration of National Public Lands Day and National Hunting and Fishing Day. This past year that event was postponed in 2023.

Togiak Refuge staff has a history of working with the Alaska Migratory Bird Co-Management Council and the ADF&G to conduct household subsistence waterfowl surveys. Refuge staff and volunteers conduct surveys in a number of southwest Alaska communities, Aleknagik, Dillingham, Togiak, Clark's Point, Newhalen, Chignik Lake and Chignik Lagoon. Due to budgetary constraints those surveys are on hold for the foreseeable future.

Togiak Refuge has historically has two Science camps for area teens, and assisted with a third. Those camps are in flux, for a host of reasons. This summer the Refuge was able to offer one camp to area JH students. The camp took place at Snake Lake and involved students from Dillingham, Manokotak, and Togiak. Students observed and learned about the many fish, wildlife and plant species found near the eastern border of the Refuge. Rafting skills, water safety, Leave No Trace camping practices, and bear safety were topics during the trip. Students also participated in other outdoor activities such as wilderness survival skills and archery. This camp helped students grasp the biological diversity found on the Refuge, while developing a deeper sense of stewardship for local natural resources. Traditional councils and school districts in western Bristol Bay are cooperators with this camp.

***Division of Refuge Law Enforcement*** Contact: Melissa Vogt

New Federal Wildlife Officer Melissa Vogt arrived in Dillingham May 15, 2024. Officer Thompson is now located in Soldotna AK and is the Alaska Region Law Enforcement Specialist.