

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](mailto:gregory_fraser@fws.gov), WNFH contact Michael Humling [michael\\_humling@fws.gov](mailto:michael_humling@fws.gov)). Thanks to John Box for compiling this information for WNFH.

For this forecast we estimated that 95% of the spring Chinook have passed Bonneville Dam totaling 155,804 adults (age-4 and age-5) and 12,688 jacks (age-3) ([fpc.org](http://fpc.org)). The current run forecast by DART is 161,073 spring Chinook above Bonneville ([www.cbr.washington.edu](http://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 158,099 spring Chinook above Bonneville.

Both June 1 and June 15 are used to describe the end of the spring Chinook run over Bonneville Dam which may be appropriate to describe the general trend of the entire run however this forecast is specific to LNFH and WNFH-origin fish so we will continue to monitor the dam detections. In previous years PIT tags from these facilities have been detected in July however, no PIT tags from LNFH and only one from WNFH have been detected at Bonneville Dam in the last 3 weeks. Additionally, 77% of the LNFH-origin fish detected at Rock Island have also been detected in the lower array in Icicle Creek suggesting that the majority of the LNFH run has entered Icicle Creek.

**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 6/2/2016.**

Age	PITs detected at BON	PIT Expansion	Run Forecast
3	5	380	400
4	50	4,630	4,874
5	7	1,233	1,298
Totals	59	6,244	6,572

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 6/2/2016 and a 5-year average of conversion rates.**

Estimated LNFH Returns to Rock Island	<b>4,206</b>	<i>64% conversion from Bon to Rock Island</i>
Estimated LNFH Returns to LNFH	<b>2,355</b>	<i>56% conversion 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 6/2/2016.**

Age	PITs detected at BON	PIT Expansion	Run Forecast
3	7	284	299
4	17	1,909	2,009
5	3	106	112
Totals	26	2,299	2,420

**Table 4. WNFH spring Chinook escapement estimates to Wells and WNFH, based on PIT tag detections at Bonneville on 6/2/2016 and a 5-year average of conversion rates.**

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Estimated WNFH Returns to Wells	<b>1,859</b>	<i>74.8% Conversion from Bon to Wells<sup>1</sup></i>
Estimated WNFH Returns to WNFH <sup>2</sup>	<b>1,561</b>	<i>84% Conversion from Wells to WNFH</i>

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<sup>1</sup>Used a combination of LNFH and WNFH conversion rates due to changes in fish marking at WNFH in the past 5 years

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