

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

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### **March 26, 2015**

This is the second 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 24, 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 were observed in the tailrace in low numbers (4 or fewer per day) until March 10 when 16 CSL were recorded. The maximum number of CSL observed on one day was 41 on March 12. The 41 CSL present on March 12 were observed moving in groups of 7-20 animals. They were actively harassed from a boat by staff from Columbia River Inter-Tribal Fish Commission (CRITFC). The boat-based harassment was successful and all CSL present on March 12 moved downriver. Since March 13, there has been an average of 5 CSL per day at Bonneville.

We have documented 8 branded CSL in the tailrace thus far. Of these, 5 were brands seen in previous years and 3 were branded CSL that had not previously been observed at Bonneville.

Steller sea lions (SSL) have been present since observations began on January 13. The maximum number of SSL observed on one day was 27 on March 24. We have documented 34 unique individual

SSL in the tailrace thus far. Of these, 26 were repeat individuals and 8 were previously unidentified and may be new to Bonneville. Of the 26 repeat SSL, 12 were branded animals.

Pinniped abundance has been variable in 2015. The daily abundance of pinnipeds (species combined) in 2015 versus the 2002-2014 average daily abundance is shown in Figure 1. There was an average of 12 pinnipeds per day in January, 8 in February, and 17 thus far in March.

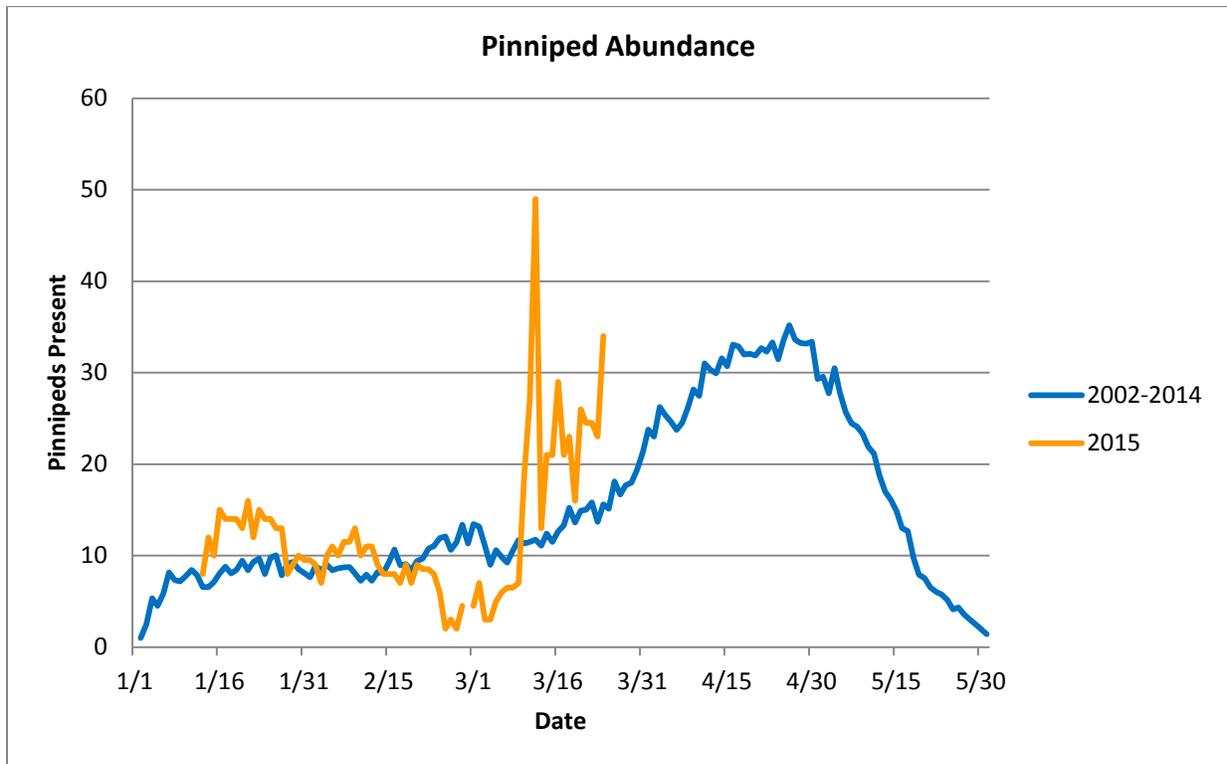


Figure 1. Pinniped abundance (California sea lion and Steller sea lion combined) at Bonneville Dam.

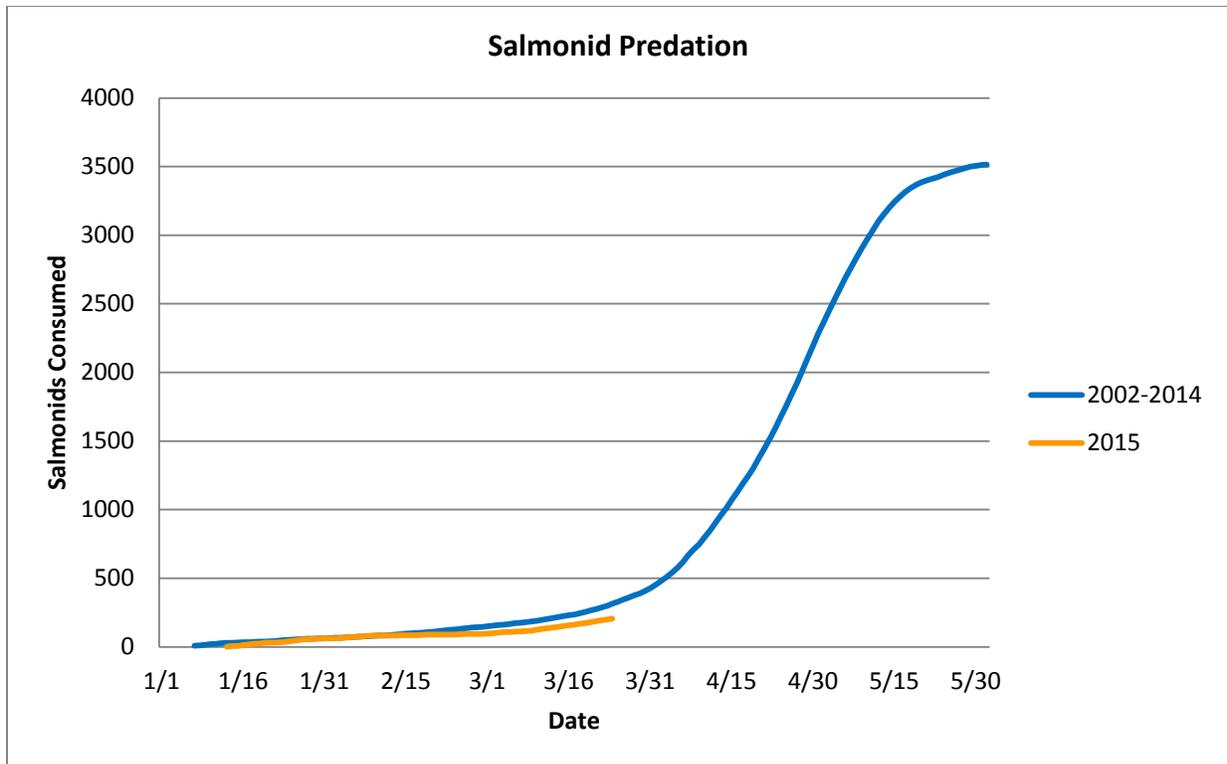
**Predation Data**

Unexpanded numbers for fish consumed by pinnipeds in the Bonneville Dam tailrace for 2015 through March 24 are listed in Table 1.

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

Prey	California Sea Lion	Steller Sea Lion	Total
Chinook Salmon	3	57	60
Steelhead	1	79	80
White Sturgeon	0	16	16
Pacific Lamprey	0	0	0
American Shad	0	4	4
Other Species	0	0	0
Unknown Species	1	39	40
<b>Total</b>	<b>5</b>	<b>195</b>	<b>200</b>

Adult salmonid (Chinook Salmon and Steelhead combined) predation has been lower than the 2002-2014 cumulative average for this time period (Figure 2). The predation estimate (expanded for weekends only) of 205 salmonids is lower than the 2002-2014 cumulative average of 329 salmonids consumed through March 24. All observed salmonid predation was by SSL, except for four salmonid catches by CSL.



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

Estimated White Sturgeon predation has been low for the 2015 field season (Figure 3). The predation estimate (expanded for weekends only) of 26 sturgeon is below the 2006-2014 cumulative average of 1223 sturgeon consumed through March 24.

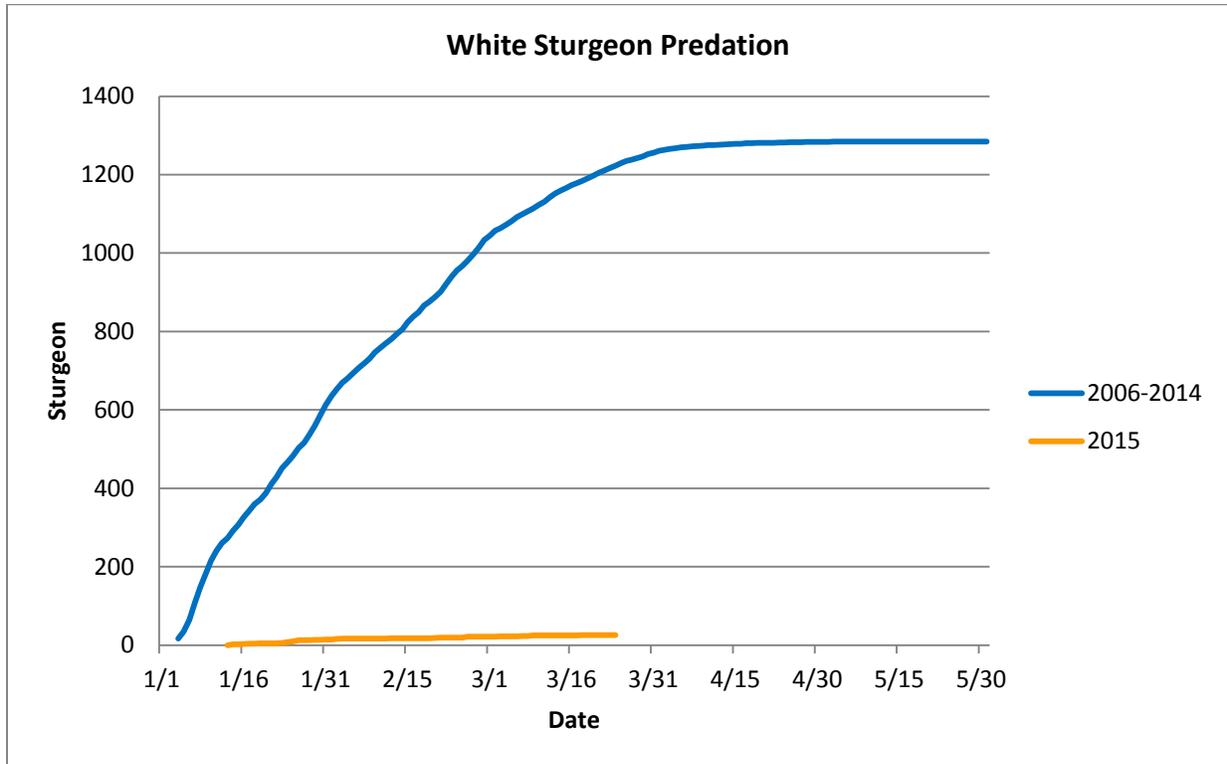


Figure 3. White sturgeon predation by pinnipeds at Bonneville Dam.

### **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.

Dam-based harassment by U.S. Department of Agriculture (USDA) began on March 18 and will be conducted 7 days a week until the end of May.