

Figure .–Total releases of coho salmon (excluding fry) from Southeast Alaska hatcheries (1979–2015), the percent of the troll harvest comprised of fish of hatchery origin, and the number of hatchery fish contributed to the Alaska troll coho salmon harvest (1980–2016). Linear trends are shown beginning in the 1991 return year. Annual values and trends that exclude Klawock Hatchery production are also shown.



Figure.–Number of coho salmon smolts released from the Hidden Falls Hatchery into Kasnyku Bay, and their subsequent marine survival by adult return year (with 8 pt LOESS trends).



Figure .–Total run size, catch, escapement, and biological escapement goal range for four wild Southeast Alaska coho salmon indicator stocks, 1982–2016 (the Ford Arm Creek project was discontinued after 2015). Escapement to the Berners River is represented by the unexpanded survey count.



Figure 6.–Total estimated run size, catch, and escapement of coho salmon bound for the Taku River (above Canyon Island) and the Chilkat and Berners rivers, 1987–2016. The Berners River escapement and escapement goal bounds are based on an estimated survey expansion factor of 1.241.



Figure .–Estimates of Southeast Alaska wild coho salmon commercial catch, total wild abundance available to the Alaska troll fishery and mean-average power troll wild CPUE in statistical weeks 28–38, 1982–2016.



Figure .–Ratio of the estimated total abundance of wild coho salmon available to the Alaska troll fishery and mean-average power troll wild coho salmon CPUE (catch-per-boat-day) during statistical weeks 28–38.

Table .–Estimated harvest by gear type, escapement, and total run of coho salmon returning to Auke Creek, 1980–2016.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Number of Fish | |  |  |
|  | Sample |  |  | Drift |  | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Catch | Escapement | Return |
| 1980 | 15 | 117 | 0 | 29 | 24 | 170 | 698 | 868 |
| 1981 | 70 | 280 | 0 | 31 | 19 | 330 | 646 | 976 |
| 1982 | 45 | 149 | 117 | 24 | 2 | 292 | 447 | 739 |
| 1983 | 129 | 385 | 10 | 28 | 122 | 545 | 694 | 1,239 |
| 1984 | 124 | 372 | 8 | 13 | 51 | 444 | 651 | 1,095 |
| 1985 | 177 | 594 | 3 | 71 | 73 | 741 | 942 | 1,683 |
| 1986 | 110 | 421 | 2 | 60 | 37 | 520 | 454 | 974 |
| 1987 | 145 | 438 | 2 | 48 | 23 | 511 | 668 | 1,179 |
| 1988 | 145 | 306 | 12 | 72 | 55 | 445 | 756 | 1,201 |
| 1989 | 182 | 533 | 7 | 15 | 49 | 604 | 502 | 1,106 |
| 1990 | 168 | 635 | 15 | 57 | 78 | 785 | 697 | 1,482 |
| 1991 | 47 | 200 | 8 | 152 | 11 | 371 | 808 | 1,179 |
| 1992 | 53 | 603 | 10 | 196 | 46 | 855 | 1,020 | 1,875 |
| 1993 | 169 | 611 | 8 | 92 | 19 | 730 | 859 | 1,589 |
| 1994 | 330 | 1,064 | 224 | 218 | 112 | 1,618 | 1,437 | 3,055 |
| 1995 | 82 | 264 | 5 | 65 | 26 | 360 | 460 | 820 |
| 1996 | 160 | 446 | 11 | 133 | 36 | 626 | 515 | 1,141 |
| 1997 | 43 | 94 | 4 | 0 | 50 | 148 | 609 | 757 |
| 1998 | 157 | 437 | 17 | 43 | 54 | 551 | 862 | 1,413 |
| 1999 | 160 | 485 | 5 | 58 | 42 | 590 | 845 | 1,435 |
| 2000 | 103 | 228 | 6 | 23 | 29 | 286 | 683 | 969 |
| 2001 | 149 | 435 | 10 | 41 | 55 | 541 | 865 | 1,406 |
| 2002 | 125 | 288 | 8 | 77 | 51 | 424 | 1,176 | 1,600 |
| 2003 | 97 | 211 | 4 | 59 | 45 | 319 | 585 | 904 |
| 2004 | 62 | 199 | 47 | 71 | 15 | 332 | 416 | 748 |
| 2005 | 66 | 240 | 0 | 6 | 31 | 277 | 450 | 727 |
| 2006 | 80 | 196 | 0 | 77 | 26 | 299 | 581 | 880 |
| 2007 | 47 | 134 | 6 | 30 | 14 | 184 | 352 | 536 |
| 2008 | 105 | 292 | 0 | 76 | 9 | 377 | 600 | 977 |
| 2009 | 75 | 179 | 0 | 46 | 8 | 233 | 360 | 593 |
| 2010 | 86 | 194 | 0 | 134 | 22 | 350 | 417 | 767 |
| 2011 | 79 | 137 | 31 | 93 | 16 | 277 | 517 | 794 |
| 2012 | 65 | 212 | 4 | 7 | 17 | 240 | 837 | 1,077 |
| 2013 | 128 | 406 | 28 | 69 | 27 | 530 | 736 | 1,266 |
| 2014 | 86 | 265 | 0 | 107 | 21 | 393 | 1,533 | 1,926 |
| 2015 | 44 | 140 | 2 | 14 | 17 | 173 | 517 | 690 |
| 2016 | 22 | 20 | 0 | 49 | 0 | 69 | 204 | 273 |
| Average |  | 330 | 17 | 64 | 36 | 447 | 686 | 1,133 |

Table 10.–Estimated harvest by gear type, escapement and total run of coho salmon returning to the Berners River based on the unadjusted escapement survey count, 1974-2016.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Number of Fish | | |  |  |  |
|  | Sample |  |  | Drift |  | B.C. | Cost | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Net | Recovery | Catch | Escapement | Run |
| 1974 | 157 | 9,161 | 406 | 4,581 | 0 | 0 | 0 | 14,148 | 4,124 | 18,272 |
| 1978 | 124 | 7,208 | 0 | 4,144 | 0 | 0 | 0 | 11,352 | 3,119 | 14,471 |
| 1979 | 84 | 4,892 | 411 | 1,774 | 95 | 0 | 0 | 7,172 | 3,460 | 10,632 |
| 1982 | 52 | 14,140 | 0 | 10,965 | 0 | 0 | 0 | 25,104 | 7,505 | 32,609 |
| 1983 | 125 | 17,176 | 0 | 6,977 | 421 | 0 | 0 | 24,574 | 9,840 | 34,414 |
| 1984 | - | - | - | - | - | - | - | - | 2,825 | - |
| 1985 | 93 | 10,861 | 290 | 7,016 | 0 | 0 | 0 | 18,167 | 6,169 | 24,336 |
| 1986 | 159 | 13,565 | 0 | 8,804 | 566 | 0 | 0 | 22,935 | 1,752 | 24,687 |
| 1987 | 52 | 7,211 | 0 | 3,317 | 166 | 0 | 0 | 10,694 | 3,260 | 13,954 |
| 1988 | 102 | 6,060 | 167 | 6,196 | 0 | 0 | 0 | 12,424 | 2,724 | 15,148 |
| 1989 | 58 | 10,583 | 0 | 1,665 | 0 | 0 | 0 | 12,247 | 7,509 | 19,756 |
| 1990 | 471 | 15,007 | 184 | 7,351 | 369 | 0 | 0 | 22,911 | 11,050 | 33,961 |
| 1991 | 1,025 | 6,449 | 285 | 16,640 | 84 | 0 | 0 | 23,457 | 11,530 | 34,987 |
| 1992 | 701 | 15,318 | 508 | 14,679 | 189 | 0 | 0 | 30,695 | 15,300 | 45,995 |
| 1993 | 1,498 | 19,308 | 166 | 14,282 | 180 | 0 | 0 | 33,936 | 15,670 | 49,606 |
| 1994 | 2,644 | 27,339 | 1,381 | 27,909 | 810 | 10 | 0 | 57,449 | 15,920 | 73,369 |
| 1995 | 1,383 | 8,766 | 25 | 14,869 | 210 | 0 | 0 | 23,870 | 4,945 | 28,815 |
| 1996 | 601 | 10,529 | 234 | 6,434 | 406 | 0 | 0 | 17,604 | 6,050 | 23,654 |
| 1997 | 312 | 2,453 | 231 | 2,254 | 278 | 0 | 18 | 5,234 | 10,050 | 15,284 |
| 1998 | 613 | 10,424 | 395 | 5,223 | 293 | 0 | 0 | 16,335 | 6,802 | 23,137 |
| 1999 | 948 | 12,876 | 200 | 9,572 | 578 | 0 | 0 | 23,225 | 9,920 | 33,145 |
| 2000 | 692 | 4,811 | 171 | 5,330 | 497 | 0 | 6 | 10,815 | 10,650 | 21,465 |
| 2001 | 747 | 8,814 | 178 | 3,523 | 347 | 0 | 0 | 12,863 | 19,290 | 32,153 |
| 2002 | 787 | 8,650 | 312 | 12,077 | 1,080 | 0 | 0 | 22,118 | 27,700 | 49,818 |
| 2003 | 1,328 | 6,823 | 251 | 11,377 | 550 | 0 | 0 | 19,001 | 10,110 | 29,111 |
| 2004 | 756 | 10,792 | 83 | 7,352 | 497 | 0 | 0 | 18,724 | 14,450 | 33,174 |
| 2005 | 392 | 4,639 | 121 | 2,546 | 232 | 0 | 0 | 7,538 | 5,220 | 12,758 |
| 2006 | 701 | 4,082 | 0 | 6,161 | 110 | 0 | 0 | 10,352 | 5,470 | 15,822 |
| 2007 | 293 | 2,937 | 40 | 1,668 | 161 | 0 | 0 | 4,807 | 3,915 | 8,722 |
| 2008 | 423 | 3,878 | 0 | 3,469 | 149 | 0 | 0 | 7,497 | 6,870 | 14,367 |
| 2009 | 201 | 2,807 | 63 | 2,037 | 180 | 0 | 0 | 5,087 | 4,230 | 9,317 |
| 2010 | 324 | 6,451 | 110 | 7,258 | 477 | 0 | 0 | 14,297 | 7,520 | 21,817 |
| 2011 | 174 | 3,722 | 251 | 1,900 | 106 | 0 | 0 | 5,979 | 6,050 | 12,029 |
| 2012 | 159 | 2,071 | 0 | 929 | 51 | 0 | 0 | 3,051 | 5,480 | 8,531 |
| 2013 | 374 | 7,521 | 369 | 6,289 | 609 | 0 | 0 | 14,788 | 6,280 | 21,068 |
| 2014 | 287 | 4,301 | 0 | 6,241 | 626 | 0 | 0 | 11,168 | 15,480 | 26,648 |
| 2015 | 306 | 3,543 | 120 | 1,869 | 177 | 0 | 0 | 5,709 | 9,940 | 15,649 |
| 2016 | 173 | 919 | 11 | 2,198 | 87 | 0 | 0 | 3,215 | 6,733 | 9,948 |
| Average | | 8,543 | 188 | 6,943 | 286 | 0 | 1 | 15,961 | 8,550 | 24,666 |

Table 10b.–Estimated harvest by gear type, escapement and total run of coho salmon returning to the Berners River based on the expanded escapement survey count, 1989-2016.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Number of Fish | | | |  |  |  |
|  | Sample |  |  | Drift |  | B.C. | Cost | Total | |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Net | Recovery | Catch | | Escapement | Run |
| 1989 | 58 | 10,583 | 0 | 1,665 | 0 | 0 | 0 | 12,247 | | 9,320 | 21,567 |
| 1990 | 471 | 15,007 | 184 | 7,351 | 369 | 0 | 0 | 22,911 | | 13,715 | 36,626 |
| 1991 | 1,025 | 6,449 | 285 | 16,640 | 84 | 0 | 0 | 23,457 | | 14,311 | 37,768 |
| 1992 | 701 | 15,318 | 508 | 14,679 | 189 | 0 | 0 | 30,695 | | 18,991 | 49,686 |
| 1993 | 1,498 | 19,308 | 166 | 14,282 | 180 | 0 | 0 | 33,936 | | 19,450 | 53,386 |
| 1994 | 2,644 | 27,339 | 1,381 | 27,909 | 810 | 10 | 0 | 57,449 | | 19,760 | 77,209 |
| 1995 | 1,383 | 8,766 | 25 | 14,869 | 210 | 0 | 0 | 23,870 | | 6,138 | 30,008 |
| 1996 | 601 | 10,529 | 234 | 6,434 | 406 | 0 | 0 | 17,604 | | 7,509 | 25,113 |
| 1997 | 312 | 2,453 | 231 | 2,254 | 278 | 0 | 18 | 5,234 | | 12,474 | 17,708 |
| 1998 | 613 | 10,424 | 395 | 5,223 | 293 | 0 | 0 | 16,335 | | 8,443 | 24,778 |
| 1999 | 948 | 12,876 | 200 | 9,572 | 578 | 0 | 0 | 23,225 | | 12,313 | 35,538 |
| 2000 | 692 | 4,811 | 171 | 5,330 | 497 | 0 | 6 | 10,815 | | 13,219 | 24,034 |
| 2001 | 747 | 8,814 | 178 | 3,523 | 347 | 0 | 0 | 12,863 | | 23,943 | 36,806 |
| 2002 | 787 | 8,650 | 312 | 12,077 | 1,080 | 0 | 0 | 22,118 | | 34,382 | 56,500 |
| 2003 | 1,328 | 6,823 | 251 | 11,377 | 550 | 0 | 0 | 19,001 | | 12,549 | 31,550 |
| 2004 | 756 | 10,792 | 83 | 7,352 | 497 | 0 | 0 | 18,724 | | 17,936 | 36,660 |
| 2005 | 392 | 4,639 | 121 | 2,546 | 232 | 0 | 0 | 7,538 | | 6,479 | 14,017 |
| 2006 | 701 | 4,082 | 0 | 6,161 | 110 | 0 | 0 | 10,352 | | 6,789 | 17,141 |
| 2007 | 293 | 2,937 | 40 | 1,668 | 161 | 0 | 0 | 4,807 | | 4,859 | 9,666 |
| 2008 | 423 | 3,878 | 0 | 3,469 | 149 | 0 | 0 | 7,497 | | 8,527 | 16,024 |
| 2009 | 201 | 2,807 | 63 | 2,037 | 180 | 0 | 0 | 5,087 | | 5,250 | 10,337 |
| 2010 | 324 | 6,451 | 110 | 7,258 | 477 | 0 | 0 | 14,297 | | 9,334 | 23,631 |
| 2011 | 174 | 3,722 | 251 | 1,900 | 106 | 0 | 0 | 5,979 | | 7,509 | 13,488 |
| 2012 | 159 | 2,071 | 0 | 929 | 51 | 0 | 0 | 3,051 | | 6,802 | 9,853 |
| 2013 | 787 | 7,521 | 369 | 6,289 | 609 | 0 | 0 | 14,788 | | 7,795 | 22,583 |
| 2014 | 1,328 | 4,301 | 0 | 6,241 | 626 | 0 | 0 | 11,168 | | 19,214 | 30,382 |
| 2015 | 756 | 3,543 | 120 | 1,869 | 177 | 0 | 0 | 5,709 | | 12,338 | 18,047 |
| 2016 | 392 | 919 | 11 | 2,198 | 87 | 0 | 0 | 3,215 | | 8,357 | 11,572 |
| Average | | 8,065 | 203 | 7,254 | 333 | 0 | 1 | 15,856 | | 12,418 | 28,274 |

Table 11.–Estimated harvest by gear type, escapement, and total run of coho salmon returning to Ford Arm Creek, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery | |  |  |  | Number of Fish | | |  |  | |
|  | Sample | |  |  | Drift |  | Canadian | Total |  | | Total |
| Year | Size | | Troll | Seine | Gillnet | Sport | Troll | Catch | Escapement | | Run |
| 1982 | 38 | | 1,927 | 106 | 0 | 0 | 0 | 2,033 | 2,655 | | 4,688 |
| 1983 | 93 | | 3,344 | 912 | 0 | 0 | 0 | 4,256 | 1,931 | | 6,187 |
| 1984 | - | | - | - | - | - | - | - | - | | - |
| 1985 | 49 | | 2,482 | 0 | 0 | 0 | 0 | 2,482 | 2,324 | | 4,806 |
| 1986 | 87 | | 2,483 | 63 | 0 | 0 | 0 | 2,546 | 1,552 | | 4,098 |
| 1987 | 71 | | 1,458 | 81 | 0 | 0 | 0 | 1,539 | 1,694 | | 3,233 |
| 1988 | 151 | | 2,816 | 46 | 0 | 0 | 31 | 2,893 | 3,119 | | 6,012 |
| 1989 | 218 | | 3,799 | 185 | 0 | 0 | 0 | 3,984 | 2,176 | | 6,160 |
| 1990 | 174 | | 2,982 | 100 | 0 | 0 | 0 | 3,082 | 2,192 | | 5,274 |
| 1991 | 193 | | 3,203 | 44 | 10 | 0 | 0 | 3,257 | 2,761 | | 6,018 |
| 1992 | 199 | | 5,252 | 233 | 0 | 0 | 0 | 5,485 | 3,866 | | 9,351 |
| 1993 | 349 | | 7,749 | 434 | 0 | 176 | 0 | 8,359 | 4,202 | | 12,561 |
| 1994 | 236 | | 6,856 | 1,020 | 0 | 384 | 0 | 8,260 | 3,227 | | 11,487 |
| 1995 | 82 | | 3,582 | 759 | 0 | 0 | 0 | 4,341 | 2,446 | | 6,787 |
| 1996 | 64 | | 3,083 | 0 | 0 | 281 | 0 | 3,364 | 2,500 | | 5,864 |
| 1997 | 242 | | 4,702 | 0 | 0 | 351 | 0 | 5,053 | 4,718 | | 9,771 |
| 1998 | 320 | | 7,835 | 435 | 20 | 785 | 0 | 9,075 | 7,049 | | 16,124 |
| 1999 | 146 | | 5,893 | 66 | 0 | 436 | 0 | 6,395 | 3,800 | | 10,195 |
| 2000 | 193 | | 4,604 | 916 | 14 | 211 | 0 | 5,745 | 2,304 | | 8,049 |
| 2001 | 131 | | 5,821 | 115 | 0 | 480 | 0 | 6,416 | 2,209 | | 8,625 |
| 2002 | 246 | | 5,751 | 1,260 | 0 | 998 | 0 | 8,009 | 7,109 | | 15,118 |
| 2003 | 225 | | 4,154 | 504 | 0 | 1,770 | 0 | 6,428 | 6,789 | | 13,217 |
| 2004 | 153 | | 7,722 | 524 | 0 | 319 | 0 | 8,565 | 3,539 | | 12,104 |
| 2005 | 81 | | 5,134 | 60 | 0 | 672 | 0 | 5,866 | 4,257 | | 10,123 |
| 2006 | 137 | | 3,866 | 367 | 0 | 844 | 0 | 5,077 | 4,737 | | 9,814 |
| 2007 | 188 | | 5,673 | 217 | 7 | 202 | 0 | 6,099 | 2,567 | | 8,666 |
| 2008 | 231 | | 4,563 | 1,047 | 0 | 277 | 0 | 5,887 | 5,173 | | 11,060 |
| 2009 | 156 | | 4,604 | 248 | 0 | 93 | 0 | 4,945 | 2,181 | | 7,126 |
| 2010 | 96 | | 2,149 | 582 | 0 | 132 | 0 | 2,863 | 1,610 | | 4,473 |
| 2011 | 52 | | 2,610 | 6,238 | 0 | 79 | 0 | 8,927 | 1,908 | | 10,835 |
| 2012 | 117 | | 2,884 | 903 | 0 | 151 | 0 | 3,938 | 2,282 | | 6,220 |
| 2013 | 122 | | 3,426 | 2,069 | 0 | 241 | 0 | 5,736 | 1,573 | | 7,309 |
| 2014 | 103 | | 4,927 | 2,397 | 0 | 407 | 0 | 7,731 | 3,025 | | 10,756 |
| 2015 | 71 | | 3,078 | 380 | 0 | 118 | 0 | 3,576 | 3,281 | | 6,857 |
| Average | |  | 4,130 | 656 | 2 | 277 | 1 | 5,065 | 3,140 | | 8,205 |

Table 12.–Estimated harvest by gear type, escapement, and total run of coho salmon returning to Hugh Smith Lake, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  |  | Number of Fish | | |  |  | |  |  |
|  | Sample | Alaska | Alaska | Alaska | Alaska | Alaska | B.C. | B.C. | B.C. | Total |  | | Total |
| Year | Size | Troll | Seine | Gillnet | Trap | Sport | Troll | Net | Sport | Catch | Escapement | | Return |
| 1982 | 91 | 2,758 | 628 | 203 | 0 | 0 | 316 | 84 | 0 | 3,988 | 2,144 | | 6,132 |
| 1983 | 185 | 1,374 | 424 | 277 | 49 | 0 | 214 | 50 | 0 | 2,388 | 1,487 | | 3,875 |
| 1984 | 151 | 1,266 | 504 | 471 | 18 | 0 | 331 | 27 | 0 | 2,617 | 1,407 | | 4,024 |
| 1985 | 213 | 868 | 287 | 137 | 5 | 0 | 201 | 39 | 0 | 1,537 | 903 | | 2,440 |
| 1986 | 256 | 1,598 | 493 | 213 | 0 | 16 | 236 | 28 | 0 | 2,583 | 1,782 | | 4,365 |
| 1987 | 99 | 657 | 82 | 148 | 4 | 28 | 155 | 53 | 0 | 1,127 | 1,117 | | 2,244 |
| 1988 | 41 | 406 | 207 | 78 | 0 | 0 | 242 | 27 | 0 | 960 | 513 | | 1,473 |
| 1989 | 91 | 1,217 | 320 | 247 | 0 | 62 | 106 | 20 | 0 | 1,971 | 433 | | 2,404 |
| 1990 | 263 | 1,803 | 566 | 637 | 23 | 0 | 840 | 54 | 0 | 3,924 | 870 | | 4,794 |
| 1991 | 399 | 2,103 | 190 | 941 | 0 | 38 | 614 | 44 | 0 | 3,931 | 1,836 | | 5,767 |
| 1992 | 497 | 1,854 | 676 | 600 | 0 | 40 | 289 | 10 | 0 | 3,469 | 1,426 | | 4,895 |
| 1993 | 155 | 2,227 | 269 | 666 | 0 | 0 | 207 | 41 | 0 | 3,410 | 832 | | 4,242 |
| 1994 | 838 | 4,333 | 1,123 | 1,450 | 0 | 45 | 694 | 53 | 13 | 7,711 | 1,753 | | 9,464 |
| 1995 | 432 | 2,018 | 947 | 1,588 | 0 | 98 | 236 | 28 | 11 | 4,927 | 1,781 | | 6,708 |
| 1996 | 502 | 1,585 | 623 | 487 | 0 | 125 | 125 | 38 | 14 | 2,998 | 950 | | 3,948 |
| 1997 | 480 | 1,321 | 108 | 397 | 0 | 45 | 91 | 0 | 0 | 1,964 | 732 | | 2,696 |
| 1998 | 668 | 1,771 | 471 | 980 | 0 | 150 | 0 | 0 | 15 | 3,388 | 983 | | 4,371 |
| 1999 | 623 | 1,757 | 283 | 726 | 0 | 180 | 0 | 0 | 30 | 2,975 | 1,246 | | 4,221 |
| 2000 | 161 | 489 | 45 | 116 | 0 | 97 | 0 | 0 | 0 | 746 | 600 | | 1,346 |
| 2001 | 314 | 696 | 454 | 324 | 0 | 58 | 7 | 0 | 0 | 1,539 | 1,580 | | 3,119 |
| 2002 | 434 | 892 | 451 | 555 | 0 | 91 | 65 | 0 | 61 | 2,115 | 3,291 | | 5,406 |
| 2003 | 335 | 894 | 354 | 690 | 0 | 106 | 91 | 31 | 0 | 2,166 | 1,510 | | 3,676 |
| 2004 | 244 | 1,017 | 196 | 243 | 0 | 60 | 48 | 20 | 69 | 1,652 | 840 | | 2,492 |
| 2005 | 256 | 1,163 | 122 | 532 | 0 | 59 | 36 | 8 | 0 | 1,920 | 1,732 | | 3,652 |
| 2006 | 169 | 703 | 64 | 170 | 0 | 7 | 34 | 0 | 58 | 1,035 | 891 | | 1,926 |
| 2007 | 294 | 1,262 | 175 | 300 | 0 | 74 | 57 | 11 | 186 | 2,065 | 1,244 | | 3,309 |
| 2008 | 302 | 716 | 244 | 779 | 0 | 33 | 59 | 12 | 192 | 2,035 | 1,741 | | 3,776 |
| 2009 | 253 | 1,049 | 268 | 483 | 0 | 18 | 265 | 0 | 19 | 2,102 | 2,281 | | 4,383 |
| 2010 | 632 | 1,205 | 287 | 692 | 0 | 36 | 218 | 0 | 101 | 2,539 | 2,878 | | 5,417 |
| 2011 | 376 | 778 | 148 | 417 | 0 | 25 | 189 | 4 | 239 | 1,800 | 2,137 | | 3,937 |
| 2012 | 542 | 821 | 348 | 703 | 0 | 41 | 169 | 0 | 173 | 2,255 | 1,908 | | 4,163 |
| 2013 | 552 | 1,754 | 767 | 793 | 0 | 108 | 283 | 32 | 121 | 3,858 | 3,048 | | 6,906 |
| 2014 | 566 | 1,873 | 399 | 798 | 0 | 121 | 218 | 0 | 188 | 3,597 | 4,110 | | 7,707 |
| 2015 | 203 | 470 | 112 | 272 | 0 | 24 | 102 | 6 | 12 | 998 | 956 | | 1,954 |
| 2016 | 123 | 767 | 150 | 429 | 0 | 90 | 39 | 0 | 43 | 1,518 | 948 | | 2,466 |
| Average | | 1,356 | 365 | 530 | 3 | 54 | 194 | 21 | 44 | 2,566 | 1,540 | | 4,154 |

Table 13.–Estimated catch and escapement of coho salmon bound for the Taku River above Canyon Island, 1987–2016.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Number of Fish | |  |  |  |
|  |  |  |  | Marine |  | Total |  | Total |
| Year | Troll | Seine | Gillnet | Sport | Inriver | Catch | Escapement | Return |
| 1987 |  |  |  |  | 6,519 |  | 55,457 |  |
| 1988 |  |  |  |  | 3,643 |  | 39,450 |  |
| 1989 |  |  |  |  | 4,033 |  | 56,808 |  |
| 1990 |  |  |  |  | 3,685 |  | 72,196 |  |
| 1991 |  |  |  |  | 5,439 |  | 127,484 |  |
| 1992 | 41,713 | 2,283 | 79,013 | 431 | 5,629 | 129,069 | 83,729 | 212,710 |
| 1993 | 78,371 | 3,430 | 40,308 | 3,222 | 4,659 | 129,990 | 119,330 | 249,295 |
| 1994 | 97,039 | 26,352 | 86,198 | 19,018 | 14,786 | 243,393 | 96,343 | 339,643 |
| 1995 | 45,041 | 1,853 | 56,820 | 7,857 | 13,835 | 125,406 | 55,710 | 181,019 |
| 1996 | 24,779 | 220 | 17,069 | 2,461 | 5,119 | 49,648 | 44,635 | 94,216 |
| 1997 | 8,822 | 550 | 1,489 | 4,963 | 2,717 | 18,541 | 32,345 | 50,859 |
| 1998 | 28,827 | 742 | 19,371 | 4,427 | 5,176 | 58,543 | 61,382 | 119,839 |
| 1999 | 36,231 | 2,881 | 7,507 | 4,170 | 5,619 | 56,408 | 60,768 | 117,132 |
| 2000 | 21,236 | 2,132 | 11,466 | 4,137 | 5,478 | 44,449 | 64,700 | 109,117 |
| 2001 | 38,326 | 2,065 | 11,777 | 3,094 | 3,121 | 58,383 | 104,394 | 162,755 |
| 2002 | 39,053 | 3,456 | 30,894 | 6,642 | 3,870 | 83,915 | 219,360 | 303,207 |
| 2003 | 36,433 | 3,646 | 27,694 | 10,503 | 3,702 | 81,978 | 183,112 | 265,031 |
| 2004 | 62,002 | 5,335 | 30,961 | 14,108 | 9,804 | 122,210 | 129,327 | 251,417 |
| 2005 | 46,521 | 4,325 | 23,546 | 4,654 | 8,393 | 87,439 | 135,558 | 222,863 |
| 2006 | 49,394 | 613 | 37,879 | 4,621 | 11,803 | 104,310 | 122,384 | 226,560 |
| 2007 | 23,519 | 6,484 | 18,795 | 2,124 | 8,133 | 59,055 | 74,246 | 133,241 |
| 2008 | 47,997 | 0 | 25,254 | 1,530 | 4,064 | 78,845 | 95,226 | 173,979 |
| 2009 | 51,748 | 4,749 | 46,838 | 6,720 | 10,006 | 120,061 | 103,950 | 223,770 |
| 2010 | 34,554 | 3,988 | 52,497 | 14,287 | 14,666 | 119,992 | 126,830 | 246,564 |
| 2011 | 23,825 | 6,383 | 11,353 | 4,804 | 12,702 | 59,067 | 70,871 | 129,715 |
| 2012 | 14,648 | 0 | 12,108 | 1,212 | 14,204 | 42,171 | 70,775 | 112,815 |
| 2013 | 34,849 | 2,372 | 24,986 | 2,472 | 10,613 | 75,293 | 68,117 | 143,172 |
| 2014 | 12,118 | 773 | 32,145 | 3,656 | 16,792 | 65,484 | 124,171 | 189,431 |
| 2015 | 16,355 | 5,634 | 8,737 | 3,063 | 10,434 | 44,223 | 60,178 | 104,088 |
| 2016 | 9,801 | 326 | 14,757 | 1,210 | 11,720 | 37,814 | 87,704 | 125,318 |
| 1992-2016 | |  |  |  |  |  |  |  |
| Average | 36,928 | 3,624 | 29,178 | 5,415 | 8,682 | 83,828 | 95,683 | 179,510 |

Table 14.–Estimated harvest by gear type, escapement, and total run of coho salmon returning to the Chilkat River, 1987–2016.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Number of Fish | | | |  |  |
|  | Sample |  |  | Drift | Marine | Freshwater |  | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Sporta | Subsistence | Catch | Escapement | Run |
| 1987 |  |  |  |  |  |  |  |  | 37,432 |  |
| 1988 |  |  |  |  |  |  |  |  | 29,495 |  |
| 1989 |  |  |  |  |  |  |  |  | 48,833 |  |
| 1990 |  |  |  |  |  |  |  |  | **79,807** |  |
| 1991 |  |  |  |  |  |  |  |  | 84,517 |  |
| 1992 |  |  |  |  |  |  |  |  | 77,588 |  |
| 1993 |  |  |  |  |  |  |  |  | 58,217 |  |
| 1994 |  |  |  |  |  |  |  |  | 194,425 |  |
| 1995 |  |  |  |  |  |  |  |  | 56,737 |  |
| 1996 |  |  |  |  |  |  |  |  | 37,331 |  |
| 1997 |  |  |  |  |  |  |  |  | 43,519 |  |
| 1998 |  |  |  |  |  |  |  |  | **50,758** |  |
| 1999 |  |  |  |  |  |  |  |  | 57,140 |  |
| 2000 | 265 | 19,988 | 876 | 17,055 | 1,529 | 688 | 199 | 40,335 | 84,843 | 125,178 |
| 2001 | 250 | 30,465 | 601 | 13,436 | 1,544 | 1,996 | 126 | 48,168 | 107,697 | 155,865 |
| 2002 | 325 | 61,724 | 719 | 66,541 | 2,159 | 3,342 | 574 | 135,059 | **204,925** | 339,984 |
| 2003 | 426 | 51,629 | 1,045 | 26,520 | 3,880 | 2,433 | 498 | 86,005 | **133,109** | 219,114 |
| 2004 | 254 | 82,827 | 1,030 | 35,895 | 5,167 | 2,822 | 455 | 128,196 | 67,053 | 195,249 |
| 2005 | 141 | 17,409 | 312 | 10,597 | 769 | 1,203 | 335 | 30,625 | **34,575** | 65,200 |
| 2006 | 200 | 37,077 | 83 | 24,416 | 2,523 | 1,782 | 353 | 66,234 | 79,050 | 145,284 |
| 2007 | 73 | 9,307 | 0 | 3,546 | 0 | 540 | 107 | 13,500 | 24,770 | 38,270 |
| 2008 | 358 | 20,999 | 0 | 28,908 | 737 | 738 | 390 | 51,772 | 56,369 | 108,141 |
| 2009 | 326 | 11,931 | 346 | 15,352 | 37 | 2,059 | 460 | 30,185 | 47,911 | 78,096 |
| 2010 | 427 | 29,028 | 379 | 37,732 | 1,501 | 449 | 344 | 69,433 | 84,909 | 154,342 |
| 2011 | 219 | 19,329 | 1,201 | 13,861 | 747 | 1,184 | 299 | 36,621 | 61,099 | 97,720 |
| 2012 | 164 | 11,421 | 0 | 15,426 | 682 | 397 | 210 | 28,136 | 36,961 | 65,097 |
| 2013 | 355 | 25,419 | 873 | 41,766 | 696 | 1,014 | 445 | 70,213 | 51,324 | 121,537 |
| 2014 | 88 | 10,792 | 0 | 13,737 | 245 | 958 | 513 | 26,245 | 130,200 | 156,445 |
| 2015 | 90 | 10,558 | 576 | 11,552 | 409 | 988 | 361 | 24,444 | 47,372 | 71,816 |
| 2016 | 56 | 2,412 | 0 | 10,771 | 237 | ***462*** | 305 | 14,187 | 25,599 | 39,786 |
| 2000-2016 Avg. | | 26,607 | 473 | 22,771 | 1,345 | 1,356 | 351 | 52,903 | 75,163 | 128,066 |

a The freshwater sport harvest is based on a mail-out survey; the 2016 catch was interpolated based on the relationship between escapement and freshwater sport harvest in 2000-2015.

Table 17.–Estimated harvest (by gear type) and escapement as a percent of the total Auke Creek coho salmon run, 1980–2016.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Percent of Run | |  |  |
|  | Sample |  |  | Drift |  | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Catch | Escapement | Return |
| 1980 | 15 | 13.5 | 0.0 | 3.3 | 2.8 | 19.6 | 80.4 | 100.0 |
| 1981 | 70 | 28.7 | 0.0 | 3.2 | 1.9 | 33.8 | 66.2 | 100.0 |
| 1982 | 45 | 20.2 | 15.8 | 3.2 | 0.3 | 39.5 | 60.5 | 100.0 |
| 1983 | 129 | 31.1 | 0.8 | 2.3 | 9.8 | 44.0 | 56.0 | 100.0 |
| 1984 | 124 | 34.0 | 0.7 | 1.2 | 4.7 | 40.5 | 59.5 | 100.0 |
| 1985 | 177 | 35.3 | 0.2 | 4.2 | 4.3 | 44.0 | 56.0 | 100.0 |
| 1986 | 110 | 43.2 | 0.2 | 6.2 | 3.8 | 53.4 | 46.6 | 100.0 |
| 1987 | 145 | 37.2 | 0.2 | 4.1 | 2.0 | 43.3 | 56.7 | 100.0 |
| 1988 | 145 | 25.5 | 1.0 | 6.0 | 4.6 | 37.1 | 62.9 | 100.0 |
| 1989 | 182 | 48.2 | 0.6 | 1.4 | 4.4 | 54.6 | 45.4 | 100.0 |
| 1990 | 168 | 42.8 | 1.0 | 3.8 | 5.3 | 53.0 | 47.0 | 100.0 |
| 1991 | 47 | 17.0 | 0.7 | 12.9 | 0.9 | 31.5 | 68.5 | 100.0 |
| 1992 | 53 | 32.2 | 0.5 | 10.5 | 2.5 | 45.6 | 54.4 | 100.0 |
| 1993 | 169 | 38.5 | 0.5 | 5.8 | 1.2 | 45.9 | 54.1 | 100.0 |
| 1994 | 330 | 34.8 | 7.3 | 7.1 | 3.7 | 53.0 | 47.0 | 100.0 |
| 1995 | 82 | 32.2 | 0.6 | 7.9 | 3.2 | 43.9 | 56.1 | 100.0 |
| 1996 | 160 | 39.1 | 1.0 | 11.7 | 3.2 | 54.9 | 45.1 | 100.0 |
| 1997 | 43 | 12.4 | 0.5 | 0.0 | 6.6 | 19.6 | 80.4 | 100.0 |
| 1998 | 157 | 30.9 | 1.2 | 3.0 | 3.8 | 39.0 | 61.0 | 100.0 |
| 1999 | 160 | 33.8 | 0.3 | 4.0 | 2.9 | 41.1 | 58.9 | 100.0 |
| 2000 | 103 | 23.5 | 0.6 | 2.4 | 3.0 | 29.5 | 70.5 | 100.0 |
| 2001 | 149 | 30.9 | 0.7 | 2.9 | 3.9 | 38.5 | 61.5 | 100.0 |
| 2002 | 125 | 18.0 | 0.5 | 4.8 | 3.2 | 26.5 | 73.5 | 100.0 |
| 2003 | 97 | 23.3 | 0.4 | 6.5 | 5.0 | 35.3 | 64.7 | 100.0 |
| 2004 | 62 | 26.6 | 6.3 | 9.5 | 2.0 | 44.4 | 55.6 | 100.0 |
| 2005 | 66 | 33.0 | 0.0 | 0.8 | 4.3 | 38.1 | 61.9 | 100.0 |
| 2006 | 80 | 22.3 | 0.0 | 8.8 | 3.0 | 34.0 | 66.0 | 100.0 |
| 2007 | 47 | 25.0 | 1.1 | 5.6 | 2.6 | 34.3 | 65.7 | 100.0 |
| 2008 | 105 | 29.9 | 0.0 | 7.8 | 0.9 | 38.6 | 61.4 | 100.0 |
| 2009 | 75 | 30.2 | 0.0 | 7.8 | 1.3 | 39.3 | 60.7 | 100.0 |
| 2010 | 86 | 25.3 | 0.0 | 17.5 | 2.9 | 45.6 | 54.4 | 100.0 |
| 2011 | 79 | 17.3 | 3.9 | 11.7 | 2.0 | 34.9 | 65.1 | 100.0 |
| 2012 | 65 | 19.7 | 0.4 | 0.6 | 1.6 | 22.3 | 77.7 | 100.0 |
| 2013 | 128 | 32.1 | 2.2 | 5.5 | 2.1 | 41.9 | 58.1 | 100.0 |
| 2014 | 86 | 13.8 | 0.0 | 5.6 | 1.1 | 20.4 | 79.6 | 100.0 |
| 2015 | 44 | 20.3 | 0.3 | 2.0 | 2.5 | 25.1 | 74.9 | 100.0 |
| 2016 | 22 | 7.3 | 0.0 | 17.9 | 0.0 | 25.3 | 74.7 | 100.0 |
| Average |  | 27.8 | 1.3 | 5.9 | 3.1 | 38.1 | 61.9 | 100.0 |

Table 18.–Estimated harvest (by gear type) and escapement as a percent of the total Berners River coho salmon run based on the unadjusted escapement survey count, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Percent of Total Run | | | |  |  |
|  | Sample |  |  | Drift |  | B.C. | Cost | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Net | Recovery | Catch | Escapement | Run |
| 1974 | 157 | 50.1 | 2.2 | 25.1 | 0.0 | 0.0 | 0.0 | 77.4 | 22.6 | 100.0 |
| 1978 | 124 | 49.8 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 78.4 | 21.6 | 100.0 |
| 1979 | 84 | 46.0 | 3.9 | 16.7 | 0.9 | 0.0 | 0.0 | 67.5 | 32.5 | 100.0 |
| 1982 | 52 | 43.4 | 0.0 | 33.6 | 0.0 | 0.0 | 0.0 | 77.0 | 23.0 | 100.0 |
| 1983 | 125 | 49.9 | 0.0 | 20.3 | 1.2 | 0.0 | 0.0 | 71.4 | 28.6 | 100.0 |
| 1984 | - | - | - | - | - | - | - | - | - | - |
| 1985 | 93 | 44.6 | 1.2 | 28.8 | 0.0 | 0.0 | 0.0 | 74.7 | 25.3 | 100.0 |
| 1986 | 159 | 54.9 | 0.0 | 35.7 | 2.3 | 0.0 | 0.0 | 92.9 | 7.1 | 100.0 |
| 1987 | 52 | 51.7 | 0.0 | 23.8 | 1.2 | 0.0 | 0.0 | 76.6 | 23.4 | 100.0 |
| 1988 | 102 | 40.0 | 1.1 | 40.9 | 0.0 | 0.0 | 0.0 | 82.0 | 18.0 | 100.0 |
| 1989 | 58 | 53.6 | 0.0 | 8.4 | 0.0 | 0.0 | 0.0 | 62.0 | 38.0 | 100.0 |
| 1990 | 471 | 44.2 | 0.5 | 21.6 | 1.1 | 0.0 | 0.0 | 67.5 | 32.5 | 100.0 |
| 1991 | 1,025 | 18.4 | 0.8 | 47.6 | 0.2 | 0.0 | 0.0 | 67.0 | 33.0 | 100.0 |
| 1992 | 701 | 33.3 | 1.1 | 31.9 | 0.4 | 0.0 | 0.0 | 66.7 | 33.3 | 100.0 |
| 1993 | 1,498 | 38.9 | 0.3 | 28.8 | 0.4 | 0.0 | 0.0 | 68.4 | 31.6 | 100.0 |
| 1994 | 2,644 | 37.3 | 1.9 | 38.0 | 1.1 | 0.0 | 0.0 | 78.3 | 21.7 | 100.0 |
| 1995 | 1,383 | 30.4 | 0.1 | 51.6 | 0.7 | 0.0 | 0.0 | 82.8 | 17.2 | 100.0 |
| 1996 | 601 | 44.5 | 1.0 | 27.2 | 1.7 | 0.0 | 0.0 | 74.4 | 25.6 | 100.0 |
| 1997 | 312 | 16.0 | 1.5 | 14.7 | 1.8 | 0.0 | 0.1 | 34.2 | 65.8 | 100.0 |
| 1998 | 613 | 45.1 | 1.7 | 22.6 | 1.3 | 0.0 | 0.0 | 70.6 | 29.4 | 100.0 |
| 1999 | 948 | 38.8 | 0.6 | 28.9 | 1.7 | 0.0 | 0.0 | 70.1 | 29.9 | 100.0 |
| 2000 | 692 | 22.4 | 0.8 | 24.8 | 2.3 | 0.0 | 0.0 | 50.4 | 49.6 | 100.0 |
| 2001 | 747 | 27.4 | 0.6 | 11.0 | 1.1 | 0.0 | 0.0 | 40.0 | 60.0 | 100.0 |
| 2002 | 787 | 17.4 | 0.6 | 24.2 | 2.2 | 0.0 | 0.0 | 44.4 | 55.6 | 100.0 |
| 2003 | 1,328 | 23.4 | 0.9 | 39.1 | 1.9 | 0.0 | 0.0 | 65.3 | 34.7 | 100.0 |
| 2004 | 756 | 32.5 | 0.3 | 22.2 | 1.5 | 0.0 | 0.0 | 56.4 | 43.6 | 100.0 |
| 2005 | 392 | 36.4 | 1.0 | 20.0 | 1.8 | 0.0 | 0.0 | 59.1 | 40.9 | 100.0 |
| 2006 | 701 | 25.8 | 0.0 | 38.9 | 0.7 | 0.0 | 0.0 | 65.4 | 34.6 | 100.0 |
| 2007 | 293 | 33.7 | 0.5 | 19.1 | 1.8 | 0.0 | 0.0 | 55.1 | 44.9 | 100.0 |
| 2008 | 423 | 27.0 | 0.0 | 24.1 | 1.0 | 0.0 | 0.0 | 52.2 | 47.8 | 100.0 |
| 2009 | 201 | 30.1 | 0.7 | 21.9 | 1.9 | 0.0 | 0.0 | 54.6 | 45.4 | 100.0 |
| 2010 | 324 | 29.6 | 0.5 | 33.3 | 2.2 | 0.0 | 0.0 | 65.5 | 34.5 | 100.0 |
| 2011 | 174 | 30.9 | 2.1 | 15.8 | 0.9 | 0.0 | 0.0 | 49.7 | 50.3 | 100.0 |
| 2012 | 159 | 24.3 | 0.0 | 10.9 | 0.6 | 0.0 | 0.0 | 35.8 | 64.2 | 100.0 |
| 2013 | 374 | 35.7 | 1.8 | 29.9 | 2.9 | 0.0 | 0.0 | 70.2 | 29.8 | 100.0 |
| 2014 | 287 | 16.1 | 0.0 | 23.4 | 2.3 | 0.0 | 0.0 | 41.9 | 58.1 | 100.0 |
| 2015 | 306 | 22.6 | 0.8 | 11.9 | 1.1 | 0.0 | 0.0 | 36.5 | 63.5 | 100.0 |
| 2016 | 173 | 9.2 | 0.1 | 22.1 | 0.9 | 0.0 | 0.0 | 32.3 | 67.7 | 100.0 |
| Average | | 34.5 | 0.8 | 26.1 | 1.2 | 0.0 | 0.0 | 62.6 | 37.4 | 100.0 |

Table 18b.–Estimated harvest (by gear type) and escapement as a percent of the total Berners River coho salmon run based on the expanded escapement survey count, 1989–2016.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Percent of Total Run | | | |  |  |
|  | Sample |  |  | Drift |  | B.C. | Cost | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Net | Recovery | Catch | Escapement | Run |
| 1989 | 58 | 49.1 | 0.0 | 7.7 | 0.0 | 0.0 | 0.0 | 56.8 | 43.2 | 100.0 |
| 1990 | 471 | 41.0 | 0.5 | 20.1 | 1.0 | 0.0 | 0.0 | 62.6 | 37.4 | 100.0 |
| 1991 | 1,025 | 17.1 | 0.8 | 44.1 | 0.2 | 0.0 | 0.0 | 62.1 | 37.9 | 100.0 |
| 1992 | 701 | 30.8 | 1.0 | 29.5 | 0.4 | 0.0 | 0.0 | 61.8 | 38.2 | 100.0 |
| 1993 | 1,498 | 36.2 | 0.3 | 26.8 | 0.3 | 0.0 | 0.0 | 63.6 | 36.4 | 100.0 |
| 1994 | 2,644 | 35.4 | 1.8 | 36.1 | 1.0 | 0.0 | 0.0 | 74.4 | 25.6 | 100.0 |
| 1995 | 1,383 | 29.2 | 0.1 | 49.6 | 0.7 | 0.0 | 0.0 | 79.5 | 20.5 | 100.0 |
| 1996 | 601 | 41.9 | 0.9 | 25.6 | 1.6 | 0.0 | 0.0 | 70.1 | 29.9 | 100.0 |
| 1997 | 312 | 13.9 | 1.3 | 12.7 | 1.6 | 0.0 | 0.1 | 29.6 | 70.4 | 100.0 |
| 1998 | 613 | 42.1 | 1.6 | 21.1 | 1.2 | 0.0 | 0.0 | 65.9 | 34.1 | 100.0 |
| 1999 | 948 | 36.2 | 0.6 | 26.9 | 1.6 | 0.0 | 0.0 | 65.4 | 34.6 | 100.0 |
| 2000 | 692 | 20.0 | 0.7 | 22.2 | 2.1 | 0.0 | 0.0 | 45.0 | 55.0 | 100.0 |
| 2001 | 747 | 23.9 | 0.5 | 9.6 | 0.9 | 0.0 | 0.0 | 34.9 | 65.1 | 100.0 |
| 2002 | 787 | 15.3 | 0.6 | 21.4 | 1.9 | 0.0 | 0.0 | 39.1 | 60.9 | 100.0 |
| 2003 | 1,328 | 21.6 | 0.8 | 36.1 | 1.7 | 0.0 | 0.0 | 60.2 | 39.8 | 100.0 |
| 2004 | 756 | 29.4 | 0.2 | 20.1 | 1.4 | 0.0 | 0.0 | 51.1 | 48.9 | 100.0 |
| 2005 | 392 | 33.1 | 0.9 | 18.2 | 1.7 | 0.0 | 0.0 | 53.8 | 46.2 | 100.0 |
| 2006 | 701 | 23.8 | 0.0 | 35.9 | 0.6 | 0.0 | 0.0 | 60.4 | 39.6 | 100.0 |
| 2007 | 293 | 30.4 | 0.4 | 17.3 | 1.7 | 0.0 | 0.0 | 49.7 | 50.3 | 100.0 |
| 2008 | 423 | 24.2 | 0.0 | 21.7 | 0.9 | 0.0 | 0.0 | 46.8 | 53.2 | 100.0 |
| 2009 | 201 | 27.2 | 0.6 | 19.7 | 1.7 | 0.0 | 0.0 | 49.2 | 50.8 | 100.0 |
| 2010 | 324 | 27.3 | 0.5 | 30.7 | 2.0 | 0.0 | 0.0 | 60.5 | 39.5 | 100.0 |
| 2011 | 174 | 27.6 | 1.9 | 14.1 | 0.8 | 0.0 | 0.0 | 44.3 | 55.7 | 100.0 |
| 2012 | 159 | 21.0 | 0.0 | 9.4 | 0.5 | 0.0 | 0.0 | 31.0 | 69.0 | 100.0 |
| 2013 | 787 | 33.3 | 1.6 | 27.8 | 2.7 | 0.0 | 0.0 | 65.5 | 34.5 | 100.0 |
| 2014 | 1,328 | 14.2 | 0.0 | 20.5 | 2.1 | 0.0 | 0.0 | 36.8 | 63.2 | 100.0 |
| 2015 | 756 | 19.6 | 0.7 | 10.4 | 1.0 | 0.0 | 0.0 | 31.6 | 68.4 | 100.0 |
| 2016 | 392 | 7.9 | 0.1 | 19.0 | 0.8 | 0.0 | 0.0 | 27.8 | 72.2 | 100.0 |
| Average | | 27.6 | 0.7 | 23.4 | 1.2 | 0.0 | 0.0 | 52.8 | 47.2 | 100.0 |

Table 19.–Estimated harvest (by gear type) and escapement as a percent of the total Ford Arm Creek coho salmon run, 1982–2015.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  | Percent of Run | |  |  |  |
|  | Sample |  |  | Drift |  | Canadian | Total |  | Total |
| Year | Size | Troll | Seine | Gillnet | Sport | Troll | Catch | Escapement | Run |
| 1982 | 38 | 41.1 | 2.3 | 0.0 | 0.0 | 0.0 | 43.4 | 56.6 | 100.0 |
| 1983 | 93 | 54.0 | 14.7 | 0.0 | 0.0 | 0.0 | 68.8 | 31.2 | 100.0 |
| 1984 | - | - | - | - | - | - | - | - | - |
| 1985 | 49 | 51.6 | 0.0 | 0.0 | 0.0 | 0.0 | 51.6 | 48.4 | 100.0 |
| 1986 | 87 | 60.6 | 1.5 | 0.0 | 0.0 | 0.0 | 62.1 | 37.9 | 100.0 |
| 1987 | 71 | 45.1 | 2.5 | 0.0 | 0.0 | 0.0 | 47.6 | 52.4 | 100.0 |
| 1988 | 151 | 46.8 | 0.8 | 0.0 | 0.0 | 0.5 | 48.1 | 51.9 | 100.0 |
| 1989 | 221 | 61.7 | 3.0 | 0.0 | 0.0 | 0.0 | 64.7 | 35.3 | 100.0 |
| 1990 | 174 | 56.5 | 1.9 | 0.0 | 0.0 | 0.0 | 58.4 | 41.6 | 100.0 |
| 1991 | 193 | 53.2 | 0.7 | 0.2 | 0.0 | 0.0 | 54.1 | 45.9 | 100.0 |
| 1992 | 199 | 56.2 | 2.5 | 0.0 | 0.0 | 0.0 | 58.7 | 41.3 | 100.0 |
| 1993 | 349 | 61.7 | 3.5 | 0.0 | 1.4 | 0.0 | 66.5 | 33.5 | 100.0 |
| 1994 | 236 | 59.7 | 8.9 | 0.0 | 3.3 | 0.0 | 71.9 | 28.1 | 100.0 |
| 1995 | 91 | 52.8 | 11.2 | 0.0 | 0.0 | 0.0 | 64.0 | 36.0 | 100.0 |
| 1996 | 64 | 52.6 | 0.0 | 0.0 | 4.8 | 0.0 | 57.4 | 42.6 | 100.0 |
| 1997 | 241 | 48.1 | 0.0 | 0.0 | 3.6 | 0.0 | 51.7 | 48.3 | 100.0 |
| 1998 | 315 | 48.6 | 2.7 | 0.1 | 4.9 | 0.0 | 56.3 | 43.7 | 100.0 |
| 1999 | 145 | 57.8 | 0.6 | 0.0 | 4.3 | 0.0 | 62.7 | 37.3 | 100.0 |
| 2000 | 193 | 57.2 | 11.4 | 0.2 | 2.6 | 0.0 | 71.4 | 28.6 | 100.0 |
| 2001 | 131 | 67.5 | 1.3 | 0.0 | 5.6 | 0.0 | 74.4 | 25.6 | 100.0 |
| 2002 | 246 | 38.0 | 8.3 | 0.0 | 6.6 | 0.0 | 53.0 | 47.0 | 100.0 |
| 2003 | 225 | 31.4 | 3.8 | 0.0 | 13.4 | 0.0 | 48.6 | 51.4 | 100.0 |
| 2004 | 153 | 63.8 | 4.3 | 0.0 | 2.6 | 0.0 | 70.8 | 29.2 | 100.0 |
| 2005 | 81 | 50.7 | 0.6 | 0.0 | 6.6 | 0.0 | 57.9 | 42.1 | 100.0 |
| 2006 | 137 | 39.4 | 3.7 | 0.0 | 8.6 | 0.0 | 51.7 | 48.3 | 100.0 |
| 2007 | 188 | 65.5 | 2.5 | 0.1 | 2.3 | 0.0 | 70.4 | 29.6 | 100.0 |
| 2008 | 231 | 41.3 | 9.5 | 0.0 | 2.5 | 0.0 | 53.2 | 46.8 | 100.0 |
| 2009 | 156 | 64.6 | 3.5 | 0.0 | 1.3 | 0.0 | 69.4 | 30.6 | 100.0 |
| 2010 | 96 | 48.0 | 13.0 | 0.0 | 3.0 | 0.0 | 64.0 | 36.0 | 100.0 |
| 2011 | 52 | 24.1 | 57.6 | 0.0 | 0.7 | 0.0 | 82.4 | 17.6 | 100.0 |
| 2012 | 117 | 46.4 | 14.5 | 0.0 | 2.4 | 0.0 | 63.3 | 36.7 | 100.0 |
| 2013 | 122 | 46.9 | 28.3 | 0.0 | 3.3 | 0.0 | 78.5 | 21.5 | 100.0 |
| 2014 | 103 | 45.8 | 22.3 | 0.0 | 3.8 | 0.0 | 71.9 | 28.1 | 100.0 |
| 2015 | 71 | 44.9 | 5.5 | 0.0 | 1.7 | 0.0 | 52.2 | 47.8 | 100.0 |
| Average |  | 51.0 | 7.5 | 0.0 | 2.7 | 0.0 | 61.2 | 38.8 | 100.0 |

Table 20.–Estimated harvest (by gear type) and escapement as a percent of the total Hugh Smith Lake coho salmon run, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fishery |  |  |  |  | Percent of Run | | |  |  |  |  | |
|  | Sample | Alaska | Alaska | Alaska | Alaska | Alaska | B.C. | B.C. | B.C. | Total |  | | Total |
| Year | Size | Troll | Seine | Gillnet | Trap | Sport | Troll | Net | Sport | Catch | Escapement | | Return |
| 1982 | 91 | 45.0 | 10.2 | 3.3 | 0.0 | 0.0 | 5.2 | 1.4 | 0.0 | 65.0 | 35.0 | | 100.0 |
| 1983 | 185 | 35.5 | 10.9 | 7.1 | 1.3 | 0.0 | 5.5 | 1.3 | 0.0 | 61.6 | 38.4 | | 100.0 |
| 1984 | 151 | 31.5 | 12.5 | 11.7 | 0.5 | 0.0 | 8.2 | 0.7 | 0.0 | 65.0 | 35.0 | | 100.0 |
| 1985 | 213 | 35.6 | 11.8 | 5.6 | 0.2 | 0.0 | 8.2 | 1.6 | 0.0 | 63.0 | 37.0 | | 100.0 |
| 1986 | 256 | 36.6 | 11.3 | 4.9 | 0.0 | 0.4 | 5.4 | 0.7 | 0.0 | 59.2 | 40.8 | | 100.0 |
| 1987 | 99 | 29.3 | 3.6 | 6.6 | 0.2 | 1.3 | 6.9 | 2.4 | 0.0 | 50.2 | 49.8 | | 100.0 |
| 1988 | 41 | 27.6 | 14.0 | 5.3 | 0.0 | 0.0 | 16.4 | 1.8 | 0.0 | 65.2 | 34.8 | | 100.0 |
| 1989 | 91 | 50.6 | 13.3 | 10.3 | 0.0 | 2.6 | 4.4 | 0.8 | 0.0 | 82.0 | 18.0 | | 100.0 |
| 1990 | 263 | 37.6 | 11.8 | 13.3 | 0.5 | 0.0 | 17.5 | 1.1 | 0.0 | 81.9 | 18.1 | | 100.0 |
| 1991 | 399 | 36.5 | 3.3 | 16.3 | 0.0 | 0.7 | 10.6 | 0.8 | 0.0 | 68.2 | 31.8 | | 100.0 |
| 1992 | 497 | 37.9 | 13.8 | 12.3 | 0.0 | 0.8 | 5.9 | 0.2 | 0.0 | 70.9 | 29.1 | | 100.0 |
| 1993 | 155 | 52.5 | 6.3 | 15.7 | 0.0 | 0.0 | 4.9 | 1.0 | 0.0 | 80.4 | 19.6 | | 100.0 |
| 1994 | 838 | 45.8 | 11.9 | 15.3 | 0.0 | 0.5 | 7.3 | 0.6 | 0.1 | 81.5 | 18.5 | | 100.0 |
| 1995 | 432 | 30.1 | 14.1 | 23.7 | 0.0 | 1.5 | 3.5 | 0.4 | 0.2 | 73.5 | 26.5 | | 100.0 |
| 1996 | 502 | 40.2 | 15.8 | 12.3 | 0.0 | 3.2 | 3.2 | 1.0 | 0.4 | 75.9 | 24.1 | | 100.0 |
| 1997 | 480 | 49.0 | 4.0 | 14.7 | 0.0 | 1.7 | 3.4 | 0.0 | 0.0 | 72.8 | 27.2 | | 100.0 |
| 1998 | 668 | 40.5 | 10.8 | 22.4 | 0.0 | 3.4 | 0.0 | 0.0 | 0.3 | 77.5 | 22.5 | | 100.0 |
| 1999 | 623 | 41.6 | 6.7 | 17.2 | 0.0 | 4.3 | 0.0 | 0.0 | 0.7 | 70.5 | 29.5 | | 100.0 |
| 2000 | 161 | 36.3 | 3.4 | 8.6 | 0.0 | 7.2 | 0.0 | 0.0 | 0.0 | 55.4 | 44.6 | | 100.0 |
| 2001 | 314 | 22.3 | 14.6 | 10.4 | 0.0 | 1.9 | 0.2 | 0.0 | 0.0 | 49.3 | 50.7 | | 100.0 |
| 2002 | 434 | 16.5 | 8.3 | 10.3 | 0.0 | 1.7 | 1.2 | 0.0 | 1.1 | 39.1 | 60.9 | | 100.0 |
| 2003 | 335 | 24.3 | 9.6 | 18.8 | 0.0 | 2.9 | 2.5 | 0.8 | 0.0 | 58.9 | 41.1 | | 100.0 |
| 2004 | 244 | 40.8 | 7.9 | 9.7 | 0.0 | 2.4 | 1.9 | 0.8 | 2.8 | 66.3 | 33.7 | | 100.0 |
| 2005 | 256 | 31.8 | 3.4 | 14.6 | 0.0 | 1.6 | 1.0 | 0.2 | 0.0 | 52.6 | 47.4 | | 100.0 |
| 2006 | 169 | 36.5 | 3.3 | 8.8 | 0.0 | 0.4 | 1.8 | 0.0 | 3.0 | 53.7 | 46.3 | | 100.0 |
| 2007 | 294 | 38.1 | 5.3 | 9.1 | 0.0 | 2.2 | 1.7 | 0.3 | 5.6 | 62.4 | 37.6 | | 100.0 |
| 2008 | 302 | 19.0 | 6.5 | 20.6 | 0.0 | 0.9 | 1.6 | 0.3 | 5.1 | 53.9 | 46.1 | | 100.0 |
| 2009 | 253 | 23.9 | 6.1 | 11.0 | 0.0 | 0.4 | 6.0 | 0.0 | 0.4 | 48.0 | 52.0 | | 100.0 |
| 2010 | 632 | 22.2 | 5.3 | 12.8 | 0.0 | 0.7 | 4.0 | 0.0 | 1.9 | 46.9 | 53.1 | | 100.0 |
| 2011 | 376 | 19.8 | 3.8 | 10.6 | 0.0 | 0.6 | 4.8 | 0.1 | 6.1 | 45.7 | 54.3 | | 100.0 |
| 2012 | 542 | 19.7 | 8.4 | 16.9 | 0.0 | 1.0 | 4.1 | 0.0 | 4.2 | 54.2 | 45.8 | | 100.0 |
| 2013 | 552 | 25.4 | 11.1 | 11.5 | 0.0 | 1.6 | 4.1 | 0.5 | 1.8 | 55.9 | 44.1 | | 100.0 |
| 2014 | 566 | 24.3 | 5.2 | 10.4 | 0.0 | 1.6 | 2.8 | 0.0 | 2.4 | 46.7 | 53.3 | | 100.0 |
| 2015 | 203 | 24.1 | 5.7 | 13.9 | 0.0 | 1.2 | 5.2 | 0.3 | 0.6 | 51.1 | 48.9 | | 100.0 |
| 2016 | 123 | 31.1 | 6.1 | 17.4 | 0.0 | 3.6 | 1.6 | 0.0 | 1.7 | 61.6 | 38.4 | | 100.0 |
| Average | | 33.1 | 8.6 | 12.4 | 0.1 | 1.5 | 4.6 | 0.5 | 1.1 | 61.9 | 38.1 | | 100.0 |



Figure 20.–Estimated exploitation rates by the Alaska troll fishery for four coded-wire-tagged Southeast Alaska coho salmon stocks, 1982–2016. Weightings given to individual stocks in the index are 40% each for Auke Creek and Hugh Smith Lake, and 20% for Ford Arm Creek.



Figure 21.–Estimated total exploitation rates by all fisheries for 4 coded-wire-tagged Southeast Alaska coho salmon stocks, 1982–2016. Estimates are unavailable for the Berners River in 1982–1988 and for Ford Arm Creek in 1984 and 2016. Berners River estimates are based on expanded escapement survey counts.

Table .–Total coho smolt and presmolt production estimates for six wild coho salmon-producing systems in Southeast Alaska by age-.1 return year, 1980–2016, with preliminary estimates for 2017.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Auke | Berners | Chilkat | Taku | Hugh Smith | Ford Arm |
| Return | Creek | River | River | River | Lake | Creek |
| Year | Smolts | Smolts | Smolts | Smolts | Smolts | Pre-smolts |
| 1980 | 8,789 | - | - | - | - | - |
| 1981 | 10,714 | - | - | - | - | - |
| 1982 | 6,967 | - | - | - | - | 79,059 |
| 1983 | 6,849 | - | - | - | 29,117 | 63,686 |
| 1984 | 6,901 | - | - | - | 53,227 | - |
| 1985 | 6,838 | - | - | - | 32,283 | 38,509 |
| 1986 | 5,852 | - | - | - | 23,572 | 45,748 |
| 1987 | 5,617 | - | - | - | 21,878 | 70,322 |
| 1988 | 7,014 | - | - | - | 36,218 | 88,983 |
| 1989 | 7,685 | - | - | - | 27,904 | 51,658 |
| 1990 | 7,011 | 163,998 | - | - | 26,620 | 54,851 |
| 1991 | 5,137 | 141,291 | - | - | 33,101 | 56,284 |
| 1992 | 5,690 | 187,688 | - | 1,080,551 | 23,373 | 61,728 |
| 1993 | 6,596 | 326,312 | - | 1,510,032 | 32,657 | 57,401 |
| 1994 | 8,647 | 255,519 | - | 1,475,874 | 48,434 | 82,893 |
| 1995 | 7,495 | 181,503 | - | 1,525,330 | 49,516 | 134,640 |
| 1996 | 4,884 | 194,019 | - | 986,489 | 22,267 | 91,605 |
| 1997 | 3,934 | 133,629 | - | 759,763 | 32,294 | 66,772 |
| 1998 | 6,111 | 139,959 | - | 853,662 | 37,436 | 80,517 |
| 1999 | 7,420 | 252,168 | - | 1,184,195 | 29,875 | 132,655 |
| 2000 | 5,233 | 183,023 | 1,237,056 | 1,691,411 | 19,902 | 62,444 |
| 2001 | 4,969 | 268,777 | 1,185,804 | 1,811,038 | 23,327 | 102,610 |
| 2002 | 5,980 | 264,599 | 2,970,458 | 2,741,593 | 36,487 | 102,918 |
| 2003 | 3,616 | 148,513 | 1,696,212 | 2,737,851 | 26,841 | 77,081 |
| 2004 | 3,695 | 185,125 | 1,938,322 | 2,961,344 | 22,997 | 101,579 |
| 2005 | 4,549 | 144,778 | 776,934 | 3,755,274 | 39,924 | 120,632 |
| 2006 | 4,287 | 124,070 | 1,807,837 | 2,149,673 | 28,184 | 98,470 |
| 2007 | 4,515 | 114,648 | 875,478 | 3,035,547 | 37,267 | 84,017 |
| 2008 | 4,053 | 89,169 | 893,032 | 2,021,243 | 28,793 | 72,315 |
| 2009 | 3,815 | 102,318 | 716,689 | 2,803,021 | 24,006 | 96,180 |
| 2010 | 4,667 | 160,627 | 872,829 | 2,270,500 | 25,813 | 64,349 |
| 2011 | 6,053 | 130,727 | 1,026,314 | 1,526,065 | 37,742 | 86,994 |
| 2012 | 10,333 | 112,305 | 1,229,468 | 1,463,444 | 32,482 | 86,174 |
| 2013 | 6,143 | 151,016 | 788,387 | 1,338,435 | 41,093 | 99,144 |
| 2014 | 9,575 | 232,019 | 875,312 | 1,155,192 | 47,247 | 149,090 |
| 2015 | 5,793 | 172,588 | 639,750 | 670,139 | 33,860 | 104,490 |
| 2016 | 6,418 | 181,735 | 688,274 | 1,874,546 | 38,808 | - |
| 2017 | 9,320 | 308,612a | - | - | 33,756a | - |
| Average | 6,212 | 175,634 | 1,189,303 | 1,815,288 | 32,487 | 83,812 |

a  2017 estimates for the Berners River and Hugh Smith Lake are preliminary predictions based on mark-recovery samples from downstream smolt traps and jack returns, respectively.



Figure .–Auke Creek coho salmon smolt production by sea-entry year, with 9 pt LOESS trend, showing timing of constuction of a handy-capped accessible trail around the perimeter of Auke Lake.



Figure 8.–Berners River coho salmon smolt estimates (with 95% confidence bounds) and total July-November precipitation at the Juneau Airport in the prior year, 1989–2016. The 2016 estimate is a preliminary projection based on a downstream recapture sample.

Table .–Estimated survival rate (percent) of coho salmon smolts and presmolts from six wild Southeast Alaska indicator stocks from the time of tagging until return to the fisheries, 1980–2016.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Auke | Berners | Chilkat | Taku | Hugh Smith | Ford Arm |
| Return | Creek | River | River | River | Lake | Creek |
| Year | Smolts | Smolts | Smolts | Smolts | Smolts | Pre-smolts |
| 1980 | 9.9 | - | - | - | - | - |
| 1981 | 9.1 | - | - | - | - | - |
| 1982 | 10.6 | - | - | - | - | 5.9 |
| 1983 | 18.1 | - | - | - | 13.3 | 9.7 |
| 1984 | 15.9 | - | - | - | 7.6 | - |
| 1985 | 24.6 | - | - | - | 7.6 | 12.5 |
| 1986 | 16.6 | - | - | - | 18.5 | 9.0 |
| 1987 | 21.0 | - | - | - | 10.3 | 4.6 |
| 1988 | 17.1 | - | - | - | 4.1 | 6.8 |
| 1989 | 14.4 | - | - | - | 8.6 | 11.9 |
| 1990 | 21.1 | 22.3 | - | - | 18.0 | 9.6 |
| 1991 | 23.0 | 26.7 | - | - | 17.4 | 10.7 |
| 1992 | 33.0 | 26.5 | - | 19.7 | 20.9 | 15.1 |
| 1993 | 24.1 | 16.4 | - | 16.5 | 13.0 | 21.9 |
| 1994 | 35.3 | 30.2 | - | 23.0 | 19.5 | 13.9 |
| 1995 | 10.9 | 16.5 | - | 11.9 | 13.5 | 5.0 |
| 1996 | 23.4 | 12.9 | - | 9.6 | 17.7 | 6.4 |
| 1997 | 19.2 | 13.3 | - | 6.7 | 8.3 | 14.6 |
| 1998 | 23.1 | 17.7 | - | 14.0 | 11.7 | 20.0 |
| 1999 | 19.3 | 14.1 | - | 9.9 | 14.1 | 7.7 |
| 2000 | 18.5 | 13.1 | 10.1 | 6.5 | 6.8 | 12.9 |
| 2001 | 28.3 | 13.7 | 13.1 | 9.0 | 13.4 | 8.4 |
| 2002 | 26.8 | 21.4 | 11.4 | 11.1 | 14.8 | 14.7 |
| 2003 | 25.0 | 21.2 | 12.9 | 9.7 | 13.7 | 17.1 |
| 2004 | 20.2 | 19.8 | 10.1 | 8.5 | 10.8 | 11.9 |
| 2005 | 16.0 | 9.7 | 8.4 | 5.9 | 9.1 | 8.4 |
| 2006 | 20.5 | 13.8 | 8.0 | 10.5 | 6.8 | 10.0 |
| 2007 | 11.9 | 8.4 | 4.4 | 4.4 | 8.9 | 10.3 |
| 2008 | 24.1 | 18.0 | 12.1 | 8.6 | 13.1 | 15.3 |
| 2009 | 15.5 | 10.1 | 10.9 | 8.0 | 18.3 | 7.4 |
| 2010 | 16.4 | 14.7 | 17.7 | 10.9 | 21.0 | 6.9 |
| 2011 | 13.1 | 10.3 | 9.5 | 8.5 | 10.4 | 12.5 |
| 2012 | 10.3 | 8.8 | 5.3 | 7.7 | 12.8 | 7.2 |
| 2013 | 20.8 | 15.0 | 15.4 | 10.7 | 16.7 | 7.2 |
| 2014 | 20.1 | 10.1 | 17.9 | 16.4 | 16.3 | 7.2 |
| 2015 | 12.0 | 8.2 | 11.2 | 15.5 | 5.7 | 6.6 |
| 2016 | 4.1 | 6.4 | 5.8 | 6.7 | 6.4 | - |
| Average | 18.7 | 15.5 | 10.8 | 10.8 | 12.6 | 10.6 |



Figure 9.–Estimated marine (smolt-to-adult) survival rate for wild coho salmon from three systems in inside areas of Southeast Alaska (upper graph) and presmolts from one system on the outer coast of Southeast Alaska (lower graph), 1980-2016, with a 2017 forecast for Auke Creek (with 95% prediction interval). Survival estimates for Ford Arm Lake presmolts include approximately 10 months of mortality from July to May.



Figure .­–Relationship between the rate of return of Auke Creek coho salmon as jacks versus as adults (left graph) and the linear log-log relationship between the relationship between average age-0 jack length and the jack proportion of combined jack and adult return by sea-entry year (right graph), 1980–2015 sea-entry years. Percent of smolts returning as jacks and average jack length are shown for 2016 with the point forecast for the proportion of smolts returning as jacks. Forecast survival of 2016 smolts to adult return is 5.1% (95% prediction interval 1.6–11.8%).



Figure.–Smolt-adult survival of Auke Creek coho salmon and average fork length on July 24 of juvenile coho salmon caught in NOAA trawl surveys in northern Southeast Alaska, by sea-entry year (average length data provided by Emily Fergusson, National Marine Fisheries Service, Juneau). The marine Survival for the 2016 sea-entry year is a preliminary estimate (with 95% prediction interval) based on the return rate of Auke Creek smolts as jacks, and average length of jacks.

Table 16.–Estimates of wild and hatchery commercial catch and troll catch, troll exploitation rate index, mean-average power troll wild coho CPUE, total troll effort, and total wild coho salmon abundance available in the Alaska troll fishery, in millions of fish, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Alaska Troll | Estimated | Mean-Avg. | Troll Effort |  |  |  |
|  | Troll Catch (Millions of Fish) | | | Exploitation | Total Wild | Power Troll | (Power Troll | Commercial Catch (Millions of Fish) | | |
| Year | Total | Hatchery | Wild | Rate Indexa | Abundance | Wild CPUEb | Boat-Days)c | Total | Hatchery | Wild |
| 1982 | 1.322 | 0.036 | 1.286 | 34.3% | 3.752 | 47.4 | 67,039 | 2.103 | 0.062 | 2.041 |
| 1983 | 1.280 | 0.053 | 1.227 | 37.4% | 3.280 | 44.1 | 50,376 | 1.943 | 0.075 | 1.868 |
| 1984 | 1.134 | 0.071 | 1.062 | 37.0% | 2.868 | 38.7 | 50,502 | 1.881 | 0.121 | 1.760 |
| 1985 | 1.606 | 0.107 | 1.500 | 38.7% | 3.878 | 42.4 | 54,905 | 2.562 | 0.177 | 2.385 |
| 1986 | 2.130 | 0.280 | 1.850 | 44.0% | 4.200 | 47.7 | 61,356 | 3.259 | 0.394 | 2.865 |
| 1987 | 1.042 | 0.091 | 0.951 | 35.6% | 2.671 | 25.6 | 52,908 | 1.487 | 0.112 | 1.374 |
| 1988 | 0.500 | 0.028 | 0.472 | 30.6% | 1.544 | 21.5 | 38,866 | 1.036 | 0.049 | 0.987 |
| 1989 | 1.370 | 0.122 | 1.248 | 51.9% | 2.408 | 54.3 | 48,228 | 2.182 | 0.175 | 2.007 |
| 1990 | 1.851 | 0.292 | 1.560 | 43.5% | 3.586 | 43.9 | 48,291 | 2.740 | 0.413 | 2.327 |
| 1991 | 1.721 | 0.384 | 1.337 | 32.0% | 4.175 | 48.7 | 42,598 | 2.897 | 0.608 | 2.289 |
| 1992 | 1.929 | 0.420 | 1.509 | 39.3% | 3.845 | 51.1 | 45,478 | 3.424 | 0.739 | 2.685 |
| 1993 | 2.408 | 0.394 | 2.014 | 48.7% | 4.134 | 64.5 | 46,527 | 3.556 | 0.544 | 3.012 |
| 1994 | 3.462 | 0.515 | 2.947 | 44.2% | 6.669 | 89.1 | 51,912 | 5.520 | 0.732 | 4.788 |
| 1995 | 1.750 | 0.336 | 1.414 | 35.5% | 3.987 | 54.0 | 32,193 | 3.130 | 0.583 | 2.547 |
| 1996 | 1.907 | 0.449 | 1.458 | 42.2% | 3.453 | 57.0 | 29,779 | 2.986 | 0.626 | 2.360 |
| 1997 | 1.170 | 0.242 | 0.928 | 34.2% | 2.714 | 39.9 | 24,974 | 1.839 | 0.327 | 1.512 |
| 1998 | 1.636 | 0.329 | 1.307 | 38.3% | 3.413 | 57.8 | 26,150 | 2.751 | 0.547 | 2.204 |
| 1999 | 2.273 | 0.514 | 1.758 | 41.7% | 4.214 | 69.0 | 31,894 | 3.277 | 0.724 | 2.552 |
| 2000 | 1.125 | 0.249 | 0.876 | 35.4% | 2.476 | 43.8 | 22,557 | 1.688 | 0.354 | 1.334 |
| 2001 | 1.845 | 0.365 | 1.481 | 34.8% | 4.254 | 73.4 | 23,806 | 2.945 | 0.554 | 2.391 |
| 2002 | 1.315 | 0.335 | 0.980 | 21.4% | 4.578 | 63.7 | 20,394 | 2.487 | 0.605 | 1.882 |
| 2003 | 1.223 | 0.287 | 0.936 | 25.4% | 3.693 | 55.4 | 21,549 | 2.166 | 0.501 | 1.665 |
| 2004 | 1.917 | 0.312 | 1.605 | 39.7% | 4.040 | 76.7 | 26,776 | 2.858 | 0.451 | 2.407 |
| 2005 | 2.038 | 0.333 | 1.705 | 36.1% | 4.725 | 76.3 | 27,065 | 2.767 | 0.450 | 2.317 |
| 2006 | 1.363 | 0.217 | 1.146 | 31.4% | 3.653 | 55.6 | 25,862 | 1.841 | 0.266 | 1.575 |
| 2007 | 1.378 | 0.309 | 1.069 | 38.4% | 2.788 | 48.8 | 26,033 | 1.911 | 0.393 | 1.519 |
| 2008 | 1.293 | 0.274 | 1.019 | 27.8% | 3.668 | 49.0 | 24,799 | 2.040 | 0.396 | 1.644 |
| 2009 | 1.592 | 0.247 | 1.344 | 34.6% | 3.888 | 67.1 | 27,021 | 2.375 | 0.384 | 1.991 |
| 2010 | 1.343 | 0.285 | 1.058 | 28.6% | 3.695 | 50.3 | 31,157 | 2.286 | 0.470 | 1.815 |
| 2011 | 1.312 | 0.342 | 0.970 | 19.6% | 4.938 | 51.3 |  | 2.077 | 0.536 | 1.541 |
| 2012 | 1.201 | 0.310 | 0.891 | 25.3% | 3.526 | 45.6 |  | 1.883 | 0.443 | 1.440 |
| 2013 | 2.394 | 0.733 | 1.661 | 32.2% | 5.159 | 89.0 |  | 3.588 | 1.018 | 2.570 |
| 2014 | 2.245 | 0.620 | 1.625 | 24.3% | 6.692 | 79.5 |  | 3.361 | 0.912 | 2.449 |
| 2015 | 1.241 | 0.369 | 0.873 | 26.7% | 3.266 | 61.4 |  | 1.940 | 0.518 | 1.421 |
| 2016 | 1.387 | 0.338 | 1.049 | 22.8% | 4.606 | 52.9 |  | 2.098 | 0.449 | 1.649 |
| Total | 1.620 | 0.303 | 1.318 | 34.7% | 3.841 | 55.3 | 37,276 | 2.540 | 0.449 | 2.091 |

a Index of the exploitation rate on available wild coho salmon stocks by the Alaska troll fishery based on the following weightings: Auke Creek (40%), Hugh Smith Lake (40%), and Ford Arm Creek (20%).

b Average of estimates of wild coho salmon CPUE by power trollers during statistical weeks 28–38.

c Total troll effort in boat-days during statistical weeks 28-40, with hand troll effort converted to power troll equivalents.

Appendix A2.–Average and coefficient of variation (CV) of mid-eye to fork length ofmale and female adult age-.1 coho salmon returning to Auke Creek and the Berners River, 1980–2016.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Auke Creek (Males) | |  | Auke Creek (Females) | |  | Berners River (Males) | |  | Berners River (Females) | |
|  | Average |  |  | Average |  |  | Average |  |  | Average |  |
| Year | Length (mm) | CV |  | Length (mm) | CV |  | Length (mm) | CV |  | Length (mm) | CV |
| 1980 | 607 | 0.0888 |  | 613 | 0.0627 |  | - | - |  | - | - |
| 1981 | 633 | 0.0746 |  | 643 | 0.0560 |  | - | - |  | - | - |
| 1982 | 622 | 0.0720 |  | 624 | 0.0604 |  | 642 | 0.0901 |  | 660 | 0.0459 |
| 1983 | 617 | 0.0838 |  | 631 | 0.0610 |  | 628 | 0.1058 |  | 654 | 0.0533 |
| 1984 | 644 | 0.0712 |  | 649 | 0.0548 |  | - | - |  | - | - |
| 1985 | 644 | 0.0631 |  | 656 | 0.0499 |  | 647 | 0.0979 |  | 670 | 0.0539 |
| 1986 | 635 | 0.0932 |  | 629 | 0.0768 |  | 611 | 0.1298 |  | 656 | 0.0539 |
| 1987 | 628 | 0.0619 |  | 630 | 0.0436 |  | 633 | 0.0896 |  | 640 | 0.0641 |
| 1988 | 636 | 0.0757 |  | 630 | 0.0656 |  | 628 | 0.1016 |  | 660 | 0.0563 |
| 1989 | 609 | 0.0866 |  | 621 | 0.0604 |  | 640 | 0.0912 |  | 656 | 0.0503 |
| 1990 | 603 | 0.0848 |  | 615 | 0.0565 |  | 644 | 0.1060 |  | 659 | 0.0592 |
| 1991 | 595 | 0.0772 |  | 605 | 0.0551 |  | 605 | 0.1090 |  | 646 | 0.0526 |
| 1992 | 600 | 0.0889 |  | 617 | 0.0634 |  | 611 | 0.1142 |  | 640 | 0.0590 |
| 1993 | 602 | 0.0852 |  | 610 | 0.0612 |  | 591 | 0.1134 |  | 623 | 0.0603 |
| 1994 | 633 | 0.0811 |  | 645 | 0.0484 |  | 633 | 0.1044 |  | 656 | 0.0593 |
| 1995 | 608 | 0.0688 |  | 620 | 0.0671 |  | 585 | 0.1176 |  | 636 | 0.0678 |
| 1996 | 615 | 0.0682 |  | 628 | 0.0631 |  | 578 | 0.1421 |  | 630 | 0.0690 |
| 1997 | 616 | 0.0819 |  | 626 | 0.0654 |  | 635 | 0.0903 |  | 655 | 0.0548 |
| 1998 | 617 | 0.0839 |  | 639 | 0.0496 |  | 643 | 0.0978 |  | 666 | 0.0465 |
| 1999 | 581 | 0.0946 |  | 593 | 0.0618 |  | 588 | 0.1017 |  | 626 | 0.0515 |
| 2000 | 606 | 0.0880 |  | 614 | 0.0692 |  | 637 | 0.1008 |  | 659 | 0.0547 |
| 2001 | 603 | 0.0973 |  | 615 | 0.0726 |  | 618 | 0.1118 |  | 643 | 0.0725 |
| 2002 | 603 | 0.0922 |  | 620 | 0.0776 |  | 631 | 0.1084 |  | 647 | 0.0649 |
| 2003 | 613 | 0.0729 |  | 626 | 0.0580 |  | 603 | 0.1093 |  | 647 | 0.0568 |
| 2004 | 612 | 0.0732 |  | 625 | 0.0579 |  | 623 | 0.1105 |  | 657 | 0.0594 |
| 2005 | 591 | 0.0978 |  | 604 | 0.0723 |  | 579 | 0.1073 |  | 621 | 0.0603 |
| 2006 | 616 | 0.0740 |  | 615 | 0.0566 |  | 626 | 0.0949 |  | 654 | 0.0545 |
| 2007 | 595 | 0.0943 |  | 601 | 0.0781 |  | 551 | 0.1260 |  | 621 | 0.0742 |
| 2008 | 645 | 0.0711 |  | 653 | 0.0502 |  | 626 | 0.1189 |  | 656 | 0.0573 |
| 2009 | 595 | 0.0966 |  | 606 | 0.0825 |  | 574 | 0.1203 |  | 610 | 0.0769 |
| 2010 | 596 | 0.0964 |  | 617 | 0.0592 |  | 602 | 0.1069 |  | 650 | 0.0509 |
| 2011 | 589 | 0.0725 |  | 602 | 0.0625 |  | 564 | 0.1180 |  | 607 | 0.0630 |
| 2012 | 594 | 0.0710 |  | 600 | 0.0597 |  | 575 | 0.1149 |  | 618 | 0.0618 |
| 2013 | 606 | 0.0887 |  | 606 | 0.0567 |  | 578 | 0.1192 |  | 604 | 0.0669 |
| 2014 | 617 | 0.0769 |  | 616 | 0.0660 |  | 604 | 0.1066 |  | 633 | 0.0618 |
| 2015 | 593 | 0.0620 |  | 607 | 0.0567 |  | 600 | 0.0861 |  | 622 | 0.0553 |
| 2016 | 604 | 0.0795 |  | 609 | 0.0490 |  | 622 | 0.0900 |  | 656 | 0.0435 |
| Average |  |  |  |  |  |  |  |  |  |  |  |
| 1982-1989 | 629 | 0.0759 |  | 634 | 0.0591 |  | 633 | 0.1009 |  | 656 | 0.0539 |
| 1990-1999 | 607 | 0.0815 |  | 620 | 0.0592 |  | 611 | 0.1097 |  | 644 | 0.0580 |
| 2000-2009 | 608 | 0.0857 |  | 618 | 0.0675 |  | 607 | 0.1108 |  | 642 | 0.0632 |
| 2010-2016 | 600 | 0.0781 |  | 608 | 0.0586 |  | 592 | 0.1060 |  | 627 | 0.0576 |
| All Years | 611 | 0.0808 |  | 621 | 0.0613 |  | 610 | 0.1074 |  | 642 | 0.0586 |

Appendix A3.–Average and coefficient of variation (CV) of mid-eye to fork length ofmale and female adult age-.1 coho salmon returning to Ford Arm Creek and Hugh Smith Lake, 1982–2016.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Ford Arm Cr. (Males) | |  | Ford Arm Cr. (Females) | |  | Hugh Smith L. (Males) | |  | Hugh Smith L. (Females) | |
|  | Average |  |  | Average |  |  | Average |  |  | Average |  |
| Year | Length (mm) | CV |  | Length (mm) | CV |  | Length (mm) | CV |  | Length (mm) | CV |
| 1982 | 653 | 0.0814 |  | 660 | 0.0608 |  | 648 | 0.0862 |  | 654 | 0.0533 |
| 1983 | 642 | 0.0901 |  | 649 | 0.0689 |  | 595 | 0.1069 |  | 627 | 0.0759 |
| 1984 | - | - |  | - | - |  | 655 | 0.0920 |  | 670 | 0.0609 |
| 1985 | 665 | 0.0680 |  | 667 | 0.0678 |  | 660 | 0.0910 |  | 662 | 0.0814 |
| 1986 | 649 | 0.0968 |  | 653 | 0.0771 |  | 678 | 0.0973 |  | 675 | 0.0582 |
| 1987 | 630 | 0.0903 |  | 655 | 0.0547 |  | 645 | 0.0820 |  | 658 | 0.0716 |
| 1988 | 656 | 0.0862 |  | 668 | 0.0624 |  | 636 | 0.1030 |  | 653 | 0.0752 |
| 1989 | 597 | 0.1193 |  | 643 | 0.0707 |  | 613 | 0.0964 |  | 623 | 0.0641 |
| 1990 | 641 | 0.1116 |  | 669 | 0.0674 |  | 650 | 0.1072 |  | 661 | 0.0620 |
| 1991 | 617 | 0.0950 |  | 650 | 0.0516 |  | 612 | 0.1026 |  | 632 | 0.0707 |
| 1992 | 620 | 0.0944 |  | 643 | 0.0586 |  | 642 | 0.0927 |  | 651 | 0.0648 |
| 1993 | 605 | 0.1021 |  | 631 | 0.0565 |  | 612 | 0.1173 |  | 641 | 0.0603 |
| 1994 | 623 | 0.1007 |  | 659 | 0.0576 |  | 624 | 0.1202 |  | 645 | 0.0952 |
| 1995 | 616 | 0.0869 |  | 650 | 0.0454 |  | 628 | 0.1022 |  | 651 | 0.0630 |
| 1996 | 607 | 0.1127 |  | 642 | 0.0580 |  | 613 | 0.1131 |  | 630 | 0.0720 |
| 1997 | 606 | 0.1000 |  | 641 | 0.0503 |  | 616 | 0.1061 |  | 644 | 0.0674 |
| 1998 | 622 | 0.0977 |  | 649 | 0.0492 |  | 652 | 0.1075 |  | 663 | 0.0682 |
| 1999 | 575 | 0.1160 |  | 610 | 0.0800 |  | 573 | 0.1231 |  | 611 | 0.0761 |
| 2000 | 597 | 0.0974 |  | 641 | 0.0518 |  | 598 | 0.1215 |  | 634 | 0.0726 |
| 2001 | 573 | 0.1242 |  | 622 | 0.0739 |  | 611 | 0.1235 |  | 631 | 0.0827 |
| 2002 | 584 | 0.1199 |  | 631 | 0.0719 |  | 594 | 0.1412 |  | 635 | 0.0765 |
| 2003 | 596 | 0.1007 |  | 626 | 0.0552 |  | 592 | 0.1296 |  | 631 | 0.0691 |
| 2004 | 596 | 0.1122 |  | 641 | 0.0521 |  | 625 | 0.0963 |  | 638 | 0.0734 |
| 2005 | 571 | 0.1160 |  | 618 | 0.0597 |  | 604 | 0.1119 |  | 630 | 0.0685 |
| 2006 | 597 | 0.0942 |  | 628 | 0.0593 |  | 606 | 0.1251 |  | 631 | 0.0831 |
| 2007 | 563 | 0.1167 |  | 617 | 0.0657 |  | 581 | 0.1144 |  | 616 | 0.0764 |
| 2008 | 615 | 0.1034 |  | 652 | 0.0538 |  | 613 | 0.1131 |  | 641 | 0.0796 |
| 2009 | 560 | 0.1110 |  | 619 | 0.0720 |  | 577 | 0.1214 |  | 609 | 0.0946 |
| 2010 | 588 | 0.1061 |  | 635 | 0.0599 |  | 641 | 0.1090 |  | 657 | 0.0731 |
| 2011 | 563 | 0.0905 |  | 587 | 0.0770 |  | 601 | 0.0973 |  | 617 | 0.0754 |
| 2012 | 553 | 0.1150 |  | 611 | 0.0619 |  | 595 | 0.1124 |  | 616 | 0.0710 |
| 2013 | 554 | 0.1254 |  | 594 | 0.0923 |  | 587 | 0.1220 |  | 604 | 0.0860 |
| 2014 | 600 | 0.1093 |  | 632 | 0.0779 |  | 619 | 0.1197 |  | 639 | 0.0851 |
| 2015 | 610 | 0.0741 |  | 629 | 0.0527 |  | 606 | 0.0967 |  | 630 | 0.0606 |
| 2016 | - | - |  | - | - |  | 617 | 0.1043 |  | 646 | 0.0652 |
| Average |  |  |  |  |  |  |  |  |  |  |  |
| 1982-1989 | 642 | 0.0903 |  | 656 | 0.0661 |  | 641 | 0.0943 |  | 653 | 0.0676 |
| 1990-1999 | 613 | 0.1017 |  | 644 | 0.0575 |  | 622 | 0.1092 |  | 643 | 0.0700 |
| 2000-2009 | 585 | 0.1096 |  | 630 | 0.0615 |  | 600 | 0.1198 |  | 630 | 0.0776 |
| 2010-2016 | 578 | 0.1034 |  | 615 | 0.0703 |  | 609 | 0.1088 |  | 630 | 0.0738 |
| All Years | 604 | 0.1020 |  | 637 | 0.0629 |  | 618 | 0.1087 |  | 639 | 0.0724 |



Figure 26.–Annual average mid-eye to fork length for age-.1 male and female coho salmon sampled in Auke Creek, Berners River, Ford Arm Creek, and Hugh Smith Lake, 1982–2016.



Figure 27.–Coefficient of variation in the mid-eye to fork length and 9 pt LOESS trend for age-.1 male and female coho salmon sampled in Auke Creek, Berners River, Ford Arm Creek, and Hugh Smith Lake, 1982–2016.



Figure.–Southeast Alaska troll-caught coho salmon average dressed weight compared with modeled weight (A) based on a multiple regression model with two variables: the standardized April–March PDO Index (average for lag 0, 2, and 4 years; 0.492 weighting based on the regression coefficient) and the standardized average commercial catch of pink salmon in North America (excluding the Bering Sea and Aleutian Islands) lagged by 2 and 4 years (0.508 weighting). The model residual is shown (B), as well as partial residual plots for pink salmon (C) and the PDO index (D). The model, developed by Shaul and Geiger (2016), was fitted with 1970-2014 weight data, while residuals and partial residuals for 2015–2016 and forecasts for 2015–2018 are shown by unshaded markers.

Appendix . Southeast Alaska troll-caught coho salmon average dressed weight compared with modeled weight based on based on a multiple regression model with two standardized variables fitted to 1970–2014 weight data: the standardized April–March PDO Index (average for lag 0, 2, and 4 years; 0.492 weighting) and the average commercial catch of pink salmon in North America (excluding the Bering Sea and Aleutian Islands) lagged by 2 and 4 years (0.508 weighting). Model forecasts are shown for 2015–2016 (based on a 1970–2014 fit) and for 2017–2018 (based on a 1970–2016 fit). Also shown is the mean-average length of male and female spawners from four wild indicator stocks in Southeast Alaska.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Predictive Variables | |  | |  |  | | |  | |  |
|  |  | Pink Salmon | Modeled | Observed | |  | Mean-Average | | | | |
|  |  | Catch Biomass | Weight | Weight | |  | | Spawner Length (mm)c | | | |
| Year | PDO Index | (1,000s of m-tons) | (kg) | (kg) | | Residual | | Males | | Females | |
| 1970 | -0.24 | 98.92 | 3.12 | 3.23 | | -0.11 | | | - | - | |
| 1971 | -0.65 | 53.32 | 3.16 | 3.16 | | -0.01 | | | - | - | |
| 1972 | -0.59 | 84.40 | 3.06 | 2.85 | | 0.21 | | | - | - | |
| 1973 | -0.70 | 61.04 | 3.11 | 3.28 | | -0.17 | | | - | - | |
| 1974 | -0.67 | 60.55 | 3.12 | 3.16 | | -0.03 | | | - | - | |
| 1975 | -0.60 | 50.51 | 3.18 | 2.95 | | 0.23 | | | - | - | |
| 1976 | -1.20 | 36.16 | 3.05 | 3.14 | | -0.10 | | | - | - | |
| 1977 | -0.04 | 37.80 | 3.41 | 3.64 | | -0.23 | | | - | - | |
| 1978 | -0.68 | 46.01 | 3.17 | 2.96 | | 0.21 | | | - | - | |
| 1979 | 0.09 | 65.22 | 3.35 | 3.15 | | 0.20 | | | - | - | |
| 1980 | -0.13 | 77.26 | 3.23 | 3.19 | | 0.04 | | | - | - | |
| 1981 | 0.38 | 106.30 | 3.29 | 3.38 | | -0.09 | | | - | - | |
| 1982 | 0.53 | 98.33 | 3.37 | 3.28 | | 0.08 | | | 641 | 649 | |
| 1983 | 0.29 | 140.93 | 3.14 | 3.18 | | -0.04 | | | 621 | 640 | |
| 1984 | 1.03 | 102.13 | 3.51 | 3.75 | | -0.24 | | | 652 | 667 | |
| 1985 | 0.58 | 147.83 | 3.20 | 3.46 | | -0.26 | | | 654 | 664 | |
| 1986 | 1.02 | 114.13 | 3.46 | 3.46 | | 0.01 | | | 643 | 653 | |
| 1987 | 0.79 | 161.92 | 3.22 | 3.08 | | 0.13 | | | 634 | 646 | |
| 1988 | 1.32 | 139.13 | 3.47 | 3.44 | | 0.03 | | | 639 | 653 | |
| 1989 | 0.67 | 148.67 | 3.23 | 3.02 | | 0.21 | | | 615 | 636 | |
| 1990 | 0.73 | 131.25 | 3.31 | 3.10 | | 0.21 | | | 634 | 651 | |
| 1991 | 0.25 | 149.62 | 3.09 | 2.95 | | 0.14 | | | 607 | 633 | |
| 1992 | 0.52 | 132.01 | 3.24 | 3.16 | | 0.08 | | | 618 | 637 | |
| 1993 | 0.12 | 196.79 | 2.88 | 2.57 | | 0.31 | | | 603 | 627 | |
| 1994 | 0.49 | 128.57 | 3.24 | 3.34 | | -0.10 | | | 628 | 651 | |
| 1995 | 0.02 | 187.91 | 2.88 | 3.33 | | -0.45 | | | 610 | 639 | |
| 1996 | 0.77 | 137.28 | 3.30 | 3.17 | | 0.13 | | | 603 | 632 | |
| 1997 | 0.39 | 198.34 | 2.96 | 3.10 | | -0.14 | | | 618 | 641 | |
| 1998 | 1.35 | 158.23 | 3.41 | 3.46 | | -0.05 | | | 633 | 654 | |
| 1999 | 0.00 | 179.48 | 2.90 | 2.54 | | 0.36 | | | 579 | 610 | |

-Continued-

Appendix .–continued (page 2 of 2).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Predictive Variables | |  |  |  |  |  |
|  |  | Pink Salmon | Modeled | Observed |  | Mean-Average | |
|  |  | Catch Biomass | Weight | Weight |  | Spawner Length (mm)c | |
| Year | PDO Index | (1,000s of m-tons) | (kg) | (kg) | Residual | Males | Females |
| 2000 | 0.45 | 160.73 | 3.11 | 3.15 | -0.04 | 609 | 637 |
| 2001 | 0.02 | 170.51 | 2.94 | 2.89 | 0.05 | 601 | 628 |
| 2002 | -0.06 | 147.01 | 3.00 | 3.14 | -0.13 | 603 | 633 |
| 2003 | 0.08 | 206.88 | 2.83 | 2.94 | -0.12 | 601 | 633 |
| 2004 | -0.42 | 133.09 | 2.94 | 3.05 | -0.11 | 614 | 640 |
| 2005 | 0.30 | 214.55 | 2.87 | 2.63 | 0.24 | 586 | 618 |
| 2006 | 0.07 | 156.50 | 3.01 | 3.04 | -0.03 | 611 | 632 |
| 2007 | 0.40 | 244.54 | 2.79 | 2.73 | 0.06 | 573 | 614 |
| 2008 | 0.19 | 145.77 | 3.09 | 3.44 | -0.35 | 625 | 651 |
| 2009 | -0.34 | 255.13 | 2.52 | 2.69 | -0.17 | 577 | 611 |
| 2010 | -0.04 | 128.10 | 3.08 | 3.17 | -0.09 | 607 | 640 |
| 2011 | -0.71 | 202.03 | 2.59 | 2.45 | 0.15 | 579 | 603 |
| 2012 | -0.58 | 157.23 | 2.80 | 2.69 | 0.11 | 579 | 611 |
| 2013 | -1.03 | 180.20 | 2.57 | 2.60 | -0.03 | 581 | 602 |
| 2014 | -0.55 | 147.69 | 2.84 | 2.93 | -0.08 | 610 | 630 |
| 2015 | -0.02 | 270.00 | 2.56a | 2.76 | -0.19 | 602 | 622 |
| 2016 | -0.01 | 133.47 | 3.07a | 3.13 | -0.07 | 611 | 628 |
| 2017 | 0.63 | 319.67 | 2.62a | - | - | - | - |
| 2018 | 0.63b | 112.60 | 3.34a | - | - | - | - |

a Forecasts for average weight in 2015 and 2016 were based on a 1970–2014 model fit, while the model fit for 2017 and 2018 forecasts also includes 2015–2016 data.

b The PDO index value for the 2018 weight forecast is based on the average at lags of 2 years and 4 years, and excludes lag-0.

c Average lengths were interpolated for the Berners River and Ford Arm Creek in 1984 and for Ford Arm Creek in 2016 based on the method presented by Brown 1974).