# Appendix J: Preseason forecasts and postseason estimates for PSC model stocks, 1999-Present

Note: there was no CTC consensus on the 2015 and 2016 model calibrations (CLB 1503 and 1601). Outputs from CLB 1503 were used by the Commission to configure AABM fisheries in 2015. Abundances indices for AABM fisheries generated from CLB 1601 were accepted by the Commission. For each stock group in Appendix J, preseason PSC Model forecasts for 2015 are from CLB 1503 and forecasts for 2016 are from CLB 1601.

Data in Appendix J are used to evaluate Chinook Model and Agency Forecasts. The following terminology is used:

* Model Forecast. The Model forecast for a stock is from that year’s calibration (e.g., 2019 is from CLB1905). These data do not change from year-to-year and can be found in a given year’s model calibration out files. [source: stage 2 checkCLB.out file]
* Agency Forecast. The Agency forecast for a stock is what was provided to the CTC for use with that year’s Model calibration. These data do not change from year-to-year and can be found in a given year’s model calibration input file. [source: OCNyear.FCS files]
* Postseason Return. The postseason return is the most up to date estimate of either the terminal return or the escapement, depending on how the stock is reported in the FCS file. [source: checkCLB.out or FCS file]

In the Appendix J tables, the column labeled *Model Fcst/Agency Fcst* shows the ratio of the model prediction and the agency forecast as a percentage. The column labeled *Agency Fcst/Postseason* shows the ratio of the agency forecast and the actual return as a percentage. The column labeled *Model Fcst/Postseason* shows the ratio of the model prediction and the actual return as a percentage. A value of 100% would indicate that the predicted and actual values were the same.

With the transition to the new (Phase II) Chinook Model base period, the stock structure and number of stocks represented in the model have changed. The old model stock structure is represented in Appendix J1, which contains preseason forecasts used in model calibrations from 1999 – 2020, in addition to the actual postseason returns through 2019. The new model stock structure is represented in Appendix J2. As 2020 was the first year this model was employed, only 2020 forecasts are provided here.

Appendix J1. Forecasts and postseason returns for old model stocks, 1999-Present –Page 1 of 14.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| AKS1 | 1999 | 11,866 | NA | 12,219 | NA | NA | 97% |
| (Alaska SSE) | 2000 | 18,967 | NA | 16,164 | NA | NA | 117% |
|  | 2001 | 22,130 | NA | 21,590 | NA | NA | 103% |
|  | 2002 | 15,650 | NA | 18,679 | NA | NA | 84% |
|  | 2003 | 22,316 | NA | 14,576 | NA | NA | 153% |
|  | 2004 | 11,880 | NA | 17,107 | NA | NA | 69% |
|  | 2005 | 25,204 | NA | 15,235 | NA | NA | 165% |
|  | 2006 | 17,966 | NA | 20,730 | NA | NA | 87% |
|  | 2007 | 25,653 | NA | 15,012 | NA | NA | 171% |
|  | 2008 | 14,626 | NA | 13,780 | NA | NA | 106% |
|  | 2009 | 14,362 | NA | 10,463 | NA | NA | 137% |
|  | 2010 | 16,445 | NA | 15,674 | NA | NA | 105% |
|  | 2011 | 17,065 | NA | 11,808 | NA | NA | 145% |
|  | 2012 | 12,557 | NA | 6,731 | NA | NA | 187% |
|  | 2013 | 4,838 | NA | 8,175 | NA | NA | 59% |
|  | 2014 | 4,239 | NA | 10,587 | NA | NA | 40% |
|  | 2015 | 6,812 | NA | 9,961 | NA | NA | 68% |
|  | 2016 | 7,099 | NA | 5,997 | NA | NA | 118% |
|  | 2017 | 4,896 | NA | 4,600 | NA | NA | 106% |
|  | 2018 | 4,971 | NA | 8,875 | NA | NA | 56% |
|  | 2019 | 8,185 | NA | 8,567 | NA | NA | 96% |
|  | 2020 | 5,470 | NA | NA | NA | NA | NA |
|  | AVG |  |  |  | NA | NA | 108% |
| NTH2 | 1999 | 149,387 | NA | 154,294 | NA | NA | 97% |
| (North/ | 2000 | 159,818 | NA | 188,482 | NA | NA | 85% |
| Central BC) | 2001 | 189,088 | NA | 212,075 | NA | NA | 89% |
|  | 2002 | 228,073 | NA | 147,769 | NA | NA | 154% |
|  | 2003 | 154,103 | NA | 165,223 | NA | NA | 93% |
|  | 2004 | 171,070 | NA | 153,494 | NA | NA | 111% |
|  | 2005 | 154,552 | NA | 132,480 | NA | NA | 117% |
|  | 2006 | 132,710 | NA | 151,915 | NA | NA | 87% |
|  | 2007 | 156,017 | NA | 123,388 | NA | NA | 126% |
|  | 2008 | 131,262 | NA | 112,038 | NA | NA | 117% |
|  | 2009 | 119,761 | NA | 126,901 | NA | NA | 94% |
|  | 2010 | 136,998 | NA | 114,904 | NA | NA | 119% |
|  | 2011 | 119,323 | NA | 95,091 | NA | NA | 125% |
|  | 2012 | 98,010 | NA | 81,097 | NA | NA | 121% |
|  | 2013 | 86,819 | NA | 96,349 | NA | NA | 90% |
|  | 2014 | 94,878 | NA | 97,188 | NA | NA | 98% |
|  | 2015 | 95,587 | NA | 154,141 | NA | NA | 62% |
|  | 2016 | 146,607 | NA | 102,126 | NA | NA | 144% |
|  | 2017 | 108,254 | 104,935 | 55,918 | 103% | 188% | 194% |
|  | 2018 | 90,891 | 101,362 | 98,984 | 90% | 102% | 92% |
|  | 2019 | 86,376 | 84,033 | 90,440 | 103% | 93% | 96% |
|  | 2020 | 87,807 | 83,165 | NA | 106% | NA | NA |
|  | AVG |  |  |  | 100% | 128% | 110% |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| RBH+RBT2 | 1999 | 77,836 | 68,400 | 104,859 | 114% | 65% | 74% |
| (WCVI | 2000 | 21,040 | 15,040 | 38,484 | 140% | 39% | 55% |
| Hatchery + | 2001 | 33,702 | 30,633 | 88,285 | 110% | 35% | 38% |
| Natural) | 2002 | 128,068 | 109,882 | 166,001 | 117% | 66% | 77% |
|  | 2003 | 111,430 | 105,801 | 216,544 | 105% | 49% | 51% |
|  | 2004 | 166,548 | 144,180 | 264,754 | 116% | 54% | 63% |
|  | 2005 | 244,768 | 218,840 | 157,480 | 112% | 139% | 155% |
|  | 2006 | 152,483 | 138,878 | 197,651 | 110% | 70% | 77% |
|  | 2007 | 151,925 | 117,321 | 120,804 | 129% | 97% | 126% |
|  | 2008 | 67,347 | 60,255 | 98,453 | 112% | 61% | 68% |
|  | 2009 | 76,063 | 58,382 | 91,644 | 130% | 64% | 83% |
|  | 2010 | 75,748 | 61,586 | 94,673 | 123% | 65% | 80% |
|  | 2011 | 98,929 | 74,708 | 158,123 | 132% | 47% | 63% |
|  | 2012 | 70,838 | 54,765 | 80,896 | 129% | 68% | 88% |
|  | 2013 | 32,180 | NA4 | 175,440 | NA | NA | 18% |
|  | 2014 | 205,989 | 216,727 | 115,149 | 95% | 188% | 179% |
|  | 2015 | 91,710 | 105,003 | 189,058 | 87% | 56% | 49% |
|  | 2016 | 235,776 | 224,119 | 168,656 | 105% | 133% | 140% |
|  | 2017 | 172,885 | 163,568 | 177,199 | 106% | 92% | 98% |
|  | 2018 | 154,182 | 158,357 | 170,644 | 97% | 93% | 90% |
|  | 2019 | 208,973 | 195,095 | 188,731 | 107% | 103% | 111% |
|  | 2020 | 175,725 | 174,758 | NA | 101% | NA | NA |
|  | AVG |  |  |  | 113% | 79% | 85% |
| GSQ1 | 1999 | 16,450 | NA | 26,783 | NA | NA | 61% |
| (Upper Strait | 2000 | 19,452 | NA | 35,101 | NA | NA | 55% |
| of Georgia) | 2001 | 25,828 | NA | 42,436 | NA | NA | 61% |
|  | 2002 | 41,492 | NA | 41,022 | NA | NA | 101% |
|  | 2003 | 36,882 | NA | 40,500 | NA | NA | 91% |
|  | 2004 | 39,766 | NA | 31,803 | NA | NA | 125% |
|  | 2005 | 38,798 | NA | 28,490 | NA | NA | 136% |
|  | 2006 | 39,171 | NA | 50,989 | NA | NA | 77% |
|  | 2007 | 41,711 | NA | 24,877 | NA | NA | 168% |
|  | 2008 | 30,065 | NA | 19,392 | NA | NA | 155% |
|  | 2009 | 26,173 | NA | 31,323 | NA | NA | 84% |
|  | 2010 | 26,624 | NA | 22,480 | NA | NA | 118% |
|  | 2011 | 23,998 | NA | 18,751 | NA | NA | 128% |
|  | 2012 | 25,756 | NA | 42,830 | NA | NA | 60% |
|  | 2013 | 31,498 | NA | 40,341 | NA | NA | 78% |
|  | 2014 | 30,162 | NA | 41,418 | NA | NA | 73% |
|  | 2015 | 26,699 | NA | 37,253 | NA | NA | 72% |
|  | 2016 | 26,084 | NA | 38,648 | NA | NA | 67% |
|  | 2017 | 40,981 | 39,106 | 52,535 | 105% | 74% | 78% |
|  | 2018 | 50,676 | 49,654 | 33,608 | 102% | 148% | 151% |
|  | 2019 | 35,642 | 36,991 | 37,834 | 96% | 98% | 94% |
|  | 2020 | 37,758 | 37,859 | NA | 100% | NA | NA |
|  | AVG |  |  |  | 101% | 107% | 97% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| GSH2 | 1999 | 22,896 | NA | 23,015 | NA | NA | 99% |
| (Lower Strait | 2000 | 19,165 | NA | 21,322 | NA | NA | 90% |
| of Georgia | 2001 | 17,547 | NA | 29,633 | NA | NA | 59% |
| Hatchery) | 2002 | 25,051 | NA | 22,064 | NA | NA | 114% |
|  | 2003 | 21,222 | NA | 21,496 | NA | NA | 99% |
|  | 2004 | 16,573 | NA | 20,852 | NA | NA | 79% |
|  | 2005 | 21,046 | NA | 25,941 | NA | NA | 81% |
|  | 2006 | 18,169 | NA | 22,109 | NA | NA | 82% |
|  | 2007 | 24,378 | NA | 12,733 | NA | NA | 191% |
|  | 2008 | 11,765 | NA | 12,011 | NA | NA | 98% |
|  | 2009 | 17,551 | NA | 13,380 | NA | NA | 131% |
|  | 2010 | 7,999 | NA | 11,605 | NA | NA | 69% |
|  | 2011 | 14,671 | NA | 11,480 | NA | NA | 128% |
|  | 2012 | 10,104 | NA | 8,462 | NA | NA | 119% |
|  | 2013 | 5,568 | NA | 8,242 | NA | NA | 68% |
|  | 2014 | 6,116 | NA | 15,665 | NA | NA | 39% |
|  | 2015 | 18,566 | NA | 9,888 | NA | NA | 188% |
|  | 2016 | 5,475 | NA | 10,236 | NA | NA | 53% |
|  | 2017 | 10,414 | 11,820 | 14,524 | 88% | 81% | 72% |
|  | 2018 | 13,423 | 11,353 | 11,731 | 118% | 97% | 114% |
|  | 2019 | 8,708 | 10,207 | 15,398 | 85% | 66% | 57% |
|  | 2020 | 14,104 | 15,081 | NA | 94% | NA | NA |
|  | AVG |  |  |  | 96% | 81% | 97% |
| GST1 | 1999 | 14,236 | NA | 8,715 | NA | NA | 163% |
| (Lower Strait | 2000 | 11,094 | NA | 8,223 | NA | NA | 135% |
| of Georgia Natural) | 2001 | 7,955 | NA | 8,569 | NA | NA | 93% |
|  | 2002 | 8,833 | NA | 7,812 | NA | NA | 113% |
|  | 2003 | 8,088 | NA | 5,903 | NA | NA | 137% |
|  | 2004 | 5,157 | NA | 3,642 | NA | NA | 142% |
|  | 2005 | 4,459 | NA | 4,870 | NA | NA | 92% |
|  | 2006 | 4,070 | NA | 4,880 | NA | NA | 83% |
|  | 2007 | 7,782 | NA | 4,778 | NA | NA | 163% |
|  | 2008 | 6,823 | NA | 5,646 | NA | NA | 121% |
|  | 2009 | 5,701 | NA | 3,106 | NA | NA | 184% |
|  | 2010 | 2,972 | NA | 5,763 | NA | NA | 52% |
|  | 2011 | 10,778 | NA | 7,595 | NA | NA | 142% |
|  | 2012 | 11,433 | NA | 6,291 | NA | NA | 182% |
|  | 2013 | 8,267 | NA | 5,440 | NA | NA | 152% |
|  | 2014 | 11,910 | NA | 6,579 | NA | NA | 181% |
|  | 2015 | 13,177 | NA | 9,840 | NA | NA | 134% |
|  | 2016 | 7,469 | NA | 10,639 | NA | NA | 70% |
|  | 2017 | 11,163 | 10,639 | 14,270 | 105% | 75% | 78% |
|  | 2018 | 16,186 | 12,162 | 19,417 | 133% | 63% | 83% |
|  | 2019 | 25,521 | 22,630 | 21,433 | 113% | 106% | 119% |
|  | 2020 | 16,696 | 14,821 | NA | 113% | NA | NA |
|  | AVG |  |  |  | 116% | 81% | 125% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| FRE2 | 1999 | 162,865 | NA | 105,473 | NA | NA | 154% |
| (Fraser Early) | 2000 | 118,058 | NA | 116,233 | NA | NA | 102% |
|  | 2001 | 122,333 | NA | 154,175 | NA | NA | 79% |
|  | 2002 | 170,232 | NA | 189,335 | NA | NA | 90% |
|  | 2003 | 202,363 | NA | 191,700 | NA | NA | 106% |
|  | 2004 | 185,450 | NA | 147,813 | NA | NA | 125% |
|  | 2005 | 151,591 | NA | 135,177 | NA | NA | 112% |
|  | 2006 | 141,517 | NA | 203,460 | NA | NA | 70% |
|  | 2007 | 196,060 | NA | 110,555 | NA | NA | 177% |
|  | 2008 | 128,347 | NA | 149,048 | NA | NA | 86% |
|  | 2009 | 153,593 | NA | 136,201 | NA | NA | 113% |
|  | 2010 | 144,214 | NA | 203,948 | NA | NA | 71% |
|  | 2011 | 174,183 | NA | 161,748 | NA | NA | 108% |
|  | 2012 | 175,729 | NA | 77,285 | NA | NA | 227% |
|  | 2013 | 83,719 | NA | 165,166 | NA | NA | 51% |
|  | 2014 | 176,008 | NA | 159,656 | NA | NA | 110% |
|  | 2015 | 173,286 | NA | 236,551 | NA | NA | 73% |
|  | 2016 | 258,884 | NA | 126,975 | NA | NA | 204% |
|  | 2017 | 180,300 | 184,349 | 105,275 | 98% | 175% | 171% |
|  | 2018 | 147,972 | 156,877 | 84,373 | 94% | 186% | 175% |
|  | 2019 | 127,373 | 138,333 | 218,957 | 92% | 63% | 58% |
|  | 2020 | 194,044 | 179,120 | NA | 108% | NA | NA |
|  | AVG |  |  |  | 98% | 141% | 117% |
| FRL1 | 1999 | 84,686 | 82,650 | 188,873 | 102% | 44% | 45% |
| (Fraser Late) | 2000 | 187,970 | 220,400 | 133,998 | 85% | 164% | 140% |
|  | 2001 | 141,745 | 131,800 | 192,693 | 108% | 68% | 74% |
|  | 2002 | 132,946 | 160,100 | 172,451 | 83% | 93% | 77% |
|  | 2003 | 127,144 | 114,780 | 308,769 | 111% | 37% | 41% |
|  | 2004 | 104,597 | 97,227 | 206,892 | 108% | 47% | 51% |
|  | 2005 | 121,315 | 108,061 | 130,229 | 112% | 83% | 93% |
|  | 2006 | 115,489 | 116,682 | 116,985 | 99% | 100% | 99% |
|  | 2007 | 122,402 | 107,311 | 110,736 | 114% | 97% | 111% |
|  | 2008 | 125,100 | 116,038 | 88,667 | 108% | 131% | 141% |
|  | 2009 | 119,892 | 91,391 | 97,541 | 131% | 94% | 123% |
|  | 2010 | 119,953 | 118,891 | 196,175 | 101% | 61% | 61% |
|  | 2011 | 353,646 | 284,604 | 182,269 | 124% | 156% | 194% |
|  | 2012 | 107,738 | 93,652 | 70,029 | 115% | 134% | 154% |
|  | 2013 | 70,178 | 73,584 | 104,476 | 95% | 70% | 67% |
|  | 2014 | 131,118 | 118,361 | 113,568 | 111% | 104% | 115% |
|  | 2015 | 88,165 | 72,037 | 141,296 | 122% | 51% | 62% |
|  | 2016 | 57,236 | 51,903 | 95,170 | 110% | 55% | 60% |
|  | 2017 | 112,272 | 107,065 | 61,074 | 105% | 175% | 184% |
|  | 2018 | 93,126 | 96,147 | 81,399 | 97% | 118% | 114% |
|  | 2019 | 114,809 | 126,343 | 129,346 | 91% | 98% | 89% |
|  | 2020 | 96,806 | 90,822 | NA | 107% | NA | NA |
|  | AVG |  |  |  | 106% | 94% | 100% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| NKS1 | 1999 | 1,048 | NA | 1,111 | NA | NA | 94% |
| (Nooksack | 2000 | 834 | NA | 1,615 | NA | NA | 52% |
| Spring) | 2001 | 982 | NA | 2,629 | NA | NA | 37% |
|  | 2002 | 1,216 | NA | 4,366 | NA | NA | 28% |
|  | 2003 | 1,301 | NA | 3,448 | NA | NA | 38% |
|  | 2004 | 1,708 | NA | 1,891 | NA | NA | 90% |
|  | 2005 | 1,549 | NA | 2,279 | NA | NA | 68% |
|  | 2006 | 583 | 677 | 1,716 | 86% | 39% | 34% |
|  | 2007 | 582 | 575 | 1,786 | 101% | 32% | 33% |
|  | 2008 | 371 | 378 | 1,714 | 98% | 22% | 22% |
|  | 2009 | 336 | 315 | 2,360 | 107% | 13% | 14% |
|  | 2010 | 374 | 390 | 2,596 | 96% | 15% | 14% |
|  | 2011 | 340 | 309 | 1,101 | 110% | 28% | 31% |
|  | 2012 | 271 | 243 | 1,027 | 112% | 24% | 26% |
|  | 2013 | 1,331 | NA | 1,565 | NA | NA | 85% |
|  | 2014 | 1,361 | 1,273 | 1,308 | 107% | 97% | 104% |
|  | 2015 | 1,192 | 1,119 | 1,761 | 107% | 64% | 68% |
|  | 2016 | 1,308 | 1,324 | 1,141 | 99% | 116% | 115% |
|  | 2017 | 1,297 | 1,291 | 2,016 | 100% | 64% | 64% |
|  | 2018 | 1,342 | 1,389 | 1,389 | 97% | 100% | 97% |
|  | 2019 | 1,419 | 1,508 | 1,508 | 94% | 100% | 94% |
|  | 2020 | 1,409 | 1,479 | NA | 95% | NA | NA |
|  | AVG |  |  |  | 101% | 55% | 58% |
| NKF2 | 1999 | 27,206 | 27,000 | 43,709 | 101% | 62% | 62% |
| (Nooksack/ | 2000 | 21,277 | 19,000 | 35,630 | 112% | 53% | 60% |
| Samish Fall | 2001 | 33,974 | 36,450 | 71,437 | 93% | 51% | 48% |
| Fingerling) | 2002 | 50,361 | 54,420 | 62,519 | 93% | 87% | 81% |
|  | 2003 | 48,259 | 45,750 | 33,339 | 105% | 137% | 145% |
|  | 2004 | 37,980 | 34,200 | 18,118 | 111% | 189% | 210% |
|  | 2005 | 19,808 | 19,523 | 20,703 | 101% | 94% | 96% |
|  | 2006 | 16,795 | 16,899 | 38,455 | 99% | 44% | 44% |
|  | 2007 | 22,086 | 18,834 | 39,390 | 117% | 48% | 56% |
|  | 2008 | 34,392 | 35,271 | 33,750 | 98% | 105% | 102% |
|  | 2009 | 26,072 | 23,014 | 25,884 | 113% | 89% | 101% |
|  | 2010 | 32,061 | 32,627 | 41,239 | 98% | 79% | 78% |
|  | 2011 | 39,144 | 37,902 | 40,678 | 103% | 93% | 96% |
|  | 2012 | 45,719 | 43,973 | 41,557 | 104% | 106% | 110% |
|  | 2013 | 50,065 | 48,257 | 37,525 | 104% | 129% | 133% |
|  | 2014 | 46,771 | 44,046 | 32,053 | 106% | 137% | 146% |
|  | 2015 | 40,315 | 39,739 | 23,696 | 101% | 168% | 170% |
|  | 2016 | 29,171 | 28,611 | 21,226 | 102% | 135% | 137% |
|  | 2017 | 21,922 | 21,997 | 24,590 | 100% | 89% | 89% |
|  | 2018 | 26,637 | 25,231 | 23,402 | 106% | 108% | 114% |
|  | 2019 | 23,105 | 21,339 | 9,143 | 108% | 233% | 253% |
|  | 2020 | 15,680 | 16,858 | NA | 93% | NA | NA |
|  | AVG |  |  |  | 103% | 106% | 111% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| SKG2 | 1999 | 8,967 | 7,600 | 5,139 | 118% | 148% | 174% |
| (Skagit | 2000 | 6,988 | 7,300 | 16,266 | 96% | 45% | 43% |
| Summer/ | 2001 | 9,064 | 9,183 | 14,193 | 99% | 65% | 64% |
| Fall Wild) | 2002 | 12,635 | 13,455 | 18,114 | 94% | 74% | 70% |
|  | 2003 | 11,906 | 11,348 | 10,583 | 105% | 107% | 113% |
|  | 2004 | 18,761 | 20,359 | 22,144 | 92% | 92% | 85% |
|  | 2005 | 16,220 | 19,493 | 22,784 | 83% | 86% | 71% |
|  | 2006 | 22,402 | 21,811 | 21,246 | 103% | 103% | 105% |
|  | 2007 | 12,324 | 14,252 | 12,646 | 86% | 113% | 97% |
|  | 2008 | 18,598 | 18,302 | 14,254 | 102% | 128% | 130% |
|  | 2009 | 22,193 | 20,400 | 10,977 | 109% | 186% | 202% |
|  | 2010 | 9,894 | 11,853 | 7,926 | 83% | 150% | 125% |
|  | 2011 | 12,556 | 13,044 | 8,382 | 96% | 156% | 150% |
|  | 2012 | 10,020 | 8,337 | 15,422 | 120% | 54% | 65% |
|  | 2013 | 7,287 | 13,018 | 13,312 | 56% | 98% | 55% |
|  | 2014 | 15,221 | 17,874 | 12,777 | 85% | 140% | 119% |
|  | 2015 | 9,820 | 11,387 | 13,315 | 86% | 86% | 74% |
|  | 2016 | 14,336 | 14,361 | 17,426 | 100% | 82% | 82% |
|  | 2017 | 15,947 | 14,429 | 14,800 | 111% | 97% | 108% |
|  | 2018 | 11,765 | 12,565 | 12,178 | 94% | 103% | 97% |
|  | 2019 | 13,639 | 13,630 | 12,208 | 100% | 112% | 112% |
|  | 2020 | 12,329 | 12,877 | NA | 96% | NA | NA |
|  | AVG |  |  |  | 96% | 106% | 102% |
| STL1 | 1999 | 1,303 | NA | 1,436 | NA | NA | 91% |
| (Stillaguamish | 2000 | 1,370 | 1,500 | 2,074 | 91% | 72% | 66% |
| Summer/Fall | 2001 | 1,328 | 1,360 | 1,729 | 98% | 79% | 77% |
| Wild) | 2002 | 1,372 | 1,449 | 2,007 | 95% | 72% | 68% |
|  | 2003 | 1,860 | 2,050 | 1,307 | 91% | 157% | 142% |
|  | 2004 | 1,795 | NA | 1,912 | NA | NA | 94% |
|  | 2005 | 1,377 | NA | 1,363 | NA | NA | 101% |
|  | 2006 | 1,113 | 1,169 | 1,612 | 95% | 73% | 69% |
|  | 2007 | 1,424 | 1,510 | 870 | 94% | 174% | 164% |
|  | 2008 | 689 | 637 | 1,914 | 108% | 33% | 36% |
|  | 2009 | 1,268 | 1,086 | 1,061 | 117% | 102% | 120% |
|  | 2010 | 898 | 817 | 1,358 | 110% | 60% | 66% |
|  | 2011 | 812 | 783 | 1,345 | 104% | 58% | 60% |
|  | 2012 | 569 | 395 | 1,750 | 144% | 23% | 33% |
|  | 2013 | 1,393 | 1,328 | 1,469 | 105% | 90% | 95% |
|  | 2014 | 1,000 | 850 | 721 | 118% | 118% | 139% |
|  | 2015 | 514 | 525 | 709 | 98% | 74% | 72% |
|  | 2016 | 346 | 299 | 1,053 | 116% | 28% | 33% |
|  | 2017 | 360 | 266 | 1,070 | 135% | 25% | 34% |
|  | 2018 | 1,421 | 1,474 | 966 | 96% | 153% | 147% |
|  | 2019 | 460 | 376 | 503 | 122% | 75% | 91% |
|  | 2020 | 692 | 762 | NA | 91% | NA | NA |
|  | AVG |  |  |  | 107% | 81% | 86% |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| SNO2 | 1999 | 5,804 | 5,600 | 2,524 | 104% | 222% | 230% |
| (Snohomish | 2000 | 5,997 | 6,000 | 3,269 | 100% | 184% | 183% |
| Wild) | 2001 | 5,876 | 5,760 | 6,742 | 102% | 85% | 87% |
|  | 2002 | 6,524 | 6,700 | 7,422 | 97% | 90% | 88% |
|  | 2003 | 6,033 | 5,450 | 5,786 | 111% | 94% | 104% |
|  | 2004 | 12,845 | 15,700 | 10,994 | 82% | 143% | 117% |
|  | 2005 | 10,161 | NA | 4,963 | NA | NA | 205% |
|  | 2006 | 7,824 | 8,729 | 7,180 | 90% | 122% | 109% |
|  | 2007 | 11,153 | 12,289 | 2,832 | 91% | 434% | 394% |
|  | 2008 | 6,103 | 6,541 | 6,986 | 93% | 94% | 87% |
|  | 2009 | 8,503 | 8,410 | 1,830 | 101% | 460% | 465% |
|  | 2010 | 8,050 | 9,858 | 3,488 | 82% | 283% | 231% |
|  | 2011 | 8,281 | 7,600 | 1,414 | 109% | 537% | 586% |
|  | 2012 | 2,506 | 2,775 | 3,361 | 90% | 83% | 75% |
|  | 2013 | 3,835 | 3,161 | 2,684 | 121% | 118% | 143% |
|  | 2014 | 3,416 | 3,327 | 2,375 | 103% | 140% | 144% |
|  | 2015 | 3,809 | 4,159 | 2,329 | 92% | 179% | 164% |
|  | 2016 | 3,586 | 3,339 | 3,455 | 107% | 97% | 104% |
|  | 2017 | 3,775 | 3,412 | 4,369 | 111% | 78% | 86% |
|  | 2018 | 3,825 | 3,460 | 3,275 | 111% | 106% | 117% |
|  | 2019 | 3,013 | 2,780 | 1,024 | 108% | 271% | 294% |
|  | 2020 | 2,539 | 2,978 | NA | 85% | NA | NA |
|  | AVG |  |  |  | 99% | 191% | 191% |
| PSF+PSY2,3 | 1999 | 66,260 | 69,285 | 146,471 | 96% | 47% | 45% |
| (Puget Sound | 2000 | 67,306 | 69,800 | 100,425 | 96% | 70% | 67% |
| Fingerling + | 2001 | 102,899 | 105,955 | 145,822 | 97% | 73% | 71% |
| Yearling) | 2002 | 114,889 | 124,608 | 147,447 | 92% | 85% | 78% |
|  | 2003 | 114,275 | 133,850 | 144,177 | 85% | 93% | 79% |
|  | 2004 | 127,902 | 132,300 | 143,731 | 97% | 92% | 89% |
|  | 2005 | 104,084 | 110,542 | 155,325 | 94% | 71% | 67% |
|  | 2006 | 107,292 | 113,486 | 191,623 | 95% | 59% | 56% |
|  | 2007 | 127,115 | 135,714 | 221,341 | 94% | 61% | 57% |
|  | 2008 | 166,071 | 159,200 | 160,626 | 104% | 99% | 103% |
|  | 2009 | 138,299 | 133,187 | 136,695 | 104% | 97% | 101% |
|  | 2010 | 138,238 | 140,074 | 144,296 | 99% | 97% | 96% |
|  | 2011 | 172,415 | 168,642 | 155,941 | 102% | 108% | 111% |
|  | 2012 | 153,462 | 153,989 | 192,714 | 100% | 80% | 80% |
|  | 2013 | 189,645 | 184,783 | 182,276 | 103% | 101% | 104% |
|  | 2014 | 191,307 | 188,039 | 80,047 | 102% | 235% | 239% |
|  | 2015 | 128,255 | 131,300 | 96,003 | 98% | 137% | 134% |
|  | 2016 | 109,207 | 96,430 | 166,953 | 113% | 58% | 65% |
|  | 2017 | 142,320 | 144,238 | 286,815 | 99% | 50% | 50% |
|  | 2018 | 214,806 | 202,186 | 212,245 | 106% | 95% | 101% |
|  | 2019 | 208,195 | 187,516 | 206,068 | 111% | 91% | 101% |
|  | 2020 | 200,537 | 190,176 | NA | 105% | NA | NA |
|  | AVG |  |  |  | 100% | 90% | 90% |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| PSN2,3 | 1999 | 28,536 | 28,400 | 23,215 | 100% | 122% | 123% |
| (Puget Sound | 2000 | 15,364 | 10,000 | 17,882 | 154% | 56% | 86% |
| Natural) | 2001 | 19,938 | 18,900 | 26,107 | 105% | 72% | 76% |
|  | 2002 | 20,008 | 19,801 | 25,009 | 101% | 79% | 80% |
|  | 2003 | 25,743 | 26,600 | 9,233 | 97% | 288% | 279% |
|  | 2004 | 24,616 | 23,200 | 16,023 | 106% | 145% | 154% |
|  | 2005 | 22,208 | 17,715 | 10,903 | 125% | 162% | 204% |
|  | 2006 | 20,182 | 21,301 | 13,095 | 95% | 163% | 154% |
|  | 2007 | 18,964 | 17,014 | 12,094 | 111% | 141% | 157% |
|  | 2008 | 23,118 | 21,100 | 18,637 | 110% | 113% | 124% |
|  | 2009 | 24,698 | 23,073 | 10,066 | 107% | 229% | 245% |
|  | 2010 | 14,734 | 15,128 | 8,139 | 97% | 186% | 181% |
|  | 2011 | 18,115 | 15,997 | 8,033 | 113% | 199% | 226% |
|  | 2012 | 14,396 | 13,860 | 10,578 | 104% | 131% | 136% |
|  | 2013 | 12,079 | 8,767 | 8,407 | 138% | 104% | 144% |
|  | 2014 | 9,253 | 8,125 | 8,201 | 114% | 99% | 113% |
|  | 2015 | 7,797 | 7,478 | 10,439 | 104% | 72% | 75% |
|  | 2016 | 7,801 | 7,066 | 9,590 | 110% | 74% | 81% |
|  | 2017 | 8,901 | 8,040 | 13,470 | 111% | 60% | 66% |
|  | 2018 | 10,149 | 9,045 | 14,471 | 112% | 63% | 70% |
|  | 2019 | 10,479 | 10,163 | 3,688 | 103% | 276% | 284% |
|  | 2020 | 6,992 | 7,132 | NA | 98% | NA | NA |
|  | AVG |  |  |  | 110% | 135% | 146% |
| WCH2 | 1999 | 35,221 | 42,752 | 13,535 | 82% | 316% | 260% |
| (Washington | 2000 | 16,244 | NA | 22,571 | NA | NA | 72% |
| Coastal | 2001 | 15,792 | NA | 23,166 | NA | NA | 68% |
| Hatchery) | 2002 | 23,678 | NA | 34,243 | NA | NA | 69% |
|  | 2003 | 20,755 | 18,222 | 41,766 | 114% | 44% | 50% |
|  | 2004 | 28,900 | NA | 39,651 | NA | NA | 73% |
|  | 2005 | 28,626 | NA | 40,458 | NA | NA | 71% |
|  | 2006 | 36,950 | NA | 51,155 | NA | NA | 72% |
|  | 2007 | 41,801 | 40,497 | 22,669 | 103% | 179% | 184% |
|  | 2008 | 34,841 | 31,251 | 26,397 | 111% | 118% | 132% |
|  | 2009 | 41,756 | 42,595 | 38,162 | 98% | 112% | 109% |
|  | 2010 | 38,347 | NA | 41,498 | NA | NA | 92% |
|  | 2011 | 38,208 | NA | 63,942 | NA | NA | 60% |
|  | 2012 | 45,128 | 44,300 | 40,311 | 102% | 110% | 112% |
|  | 2013 | 33,629 | 25,304 | 44,091 | 133% | 57% | 76% |
|  | 2014 | 40,866 | 42,907 | 51,226 | 95% | 84% | 80% |
|  | 2015 | 42,604 | 38,120 | 54,902 | 112% | 69% | 78% |
|  | 2016 | 57,443 | 52,174 | 31,983 | 110% | 163% | 180% |
|  | 2017 | 47,587 | 47,079 | 43,191 | 101% | 109% | 110% |
|  | 2018 | 49,042 | 47,194 | 43,359 | 104% | 109% | 113% |
|  | 2019 | 35,258 | 25,521 | 25,521 | 138% | 100% | 138% |
|  | 2020 | 34,402 | 32,802 | NA | 105% | NA | NA |
|  | AVG |  |  |  | 108% | 121% | 105% |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| WCN2 | 1999 | 42,107 | 43,780 | 25,065 | 96% | 175% | 168% |
| (Washington | 2000 | 34,741 | NA | 26,507 | NA | NA | 131% |
| Coastal | 2001 | 34,563 | 35,306 | 34,747 | 98% | 102% | 99% |
| Natural) | 2002 | 33,902 | 33,489 | 36,183 | 101% | 93% | 94% |
|  | 2003 | 32,785 | NA | 39,947 | NA | NA | 82% |
|  | 2004 | 28,185 | NA | 57,917 | NA | NA | 49% |
|  | 2005 | 34,857 | NA | 41,461 | NA | NA | 84% |
|  | 2006 | 43,866 | NA | 38,246 | NA | NA | 115% |
|  | 2007 | 35,695 | 32,362 | 26,270 | 110% | 123% | 136% |
|  | 2008 | 32,187 | 26,923 | 31,219 | 120% | 86% | 103% |
|  | 2009 | 35,485 | 31,318 | 27,215 | 113% | 115% | 130% |
|  | 2010 | 39,215 | NA | 40,293 | NA | NA | 97% |
|  | 2011 | 32,205 | NA | 49,824 | NA | NA | 65% |
|  | 2012 | 45,153 | 41,500 | 40,637 | 109% | 102% | 111% |
|  | 2013 | 35,464 | 34,023 | 34,086 | 104% | 100% | 104% |
|  | 2014 | 44,952 | 46,275 | 32,459 | 97% | 143% | 138% |
|  | 2015 | 48,297 | 50,360 | 52,225 | 96% | 96% | 92% |
|  | 2016 | 48,034 | 41,095 | 27,085 | 117% | 152% | 177% |
|  | 2017 | 39,456 | 36,705 | 36,854 | 107% | 100% | 107% |
|  | 2018 | 37,884 | 33,973 | 38,721 | 112% | 88% | 98% |
|  | 2019 | 37,364 | 30,768 | 30,768 | 121% | 100% | 121% |
|  | 2020 | 34,552 | 30,130 | NA | 115% | NA | NA |
|  | AVG |  |  |  | 108% | 112% | 110% |
| CWS2 | 1999 | 3,363 | 3,950 | 4,799 | 85% | 82% | 70% |
| (Cowlitz | 2000 | 4,922 | 6,050 | 6,132 | 81% | 99% | 80% |
| Spring) | 2001 | 3,684 | 4,849 | 7,182 | 76% | 68% | 51% |
|  | 2002 | 5,534 | 6,800 | 11,644 | 81% | 58% | 48% |
|  | 2003 | 9,550 | 11,700 | 25,584 | 82% | 46% | 37% |
|  | 2004 | 20,802 | 27,350 | 28,696 | 76% | 95% | 72% |
|  | 2005 | 18,349 | 24,850 | 16,227 | 74% | 153% | 113% |
|  | 2006 | 12,838 | 15,250 | 19,685 | 84% | 77% | 65% |
|  | 2007 | 9,945 | 10,600 | 19,519 | 94% | 54% | 51% |
|  | 2008 | 9,544 | 12,400 | 6,838 | 77% | 181% | 140% |
|  | 2009 | 6,413 | 14,400 | 7,867 | 45% | 183% | 82% |
|  | 2010 | 18,927 | 19,409 | 12,211 | 98% | 159% | 155% |
|  | 2011 | 9,654 | 10,602 | 7,946 | 91% | 133% | 121% |
|  | 2012 | 9,287 | 8,724 | 15,429 | 106% | 57% | 60% |
|  | 2013 | 9,348 | 7,727 | 11,244 | 121% | 69% | 83% |
|  | 2014 | 9,569 | 9,400 | 11,452 | 102% | 82% | 84% |
|  | 2015 | 15,530 | 14,100 | 27,941 | 110% | 50% | 56% |
|  | 2016 | 35,176 | 30,977 | 26,786 | 114% | 116% | 131% |
|  | 2017 | 24,763 | 21,300 | 18,917 | 116% | 113% | 131% |
|  | 2018 | 11,384 | 10,400 | 9,419 | 109% | 110% | 121% |
|  | 2019 | 4,605 | 4,152 | 3,607 | 111% | 115% | 128% |
|  | 2020 | 3,744 | 3,843 | NA | 97% | NA | NA |
|  | AVG |  |  |  | 92% | 100% | 89% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| WSH2 | 1999 | 46,181 | 49,875 | 54,202 | 93% | 92% | 85% |
| (Willamette | 2000 | 57,202 | 61,211 | 57,455 | 93% | 107% | 100% |
| Spring) | 2001 | 59,207 | 59,600 | 80,366 | 99% | 74% | 74% |
|  | 2002 | 73,151 | 77,434 | 121,708 | 94% | 64% | 60% |
|  | 2003 | 108,530 | 112,521 | 126,583 | 96% | 89% | 86% |
|  | 2004 | 113,708 | 112,701 | 144,446 | 101% | 78% | 79% |
|  | 2005 | 105,111 | 122,280 | 60,976 | 86% | 201% | 172% |
|  | 2006 | 48,880 | 52,388 | 59,662 | 93% | 88% | 82% |
|  | 2007 | 44,542 | 61,071 | 40,468 | 73% | 151% | 110% |
|  | 2008 | 20,185 | 40,851 | 27,357 | 49% | 149% | 74% |
|  | 2009 | 44,161 | 41,205 | 39,410 | 107% | 105% | 112% |
|  | 2010 | 70,960 | 66,360 | 110,536 | 107% | 60% | 64% |
|  | 2011 | 117,375 | 109,600 | 80,254 | 107% | 137% | 146% |
|  | 2012 | 105,098 | 88,202 | 65,115 | 119% | 135% | 161% |
|  | 2013 | 58,436 | 65,982 | 47,311 | 89% | 139% | 124% |
|  | 2014 | 58,496 | 64,189 | 51,794 | 91% | 124% | 113% |
|  | 2015 | 54,162 | 55,440 | 87,071 | 98% | 64% | 62% |
|  | 2016 | 73,333 | 70,100 | 49,768 | 105% | 141% | 147% |
|  | 2017 | 38,756 | 40,190 | 53,653 | 96% | 75% | 72% |
|  | 2018 | 48,533 | 56,000 | 39,660 | 87% | 141% | 122% |
|  | 2019 | 43,866 | 42,490 | 29,314 | 103% | 145% | 150% |
|  | 2020 | 41,287 | 43,430 | NA | 95% | NA | NA |
|  | AVG |  |  |  | 95% | 112% | 105% |
| SUM2 | 1999 | 21,653 | 20,900 | 21,867 | 104% | 96% | 99% |
| (Columbia | 2000 | 27,214 | 28,038 | 22,595 | 97% | 124% | 120% |
| River Summer) | 2001 | 27,029 | 24,500 | 52,960 | 110% | 46% | 51% |
|  | 2002 | 70,290 | 77,700 | 89,524 | 90% | 87% | 79% |
|  | 2003 | 97,280 | 87,600 | 83,058 | 111% | 105% | 117% |
|  | 2004 | 83,246 | 78,569 | 65,623 | 106% | 120% | 127% |
|  | 2005 | 66,190 | 62,400 | 60,272 | 106% | 104% | 110% |
|  | 2006 | 75,848 | 78,512 | 77,573 | 97% | 101% | 98% |
|  | 2007 | 56,948 | 45,555 | 37,035 | 125% | 123% | 154% |
|  | 2008 | 50,171 | 52,000 | 55,532 | 96% | 94% | 90% |
|  | 2009 | 68,114 | 70,700 | 53,881 | 96% | 131% | 126% |
|  | 2010 | 81,403 | 88,800 | 72,364 | 92% | 123% | 112% |
|  | 2011 | 89,000 | 91,900 | 80,574 | 97% | 114% | 110% |
|  | 2012 | 91,202 | 91,200 | 58,300 | 100% | 156% | 156% |
|  | 2013 | 72,042 | 73,500 | 67,603 | 98% | 109% | 107% |
|  | 2014 | 69,644 | 67,500 | 78,304 | 103% | 86% | 89% |
|  | 2015 | 76,664 | 73,000 | 126,882 | 105% | 58% | 60% |
|  | 2016 | 105,748 | 93,300 | 91,048 | 113% | 102% | 116% |
|  | 2017 | 75,738 | 63,100 | 68,200 | 120% | 93% | 111% |
|  | 2018 | 70,635 | 67,300 | 42,120 | 105% | 160% | 168% |
|  | 2019 | 39,774 | 35,900 | 34,619 | 111% | 104% | 115% |
|  | 2020 | 38,584 | 38,300 | NA | 101% | NA | NA |
|  | AVG |  |  |  | 104% | 106% | 110% |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| BON+CWF2 | 1999 | 26,112 | 34,800 | 39,829 | 75% | 87% | 66% |
| (Bonneville + | 2000 | 17,095 | 23,700 | 26,945 | 72% | 88% | 63% |
| Cowlitz | 2001 | 28,732 | 32,200 | 94,149 | 89% | 34% | 31% |
| Hatcheries) | 2002 | 100,401 | 137,600 | 156,378 | 73% | 88% | 64% |
|  | 2003 | 100,196 | 115,900 | 155,413 | 86% | 75% | 64% |
|  | 2004 | 64,696 | 77,100 | 107,614 | 84% | 72% | 60% |
|  | 2005 | 65,971 | 74,100 | 68,288 | 89% | 109% | 97% |
|  | 2006 | 49,173 | 55,800 | 59,361 | 88% | 94% | 83% |
|  | 2007 | 49,219 | 54,900 | 32,789 | 90% | 167% | 150% |
|  | 2008 | 58,557 | 59,000 | 58,970 | 99% | 100% | 99% |
|  | 2009 | 91,519 | 88,800 | 76,839 | 103% | 116% | 119% |
|  | 2010 | 95,581 | 90,600 | 102,774 | 105% | 88% | 93% |
|  | 2011 | 139,873 | 133,430 | 108,793 | 105% | 123% | 129% |
|  | 2012 | 132,629 | 126,999 | 84,618 | 104% | 150% | 157% |
|  | 2013 | 86,456 | 94,600 | 101,649 | 91% | 93% | 85% |
|  | 2014 | 98,459 | 110,000 | 101,748 | 90% | 108% | 97% |
|  | 2015 | 84,204 | 94,900 | 128,534 | 89% | 74% | 66% |
|  | 2016 | 131,890 | 133,700 | 82,228 | 99% | 163% | 160% |
|  | 2017 | 85,726 | 92,400 | 64,629 | 93% | 143% | 133% |
|  | 2018 | 58,162 | 62,450 | 52,961 | 93% | 118% | 110% |
|  | 2019 | 53,077 | 54,460 | 48,914 | 97% | 111% | 109% |
|  | 2020 | 48,879 | 51,000 | NA | 96% | NA | NA |
|  | AVG |  |  |  | 91% | 105% | 97% |
| SPR2 | 1999 | 63,203 | 65,800 | 50,189 | 96% | 131% | 126% |
| (Spring Creek | 2000 | 17,335 | 21,900 | 20,528 | 79% | 107% | 84% |
| Hatchery) | 2001 | 56,089 | 56,600 | 124,951 | 99% | 45% | 45% |
|  | 2002 | 153,070 | 144,400 | 158,300 | 106% | 91% | 97% |
|  | 2003 | 89,116 | 96,900 | 180,592 | 92% | 54% | 49% |
|  | 2004 | 124,820 | 138,000 | 175,245 | 90% | 79% | 71% |
|  | 2005 | 92,021 | 114,100 | 103,467 | 81% | 110% | 89% |
|  | 2006 | 43,421 | 50,000 | 27,918 | 87% | 179% | 156% |
|  | 2007 | 19,421 | 21,800 | 14,549 | 89% | 150% | 133% |
|  | 2008 | 87,109 | 87,200 | 93,848 | 100% | 93% | 93% |
|  | 2009 | 46,652 | 59,300 | 48,966 | 79% | 121% | 95% |
|  | 2010 | 167,251 | 169,000 | 128,554 | 99% | 131% | 130% |
|  | 2011 | 105,900 | 116,400 | 70,531 | 91% | 165% | 150% |
|  | 2012 | 72,135 | 63,800 | 56,947 | 113% | 112% | 127% |
|  | 2013 | 36,276 | 38,000 | 86,703 | 95% | 44% | 42% |
|  | 2014 | 108,724 | 115,100 | 126,991 | 94% | 91% | 86% |
|  | 2015 | 145,389 | 160,500 | 166,450 | 91% | 96% | 87% |
|  | 2016 | 84,230 | 89,600 | 41,423 | 94% | 216% | 203% |
|  | 2017 | 158,396 | 158,400 | 48,125 | 100% | 329% | 329% |
|  | 2018 | 49,921 | 50,100 | 28,862 | 100% | 174% | 173% |
|  | 2019 | 46,728 | 46,000 | 28,953 | 102% | 159% | 161% |
|  | 2020 | 47,965 | 47,500 | NA | 101% | NA | NA |
|  | AVG |  |  |  | 94% | 127% | 120% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| URB2 | 1999 | 173,712 | 147,500 | 165,889 | 118% | 89% | 105% |
| (Columbia | 2000 | 212,317 | 171,100 | 156,595 | 124% | 109% | 136% |
| Upriver | 2001 | 150,973 | 127,200 | 232,367 | 119% | 55% | 65% |
| Bright) | 2002 | 249,721 | 281,000 | 279,547 | 89% | 101% | 89% |
|  | 2003 | 246,890 | 280,400 | 374,153 | 88% | 75% | 66% |
|  | 2004 | 246,943 | 292,200 | 362,804 | 85% | 81% | 68% |
|  | 2005 | 318,535 | 352,200 | 277,240 | 90% | 127% | 115% |
|  | 2006 | 231,319 | 253,900 | 230,390 | 91% | 110% | 100% |
|  | 2007 | 168,594 | 182,400 | 114,001 | 92% | 160% | 148% |
|  | 2008 | 151,839 | 162,500 | 197,296 | 93% | 82% | 77% |
|  | 2009 | 259,415 | 259,900 | 212,103 | 100% | 123% | 122% |
|  | 2010 | 296,816 | 310,800 | 324,908 | 96% | 96% | 91% |
|  | 2011 | 388,138 | 398,200 | 322,053 | 97% | 124% | 121% |
|  | 2012 | 365,693 | 353,500 | 297,827 | 103% | 119% | 123% |
|  | 2013 | 437,422 | 432,500 | 778,254 | 101% | 56% | 56% |
|  | 2014 | 874,989 | 973,300 | 684,239 | 90% | 142% | 128% |
|  | 2015 | 489,123 | 500,300 | 795,700 | 98% | 63% | 61% |
|  | 2016 | 568,210 | 589,000 | 412,852 | 96% | 143% | 138% |
|  | 2017 | 253,016 | 260,000 | 297,423 | 97% | 87% | 85% |
|  | 2018 | 156,926 | 200,100 | 149,044 | 78% | 134% | 105% |
|  | 2019 | 140,870 | 158,400 | 212,238 | 89% | 75% | 66% |
|  | 2020 | 203,602 | 220,600 | NA | 92% | NA | NA |
|  | AVG |  |  |  | 97% | 102% | 98% |
| LYF1, 5 | 1999 | 523 | NA | 2,419 | NA | NA | 22% |
| (Snake River | 2000 | 1,243 | NA | 2,612 | NA | NA | 48% |
| Wild) | 2001 | 733 | 734 | 14,133 | 100% | 5% | 5% |
|  | 2002 | 2,066 | NA | 3,659 | NA | NA | 56% |
| Time series reworked per TAC guidance November 2016 | 2003 | 2,493 | 2,185 | 8,085 | 114% | 27% | 31% |
| 2004 | 4,323 | 3,725 | 8,157 | 116% | 46% | 53% |
| 2005 | 4,453 | 4,000 | 9,394 | 111% | 43% | 47% |
| 2006 | 8,285 | 3,500 | 13,097 | 237% | 27% | 63% |
| 2007 | 3,128 | 2,700 | 9,965 | 116% | 27% | 31% |
|  | 2008 | 2,718 | 2,534 | 8,929 | 107% | 28% | 30% |
|  | 2009 | 5,743 | 6,952 | 15,641 | 83% | 44% | 37% |
|  | 2010 | 2,609 | 2,610 | 12,901 | 100% | 20% | 20% |
|  | 2011 | 9,199 | 8,006 | 17,226 | 115% | 46% | 53% |
|  | 2012 | 10,401 | 8,683 | 19,277 | 120% | 45% | 54% |
|  | 2013 | 15,154 | 14,900 | 34,672 | 102% | 43% | 44% |
|  | 2014 | 31,106 | 31,642 | 20,754 | 98% | 152% | 150% |
|  | 2015 | 18,072 | NA | 24,849 | NA | NA | 73% |
|  | 2016 | 15,912 | 12,800 | 15,147 | 124% | 85% | 105% |
|  | 2017 | 11,091 | 8,100 | 11,750 | 137% | 69% | 94% |
|  | 2018 | 7,603 | 6,113 | 10,642 | 124% | 57% | 71% |
|  | 2019 | 6,814 | 5,435 | 15,231 | 125% | 36% | 45% |
|  | 2020 | 13,856 | 10,902 | NA | 127% | NA | NA |
|  | AVG |  |  |  | 120% | 47% | 54% |

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| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| MCB2 | 1999 | 37,951 | 38,300 | 50,788 | 99% | 75% | 75% |
| (Mid-Columbia | 2000 | 53,460 | 50,600 | 37,191 | 106% | 136% | 144% |
| Bright) | 2001 | 45,055 | 43,500 | 76,504 | 104% | 57% | 59% |
|  | 2002 | 102,085 | 96,200 | 108,198 | 106% | 89% | 94% |
| Time series reworked per TAC guidance November 2016 | 2003 | 126,698 | 104,800 | 150,042 | 121% | 70% | 84% |
| 2004 | 94,895 | 90,400 | 122,497 | 105% | 74% | 77% |
| 2005 | 93,837 | 89,400 | 99,647 | 105% | 90% | 94% |
| 2006 | 90,780 | 88,300 | 80,471 | 103% | 110% | 113% |
| 2007 | 77,470 | 68,000 | 47,621 | 114% | 143% | 163% |
|  | 2008 | 59,481 | 54,000 | 76,297 | 110% | 71% | 78% |
|  | 2009 | 99,685 | 94,400 | 73,012 | 106% | 129% | 137% |
|  | 2010 | 82,454 | 72,600 | 78,937 | 114% | 92% | 104% |
|  | 2011 | 108,005 | 100,000 | 87,235 | 108% | 115% | 124% |
|  | 2012 | 100,809 | 90,800 | 61,392 | 111% | 148% | 164% |
|  | 2013 | 113,333 | 105,200 | 249,588 | 108% | 42% | 45% |
|  | 2014 | 377,357 | 360,100 | 203,734 | 105% | 177% | 185% |
|  | 2015 | 156,711 | 113,300 | 170,585 | 138% | 66% | 92% |
|  | 2016 | 115,632 | 101,000 | 87,334 | 114% | 116% | 132% |
|  | 2017 | 62,130 | 45,600 | 51,814 | 136% | 88% | 120% |
|  | 2018 | 36,423 | 40,100 | 50,244 | 91% | 80% | 72% |
|  | 2019 | 68,146 | 56,700 | 68,066 | 120% | 83% | 100% |
|  | 2020 | 93,580 | 78,200 | NA | 120% | NA | NA |
|  | AVG |  |  |  | 111% | 98% | 108% |
| LRW2 | 1999 | 3,068 | 2,600 | 3,349 | 118% | 78% | 92% |
| (Lewis River | 2000 | 4,053 | 3,500 | 10,234 | 116% | 34% | 40% |
| Wild) | 2001 | 16,574 | 16,700 | 15,721 | 99% | 106% | 105% |
|  | 2002 | 18,910 | 18,200 | 25,171 | 104% | 72% | 75% |
| Time series reworked per TAC guidance November 2016 | 2003 | 25,820 | 24,600 | 25,404 | 105% | 97% | 102% |
| 2004 | 24,590 | 24,100 | 21,088 | 102% | 114% | 117% |
| 2005 | 21,937 | 20,200 | 16,345 | 109% | 124% | 134% |
| 2006 | 19,818 | 16,600 | 12,649 | 119% | 131% | 157% |
| 2007 | 10,306 | 10,100 | 4,854 | 102% | 208% | 212% |
|  | 2008 | 4,479 | 3,800 | 7,782 | 118% | 49% | 58% |
|  | 2009 | 9,363 | 8,500 | 8,404 | 110% | 101% | 111% |
|  | 2010 | 11,034 | 9,700 | 11,491 | 114% | 84% | 96% |
|  | 2011 | 13,429 | 12,500 | 15,376 | 107% | 81% | 87% |
|  | 2012 | 17,806 | 16,200 | 12,112 | 110% | 134% | 147% |
|  | 2013 | 16,713 | 14,200 | 25,841 | 118% | 55% | 65% |
|  | 2014 | 42,365 | 34,200 | 25,774 | 124% | 133% | 164% |
|  | 2015 | 32,374 | 18,900 | 32,403 | 171% | 58% | 100% |
|  | 2016 | 29,122 | 22,200 | 12,315 | 131% | 180% | 236% |
|  | 2017 | 19,063 | 12,500 | 7,855 | 153% | 159% | 243% |
|  | 2018 | 10,044 | 7,600 | 8,270 | 132% | 92% | 121% |
|  | 2019 | 15,345 | 13,700 | 16,661 | 112% | 82% | 92% |
|  | 2020 | 25,334 | 19,700 | NA | 129% | NA | NA |
|  | AVG |  |  |  | 118% | 103% | 122% |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stock** | **Year** | **Model Forecast** | **Agency Forecast** | **Postseason Return** | **Model Fcst/ Agency Fcst** | **Agency Fcst/ Postseason** | **Model Fcst/ Postseason** |
| ORC1 | 1999 | 65,249 | 72,084 | 82,084 | 91% | 88% | 79% |
| (Oregon | 2000 | 61,457 | 63,259 | 67,771 | 97% | 93% | 91% |
| Coastal) | 2001 | 58,062 | 66,412 | 130,795 | 87% | 51% | 44% |
|  | 2002 | 73,055 | 73,914 | 171,904 | 99% | 43% | 42% |
| Observed return reworked per ODFW review November 2016 | 2003 | 101,310 | 85,483 | 183,183 | 119% | 47% | 55% |
| 2004 | 135,716 | 131,904 | 138,150 | 103% | 95% | 98% |
| 2005 | 133,886 | 167,213 | 106,632 | 80% | 157% | 126% |
| 2006 | 125,550 | 136,373 | 109,112 | 92% | 125% | 115% |
| 2007 | 108,338 | 131,195 | 46,242 | 83% | 284% | 234% |
|  | 2008 | 53,417 | 70,101 | 39,887 | 76% | 176% | 134% |
|  | 2009 | 32,254 | 48,072 | 53,550 | 67% | 90% | 60% |
|  | 2010 | 51,234 | 59,806 | 72,206 | 86% | 83% | 71% |
|  | 2011 | 73,043 | 78,199 | 99,247 | 93% | 79% | 74% |
|  | 2012 | 82,789 | 80,749 | 91,655 | 103% | 88% | 90% |
|  | 2013 | 70,385 | 80,095 | 117,203 | 88% | 68% | 60% |
|  | 2014 | 81,984 | 109,029 | 133,614 | 75% | 82% | 61% |
|  | 2015 | 63,642 | 94,715 | 144,548 | 67% | 66% | 44% |
|  | 2016 | 110,710 | 119,374 | 103,788 | 93% | 115% | 107% |
|  | 2017 | 80,529 | 87,243 | 79,462 | 92% | 110% | 101% |
|  | 2018 | 48,149 | 68,939 | 58,615 | 70% | 118% | 82% |
|  | 2019 | 54,063 | 73,721 | 42,460 | 73% | 174% | 127% |
|  | 2020 | 53,458 | 68,830 | NA | 78% | NA | NA |
|  | AVG | NA | NA | NA | 87% | 106% | 90% |

1 Escapement

2 Terminal Run

3 Puget Sound returns for 2019 are preliminary postseason projections based on partial return information.

4 An agency forecast was provided in 2013 for the WCVI aggregate (27,339) but the decision was made by the CTC to exclude it from the Model calibration. The Model forecast was 32,180 and both forecasts were large under-forecasts.

5 Beginning in 2020 the runsize units for LYF were converted from escapement to terminal run. Model and agency forecasts for 1999-2019 are still in units of escapement. 2020 forecasts and all postseason returns are in units of terminal run.

Appendix J2. 2020 Forecasts for new model stocks.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Stock Acronym** | **Stock Name** | **Forecast Unit** | **Year** | **Model Forecast** | **Agency Forecast** | **Model Fcst/ Agency Fcst** |
| YAK | Yakutat Forelands | Escapement | 2020 | 4,377 | NA | NA |
| ALS | Alsek | Escapement | 2020 | 10,787 | NA | NA |
| SSA | Southern SEAK | Escapement | 2020 | 9,630 | NA | NA |
| NSA | Northern SEAK | Escapement | 2020 | 3,275 | NA | NA |
| TST | Transboundary Rivers | Escapement | 2020 | 41,536 | NA | NA |
| NBC | Northern BC | Escapement | 2020 | 21,894 | 34,971 | 63% |
| CBC | Central BC | Escapement | 2020 | 7,601 | 11,463 | 66% |
| WVH | WCVI Hacthery | Terminal Run | 2020 | 173,029 | 152,227 | 114% |
| WVN | WCVI Natural | Terminal Run | 2020 | 26,012 | 22,531 | 115% |
| UGS | Upper Georgia Strait | Escapement | 2020 | 5,943 | 11,779 | 50% |
| PPS | Puntledge River Summer | Escapement | 2020 | 647 | 563 | 115% |
| MGS | Middle Georgia Strait | Escapement | 2020 | 25,627 | 23,595 | 109% |
| LGS | Lower Georgia Strait | Terminal Run | 2020 | 13,753 | 14,821 | 93% |
| FS2 | Fraser Early Spring 1.2 | Terminal Run | 2020 | 6,190 | 6,220 | 100% |
| FS3 | Fraser Early Spring 1.3 | Terminal Run | 2020 | 19,145 | 23,332 | 82% |
| FSO | Fraser Early Summer 0.3 | Escapement | 2020 | 119,202 | 114,566 | 104% |
| FSS | Fraser Early Summer 1.3 | Terminal Run | 2020 | 10,046 | 10,737 | 94% |
| FHF | Fraser Late Natural (Harrison) | Escapement | 2020 | 53,314 | 59,745 | 89% |
| FCF | Fraser Late Hatchery (Chilliwack) | Escapement | 2020 | 44,589 | 31,077 | 143% |
| NKS | Nooksack Spring | Escapement | 2020 | 1,511 | 1,479 | 102% |
| NKF | Nooksack/Samish Fall | Terminal Run | 2020 | 15,769 | 16,858 | 94% |
| SKG | Skagit Summer/Fall Wild | Terminal Run | 2020 | 13,971 | 12,877 | 108% |
| STL | Stillaguamish Summer/Fall Wild | Escapement | 2020 | 728 | 762 | 96% |
| SNO | Snohomish Summer/Fall Wild | Terminal Run | 2020 | 2,557 | 2,978 | 86% |
| PSF | Puget Sound Fingerling | Terminal Run | 2020 | 206,848 | 186,117 | 111% |
| PSY | Puget Sound Yearling | Terminal Run | 2020 | 4,609 | 4,059 | 114% |
| PSN | Puget Sound Natural | Terminal Run | 2020 | 7,741 | 7,132 | 109% |
| WCH | Washington Coastal Hatchery | Terminal Run | 2020 | 30,608 | 32,802 | 93% |
| WCN | Washington Coastal Natural | Terminal Run | 2020 | 33,592 | 30,130 | 111% |
| CWS | Cowlitz Spring | Terminal Run | 2020 | 3,739 | 3,843 | 97% |
| WSH | Willamette Spring | Terminal Run | 2020 | 42,265 | 43,430 | 97% |
| SUM | Columbia River Summer | Terminal Run | 2020 | 34,705 | 38,300 | 91% |
| LRW | Lewis River Wild | Terminal Run | 2020 | 21,961 | 19,700 | 111% |
| BON | Lower Bonneville Hatchery | Terminal Run | 2020 | 15,553 | 16,500 | 94% |
| CWF | Fall Cowlitz Hatchery | Terminal Run | 2020 | 38,117 | 34,500 | 110% |
| SPR | Spring Creek Hatchery | Terminal Run | 2020 | 48,173 | 47,500 | 101% |
| MCB | Mid-Columbia Bright | Terminal Run | 2020 | 86,293 | 78,200 | 110% |
| URB | Columbia Upriver Bright | Terminal Run | 2020 | 236,066 | 220,600 | 107% |
| LYF | Snake River Wild | Escapement | 2020 | 13,011 | 10,902 | 119% |
| NOC | North Oregon Coast | Escapement | 2020 | 59,466 | 44,809 | 133% |
| MOC | Mid-Oregon Coast | Escapement | 2020 | 25,867 | 28,140 | 92% |