All WR SIT DSM Summary Tables - BA Act5

2025-07-29

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## BA

### Population Abundance, Growth

**Table** **:** Table BA.1. Predicted annual total winter-run spawner abundance in the Upper Sacramento River, including both natural- and hatchery-origin fish.

| Year | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1980 | 8762 | 8762 | 8762 | 8762 | 8762 | 8762 | 8762 | 8762 |
| 1981 | 9376 | 9376 | 9376 | 9376 | 9376 | 9376 | 9376 | 9376 |
| 1982 | 6456 | 8235 | 8156 | 8147 | 8144 | 8177 | 8214 | 8159 |
| 1983 | 2542 | 8632 | 8371 | 8374 | 8367 | 8368 | 8518 | 8449 |
| 1984 | 2022 | 11570 | 11391 | 11423 | 11416 | 11325 | 11532 | 11536 |
| 1985 | 3374 | 13951 | 14384 | 14410 | 14402 | 14340 | 14519 | 14484 |
| 1986 | 3069 | 14195 | 14884 | 14940 | 14930 | 14906 | 15117 | 14863 |
| 1987 | 1454 | 13383 | 13350 | 13537 | 13527 | 13436 | 13707 | 13259 |
| 1988 | 585 | 13647 | 13113 | 13393 | 13382 | 13241 | 13566 | 13035 |
| 1989 | 483 | 12730 | 12314 | 12434 | 12424 | 12340 | 12633 | 12137 |
| 1990 | 427 | 9123 | 8234 | 8166 | 8158 | 8153 | 8285 | 8016 |
| 1991 | 392 | 8116 | 6230 | 6257 | 6245 | 6270 | 6397 | 6188 |
| 1992 | 391 | 8057 | 6089 | 6237 | 6251 | 6224 | 6444 | 6098 |
| 1993 | 390 | 5103 | 4015 | 4183 | 4257 | 4154 | 4144 | 3947 |
| 1994 | 389 | 3178 | 2777 | 2524 | 2823 | 2514 | 1878 | 2323 |
| 1995 | 391 | 3975 | 3657 | 2915 | 3387 | 2885 | 2001 | 2845 |
| 1996 | 392 | 4535 | 4052 | 3621 | 3899 | 3593 | 3110 | 3668 |
| 1997 | 394 | 4119 | 3735 | 3635 | 3747 | 3619 | 3311 | 3745 |
| 1998 | 403 | 4793 | 4698 | 4628 | 4693 | 4584 | 4319 | 4739 |
| 1999 | 421 | 5855 | 5946 | 5941 | 5950 | 5902 | 5829 | 5937 |

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**Table** **:** Table BA.2. Predicted annual natural-origin winter-run spawner abundance in the Upper Sacramento River.

| Year | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1980 | 8374 | 8374 | 8374 | 8374 | 8374 | 8374 | 8374 | 8374 |
| 1981 | 8989 | 8989 | 8989 | 8989 | 8989 | 8989 | 8989 | 8989 |
| 1982 | 6069 | 7847 | 7769 | 7760 | 7757 | 7790 | 7826 | 7772 |
| 1983 | 2155 | 8245 | 7984 | 7987 | 7979 | 7981 | 8131 | 8061 |
| 1984 | 1634 | 11183 | 11004 | 11036 | 11029 | 10937 | 11145 | 11148 |
| 1985 | 2987 | 13563 | 13997 | 14023 | 14015 | 13952 | 14131 | 14097 |
| 1986 | 2682 | 13808 | 14497 | 14553 | 14543 | 14519 | 14730 | 14475 |
| 1987 | 1066 | 12995 | 12962 | 13150 | 13140 | 13049 | 13320 | 12871 |
| 1988 | 198 | 13259 | 12726 | 13006 | 12995 | 12854 | 13179 | 12648 |
| 1989 | 96 | 12343 | 11927 | 12047 | 12036 | 11953 | 12246 | 11750 |
| 1990 | 40 | 8735 | 7847 | 7779 | 7770 | 7766 | 7898 | 7629 |
| 1991 | 5 | 7729 | 5842 | 5870 | 5857 | 5882 | 6010 | 5801 |
| 1992 | 4 | 7670 | 5702 | 5849 | 5864 | 5837 | 6057 | 5710 |
| 1993 | 3 | 4716 | 3627 | 3796 | 3869 | 3767 | 3756 | 3559 |
| 1994 | 2 | 2791 | 2390 | 2137 | 2435 | 2126 | 1490 | 1936 |
| 1995 | 3 | 3588 | 3270 | 2528 | 3000 | 2498 | 1613 | 2458 |
| 1996 | 5 | 4148 | 3665 | 3233 | 3512 | 3205 | 2723 | 3281 |
| 1997 | 7 | 3732 | 3348 | 3247 | 3360 | 3231 | 2924 | 3358 |
| 1998 | 16 | 4405 | 4311 | 4241 | 4306 | 4197 | 3932 | 4352 |
| 1999 | 33 | 5467 | 5558 | 5553 | 5563 | 5515 | 5441 | 5550 |

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**Table** **:** Table BA.3. Predicted mean lambda (Nt+1/Nt) for total winter-run spawner abundance in the Upper Sacramento River, including both natural- and hatchery-origin fish.

| WYT | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C | 0.840 | 0.848 | 0.815 | 0.802 | 0.815 | 0.803 | 0.776 | 0.798 |
| D | 1.010 | 1.038 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.037 |
| AN | 0.998 | 0.633 | 0.659 | 0.671 | 0.681 | 0.667 | 0.643 | 0.647 |
| W | 0.874 | 1.108 | 1.129 | 1.139 | 1.126 | 1.138 | 1.183 | 1.150 |
| All | 0.852 | 0.979 | 0.980 | 0.980 | 0.980 | 0.979 | 0.979 | 0.980 |

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**Table** **:** Table BA.4. Predicted terminal lambda (Nt=19/Nt=1) for total winter-run spawner abundance in the Upper Sacramento River, including both natural- and hatchery-origin fish, from deterministic model runs.

| EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 0.048 | 0.668 | 0.679 | 0.678 | 0.679 | 0.674 | 0.665 | 0.678 |

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### Demographic Parameters

**Table** **:** Table BA.5. Predicted small juvenile rearing survival for winter-run Chinook salmon in the Upper Sacramento River.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 0.002 | 0.164 | 0.166 | 0.164 | 0.166 | 0.163 | 0.159 | 0.1626151 |
| All | 10 | 0.101 | 0.181 | 0.181 | 0.175 | 0.179 | 0.176 | 0.172 | 0.1755658 |
| All | 11 | 0.200 | 0.201 | 0.200 | 0.200 | 0.200 | 0.200 | 0.200 | 0.1998732 |
| All | 12 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.2019947 |
| All | 1 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1902001 |
| All | 2 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1902136 |
| All | 3 | 0.187 | 0.186 | 0.187 | 0.187 | 0.187 | 0.187 | 0.187 | 0.1871006 |
| All | 4 | 0.165 | 0.159 | 0.162 | 0.164 | 0.164 | 0.164 | 0.164 | 0.1636633 |
| All | 5 | 0.110 | 0.154 | 0.155 | 0.158 | 0.158 | 0.158 | 0.158 | 0.1578240 |
| C | 9 | 0.001 | 0.160 | 0.157 | 0.148 | 0.159 | 0.147 | 0.129 | 0.1457647 |
| C | 10 | 0.086 | 0.180 | 0.176 | 0.178 | 0.180 | 0.180 | 0.170 | 0.1766453 |
| C | 11 | 0.200 | 0.201 | 0.199 | 0.200 | 0.200 | 0.200 | 0.199 | 0.1995334 |
| C | 12 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.2019362 |
| C | 1 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1901014 |
| C | 2 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1900270 |
| C | 3 | 0.181 | 0.178 | 0.180 | 0.180 | 0.180 | 0.181 | 0.180 | 0.1806472 |
| C | 4 | 0.151 | 0.146 | 0.153 | 0.162 | 0.161 | 0.162 | 0.161 | 0.1591407 |
| C | 5 | 0.081 | 0.156 | 0.166 | 0.168 | 0.168 | 0.168 | 0.168 | 0.1677188 |
| D | 9 | 0.001 | 0.175 | 0.174 | 0.175 | 0.175 | 0.174 | 0.174 | 0.1741394 |
| D | 10 | 0.091 | 0.174 | 0.174 | 0.172 | 0.171 | 0.175 | 0.169 | 0.1744321 |
| D | 11 | 0.199 | 0.201 | 0.201 | 0.200 | 0.200 | 0.201 | 0.200 | 0.2006765 |
| D | 12 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.2017372 |
| D | 1 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1898691 |
| D | 2 | 0.191 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1898205 |
| D | 3 | 0.190 | 0.190 | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | 0.1892672 |
| D | 4 | 0.151 | 0.143 | 0.147 | 0.148 | 0.148 | 0.149 | 0.148 | 0.1480539 |
| D | 5 | 0.028 | 0.149 | 0.144 | 0.151 | 0.151 | 0.151 | 0.150 | 0.1504071 |
| AN | 9 | 0.001 | 0.158 | 0.159 | 0.159 | 0.159 | 0.159 | 0.159 | 0.1578910 |
| AN | 10 | 0.121 | 0.182 | 0.182 | 0.131 | 0.164 | 0.131 | 0.119 | 0.1300651 |
| AN | 11 | 0.201 | 0.199 | 0.198 | 0.195 | 0.196 | 0.195 | 0.196 | 0.1951216 |
| AN | 12 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.2020140 |
| AN | 1 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1903442 |
| AN | 2 | 0.191 | 0.190 | 0.190 | 0.191 | 0.191 | 0.191 | 0.191 | 0.1905086 |
| AN | 3 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1901950 |
| AN | 4 | 0.176 | 0.170 | 0.168 | 0.168 | 0.169 | 0.168 | 0.169 | 0.1692598 |
| AN | 5 | 0.158 | 0.161 | 0.158 | 0.161 | 0.161 | 0.161 | 0.161 | 0.1616017 |
| W | 9 | 0.004 | 0.164 | 0.168 | 0.169 | 0.169 | 0.169 | 0.169 | 0.1679044 |
| W | 10 | 0.110 | 0.185 | 0.186 | 0.186 | 0.185 | 0.185 | 0.185 | 0.1855811 |
| W | 11 | 0.200 | 0.201 | 0.201 | 0.201 | 0.201 | 0.201 | 0.201 | 0.2007608 |
| W | 12 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.2021373 |
| W | 1 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1903700 |
| W | 2 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.190 | 0.1904264 |
| W | 3 | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | 0.1890352 |
| W | 4 | 0.176 | 0.171 | 0.172 | 0.172 | 0.172 | 0.172 | 0.172 | 0.1718697 |
| W | 5 | 0.151 | 0.154 | 0.152 | 0.155 | 0.155 | 0.155 | 0.155 | 0.1547837 |

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**Table** **:** Table BA.6. Predicted smolt migratory survival for winter-run Chinook salmon in the Upper-mid Sacramento River.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 0.993 | 0.996 | 0.997 | 0.998 | 0.998 | 0.998 | 0.998 | 0.9971836 |
| All | 10 | 0.997 | 0.997 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.9982350 |
| All | 11 | 0.998 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988625 |
| All | 12 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9991445 |
| All | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996607 |
| All | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997507 |
| All | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998247 |
| All | 4 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988029 |
| All | 5 | 0.976 | 0.983 | 0.985 | 0.986 | 0.986 | 0.985 | 0.986 | 0.9854502 |
| C | 9 | 0.989 | 0.997 | 0.997 | 0.997 | 0.997 | 0.997 | 0.997 | 0.9970502 |
| C | 10 | 0.997 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.9979243 |
| C | 11 | 0.997 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.9982185 |
| C | 12 | 0.998 | 0.999 | 0.998 | 0.998 | 0.999 | 0.998 | 0.998 | 0.9984635 |
| C | 1 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9994603 |
| C | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995724 |
| C | 3 | 1.000 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996474 |
| C | 4 | 0.999 | 0.998 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9986246 |
| C | 5 | 0.977 | 0.988 | 0.987 | 0.990 | 0.990 | 0.990 | 0.992 | 0.9907860 |
| D | 9 | 0.990 | 0.996 | 0.996 | 0.996 | 0.996 | 0.996 | 0.996 | 0.9956508 |
| D | 10 | 0.996 | 0.997 | 0.998 | 0.998 | 0.998 | 0.998 | 0.998 | 0.9977298 |
| D | 11 | 0.998 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988187 |
| D | 12 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988423 |
| D | 1 | 1.000 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993332 |
| D | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995585 |
| D | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997376 |
| D | 4 | 0.999 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9985967 |
| D | 5 | 0.942 | 0.978 | 0.989 | 0.987 | 0.987 | 0.985 | 0.985 | 0.9845685 |
| AN | 9 | 0.994 | 0.996 | 0.997 | 0.997 | 0.997 | 0.997 | 0.997 | 0.9964027 |
| AN | 10 | 0.997 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9982596 |
| AN | 11 | 0.997 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9985180 |
| AN | 12 | 0.999 | 1.000 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993377 |
| AN | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998298 |
| AN | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999217 |
| AN | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999814 |
| AN | 4 | 1.000 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988356 |
| AN | 5 | 0.993 | 0.981 | 0.984 | 0.984 | 0.984 | 0.984 | 0.988 | 0.9889287 |
| W | 9 | 0.997 | 0.996 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9981126 |
| W | 10 | 0.998 | 0.997 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9986266 |
| W | 11 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993163 |
| W | 12 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996142 |
| W | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998800 |
| W | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998973 |
| W | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999270 |
| W | 4 | 1.000 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9989863 |
| W | 5 | 0.987 | 0.983 | 0.983 | 0.983 | 0.983 | 0.982 | 0.982 | 0.9821048 |

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**Table** **:** Table BA.7. Predicted smolt migratory survival for winter-run Chinook salmon in the Lower-mid Sacramento River.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 0.997 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995768 |
| All | 10 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995018 |
| All | 11 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996387 |
| All | 12 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996328 |
| All | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997389 |
| All | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997860 |
| All | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998591 |
| All | 4 | 1.000 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996210 |
| All | 5 | 0.997 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9991625 |
| C | 9 | 0.991 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993588 |
| C | 10 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993666 |
| C | 11 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9994704 |
| C | 12 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9993716 |
| C | 1 | 1.000 | 0.999 | 1.000 | 1.000 | 0.999 | 0.999 | 1.000 | 0.9995809 |
| C | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996257 |
| C | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997178 |
| C | 4 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9994153 |
| C | 5 | 0.995 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9988949 |
| D | 9 | 0.996 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9994296 |
| D | 10 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9994609 |
| D | 11 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996572 |
| D | 12 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.999 | 0.999 | 0.9995083 |
| D | 1 | 1.000 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9994994 |
| D | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996197 |
| D | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997803 |
| D | 4 | 1.000 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995905 |
| D | 5 | 0.993 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9992398 |
| AN | 9 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996438 |
| AN | 10 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9994734 |
| AN | 11 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9995760 |
| AN | 12 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997023 |
| AN | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998589 |
| AN | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999324 |
| AN | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999854 |
| AN | 4 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996860 |
| AN | 5 | 0.999 | 0.998 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9992480 |
| W | 9 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997485 |
| W | 10 | 0.999 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9996015 |
| W | 11 | 1.000 | 0.999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997379 |
| W | 12 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9998179 |
| W | 1 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999064 |
| W | 2 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999164 |
| W | 3 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9999447 |
| W | 4 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.9997343 |
| W | 5 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.999 | 0.9992578 |

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**Table** **:** Table BA.8. Predicted smolt migratory survival for winter-run Chinook salmon in the Lower Sacramento River.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996351 |
| All | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995966 |
| All | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997157 |
| All | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996789 |
| All | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997719 |
| All | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997857 |
| All | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998570 |
| All | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997133 |
| All | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997952 |
| C | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9994556 |
| C | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9994825 |
| C | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995751 |
| C | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9994477 |
| C | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996168 |
| C | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996038 |
| C | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997025 |
| C | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995458 |
| C | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996989 |
| D | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9994631 |
| D | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995787 |
| D | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997180 |
| D | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995823 |
| D | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995724 |
| D | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996151 |
| D | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997761 |
| D | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997242 |
| D | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998192 |
| AN | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997027 |
| AN | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9995678 |
| AN | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996681 |
| AN | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997444 |
| AN | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998718 |
| AN | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9999480 |
| AN | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9999892 |
| AN | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997487 |
| AN | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997734 |
| W | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997962 |
| W | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9996743 |
| W | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998034 |
| W | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998357 |
| W | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9999246 |
| W | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9999265 |
| W | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9999494 |
| W | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9997937 |
| W | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9998429 |

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**Table** **:** Table BA.9. Predicted smolt migratory survival for winter-run Chinook salmon in the North Delta.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 0.833 | 0.840 | 0.841 | 0.841 | 0.841 | 0.841 | 0.841 | 0.8395471 |
| All | 10 | 0.837 | 0.843 | 0.843 | 0.843 | 0.843 | 0.842 | 0.843 | 0.8419020 |
| All | 11 | 0.832 | 0.843 | 0.841 | 0.842 | 0.841 | 0.843 | 0.842 | 0.8419802 |
| All | 12 | 0.848 | 0.849 | 0.846 | 0.846 | 0.847 | 0.846 | 0.846 | 0.8465740 |
| All | 1 | 0.850 | 0.850 | 0.849 | 0.849 | 0.849 | 0.848 | 0.849 | 0.8493254 |
| All | 2 | 0.856 | 0.855 | 0.855 | 0.855 | 0.855 | 0.854 | 0.855 | 0.8542771 |
| All | 3 | 0.856 | 0.855 | 0.854 | 0.854 | 0.854 | 0.854 | 0.854 | 0.8542853 |
| All | 4 | 0.849 | 0.844 | 0.844 | 0.846 | 0.845 | 0.846 | 0.847 | 0.8457705 |
| All | 5 | 0.833 | 0.837 | 0.839 | 0.840 | 0.840 | 0.839 | 0.840 | 0.8399887 |
| C | 9 | 0.818 | 0.837 | 0.831 | 0.830 | 0.831 | 0.830 | 0.830 | 0.8291802 |
| C | 10 | 0.836 | 0.844 | 0.838 | 0.840 | 0.840 | 0.837 | 0.839 | 0.8373601 |
| C | 11 | 0.815 | 0.837 | 0.830 | 0.833 | 0.830 | 0.834 | 0.834 | 0.8333544 |
| C | 12 | 0.839 | 0.842 | 0.837 | 0.837 | 0.839 | 0.837 | 0.837 | 0.8365111 |
| C | 1 | 0.837 | 0.840 | 0.840 | 0.842 | 0.839 | 0.838 | 0.842 | 0.8420890 |
| C | 2 | 0.851 | 0.850 | 0.851 | 0.851 | 0.851 | 0.850 | 0.851 | 0.8496123 |
| C | 3 | 0.851 | 0.847 | 0.848 | 0.848 | 0.847 | 0.848 | 0.848 | 0.8483314 |
| C | 4 | 0.839 | 0.832 | 0.831 | 0.838 | 0.835 | 0.837 | 0.839 | 0.8358119 |
| C | 5 | 0.818 | 0.827 | 0.827 | 0.830 | 0.830 | 0.830 | 0.832 | 0.8317102 |
| D | 9 | 0.829 | 0.839 | 0.837 | 0.837 | 0.837 | 0.837 | 0.837 | 0.8369623 |
| D | 10 | 0.832 | 0.841 | 0.842 | 0.842 | 0.842 | 0.842 | 0.842 | 0.8410380 |
| D | 11 | 0.832 | 0.843 | 0.843 | 0.842 | 0.842 | 0.844 | 0.843 | 0.8414219 |
| D | 12 | 0.845 | 0.845 | 0.843 | 0.844 | 0.844 | 0.843 | 0.843 | 0.8436846 |
| D | 1 | 0.845 | 0.844 | 0.841 | 0.841 | 0.841 | 0.841 | 0.841 | 0.8403895 |
| D | 2 | 0.853 | 0.850 | 0.848 | 0.848 | 0.848 | 0.848 | 0.848 | 0.8475291 |
| D | 3 | 0.856 | 0.855 | 0.852 | 0.852 | 0.852 | 0.852 | 0.852 | 0.8521543 |
| D | 4 | 0.845 | 0.838 | 0.840 | 0.840 | 0.840 | 0.841 | 0.843 | 0.8423530 |
| D | 5 | 0.809 | 0.827 | 0.837 | 0.837 | 0.837 | 0.836 | 0.836 | 0.8363747 |
| AN | 9 | 0.839 | 0.843 | 0.846 | 0.847 | 0.847 | 0.847 | 0.847 | 0.8445480 |
| AN | 10 | 0.838 | 0.844 | 0.847 | 0.841 | 0.841 | 0.841 | 0.841 | 0.8400107 |
| AN | 11 | 0.816 | 0.834 | 0.836 | 0.838 | 0.838 | 0.838 | 0.839 | 0.8368955 |
| AN | 12 | 0.846 | 0.851 | 0.842 | 0.842 | 0.842 | 0.842 | 0.842 | 0.8459097 |
| AN | 1 | 0.857 | 0.857 | 0.854 | 0.854 | 0.854 | 0.854 | 0.854 | 0.8540364 |
| AN | 2 | 0.860 | 0.860 | 0.859 | 0.859 | 0.859 | 0.859 | 0.859 | 0.8592653 |
| AN | 3 | 0.860 | 0.859 | 0.859 | 0.858 | 0.859 | 0.858 | 0.858 | 0.8584739 |
| AN | 4 | 0.855 | 0.851 | 0.850 | 0.850 | 0.850 | 0.850 | 0.851 | 0.8506010 |
| AN | 5 | 0.848 | 0.842 | 0.842 | 0.842 | 0.842 | 0.842 | 0.843 | 0.8430975 |
| W | 9 | 0.842 | 0.841 | 0.848 | 0.848 | 0.848 | 0.848 | 0.848 | 0.8453439 |
| W | 10 | 0.840 | 0.844 | 0.846 | 0.846 | 0.846 | 0.846 | 0.846 | 0.8452295 |
| W | 11 | 0.845 | 0.848 | 0.848 | 0.848 | 0.848 | 0.848 | 0.847 | 0.8481504 |
| W | 12 | 0.855 | 0.855 | 0.854 | 0.854 | 0.854 | 0.854 | 0.854 | 0.8535964 |
| W | 1 | 0.858 | 0.857 | 0.856 | 0.856 | 0.856 | 0.856 | 0.856 | 0.8562702 |
| W | 2 | 0.860 | 0.859 | 0.859 | 0.859 | 0.859 | 0.859 | 0.859 | 0.8587592 |
| W | 3 | 0.859 | 0.858 | 0.858 | 0.858 | 0.858 | 0.858 | 0.858 | 0.8576093 |
| W | 4 | 0.855 | 0.852 | 0.852 | 0.852 | 0.852 | 0.852 | 0.852 | 0.8517485 |
| W | 5 | 0.848 | 0.846 | 0.846 | 0.846 | 0.846 | 0.846 | 0.846 | 0.8455033 |

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**Table** **:** Table BA.10. Predicted smolt migratory survival for winter-run Chinook salmon in the South Delta.

| WYT | Month | EXP1 | EXP3 | NAA | Alt2wTUCPwoVA | Alt2woTUCPwoVA | Alt2woTUCPDeltaVA | Alt2woTUCPAllVA | Act5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All | 9 | 0.253 | 0.269 | 0.326 | 0.327 | 0.327 | 0.328 | 0.327 | 0.3108053 |
| All | 10 | 0.240 | 0.252 | 0.291 | 0.291 | 0.291 | 0.290 | 0.291 | 0.2840350 |
| All | 11 | 0.301 | 0.326 | 0.329 | 0.330 | 0.329 | 0.333 | 0.332 | 0.3298108 |
| All | 12 | 0.402 | 0.411 | 0.379 | 0.381 | 0.383 | 0.380 | 0.379 | 0.3839326 |
| All | 1 | 0.455 | 0.446 | 0.438 | 0.442 | 0.438 | 0.438 | 0.442 | 0.4413519 |
| All | 2 | 0.487 | 0.467 | 0.470 | 0.469 | 0.469 | 0.463 | 0.469 | 0.4640654 |
| All | 3 | 0.505 | 0.475 | 0.469 | 0.467 | 0.468 | 0.469 | 0.468 | 0.4698004 |
| All | 4 | 0.422 | 0.360 | 0.365 | 0.372 | 0.369 | 0.372 | 0.378 | 0.3731113 |
| All | 5 | 0.343 | 0.331 | 0.345 | 0.347 | 0.347 | 0.346 | 0.349 | 0.3489942 |
| C | 9 | 0.199 | 0.246 | 0.251 | 0.248 | 0.248 | 0.251 | 0.249 | 0.2494638 |
| C | 10 | 0.219 | 0.235 | 0.250 | 0.253 | 0.253 | 0.250 | 0.253 | 0.2512771 |
| C | 11 | 0.205 | 0.258 | 0.251 | 0.254 | 0.253 | 0.257 | 0.253 | 0.2573367 |
| C | 12 | 0.295 | 0.302 | 0.278 | 0.278 | 0.286 | 0.279 | 0.277 | 0.2786249 |
| C | 1 | 0.330 | 0.321 | 0.323 | 0.333 | 0.319 | 0.319 | 0.334 | 0.3333093 |
| C | 2 | 0.374 | 0.349 | 0.366 | 0.361 | 0.362 | 0.340 | 0.362 | 0.3429583 |
| C | 3 | 0.401 | 0.338 | 0.346 | 0.342 | 0.342 | 0.347 | 0.344 | 0.3501440 |
| C | 4 | 0.284 | 0.244 | 0.248 | 0.275 | 0.261 | 0.272 | 0.279 | 0.2661660 |
| C | 5 | 0.239 | 0.245 | 0.250 | 0.259 | 0.259 | 0.258 | 0.266 | 0.2656341 |
| D | 9 | 0.241 | 0.273 | 0.285 | 0.290 | 0.290 | 0.286 | 0.287 | 0.2863556 |
| D | 10 | 0.226 | 0.241 | 0.282 | 0.283 | 0.283 | 0.283 | 0.283 | 0.2712215 |
| D | 11 | 0.308 | 0.320 | 0.324 | 0.319 | 0.319 | 0.331 | 0.330 | 0.3145642 |
| D | 12 | 0.342 | 0.351 | 0.323 | 0.331 | 0.331 | 0.323 | 0.322 | 0.3294718 |
| D | 1 | 0.352 | 0.336 | 0.324 | 0.331 | 0.331 | 0.331 | 0.330 | 0.3229595 |
| D | 2 | 0.400 | 0.343 | 0.343 | 0.342 | 0.342 | 0.341 | 0.340 | 0.3398873 |
| D | 3 | 0.488 | 0.455 | 0.412 | 0.413 | 0.413 | 0.413 | 0.414 | 0.4144992 |
| D | 4 | 0.361 | 0.287 | 0.310 | 0.310 | 0.310 | 0.313 | 0.329 | 0.3219523 |
| D | 5 | 0.222 | 0.253 | 0.308 | 0.306 | 0.306 | 0.300 | 0.301 | 0.3030333 |
| AN | 9 | 0.238 | 0.263 | 0.365 | 0.375 | 0.376 | 0.379 | 0.377 | 0.3400548 |
| AN | 10 | 0.210 | 0.235 | 0.280 | 0.272 | 0.273 | 0.273 | 0.272 | 0.2558058 |
| AN | 11 | 0.221 | 0.246 | 0.272 | 0.290 | 0.287 | 0.290 | 0.292 | 0.2750910 |
| AN | 12 | 0.348 | 0.389 | 0.308 | 0.306 | 0.305 | 0.306 | 0.306 | 0.3384759 |
| AN | 1 | 0.536 | 0.530 | 0.492 | 0.495 | 0.496 | 0.494 | 0.497 | 0.4957151 |
| AN | 2 | 0.576 | 0.573 | 0.566 | 0.565 | 0.565 | 0.565 | 0.565 | 0.5654905 |
| AN | 3 | 0.569 | 0.564 | 0.559 | 0.554 | 0.559 | 0.553 | 0.550 | 0.5551765 |
| AN | 4 | 0.501 | 0.410 | 0.402 | 0.399 | 0.401 | 0.399 | 0.411 | 0.4123588 |
| AN | 5 | 0.403 | 0.337 | 0.342 | 0.341 | 0.341 | 0.340 | 0.351 | 0.3536070 |
| W | 9 | 0.291 | 0.282 | 0.377 | 0.376 | 0.376 | 0.377 | 0.377 | 0.3492506 |
| W | 10 | 0.265 | 0.269 | 0.320 | 0.320 | 0.320 | 0.319 | 0.319 | 0.3142018 |
| W | 11 | 0.370 | 0.384 | 0.388 | 0.386 | 0.386 | 0.386 | 0.385 | 0.3890104 |
| W | 12 | 0.500 | 0.504 | 0.477 | 0.477 | 0.477 | 0.477 | 0.477 | 0.4767431 |
| W | 1 | 0.553 | 0.546 | 0.539 | 0.539 | 0.539 | 0.539 | 0.539 | 0.5419136 |
| W | 2 | 0.569 | 0.565 | 0.564 | 0.564 | 0.564 | 0.564 | 0.564 | 0.5639985 |
| W | 3 | 0.556 | 0.540 | 0.542 | 0.542 | 0.542 | 0.542 | 0.542 | 0.5418820 |
| W | 4 | 0.507 | 0.445 | 0.446 | 0.447 | 0.447 | 0.447 | 0.447 | 0.4465411 |
| W | 5 | 0.442 | 0.412 | 0.415 | 0.416 | 0.416 | 0.415 | 0.415 | 0.4147073 |

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