

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

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February 4, 2011

This is the first weekly status report of 2011 and summarizes all pinniped predation monitoring and deterrent activities at Bonneville Dam from January 1 through February 2, 2011. 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 18 Steller sea lions (*Eumetopias jubatus*) but no California sea lions (*Zalophus californianus*) at the dam so far this year (Figures 1) so far. There are more Steller sea lions present per day on average this year, but less California sea lions than previous years (Figure 2). The highest daily abundance estimate for pinnipeds at Bonneville dam was 18 on January 11, however, we have documented at least 26 different individual Steller sea lions since January 7, 18 of those being confirmed as seen in past years.

A few Steller sea lions were observed hauled out inside the powerhouse two (PH2) corner collector (B2CC) outfall in early January, but subsequent to the high flows and tailwater levels from the heavy rain events in late January, we have not observed any recent haul outs at the dam.

PREDATION DATA

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

	California Sea Lions	Steller Sea Lions	Total
Chinook	0	0	0
Steelhead	0	48	48
Sturgeon	0	730	730
Lamprey	0	0	0
Shad	0	68	68
Other	0	1	1
Unknown	0	265	265

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, but the spillway and powerhouse 1 are almost even (Figure 3). Observed sturgeon catch is almost twice that of last years at this time (Figure 4) with a record high of 122 being observed caught on January 11, most being in the 2 to 4 foot range. Few fish are passing the count stations (825 steelhead) since January 1, similar to last year. Total salmonid catch to date (60 expanded by interpolating for weekends) is slightly more than it has been the past two years (2010 – 52, 2009 – 56, 2008 - 41), all by Steller sea lions.

DETERRENTS/TRAPPING

ODFW and WDFW deployed four sea lion traps at the Bonneville Dam on January 27 which are currently locked open to acclimatize sea lions to haul out on them. These traps will be used to mark California sea lions and Steller sea lions not previously captured. Currently, the states have no permit to remove California sea lions as in the past three years. However, NMFS is expected to address the issues brought up by the 9th Circuit Court of Appeals as well as recommendations from the Pinniped/Fishery Interaction Task Force (<http://www.mediate.com/DSConsulting>) and revise their program plans by March. Acoustic tags may be fastened to some animals to help gain more information on movements and hunting behaviors from several acoustic sensor arrays that CRITFC will deploy and monitor between Bonneville Dam and the estuary.

SLEDs were installed at Powerhouse 1 and B branch entrances in January, while the Powerhouse 2 and Cascades Island fishways are down for winter maintenance (also some SLED's have already been installed). No hazing (other than mentioned in the next section), has been conducted at Bonneville Dam yet. The Task Force that met last November to review the deterrent and removal program after the first three years, determined that hazing activities had little real effect on the overall predation rates, and recommended that resources be focused elsewhere. Boat hazing will occur when deemed necessary or appropriate to enhance other activities at the dam. USDA/WS dam based hazers will begin on February 28.

OTHER ITEMS OF INTEREST

A report of a California sea lion barking at Powerhouse 2 was reported on September 1, 2010, but this was never confirmed. During September, October, November, and December, Steller sea lions were present and observed to take sturgeon (only recorded anecdotally, as our observation program begins in January). We believe the sturgeon predation during these months is significant and occurring at the same rate as we see in January, but we do not have the resources to document this predation at this time.

Hazing from PH2 deck occurred briefly on January 27 to help keep Steller sea lions away from the area sturgeon were being released from the PH2 north collection channel dewatering activity. On 1/26, between 1300 and 1700h we observed 44 Sturgeon caught at PH2, which was the highest rate we have seen (although we have seen spurts of 10-13 per hour at other locations at times this year). Of those 44, 12 were less than 2', 26 were 2'-3', 3 were 3'-4', 1 was 4'-5', 2 were 5'-6'. Sturgeon take by zone for those 3 hours was zone 1 - 1, zone 2 - 3, zone 3 - 9 (where fish were released), zone 4 - 5, zone 5 - 17, zone 6 - 7, zone 7 - 2. So in general, it did seem like a couple of Stellers found and keyed in on sturgeon being released in that area, likely taking some of those that were slow to recover. However, this release was also going on during the afternoon of January 25, all day including morning of 26th, and the 27th with no unusual predation observed. The highest single day of sturgeon predation at the project was on January 11 with 122 sturgeon observed taken. January 26 was 96, the second highest this year. We are averaging about 50 per day so far this year, with several days in the 80's also.

Figure 1. Daily pinniped abundance, by species, at Bonneville Dam, 2010.

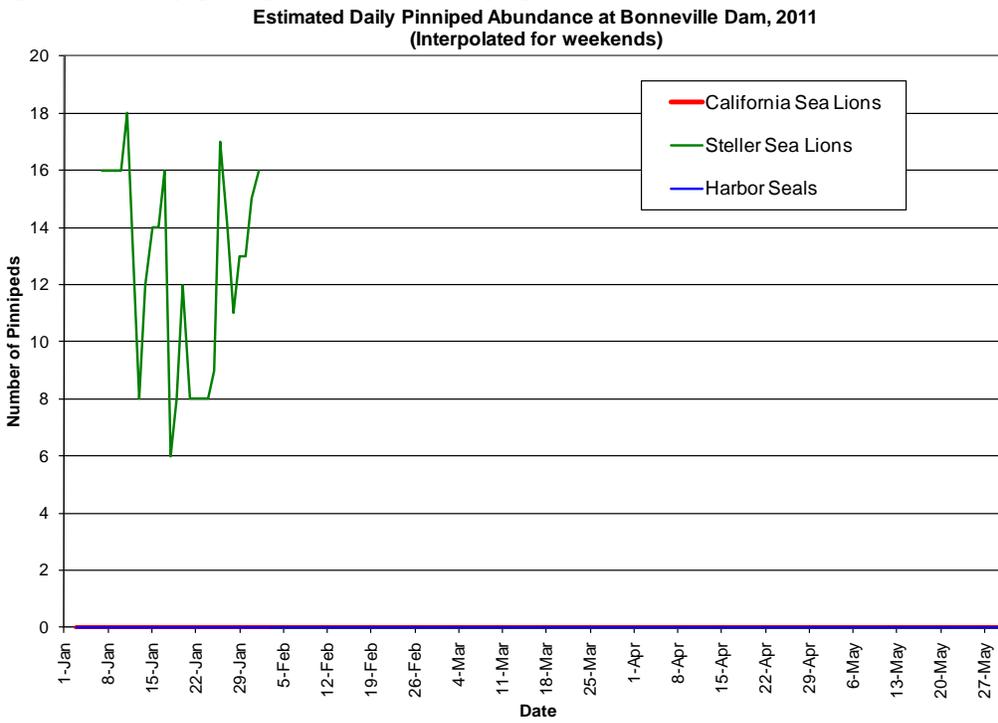


Figure 2. Average daily presence of pinnipeds, by species, to date (February 17) for each year at Bonneville Dam.

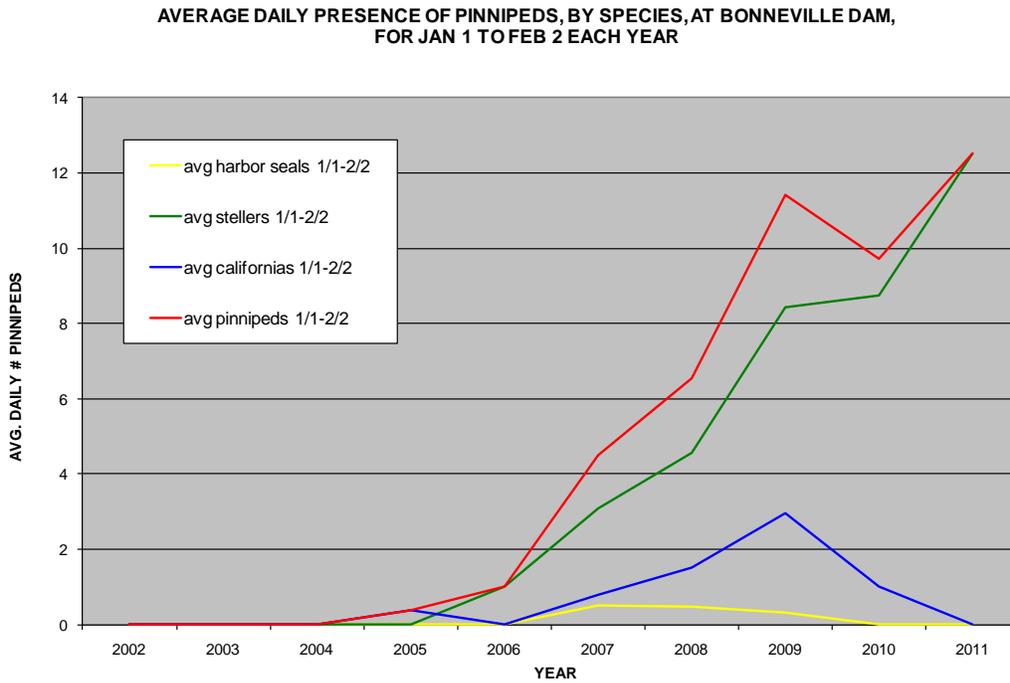


Figure 3. Major prey species taken by Pinnipeds by location, 2010.

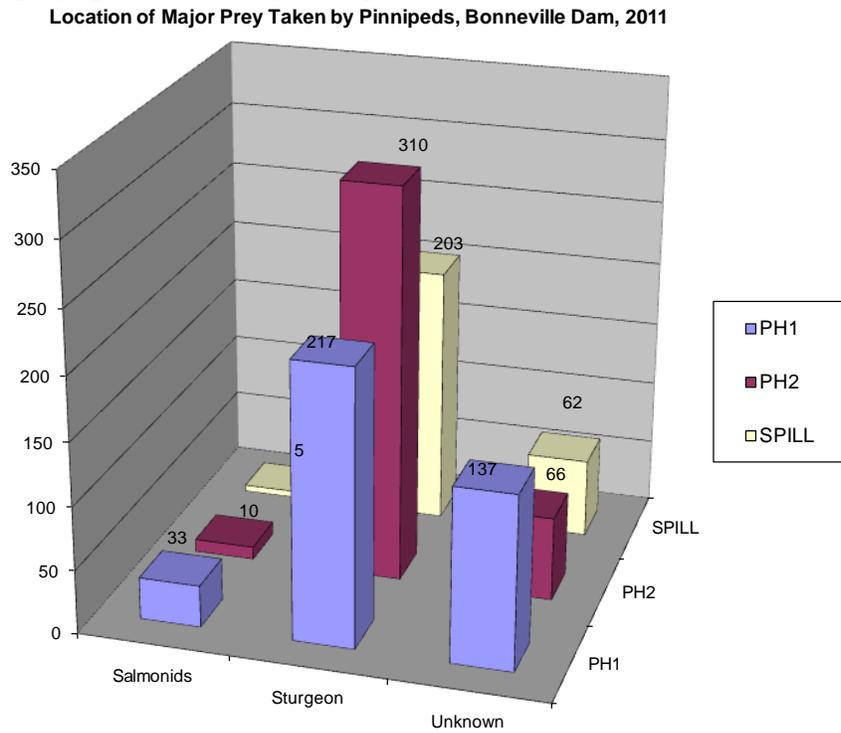


Figure 4. Daily cumulative sturgeon catch (interpolated for weekends) at Bonneville Dam, 2006-2010.

