

The following is an update of the latest run forecasts for hatchery-origin spring Chinook returning to Leavenworth (LNFH) and Winthrop (WNFH) national fish hatcheries. These data are in-season return estimates based on PIT tag detections at Bonneville Dam and expanded by PIT tag ratios at each station by year. Tagging ratios are not included in this report but are available by request (LNFH contact Greg Fraser gregory_fraser@fws.gov, WNFH contact Michael Humling michael_humling@fws.gov). Thanks to John Box for compiling this information for WNFH.

For this forecast we estimated that 82% of the spring Chinook have passed Bonneville Dam totaling 130,555 adults (age-4 and age-5) and 10,411 jacks (age-3) (fpc.org). The current run forecast by DART is 157,462 spring Chinook above Bonneville (www.cbr.washington.edu) however, this estimate is adjusted daily when fish passage data are reported and will affect forecasts to upriver locations. The DART run forecast has increased since last week as the number of springer Chinook passing over Bonneville Dam has remained constant. Last week the run forecast sent out was predicting 153,435 spring Chinook above Bonneville.

Table 1. Leavenworth National Fish Hatchery (LNFH)-origin spring Chinook PIT tag detections, PIT tag expansion estimates and the run forecast above Bonneville Dam (BON) as of 5/26/2016.

Age	PITs detected at BON	PIT Expansion	Run Forecast
3	5	380	463
4	50	4,630	5,647
5	7	1,233	1,504
Totals	59	6,244	7,614

Run forecast were produced estimating that 82% of the spring Chinook run that has passed Bonneville Dam.

Table 2. LNFH spring Chinook escapement estimates to Rock Island and LNFH, based on PIT tag detections at Bonneville on 5/26/2016 and a 5-year average of survival rates.

Estimated LNFH Returns to Rock Island	4,873	<i>64% survival from Bon to Rock Island</i>
Estimated LNFH Returns to LNFH	2,729	<i>56% survival from Rock Island to LNFH</i>

Table 3. Winthrop National Fish Hatchery (WNFH)-origin spring Chinook PIT tag detections, PIT tag expansion estimates and the run forecast above Bonneville Dam (BON) as of 5/26/2016.

Age	PITs detected at BON	PIT Expansion	Run Forecast
3	6	244	297
4	16	1,796	2,191
5	3	106	129
Totals	25	2,146	2,617

Table 4. WNFH spring Chinook escapement estimates to Wells and WNFH, based on PIT tag detections at Bonneville on 5/26/2016 and a 5-year average of survival rates.

Estimated WNFH Returns to Wells	1,958	<i>74.8% Survival from Bon to Wells¹</i>
Estimated WNFH Returns to WNFH ²	1,645	<i>84% Survival from Wells to WNFH</i>

¹Used a combination of LNFH and WNFH survival rates due to changes in fish marking at WNFH in the past 5 years

²Spring Creek PIT Array was used as a surrogate for WNFH due to changing management strategies in the past 5 years