For: FPOM - 8 Dec 2016

From: FFU

Bonneville Dam Pinniped Abundance Update

While pinnipeds are potentially present at Bonneville Dam year round, the species composition changes, and abundance is lowest from June through mid-August. Figure 1 shows pinniped (California and Steller sea lion combined) abundance during 2016 from point counts performed by the Portland District’s Fisheries Field Unit (FFU). The notes below break the calendar year into four time periods. Each note describes the abundance and species composition we observed during each time period.

1. January through February (blue shading on graph)

Only Steller sea lions were present during this time period.

1. March through May (orange shading on graph)

This time period has the highest abundance of pinnipeds and coincides with spring Chinook salmon passage at Bonneville Dam. During these months there is a mix of California and Steller sea lions in the tailrace. Pinnipeds typically depart the Bonneville Dam tailrace by the end of May.

1. June through mid-August (yellow shading on graph)

There are no point counts performed during the summer months but we periodically get reports of pinnipeds being present in the tailrace. Employees of Bonneville Dam contact the FFU when they see a pinniped and then we try to locate and identify the species. We were able to identify both California and Steller sea lions as being present during the summer months. During the time period we typically see only one pinniped at a time and they usually do not stay in the tailrace for multiple days. Bjorn van der Leeuw of the FFU says that 2016 has had the most pinnipeds observed during the summer months in the years that he has worked at Bonneville Dam (since August 2010). He also stated that observing pinnipeds during June and July was a very rare occurrence until this year.

1. Mid-August through December (green shading on graph)

Steller sea lions are now returning to the Bonneville Dam tailrace by mid-August. This early return has been occurring since 2013. Point counts completed during this time period in 2016 have showed the highest abundance of Steller sea lions to date. The monthly mean of Steller sea lions was 11 in August, 30 in September, 28 in October, 21 in November and 21 in December 2016. We perform our point counts early in the morning and typically see the largest number of pinnipeds hauled out on Tower Island. We also see a much smaller number of pinnipeds hunting in the three tailrace areas. This leads us to believe that some Steller sea lions are using Tower Island as a haulout during the night and then moving downriver to hunt during the day.

California sea lions are very rarely observed during this time period. In 2016 we completed 68 point counts between August 15 and December 7. One California sea lion was observed hunting in the tailrace on 7 separate days. Through individual identification, we know that it was not the same California sea lion each day.

Figure 1 - Daily pinniped abundance in the Bonneville Dam tailrace in 2016 (California and Steller sea lions combined). Counts are taken during week days, gaps in data are weekends.