

Status Report – Pinniped Monitoring Program at Bonneville Lock & Dam, 2015

Bjorn van der Leeuw, Katherine Abbott, Ryan Bart, Travis Bybee, Dina Grinstead, Jessica Mejia, Alina Montgomery & Gregory Robertson

U.S. Army Corps of Engineers
Portland District
Fisheries Field Unit
Cascade Locks, OR 97014

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This is the first biweekly status report of the 2015 field season. This report summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 13 through March 11, 2015. Regular daylight observations began on January 13 and will continue through the end of May. As in past years, observations will be conducted Monday through Friday during daylight hours, but will not be conducted on weekends and federal holidays.

Final predation estimates will be expanded for hours and days not observed and adjusted for “unknown” prey species consumed. These adjustments will be performed at the end of the field season and will be presented in our annual report. This report can be found at: <http://www.nwd-wc.usace.army.mil/tmt/documents/fish>.

All data presented here are preliminary as of the status report date. Predation figures are unexpanded (unless otherwise noted) and pinniped abundance estimates will likely change as the season progresses and data are proofed and analyzed. A final report summarizing the results of the 2015 Pinniped Monitoring Program will be available in the fall of this year.

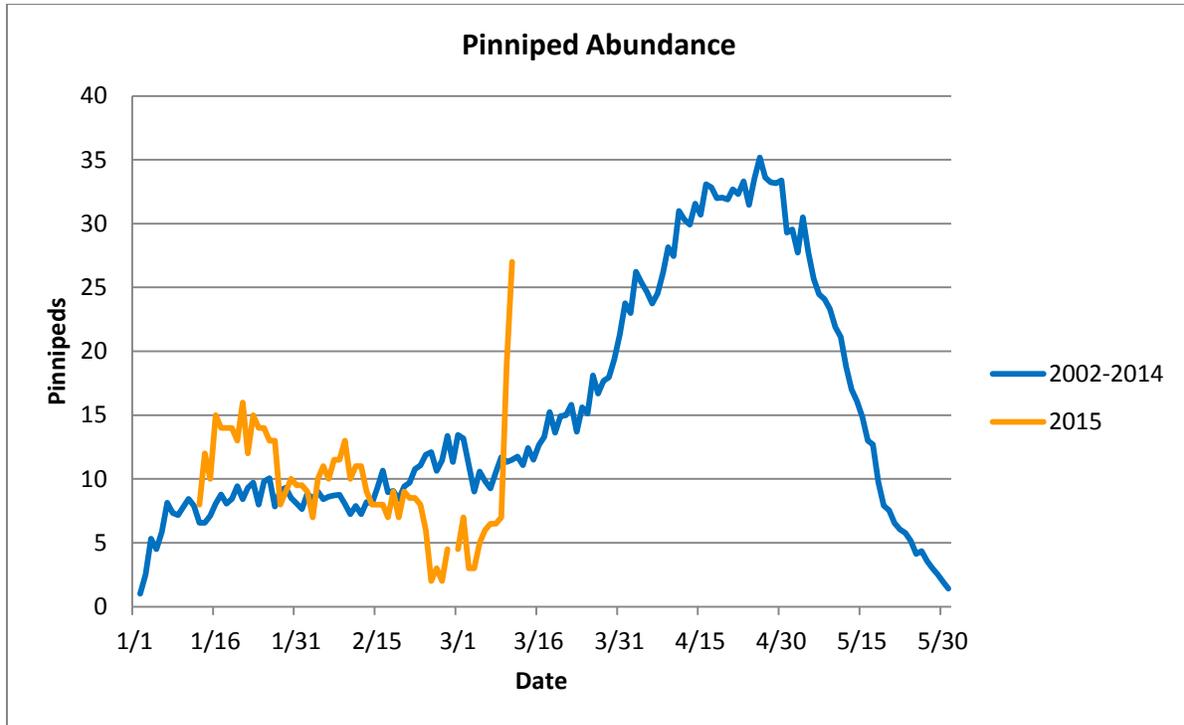
Preliminary Pinniped Abundance Data

The first California sea lion (CSL) of the 2015 field season was observed on February 9. California sea lions have been observed in the tailrace in low numbers (< 5 per day) until March 10 when 16 CSL were recorded. The maximum number of CSL observed on one day was 21 on March 11. The vast majority of CSL observed this year have been younger animals that are quickly moving around the tailrace in groups of 5-15 individuals. These groups have not stayed in the vicinity of Bonneville Dam for more than a few hours at a time.

Steller sea lions (SSL) have been present since observations began on January 13. The maximum number of SSL observed on one day was 16 on January 21. We have documented 23 unique individual SSL in the tailrace thus far. Of these, 16 were repeat individuals and 7 were previously unidentified and may be new to Bonneville. Of the 16 repeat SSL, 8 were branded individuals.

The daily abundance of pinnipeds (species combined) in 2015 versus the 2002-2014 average daily abundance is shown in Figure 1. Pinniped abundance has been variable in 2015. There was an average of 12 pinnipeds per day in January, 8 in February, and 9 in the early part of March.

Figure 1. Pinniped abundance (CSL & SSL combined) at Bonneville Dam.



Predation Data

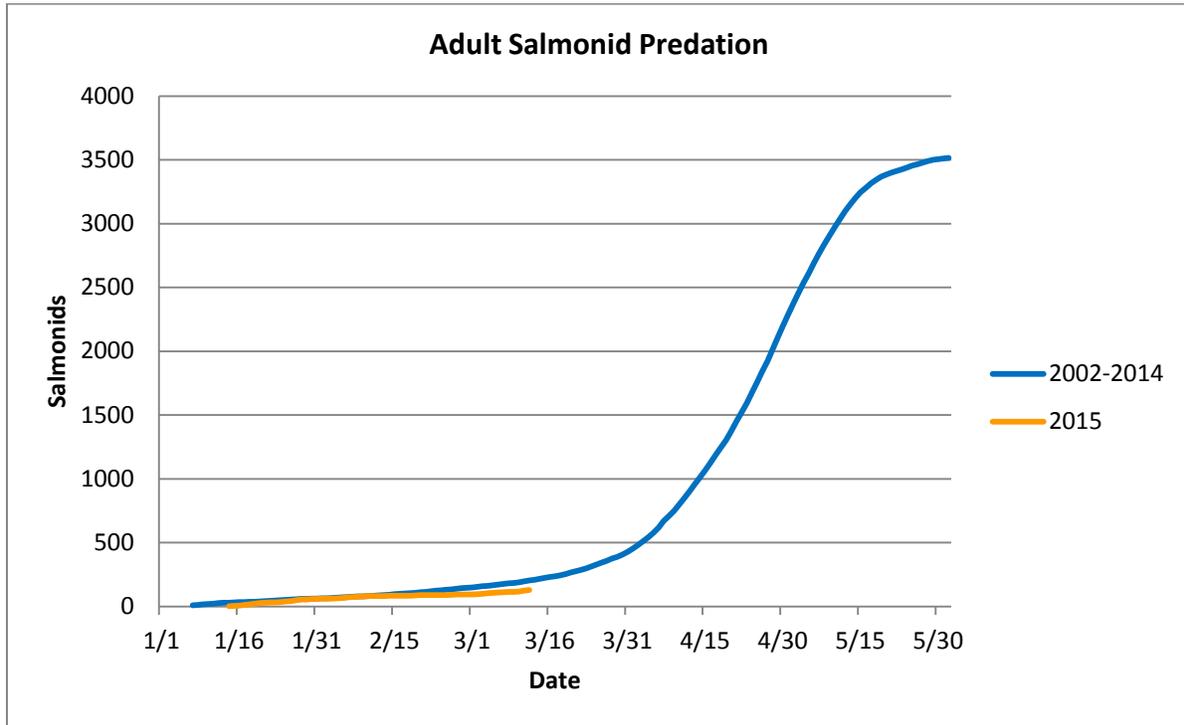
Unexpanded numbers for fish consumed by pinnipeds in the Bonneville Dam tailrace for 2015 through March 11 are listed in Table 1.

Prey	CSL	SSL	Total
Chinook Salmon	2	11	13
Steelhead	1	73	74
White Sturgeon	0	16	16
Pacific Lamprey	0	0	0
American Shad	0	4	4
Salmonid Smolt	0	0	0
Other Species	0	0	0
Unknown Species	1	20	21
Total	4	124	128

Table 1. Observed fish catches separated by fish species and pinniped species.

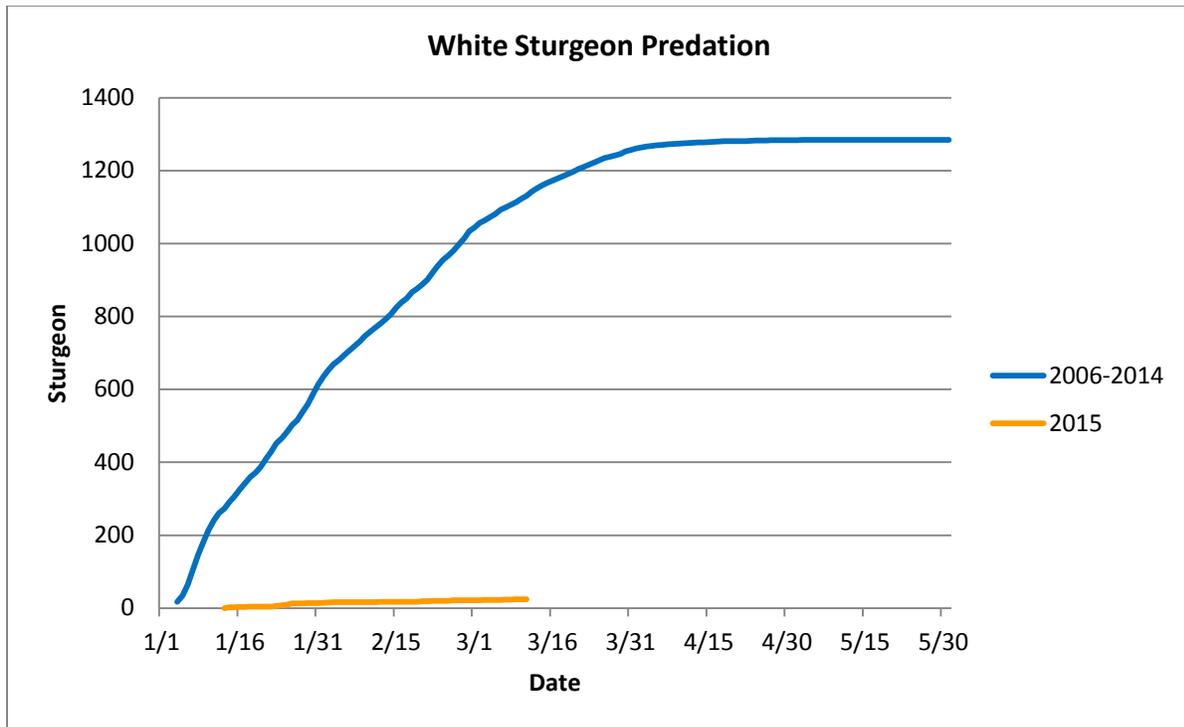
Adult salmonid (Chinook Salmon and Steelhead combined) predation has been near the 2002-2014 cumulative average for this time period (Figure 2). The predation estimate (expanded for weekends only) of 130 salmonids is lower than the 2002-2014 cumulative average of 203 salmonids consumed through March 11. All observed salmonid predation was by SSL, except for three salmonid catches by CSL.

Figure 2. Adult salmonid predation by pinnipeds at Bonneville Dam.



Estimated White Sturgeon predation has been very low for the 2015 field season (Figure 3). The predation estimate (expanded for weekends only) of 25 sturgeon is far below the 2006-2014 cumulative average of 1131 sturgeon consumed through March 11.

Figure 3. White Sturgeon predation by pinnipeds at Bonneville Dam.



Pinniped Deterrents

Sea lion exclusion devices (SLEDs) were installed at all fishway entrances by March 4. Specifically, the SLEDs at Powerhouse Two were installed on February 24, Cascades Island entrance on March 1, B-branch entrance on March 4, and Powerhouse One on March 4.

Boat-based harassment by Columbia River Inter-Tribal Fish Commission (CRITFC) began on March 6 and will continue until the end of May.

Other Items of Interest

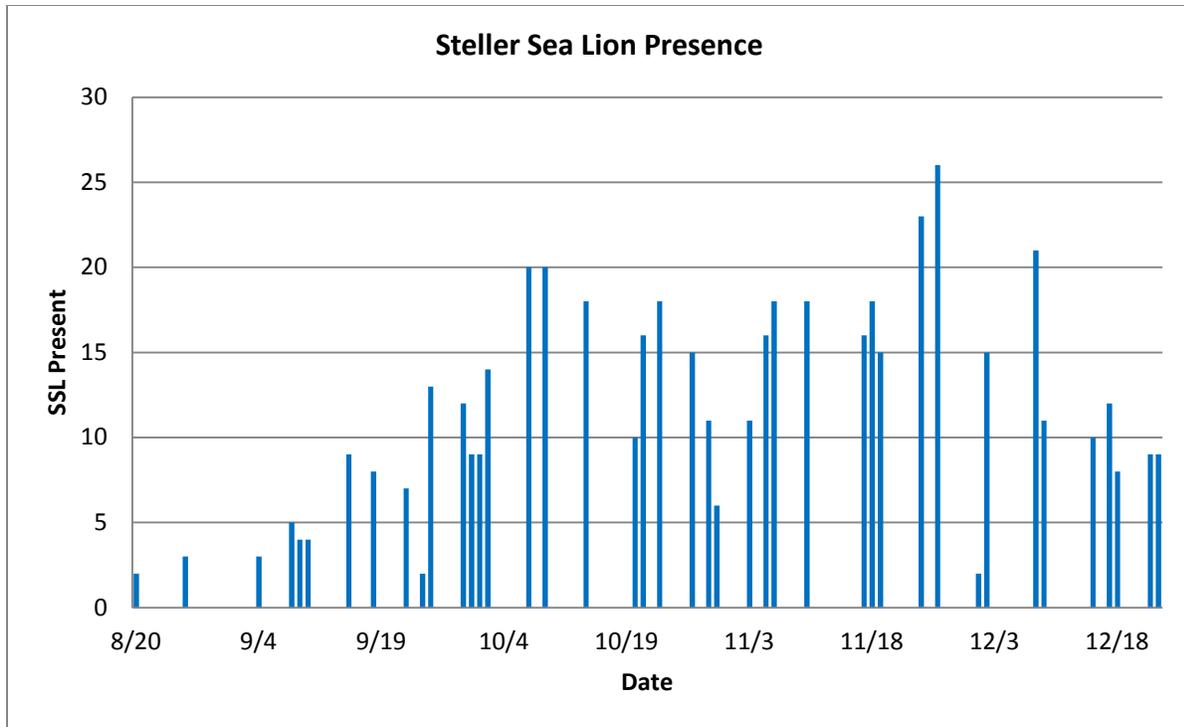
Pinniped Abundance: August-December 2014

Steller sea lions are now commonly present nine months a year in the Bonneville Dam tailrace. Some SSL are beginning to arrive as early as the latter part of August. The new timeline for SSL presence at Bonneville is to arrive in late summer and be present during autumn, winter, and spring. All SSL have typically departed the tailrace by the end of May.

Periodic observations from August to December 2014 showed that SSL were present with November having the highest median number of SSL present (Figure 4). The first SSL were observed on 20 August. The median number of SSL present by month was 3 in August, 7 in September, 15 in October, 18 in

November and 9 in December. The minimum number of SSL present on one day during this period was zero on December 3, while the maximum was 26 SSL on November 26.

Figure 4. Point counts of Steller sea lion presence in the Bonneville Dam tailrace from August 20 to December 23, 2014.



We documented 22 unique individual SSL from August to December 2014. Of these, 18 were repeat individuals and 4 were previously unidentified and may be new to Bonneville. Of the 18 repeat SSL, 9 were branded individuals.

Observations to estimate predation were not conducted from August to December 2014, but times that point counts were conducted did not show high levels of predation activity. Observations conducted at dawn suggest that many SSL are using Tower Island as a haulout, but may be hunting elsewhere downriver during the day and then returning to Tower Island to haulout at night. Most days we were unable to locate an equal number of SSL hunting in the Bonneville Dam tailrace as had been seen earlier in the day at Tower Island. We did observe many SSL regularly hunting in the Powerhouse One and Powerhouse Two tailraces, but the Spillway tailrace was not used often by SSL.

One CSL was observed on one day during the August through December timeframe. This CSL was branded (U248) and has been observed in the tailrace during the 2013 and 2014 main field seasons.