

STATUS REPORT - PINNIPED PREDATION AND DETERRENT ACTIVITIES AT BONNEVILLE DAM, 2011

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This is the eighth weekly status report of 2011 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through March 23, 2011 (unless otherwise noted). This report and earlier reports can be found at:

http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2011/sea_lion_hazing2011.html.

Regular daylight observations began on January 7 and will continue to the end of May, five days per week. Weekends will not be regularly monitored this year, as was the case in 2009/2010. Final predation estimates will be expanded for hours and days not observed at the end of the observation season and these updated figures will be presented in our annual field report.

PRELIMINARY RESULTS

All data presented here are preliminary as of the status report date. Predation figures are unexpanded (unless otherwise noted) and sea lion abundance estimates will likely change as the season progresses and data are proofed and analyzed, so please use these estimates with appropriate caution. A final report summarizing the results of the 2011 evaluation will be available in the fall of this year.

PINNIPED ABUNDANCE

We have seen as many as 21 Steller sea lions (*Eumetopias jubatus*) and 5 California sea lions (*Zalophus californianus*) at the dam on any one day so far this year (Figure 1). There are more Steller sea lions present per day on average this year so far, but fewer average California sea lions per day to date since 2003 (Figure 2). The low numbers of California sea lions present is evidence that the removal program of the past three years did remove most of the “regular” returning individuals that would typically show up early in the year and wait for the salmon to show up. The highest daily abundance estimate for pinnipeds at Bonneville dam was 21 on January 26, however, we have documented over 50 different individual Steller sea lions since January 7, 23 of those being confirmed as seen in past years. Eleven individual California sea lions have been observed, at least five have been seen in previous years. February 21 was the first day this year we observed a California sea lion (we do not monitor the weekends), and this is the latest first arrival for California sea lions at the dam since 2004. But the numbers of California sea lions seems to be picking up the past few days. Oddly, we have not seen any

harbor seals at the dam yet this year. Perhaps they prefer the smelt that are showing up in the lower river.

A number of Steller sea lions have now been observed hauled out on 2 of the traps the past two weeks most mornings.

PREDATION DATA

Unexpanded numbers for fish observed taken in the Bonneville Dam tailrace for 2011 are:

	<u>California Sea Lions</u>	<u>Steller Sea Lions</u>	<u>Total</u>
Chinook	45	52	97
Steelhead	15	92	107
Sturgeon	1	1310	1311
Lamprey	0	0	0
Shad	0	88	88
Other	0	1	1
Unknown	8	610	618

It is likely that at least 90% of the unknown fish caught by Steller sea lions were sturgeon. The Steller sea lions are catching many of the fish at the downstream range of our viewing area, making fish identification very difficult. Most sturgeon have been caught in powerhouse 2 tailrace, followed by the spillway then powerhouse 1 (Figure 3). The rate of observed sturgeon catch has really dropped off the past few weeks but is still a few hundred fish over that of last years at this time (Figure 4) with a record high of 122 being observed caught on January 11. Most sturgeon caught are in the 2 to 4 foot range. Few fish are passing the count stations (1,786 steelhead, 101 Chinook) since January 1, less than last year (3,335), but more than 2008 and 2009. For Chinook, 97 have been observed taken but only 101 have been seen to pass the dam so far, demonstrating the point that the early stocks of spring Chinook are at the greatest risk. Total salmonid catch to date (266 expanded by interpolating for weekends) is the lowest cumulative catch to date since 2003 (Figure 5), and the majority of those catches have been by Steller sea lions.

DETERRENTS/TRAPPING

Hazing by CRITFC (boats) and USDA (land) began on February 28 and has continued daily (Mondays through Fridays for boat hazing). Hazing appears to be a little more effective this year so far, at least keeping the number of pinnipeds and amount of predation low for 7-8 hours during the day. This may be because most of the pinnipeds are the Stellers (which seem to be chased off a bit more easily than California sea lions) and the California sea lions that are present are mostly new to Bonneville. However, as in past years, as soon as the hazing ends, the numbers of pinnipeds present increases as does the predation.

OTHER ITEMS OF INTEREST

We conducted our first night observation of the season on March 18. We noted a general decrease in the presence of both California and Steller sea lions hunting at PH1 and PH2 as the

night progressed, and a concurrent increase in the number of pinnipeds observed hauled out on the traps or resting nearby in the water. Only 2 predation events were observed (1 unknown catch by a Steller, 1 steelhead by a California sea lion, both during the 2000h-2100 period at PH2).

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2011.

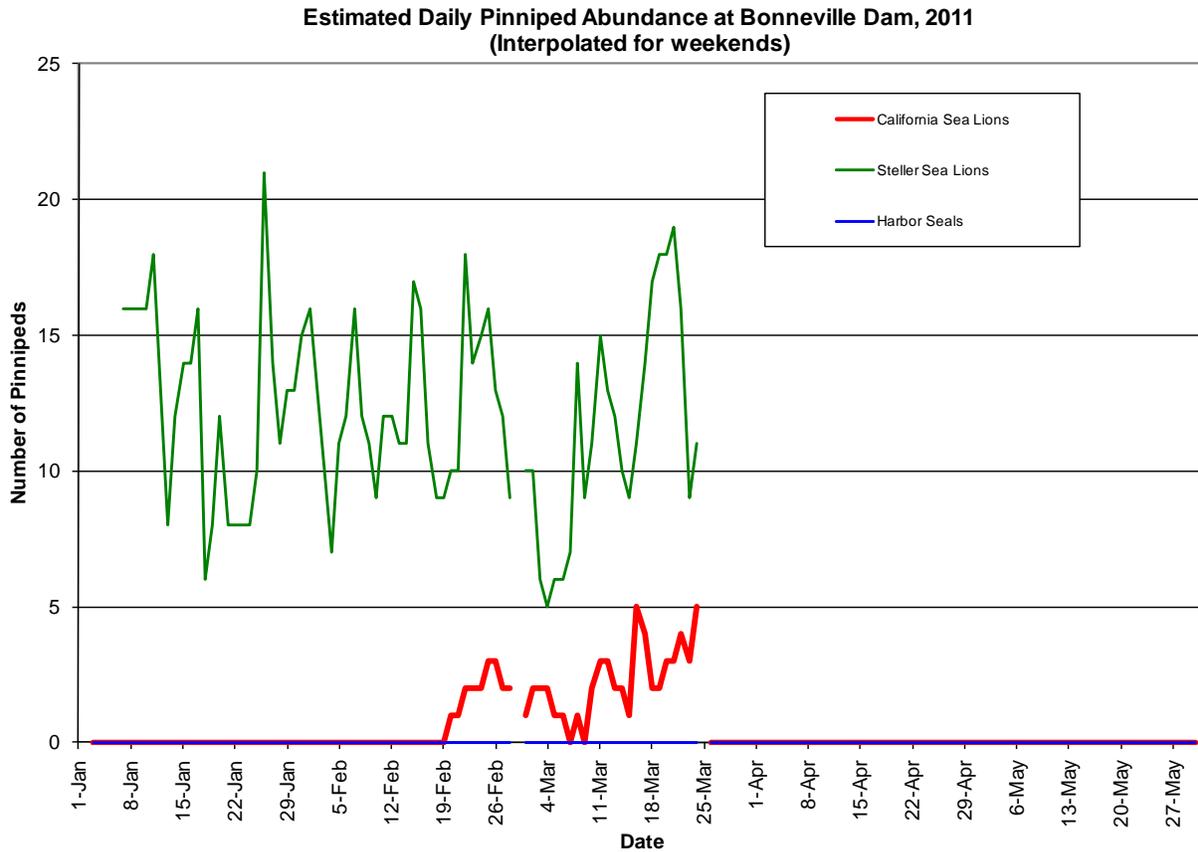


Figure 2. Average daily presence of pinnipeds, by species, to date (March 24) for each year at Bonneville Dam.

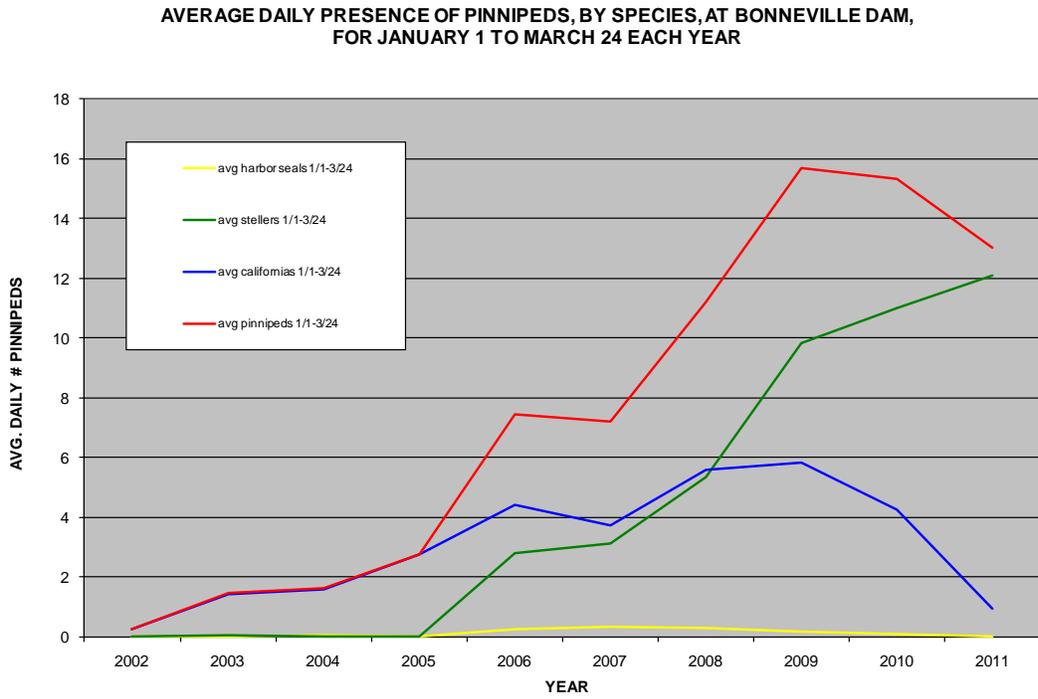


Figure 3. Major prey species taken by Pinnipeds by location, 2011.

Location of Major Prey Taken by Pinnipeds, Bonneville Dam, 2011

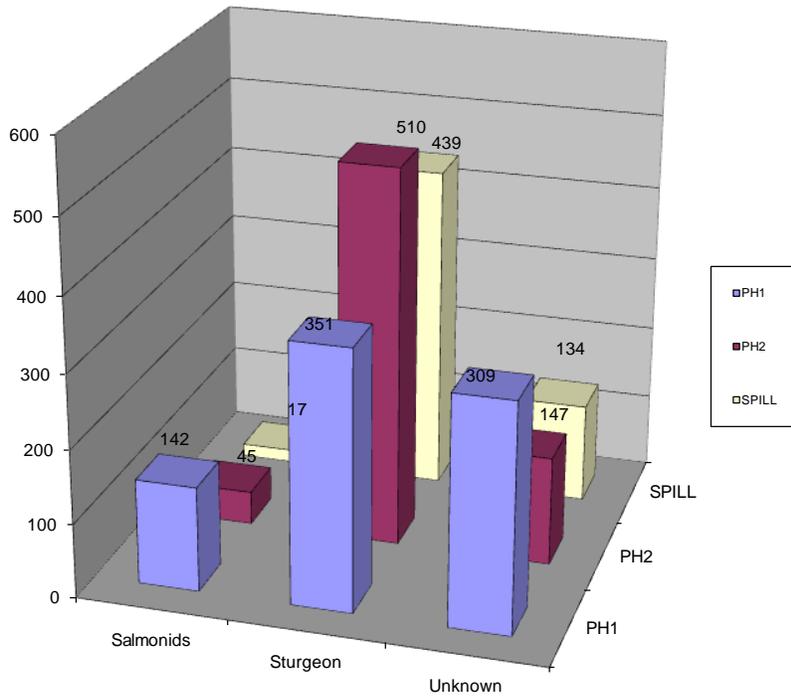


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

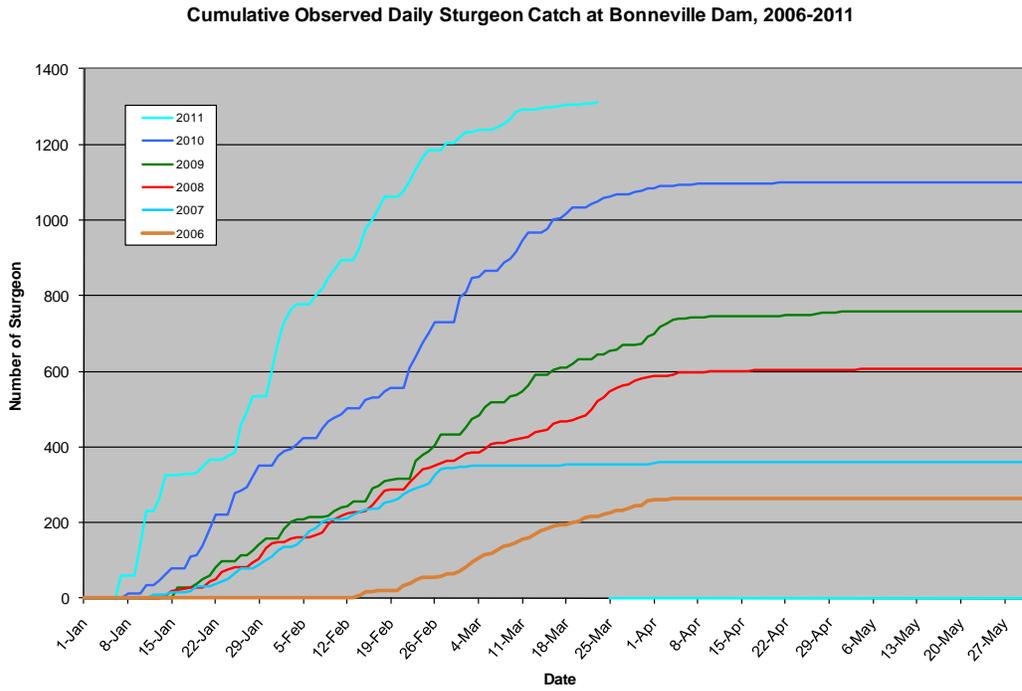


Figure 5. Daily cumulative salmonid catch (interpolated for weekends) at Bonneville Dam, 2006-2011.

