



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
**Kodiak National Wildlife Refuge**  
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## **Federal Subsistence Activity Report March 2016 – July 2016**

### **Fisheries**

*Please note that results of salmon counts presented below were provided by the Alaska Department of Fish and Game (ADF&G).*

#### Western Area

Lower escapement goals were exceeded for stocks of early-run sockeye salmon in the Karluk River and Ayakulik River. Review of escapement of late-run stocks indicated that escapement goals also will be met for these systems.

For the first time since 2012, lower escapement goals were exceeded in the Karluk River and Ayakulik River. As of July 29, 3,364 Chinook were counted through the weir in the Karluk River and 4,577 were counted through the weir in the Ayakulik River.

#### Northern Area

There were solid returns of sockeye salmon to the northern areas of the Kodiak Archipelago open to subsistence fishing under federal regulations. Subsistence users from Kodiak, Port Lions and Ouzinkie utilized federal areas around Afognak “Litnik” lake and Buskin River. The Litnik sockeye salmon escapement count of 33,167 fish was within the escapement goal range of 20,000 to 50,000 fish. The Buskin River sockeye salmon escapement of 9,679 exceeded escapement goals of 5,000 to 8,000 fish.

#### Akalura River

For a second year we continued to enumerate the number of adult sockeye salmon returning to the Akalura Lake drainage. The station was established on July 12 and will be maintained through September. Field methods include a combination of time-lapse photography and video to document salmon passing panels mounted over the stream substrate. In the office, time-lapse photos are reviewed, fish are enumerated, and video is used to calibrate the time-lapse counts. In 2015, we estimated that 32,800 ( $\pm 7,336$ ) sockeye salmon returned to Akalura Lake.

#### Cooperative Habitat Monitoring

Implementation continued of networked, cooperative monitoring of temperature in 27 stream and 25 lake sites. This project, and another in Bristol Bay, has served as models for coordinated,

standardized, multi-jurisdictional regional monitoring of water temperature in freshwater salmon habitat of Alaska.

## **Brown Bear**

### Population Assessment

The Refuge, in cooperation with ADF&G, attempts an annual aerial survey to monitor trend in abundance on Kodiak Island. No survey was conducted in 2016 despite full preparation and agency commitments. As in 2015, survey cancellation was caused by early leaf-out of deciduous shrubs and trees before the late May survey period started. Such advanced green-up is unacceptable because it would conceal bears, influence observation rates, and bias comparison of bear abundance among years.

The Refuge annually surveys population composition and habitat use along selected streams of southwest Kodiak Island. In 2016, the weekly surveys started on July 9 and will continue through the end of August.

### Bear-Salmon Research

Will Deacy completed his dissertation research and graduated from the University of Montana in May 2015. In collaboration with Bill Leacock, Refuge Wildlife Biologist, Will issued several products of 2013-2015 research. These include a paper published in the journal *Ecology* (*Kodiak brown bears surf the salmon red wave: direct evidence from GPS collared individuals*); a paper published in *PeerJ* (*A time-lapse photography method for monitoring salmon (*Oncorhynchus* spp.) passage and abundance in streams*); and a doctoral dissertation (*Foraging behavior of brown bears on Kodiak Island, Alaska*). Contact Bill Leacock of Bill Pyle with Kodiak Refuge if you would like to receive a copy of any of these publications.

### Bear-Berry Research

The Refuge is presently completing the second and concluding year of a pilot project geared to develop and establish repeatable standard methods for monitoring year-to-year variation in relative abundance and phenology of red elderberry, salmonberry, blueberry, and devils-club. The Council will be apprised of summary findings in our spring 2017 activity report.

## **Sitka Black-tailed Deer**

Due to reduced staff capacity no survey was conducted in spring 2016. Anecdotal reports received by Refuge staff suggest (1) continued high over-winter survival and (2) continued increase in populations, possibly meeting or exceeding ADF&G's objective (70,000-75,000) for the archipelago.

## **Elk**

Radio-collared elk provide a basis for ADF&G's efforts to track herd locations and estimate herd composition, population size and harvest quotas in the Afognak Island vicinity including Refuge lands on northeastern Afognak and Ban Islands. The ADF&G annually completes a population survey in late summer before the start of hunting seasons. Results from the 2016 survey will be presented in our spring 2017 activity report.

## **Mountain Goat**

The Refuge and ADF&G collaborate on monitoring and research. The 2016 survey of herd composition and distribution is expected to conclude by late August. Regarding research, we are working to resolve a serious issue with performance of one of the two GPS collars we deployed in July 2015. Movement and habitat use data collected since 2013 will be analyzed this fall and results will be reported to the Council in spring 2017.

## **Migratory Birds**

### Coastal Waterbird Surveys

In June 2016, Robin Corcoran's team surveyed breeding populations of the western Kodiak Island. In August, she plans to survey productivity of a subset of common species. Preliminary results including comparison of 2013 and 2016 surveys of western Kodiak Island will be presented at the Council's spring 2017 meeting.

## **Subsistence Outreach**

### Refuge Information Technician

Tonya Lee, longtime Refuge Information Technician (RIT) with Kodiak Refuge, resigned in June 2016. Thanks to Tonya, who worked as RIT since the position was established in 2002, the Refuge built a strong network of partnering individuals and organizations that effectively delivered outreach and environmental education to village communities throughout the archipelago. We plan to recruit for another locally-based RIT in fall 2017.

### Village-based Science & Culture Camps

The Refuge received a small grant to support Dig Afognak, Nuniaq, and Akhiok Kids Camp. Grant funds were used to support camp travel and to purchase camp supplies and equipment.

## **Other News**

### Kodiak Refuge Celebrates 75<sup>th</sup> Anniversary

Originally established to protect brown bears and their habitat, Kodiak National Wildlife Refuge celebrates seventy-five years this August 19th! The refuge gratefully acknowledges the support and service of the Kodiak community, conservation and government partners, biologists, and educators for their historic and ongoing contributions to wildlife conservation.

Anniversary events have included a booth at the Kodiak Crab Festival and a landscape photography exhibit. Our next upcoming event is a community BBQ with guest speakers, activities, and exhibit booths, including a table demonstrating wild foods and subsistence resources. A community photography exhibit in September will celebrate Kodiak's wildlife and habitat as a public resource for both sustenance and natural beauty. Finally, the Refuge continues to feature a weekly series on social media that highlights wild foods and subsistence resources of Kodiak as part of the FWS Region 7 Share Your Plate communications initiative.