Performance metric tables

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“**Supplementary Table 4.EBS.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 2,091,828 | 2,976,620 | 1,623,757 | 2,091,930 | 2,091,439 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,109,822 | 2,965,906 | 1,679,994 | 2,109,947 | 2,110,537 |
|  |  | HCR 2a (PFMC) | 1,841,465 | 2,573,109 | 1,461,767 | 1,840,975 | 1,841,227 |
|  |  | HCR 2b (Dynamic PFMC) | 1,846,504 | 2,573,875 | 1,479,802 | 1,846,127 | 1,846,335 |
|  |  | HCR 3a (SESSF) | 1,845,966 | 2,592,821 | 1,432,260 | 1,845,803 | 1,845,641 |
|  |  | HCR 3b (Dynamic SESSF) | 1,861,241 | 2,595,711 | 1,491,118 | 1,862,632 | 1,861,463 |
|  |  | HCR 4 (NEFMC) | 2,136,327 | 2,993,730 | 1,705,792 | 2,136,165 | 2,136,349 |
|  |  | HCR 5 (Avg F) | 1,337,403 | 1,850,546 | 1,079,009 | 1,337,234 | 1,336,824 |
|  | *Est M* | HCR 1a (NPFMC) | 2,350,264 | 3,349,630 | 1,829,096 | 2,349,750 | 2,350,216 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,367,876 | 3,336,958 | 1,884,892 | 2,370,096 | 2,369,638 |
|  |  | HCR 2a (PFMC) | 2,151,203 | 3,028,617 | 1,700,782 | 2,151,229 | 2,150,906 |
|  |  | HCR 2b (Dynamic PFMC) | 2,156,777 | 3,033,943 | 1,721,384 | 2,156,979 | 2,156,306 |
|  |  | HCR 3a (SESSF) | 2,158,559 | 3,052,674 | 1,675,168 | 2,157,543 | 2,156,207 |
|  |  | HCR 3b (Dynamic SESSF) | 2,178,022 | 3,055,048 | 1,739,782 | 2,178,863 | 2,177,172 |
|  |  | HCR 4 (NEFMC) | 2,391,967 | 3,362,911 | 1,907,874 | 2,391,947 | 2,392,474 |
|  |  | HCR 5 (Avg F) | 1,307,298 | 1,811,715 | 1,052,436 | 1,304,851 | 1,305,348 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 2,457,287 | 3,506,262 | 1,894,571 | 2,456,585 | 2,456,997 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,467,948 | 3,479,228 | 1,956,677 | 2,467,709 | 2,467,869 |
|  |  | HCR 2a (PFMC) | 2,007,391 | 2,809,466 | 1,591,295 | 2,008,636 | 2,008,992 |
|  |  | HCR 2b (Dynamic PFMC) | 2,013,543 | 2,811,093 | 1,610,882 | 2,012,307 | 2,014,284 |
|  |  | HCR 3a (SESSF) | 2,024,829 | 2,845,872 | 1,567,842 | 2,023,705 | 2,025,350 |
|  |  | HCR 3b (Dynamic SESSF) | 2,039,127 | 2,846,565 | 1,632,448 | 2,039,813 | 2,038,649 |
|  |  | HCR 4 (NEFMC) | 2,507,839 | 3,520,083 | 1,996,129 | 2,507,413 | 2,506,789 |
|  |  | HCR 5 (Avg F) | 1,357,577 | 1,878,477 | 1,095,779 | 1,357,914 | 1,358,777 |
|  | *Est M* | HCR 1a (NPFMC) | 3,841,065 | 5,542,027 | 2,954,712 | 3,840,703 | 3,844,812 |
|  |  | HCR 1b (Dynamic NPFMC) | 3,875,962 | 5,511,185 | 3,056,573 | 3,876,691 | 3,878,335 |
|  |  | HCR 2a (PFMC) | 3,360,723 | 4,792,140 | 2,623,482 | 3,356,399 | 3,356,433 |
|  |  | HCR 2b (Dynamic PFMC) | 3,374,032 | 4,789,803 | 2,661,344 | 3,370,151 | 3,371,529 |
|  |  | HCR 3a (SESSF) | 3,356,715 | 4,803,389 | 2,573,167 | 3,356,879 | 3,356,539 |
|  |  | HCR 3b (Dynamic SESSF) | 3,400,719 | 4,809,555 | 2,693,843 | 3,401,915 | 3,396,806 |
|  |  | HCR 4 (NEFMC) | 3,927,088 | 5,580,334 | 3,104,449 | 3,928,750 | 3,930,050 |
|  |  | HCR 5 (Avg F) | 1,355,169 | 1,876,590 | 1,087,544 | 1,353,068 | 1,353,098 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 2,920,761 | 3,627,794 | 2,437,015 | 2,793,160 | 2,982,140 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,907,407 | 3,586,564 | 2,462,184 | 2,786,310 | 2,970,337 |
|  |  | HCR 2a (PFMC) | 2,407,373 | 2,896,112 | 2,052,327 | 2,311,319 | 2,454,792 |
|  |  | HCR 2b (Dynamic PFMC) | 2,406,803 | 2,894,192 | 2,060,281 | 2,313,308 | 2,455,561 |
|  |  | HCR 3a (SESSF) | 2,387,070 | 2,875,172 | 2,020,285 | 2,268,145 | 2,445,729 |
|  |  | HCR 3b (Dynamic SESSF) | 2,389,859 | 2,871,527 | 2,046,089 | 2,278,495 | 2,447,587 |
|  |  | HCR 4 (NEFMC) | 2,960,186 | 3,649,905 | 2,515,242 | 2,841,160 | 3,022,178 |
|  |  | HCR 5 (Avg F) | 1,692,680 | 2,042,480 | 1,446,592 | 1,587,229 | 1,748,465 |
|  | *Est M* | HCR 1a (NPFMC) | 3,601,519 | 4,523,617 | 3,009,277 | 3,457,920 | 3,677,037 |
|  |  | HCR 1b (Dynamic NPFMC) | 3,596,567 | 4,483,422 | 3,041,602 | 3,460,194 | 3,667,759 |
|  |  | HCR 2a (PFMC) | 3,130,471 | 3,835,812 | 2,650,914 | 3,010,313 | 3,187,538 |
|  |  | HCR 2b (Dynamic PFMC) | 3,129,229 | 3,833,528 | 2,658,509 | 3,013,118 | 3,187,029 |
|  |  | HCR 3a (SESSF) | 3,090,952 | 3,789,623 | 2,602,305 | 2,947,890 | 3,165,200 |
|  |  | HCR 3b (Dynamic SESSF) | 3,093,769 | 3,783,142 | 2,636,606 | 2,956,209 | 3,161,603 |
|  |  | HCR 4 (NEFMC) | 3,642,266 | 4,530,244 | 3,091,088 | 3,504,315 | 3,707,961 |
|  |  | HCR 5 (Avg F) | 1,671,800 | 2,037,800 | 1,420,503 | 1,571,720 | 1,725,694 |

[1] “**Supplementary Table 4.GOA.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 151,077 | 216,631 | 117,329 | 151,064 | 151,071 |
|  |  | HCR 1b (Dynamic NPFMC) | 153,351 | 215,539 | 121,809 | 153,278 | 153,257 |
|  |  | HCR 2a (PFMC) | 118,650 | 165,478 | 94,457 | 118,498 | 118,571 |
|  |  | HCR 2b (Dynamic PFMC) | 119,093 | 165,909 | 95,592 | 118,944 | 119,021 |
|  |  | HCR 3a (SESSF) | 132,204 | 187,928 | 101,851 | 132,065 | 131,947 |
|  |  | HCR 3b (Dynamic SESSF) | 135,193 | 188,583 | 108,220 | 135,273 | 135,475 |
|  |  | HCR 4 (NEFMC) | 156,596 | 219,253 | 124,877 | 156,506 | 156,535 |
|  |  | HCR 5 (Avg F) | 125,830 | 175,272 | 100,616 | 125,642 | 125,726 |
|  | *Est M* | HCR 1a (NPFMC) | 162,486 | 235,409 | 125,642 | 162,581 | 162,422 |
|  |  | HCR 1b (Dynamic NPFMC) | 164,770 | 234,168 | 130,405 | 164,475 | 164,353 |
|  |  | HCR 2a (PFMC) | 150,805 | 214,829 | 119,273 | 150,573 | 150,846 |
|  |  | HCR 2b (Dynamic PFMC) | 150,780 | 214,413 | 119,942 | 150,644 | 150,374 |
|  |  | HCR 3a (SESSF) | 150,349 | 216,334 | 115,677 | 150,514 | 150,697 |
|  |  | HCR 3b (Dynamic SESSF) | 152,460 | 217,403 | 120,918 | 151,821 | 152,653 |
|  |  | HCR 4 (NEFMC) | 166,649 | 235,895 | 132,705 | 166,818 | 167,094 |
|  |  | HCR 5 (Avg F) | 130,059 | 182,772 | 103,695 | 129,951 | 129,784 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 144,138 | 205,693 | 111,833 | 144,041 | 144,048 |
|  |  | HCR 1b (Dynamic NPFMC) | 146,308 | 204,718 | 116,243 | 146,044 | 146,238 |
|  |  | HCR 2a (PFMC) | 114,587 | 159,116 | 91,407 | 114,439 | 114,330 |
|  |  | HCR 2b (Dynamic PFMC) | 114,872 | 159,295 | 92,108 | 114,670 | 114,926 |
|  |  | HCR 3a (SESSF) | 127,114 | 179,939 | 98,135 | 127,152 | 126,877 |
|  |  | HCR 3b (Dynamic SESSF) | 129,636 | 180,305 | 103,874 | 129,484 | 129,440 |
|  |  | HCR 4 (NEFMC) | 148,549 | 208,443 | 119,015 | 148,674 | 148,772 |
|  |  | HCR 5 (Avg F) | 120,275 | 167,642 | 96,580 | 120,054 | 120,067 |
|  | *Est M* | HCR 1a (NPFMC) | 139,497 | 195,183 | 105,971 | 139,363 | 138,822 |
|  |  | HCR 1b (Dynamic NPFMC) | 135,186 | 192,679 | 109,474 | 135,389 | 134,959 |
|  |  | HCR 2a (PFMC) | 136,486 | 174,939 | 100,392 | 124,802 | 124,369 |
|  |  | HCR 2b (Dynamic PFMC) | 121,327 | 171,814 | 98,974 | 123,123 | 123,440 |
|  |  | HCR 3a (SESSF) | 121,767 | 184,182 | 100,744 | 132,431 | 130,796 |
|  |  | HCR 3b (Dynamic SESSF) | 122,515 | 180,098 | 102,810 | 129,422 | 128,439 |
|  |  | HCR 4 (NEFMC) | 138,657 | 194,620 | 111,584 | 139,669 | 138,780 |
|  |  | HCR 5 (Avg F) | 112,320 | 155,699 | 89,862 | 112,414 | 112,137 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 294,308 | 336,653 | 255,719 | 233,008 | 331,951 |
|  |  | HCR 1b (Dynamic NPFMC) | 293,632 | 332,708 | 256,929 | 235,468 | 330,353 |
|  |  | HCR 2a (PFMC) | 215,151 | 248,766 | 188,121 | 177,933 | 239,263 |
|  |  | HCR 2b (Dynamic PFMC) | 215,003 | 248,937 | 188,357 | 179,044 | 239,718 |
|  |  | HCR 3a (SESSF) | 223,488 | 254,570 | 196,122 | 177,123 | 252,340 |
|  |  | HCR 3b (Dynamic SESSF) | 223,932 | 255,057 | 197,104 | 182,000 | 253,629 |
|  |  | HCR 4 (NEFMC) | 296,893 | 337,483 | 259,597 | 240,056 | 333,956 |
|  |  | HCR 5 (Avg F) | 125,936 | 139,443 | 113,114 | 100,686 | 143,616 |
|  | *Est M* | HCR 1a (NPFMC) | 467,494 | 525,978 | 405,488 | 364,268 | 535,430 |
|  |  | HCR 1b (Dynamic NPFMC) | 467,352 | 525,174 | 409,771 | 369,720 | 535,204 |
|  |  | HCR 2a (PFMC) | 445,938 | 510,928 | 389,274 | 358,810 | 500,423 |
|  |  | HCR 2b (Dynamic PFMC) | 448,314 | 509,057 | 390,304 | 360,581 | 503,188 |
|  |  | HCR 3a (SESSF) | 387,514 | 433,030 | 339,293 | 298,603 | 446,070 |
|  |  | HCR 3b (Dynamic SESSF) | 388,238 | 435,361 | 344,018 | 305,454 | 447,622 |
|  |  | HCR 4 (NEFMC) | 472,453 | 530,611 | 415,360 | 374,531 | 540,160 |
|  |  | HCR 5 (Avg F) | 139,028 | 155,438 | 123,060 | 111,190 | 157,078 |

[1] “**Supplementary Table 4.EBS.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 78,018 | 77,665 | 83,975 | 78,031 | 77,904 |
|  |  | HCR 1b (Dynamic NPFMC) | 66,955 | 82,272 | 64,483 | 67,103 | 66,737 |
|  |  | HCR 2a (PFMC) | 29,866 | 38,601 | 29,185 | 29,832 | 30,027 |
|  |  | HCR 2b (Dynamic PFMC) | 28,464 | 38,577 | 25,691 | 28,393 | 28,402 |
|  |  | HCR 3a (SESSF) | 43,711 | 42,216 | 61,581 | 43,318 | 43,485 |
|  |  | HCR 3b (Dynamic SESSF) | 29,906 | 40,224 | 27,477 | 29,992 | 30,028 |
|  |  | HCR 4 (NEFMC) | 55,755 | 68,992 | 53,505 | 55,644 | 55,663 |
|  |  | HCR 5 (Avg F) | 11,046 | 16,773 | 9,089 | 11,042 | 10,943 |
|  | *Est M* | HCR 1a (NPFMC) | 288,723 | 237,899 | 345,369 | 288,586 | 288,149 |
|  |  | HCR 1b (Dynamic NPFMC) | 257,763 | 232,877 | 296,120 | 258,255 | 258,269 |
|  |  | HCR 2a (PFMC) | 80,863 | 84,369 | 89,184 | 81,303 | 81,216 |
|  |  | HCR 2b (Dynamic PFMC) | 77,037 | 83,432 | 81,036 | 77,011 | 77,189 |
|  |  | HCR 3a (SESSF) | 135,822 | 109,184 | 176,390 | 134,779 | 135,379 |
|  |  | HCR 3b (Dynamic SESSF) | 95,848 | 97,233 | 104,051 | 95,557 | 95,727 |
|  |  | HCR 4 (NEFMC) | 227,917 | 203,445 | 263,146 | 227,533 | 228,153 |
|  |  | HCR 5 (Avg F) | 10,540 | 15,840 | 8,659 | 10,547 | 10,423 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 64,310 | 71,531 | 68,051 | 64,164 | 64,119 |
|  |  | HCR 1b (Dynamic NPFMC) | 59,620 | 79,651 | 53,550 | 59,608 | 59,521 |
|  |  | HCR 2a (PFMC) | 27,235 | 38,035 | 25,249 | 27,277 | 27,121 |
|  |  | HCR 2b (Dynamic PFMC) | 26,160 | 37,904 | 22,450 | 26,413 | 26,245 |
|  |  | HCR 3a (SESSF) | 36,174 | 39,889 | 51,164 | 35,987 | 35,894 |
|  |  | HCR 3b (Dynamic SESSF) | 27,438 | 39,325 | 23,985 | 27,452 | 27,653 |
|  |  | HCR 4 (NEFMC) | 48,688 | 66,912 | 43,681 | 48,863 | 48,871 |
|  |  | HCR 5 (Avg F) | 11,127 | 16,904 | 9,109 | 11,150 | 11,159 |
|  | *Est M* | HCR 1a (NPFMC) | 390,743 | 377,939 | 444,043 | 390,914 | 391,190 |
|  |  | HCR 1b (Dynamic NPFMC) | 348,126 | 389,227 | 358,725 | 348,027 | 349,761 |
|  |  | HCR 2a (PFMC) | 138,700 | 165,676 | 138,955 | 138,903 | 138,030 |
|  |  | HCR 2b (Dynamic PFMC) | 132,380 | 165,334 | 125,661 | 132,147 | 131,649 |
|  |  | HCR 3a (SESSF) | 211,761 | 191,448 | 266,437 | 212,204 | 212,135 |
|  |  | HCR 3b (Dynamic SESSF) | 154,876 | 183,086 | 153,873 | 155,648 | 155,964 |
|  |  | HCR 4 (NEFMC) | 298,430 | 331,064 | 310,391 | 298,644 | 298,784 |
|  |  | HCR 5 (Avg F) | 11,504 | 17,703 | 9,280 | 11,430 | 11,415 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 117,159 | 147,857 | 113,964 | 123,324 | 113,651 |
|  |  | HCR 1b (Dynamic NPFMC) | 118,183 | 162,605 | 105,789 | 121,471 | 116,381 |
|  |  | HCR 2a (PFMC) | 55,293 | 80,302 | 48,176 | 56,830 | 54,332 |
|  |  | HCR 2b (Dynamic PFMC) | 54,468 | 81,022 | 46,638 | 56,222 | 53,930 |
|  |  | HCR 3a (SESSF) | 64,443 | 87,173 | 66,079 | 70,673 | 61,607 |
|  |  | HCR 3b (Dynamic SESSF) | 60,519 | 90,996 | 51,294 | 62,859 | 58,593 |
|  |  | HCR 4 (NEFMC) | 97,564 | 133,801 | 87,400 | 100,347 | 96,353 |
|  |  | HCR 5 (Avg F) | 22,970 | 35,800 | 18,387 | 23,533 | 22,778 |
|  | *Est M* | HCR 1a (NPFMC) | 480,947 | 478,117 | 524,740 | 502,682 | 470,656 |
|  |  | HCR 1b (Dynamic NPFMC) | 457,166 | 481,886 | 477,315 | 472,600 | 447,410 |
|  |  | HCR 2a (PFMC) | 158,987 | 191,254 | 155,808 | 163,641 | 155,054 |
|  |  | HCR 2b (Dynamic PFMC) | 155,071 | 190,465 | 148,524 | 158,720 | 152,146 |
|  |  | HCR 3a (SESSF) | 239,282 | 253,604 | 265,359 | 257,066 | 229,616 |
|  |  | HCR 3b (Dynamic SESSF) | 205,467 | 242,838 | 204,207 | 214,205 | 200,355 |
|  |  | HCR 4 (NEFMC) | 388,911 | 407,843 | 409,259 | 402,642 | 381,676 |
|  |  | HCR 5 (Avg F) | 22,888 | 36,245 | 18,014 | 23,425 | 22,396 |

[1] “**Supplementary Table 4.GOA.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 21,542 | 28,281 | 19,255 | 21,489 | 21,529 |
|  |  | HCR 1b (Dynamic NPFMC) | 19,433 | 27,912 | 15,194 | 19,069 | 19,279 |
|  |  | HCR 2a (PFMC) | 9,385 | 13,536 | 7,699 | 9,376 | 9,209 |
|  |  | HCR 2b (Dynamic PFMC) | 9,056 | 13,297 | 7,235 | 9,026 | 9,000 |
|  |  | HCR 3a (SESSF) | 15,280 | 19,462 | 14,612 | 15,444 | 15,078 |
|  |  | HCR 3b (Dynamic SESSF) | 12,160 | 17,960 | 9,655 | 11,930 | 12,182 |
|  |  | HCR 4 (NEFMC) | 16,567 | 25,088 | 13,053 | 16,463 | 16,699 |
|  |  | HCR 5 (Avg F) | 11,601 | 17,170 | 9,112 | 11,468 | 11,590 |
|  | *Est M* | HCR 1a (NPFMC) | 24,622 | 32,135 | 22,081 | 24,750 | 24,591 |
|  |  | HCR 1b (Dynamic NPFMC) | 22,320 | 31,771 | 17,866 | 22,012 | 21,747 |
|  |  | HCR 2a (PFMC) | 14,881 | 21,995 | 12,104 | 14,707 | 14,699 |
|  |  | HCR 2b (Dynamic PFMC) | 13,705 | 21,620 | 10,683 | 13,907 | 13,841 |
|  |  | HCR 3a (SESSF) | 19,868 | 24,982 | 19,052 | 20,165 | 20,133 |
|  |  | HCR 3b (Dynamic SESSF) | 15,062 | 23,066 | 11,868 | 14,799 | 14,833 |
|  |  | HCR 4 (NEFMC) | 17,813 | 26,928 | 14,307 | 17,898 | 18,051 |
|  |  | HCR 5 (Avg F) | 10,970 | 16,762 | 8,459 | 10,947 | 10,990 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 18,635 | 24,507 | 16,622 | 18,749 | 18,693 |
|  |  | HCR 1b (Dynamic NPFMC) | 16,734 | 24,326 | 13,605 | 16,582 | 16,681 |
|  |  | HCR 2a (PFMC) | 8,349 | 12,061 | 6,968 | 8,386 | 8,256 |
|  |  | HCR 2b (Dynamic PFMC) | 8,026 | 11,930 | 6,370 | 8,041 | 8,074 |
|  |  | HCR 3a (SESSF) | 13,360 | 17,168 | 12,626 | 13,416 | 13,228 |
|  |  | HCR 3b (Dynamic SESSF) | 10,479 | 15,894 | 8,403 | 10,628 | 10,428 |
|  |  | HCR 4 (NEFMC) | 14,119 | 21,876 | 11,492 | 14,304 | 14,329 |
|  |  | HCR 5 (Avg F) | 9,857 | 15,087 | 7,997 | 9,918 | 10,028 |
|  | *Est M* | HCR 1a (NPFMC) | 17,843 | 20,559 | 14,704 | 17,893 | 17,588 |
|  |  | HCR 1b (Dynamic NPFMC) | 14,002 | 20,494 | 11,820 | 14,061 | 14,021 |
|  |  | HCR 2a (PFMC) | 12,144 | 13,605 | 8,382 | 9,626 | 9,511 |
|  |  | HCR 2b (Dynamic PFMC) | 8,514 | 12,847 | 7,054 | 8,694 | 8,700 |
|  |  | HCR 3a (SESSF) | 12,213 | 17,775 | 14,526 | 15,522 | 14,928 |
|  |  | HCR 3b (Dynamic SESSF) | 9,164 | 15,725 | 8,771 | 10,938 | 10,823 |
|  |  | HCR 4 (NEFMC) | 11,675 | 17,385 | 9,903 | 11,661 | 11,636 |
|  |  | HCR 5 (Avg F) | 8,085 | 11,508 | 6,516 | 8,030 | 8,033 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 24,305 | 29,674 | 20,315 | 21,135 | 26,337 |
|  |  | HCR 1b (Dynamic NPFMC) | 24,561 | 30,839 | 20,418 | 20,282 | 27,527 |
|  |  | HCR 2a (PFMC) | 12,209 | 15,145 | 10,333 | 10,520 | 13,375 |
|  |  | HCR 2b (Dynamic PFMC) | 12,501 | 15,239 | 10,484 | 10,322 | 13,584 |
|  |  | HCR 3a (SESSF) | 15,123 | 19,419 | 13,502 | 14,844 | 16,522 |
|  |  | HCR 3b (Dynamic SESSF) | 14,489 | 18,399 | 12,338 | 12,396 | 16,737 |
|  |  | HCR 4 (NEFMC) | 22,528 | 28,201 | 18,952 | 18,676 | 25,865 |
|  |  | HCR 5 (Avg F) | 8,120 | 10,075 | 7,023 | 7,174 | 9,032 |
|  | *Est M* | HCR 1a (NPFMC) | 66,315 | 80,877 | 56,548 | 61,035 | 72,137 |
|  |  | HCR 1b (Dynamic NPFMC) | 67,319 | 85,364 | 56,695 | 57,740 | 74,747 |
|  |  | HCR 2a (PFMC) | 44,066 | 54,673 | 37,357 | 37,477 | 49,088 |
|  |  | HCR 2b (Dynamic PFMC) | 44,028 | 54,298 | 36,899 | 36,257 | 49,879 |
|  |  | HCR 3a (SESSF) | 45,699 | 56,124 | 40,519 | 44,565 | 48,124 |
|  |  | HCR 3b (Dynamic SESSF) | 41,695 | 53,426 | 35,347 | 36,659 | 46,401 |
|  |  | HCR 4 (NEFMC) | 57,055 | 71,870 | 49,418 | 48,426 | 65,284 |
|  |  | HCR 5 (Avg F) | 9,258 | 11,681 | 8,048 | 8,184 | 10,381 |

[1] “**Supplementary Table 4.EBS.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.03 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.01 | 0.01 | 0.02 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.08 | 0.08 | 0.09 | 0.08 | 0.08 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
|  |  | HCR 2a (PFMC) | 0.1 | 0.11 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 2b (Dynamic PFMC) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 3a (SESSF) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 3b (Dynamic SESSF) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
|  |  | HCR 5 (Avg F) | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0.01 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.01 | 0 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.01 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0.07 | 0.09 | 0.05 | 0.07 | 0.06 |

[1] “**Supplementary Table 4.GOA.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.08 | 0.1 | 0.08 | 0.08 | 0.08 |
|  |  | HCR 2b (Dynamic PFMC) | 0.08 | 0.1 | 0.07 | 0.08 | 0.08 |
|  |  | HCR 3a (SESSF) | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 |
|  |  | HCR 3b (Dynamic SESSF) | 0.04 | 0.05 | 0.03 | 0.04 | 0.04 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.41 | 0.43 | 0.39 | 0.39 | 0.39 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.01 | 0.03 | 0.01 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0.05 | 0.06 | 0.04 | 0.05 | 0.05 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.05 | 0.04 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 |
|  |  | HCR 3a (SESSF) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 3b (Dynamic SESSF) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.09 | 0.1 | 0.09 | 0.11 | 0.09 |
|  | *Est M* | HCR 1a (NPFMC) | 0.07 | 0.05 | 0.07 | 0.05 | 0.08 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.07 | 0.05 | 0.07 | 0.04 | 0.09 |
|  |  | HCR 2a (PFMC) | 0.14 | 0.11 | 0.15 | 0.1 | 0.16 |
|  |  | HCR 2b (Dynamic PFMC) | 0.14 | 0.11 | 0.14 | 0.09 | 0.16 |
|  |  | HCR 3a (SESSF) | 0.08 | 0.06 | 0.08 | 0.06 | 0.09 |
|  |  | HCR 3b (Dynamic SESSF) | 0.08 | 0.06 | 0.09 | 0.04 | 0.1 |
|  |  | HCR 4 (NEFMC) | 0.06 | 0.04 | 0.06 | 0.03 | 0.07 |
|  |  | HCR 5 (Avg F) | 0.23 | 0.31 | 0.18 | 0.3 | 0.17 |

[1] “**Supplementary Table 4.EBS.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.23 | 0.41 | 0.32 | 0.33 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.76 | 0.68 | 0.81 | 0.75 | 0.76 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.44 | 0.37 | 0.52 | 0.46 | 0.44 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.23 | 0.42 | 0.15 | 0.28 | 0.21 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.04 | 0.06 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 2a (PFMC) | 0.07 | 0.13 | 0.06 | 0.07 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0.07 | 0.12 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.49 | 0.61 | 0.41 | 0.53 | 0.45 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.04 | 0.03 | 0.06 | 0.04 | 0.04 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.62 | 0.59 | 0.64 | 0.61 | 0.62 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.12 | 0.1 | 0.14 | 0.12 | 0.12 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.1 | 0.09 | 0.12 | 0.1 | 0.1 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.66 | 0.62 | 0.68 | 0.65 | 0.65 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.03 | 0.02 | 0.05 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.5 | 0.47 | 0.53 | 0.5 | 0.5 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.09 | 0.06 | 0.11 | 0.09 | 0.09 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.09 | 0.07 | 0.08 | 0.08 | 0.09 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.64 | 0.6 | 0.67 | 0.64 | 0.64 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.2 | 0.31 | 0.17 | 0.36 | 0.17 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0.08 | 0.01 | 0.11 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.03 | 0.09 | 0.02 | 0.12 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.31 | 0.45 | 0.24 | 0.49 | 0.22 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.06 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.08 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.01 | 0.13 | 0.03 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.09 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0 | 0.11 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.04 | 0.03 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.04 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.01 | 0.12 | 0.04 | 0.04 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0.01 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.01 | 0.08 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.05 | 0.02 | 0.14 | 0.06 | 0.06 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.03 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.01 | 0.11 | 0.03 | 0.04 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0.01 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.01 | 0.06 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.01 | 0.11 | 0.04 | 0.04 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0.03 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0.02 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0.01 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.01 | 0.01 | 0.03 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0.01 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.03 | 0.02 | 0.11 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.04 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.45 | 0.32 | 0.55 | 0.44 | 0.45 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.98 | 0.94 | 0.98 | 0.98 | 0.97 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
|  |  | HCR 2a (PFMC) | 0.99 | 1 | 0.94 | 0.99 | 0.99 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.04 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.68 | 0.71 | 0.7 | 0.69 | 0.71 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.69 | 0.46 | 0.81 | 0.64 | 0.64 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.66 | 0.6 | 0.72 | 0.66 | 0.65 |
|  |  | HCR 2a (PFMC) | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0.08 | 0.07 | 0.09 | 0.08 | 0.08 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.96 | 0.94 | 0.98 | 0.96 | 0.96 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.91 | 0.84 | 0.93 | 0.89 | 0.88 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.91 | 0.9 | 0.92 | 0.91 | 0.9 |
|  |  | HCR 2a (PFMC) | 0.93 | 0.96 | 0.9 | 0.94 | 0.93 |
|  |  | HCR 2b (Dynamic PFMC) | 0.95 | 0.96 | 0.96 | 0.96 | 0.95 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.71 | 0.47 | 0.81 | 0.67 | 0.67 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.7 | 0.61 | 0.75 | 0.69 | 0.7 |
|  |  | HCR 2a (PFMC) | 0.12 | 0.1 | 0.13 | 0.12 | 0.12 |
|  |  | HCR 2b (Dynamic PFMC) | 0.13 | 0.1 | 0.14 | 0.13 | 0.13 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.95 | 0.93 | 0.97 | 0.95 | 0.95 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.47 | 0.24 | 0.49 | 0.42 | 0.41 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.25 | 0.28 | 0.32 | 0.24 | 0.25 |
|  |  | HCR 2a (PFMC) | 0.73 | 0.46 | 0.44 | 0.44 | 0.42 |
|  |  | HCR 2b (Dynamic PFMC) | 0.36 | 0.41 | 0.45 | 0.42 | 0.44 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.51 | 0.52 | 0.54 | 0.55 | 0.52 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.1 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.13 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.05 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.07 | 0 | 0.26 | 0.05 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0.01 | 0.28 | 0.06 | 0.06 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.02 | 0 | 0.16 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0 | 0.18 | 0.03 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0.01 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.05 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.04 | 0.01 | 0.14 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.02 | 0.25 | 0.09 | 0.09 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.04 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0 | 0.1 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.19 | 0.04 | 0.35 | 0.15 | 0.15 |
|  |  | HCR 2b (Dynamic PFMC) | 0.03 | 0.02 | 0.05 | 0.03 | 0.03 |
|  |  | HCR 3a (SESSF) | 0.03 | 0 | 0.09 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.16 | 0.04 | 0.33 | 0.14 | 0.14 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.06 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.06 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.05 | 0.01 | 0.15 | 0.04 | 0.04 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.01 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.02 | 0.26 | 0.09 | 0.09 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.05 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.03 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.18 | 0.02 | 0.21 | 0.07 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.01 | 0 | 0.03 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.07 | 0.01 | 0.17 | 0.06 | 0.05 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0.02 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.01 | 0 | 0.02 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.03 | 0.01 | 0.05 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.04 | 0.03 | 0.08 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.02 | 0 | 0.02 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.03 | 0.02 | 0.07 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.06 | 0.05 | 0.12 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0.01 | 0 | 0.03 | 0 |

[1] “**Supplementary Table 4.EBS.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.05 | 0.03 | 0.07 | 0.05 | 0.05 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.23 | 0.42 | 0.15 | 0.28 | 0.21 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.04 | 0.06 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 2a (PFMC) | 0.07 | 0.13 | 0.06 | 0.07 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0.07 | 0.12 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.49 | 0.61 | 0.41 | 0.53 | 0.45 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.25 | 0.23 | 0.26 | 0.23 | 0.25 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.2 | 0.31 | 0.17 | 0.36 | 0.17 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0.08 | 0.01 | 0.11 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.03 | 0.09 | 0.02 | 0.12 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.31 | 0.45 | 0.24 | 0.49 | 0.22 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.04 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.16 | 0.13 | 0.16 | 0.16 | 0.15 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.95 | 0.92 | 0.96 | 0.95 | 0.95 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.95 | 0.94 | 0.95 | 0.95 | 0.95 |
|  |  | HCR 2a (PFMC) | 0.99 | 0.99 | 0.93 | 0.99 | 0.99 |
|  |  | HCR 2b (Dynamic PFMC) | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.24 | 0.32 | 0.19 | 0.25 | 0.24 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.04 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.29 | 0.36 | 0.26 | 0.28 | 0.31 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.66 | 0.44 | 0.75 | 0.6 | 0.6 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.64 | 0.58 | 0.7 | 0.64 | 0.63 |
|  |  | HCR 2a (PFMC) | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0.08 | 0.07 | 0.09 | 0.08 | 0.08 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.35 | 0.36 | 0.33 | 0.36 | 0.34 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.79 | 0.75 | 0.79 | 0.78 | 0.77 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.8 | 0.81 | 0.81 | 0.81 | 0.8 |
|  |  | HCR 2a (PFMC) | 0.93 | 0.95 | 0.89 | 0.93 | 0.93 |
|  |  | HCR 2b (Dynamic PFMC) | 0.95 | 0.95 | 0.96 | 0.96 | 0.94 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.37 | 0.31 | 0.34 | 0.35 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.68 | 0.45 | 0.76 | 0.64 | 0.64 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.68 | 0.59 | 0.72 | 0.67 | 0.67 |
|  |  | HCR 2a (PFMC) | 0.12 | 0.1 | 0.13 | 0.12 | 0.12 |
|  |  | HCR 2b (Dynamic PFMC) | 0.13 | 0.1 | 0.14 | 0.12 | 0.13 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.45 | 0.46 | 0.44 | 0.45 | 0.46 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.39 | 0.2 | 0.4 | 0.35 | 0.34 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.19 | 0.23 | 0.25 | 0.19 | 0.19 |
|  |  | HCR 2a (PFMC) | 0.72 | 0.46 | 0.44 | 0.44 | 0.42 |
|  |  | HCR 2b (Dynamic PFMC) | 0.36 | 0.41 | 0.45 | 0.42 | 0.44 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.13 | 0.15 | 0.13 | 0.14 | 0.13 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0.02 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0.01 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0.03 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0.04 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.EBS.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.07 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.07 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.05 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.06 | 0 | 0.19 | 0.04 | 0.04 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.07 | 0 | 0.16 | 0.04 | 0.04 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0 | 0.07 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.08 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 4.GOA.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.04 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0 | 0.1 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.07 | 0.01 | 0.14 | 0.05 | 0.05 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.04 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0 | 0.09 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.16 | 0.03 | 0.28 | 0.13 | 0.13 |
|  |  | HCR 2b (Dynamic PFMC) | 0.03 | 0.02 | 0.05 | 0.03 | 0.03 |
|  |  | HCR 3a (SESSF) | 0.03 | 0 | 0.09 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.02 | 0.19 | 0.09 | 0.09 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.06 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.05 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.04 | 0.01 | 0.11 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.01 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.01 | 0.15 | 0.06 | 0.06 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.04 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.15 | 0.02 | 0.15 | 0.05 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.01 | 0 | 0.03 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.01 | 0.07 | 0.03 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0.02 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.01 | 0 | 0.01 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.03 | 0.01 | 0.04 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.04 | 0.03 | 0.08 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.01 | 0 | 0.02 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.03 | 0.02 | 0.07 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.04 | 0.03 | 0.05 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0.01 | 0 | 0.03 | 0 |

[1] “**Supplementary Table 4.EBS.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Pollock in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.41 | 0.61 | 0.37 | 0.45 | 0.45 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.42 | 0.43 | 0.4 | 0.42 | 0.42 |
|  |  | HCR 2a (PFMC) | 0.48 | 0.72 | 0.42 | 0.52 | 0.52 |
|  |  | HCR 2b (Dynamic PFMC) | 0.49 | 0.51 | 0.47 | 0.49 | 0.49 |
|  |  | HCR 3a (SESSF) | 0.48 | 0.72 | 0.43 | 0.52 | 0.52 |
|  |  | HCR 3b (Dynamic SESSF) | 0.49 | 0.5 | 0.47 | 0.48 | 0.49 |
|  |  | HCR 4 (NEFMC) | 0.4 | 0.61 | 0.35 | 0.43 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.62 | 0.91 | 0.53 | 0.66 | 0.66 |
|  | *Est M* | HCR 1a (NPFMC) | 0.34 | 0.5 | 0.3 | 0.37 | 0.37 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.34 | 0.35 | 0.33 | 0.34 | 0.34 |
|  |  | HCR 2a (PFMC) | 0.4 | 0.59 | 0.35 | 0.43 | 0.43 |
|  |  | HCR 2b (Dynamic PFMC) | 0.4 | 0.42 | 0.39 | 0.4 | 0.4 |
|  |  | HCR 3a (SESSF) | 0.39 | 0.59 | 0.35 | 0.42 | 0.43 |
|  |  | HCR 3b (Dynamic SESSF) | 0.39 | 0.41 | 0.38 | 0.39 | 0.39 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.5 | 0.28 | 0.35 | 0.35 |
|  |  | HCR 5 (Avg F) | 0.62 | 0.92 | 0.54 | 0.67 | 0.67 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.61 | 0.89 | 0.51 | 0.64 | 0.63 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.62 | 0.63 | 0.61 | 0.62 | 0.62 |
|  |  | HCR 2a (PFMC) | 0.67 | 0.99 | 0.56 | 0.7 | 0.7 |
|  |  | HCR 2b (Dynamic PFMC) | 0.69 | 0.7 | 0.67 | 0.69 | 0.69 |
|  |  | HCR 3a (SESSF) | 0.67 | 0.98 | 0.56 | 0.7 | 0.7 |
|  |  | HCR 3b (Dynamic SESSF) | 0.68 | 0.7 | 0.67 | 0.68 | 0.68 |
|  |  | HCR 4 (NEFMC) | 0.6 | 0.88 | 0.5 | 0.63 | 0.63 |
|  |  | HCR 5 (Avg F) | 0.77 | 1.12 | 0.64 | 0.8 | 0.8 |
|  | *Est M* | HCR 1a (NPFMC) | 0.41 | 0.59 | 0.35 | 0.43 | 0.43 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.41 | 0.42 | 0.4 | 0.41 | 0.41 |
|  |  | HCR 2a (PFMC) | 0.48 | 0.7 | 0.4 | 0.5 | 0.5 |
|  |  | HCR 2b (Dynamic PFMC) | 0.48 | 0.5 | 0.47 | 0.48 | 0.48 |
|  |  | HCR 3a (SESSF) | 0.48 | 0.7 | 0.41 | 0.5 | 0.5 |
|  |  | HCR 3b (Dynamic SESSF) | 0.48 | 0.49 | 0.46 | 0.48 | 0.48 |
|  |  | HCR 4 (NEFMC) | 0.4 | 0.59 | 0.33 | 0.41 | 0.41 |
|  |  | HCR 5 (Avg F) | 0.77 | 1.12 | 0.64 | 0.8 | 0.8 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1.27 | 1.84 | 1.05 | 1.27 | 1.23 |
|  |  | HCR 1b (Dynamic NPFMC) | 1.28 | 1.86 | 1.05 | 1.27 | 1.24 |
|  |  | HCR 2a (PFMC) | 1.41 | 1.99 | 1.17 | 1.41 | 1.37 |
|  |  | HCR 2b (Dynamic PFMC) | 1.41 | 1.99 | 1.17 | 1.41 | 1.37 |
|  |  | HCR 3a (SESSF) | 1.38 | 1.94 | 1.14 | 1.36 | 1.34 |
|  |  | HCR 3b (Dynamic SESSF) | 1.38 | 1.94 | 1.14 | 1.36 | 1.34 |
|  |  | HCR 4 (NEFMC) | 1.26 | 1.84 | 1.04 | 1.26 | 1.22 |
|  |  | HCR 5 (Avg F) | 1.73 | 2.45 | 1.43 | 1.68 | 1.7 |
|  | *Est M* | HCR 1a (NPFMC) | 1.02 | 1.5 | 0.84 | 1.02 | 0.98 |
|  |  | HCR 1b (Dynamic NPFMC) | 1.02 | 1.51 | 0.84 | 1.02 | 0.98 |
|  |  | HCR 2a (PFMC) | 1.15 | 1.67 | 0.95 | 1.16 | 1.11 |
|  |  | HCR 2b (Dynamic PFMC) | 1.15 | 1.67 | 0.95 | 1.16 | 1.11 |
|  |  | HCR 3a (SESSF) | 1.12 | 1.62 | 0.93 | 1.12 | 1.09 |
|  |  | HCR 3b (Dynamic SESSF) | 1.12 | 1.62 | 0.92 | 1.11 | 1.09 |
|  |  | HCR 4 (NEFMC) | 1.01 | 1.49 | 0.82 | 1 | 0.97 |
|  |  | HCR 5 (Avg F) | 1.73 | 2.45 | 1.44 | 1.68 | 1.71 |

[1] “**Supplementary Table 4.GOA.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Pollock in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.37 | 0.56 | 0.35 | 0.42 | 0.42 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.37 | 0.38 | 0.36 | 0.37 | 0.37 |
|  |  | HCR 2a (PFMC) | 0.49 | 0.73 | 0.45 | 0.54 | 0.54 |
|  |  | HCR 2b (Dynamic PFMC) | 0.48 | 0.5 | 0.47 | 0.48 | 0.48 |
|  |  | HCR 3a (SESSF) | 0.44 | 0.66 | 0.42 | 0.49 | 0.49 |
|  |  | HCR 3b (Dynamic SESSF) | 0.43 | 0.44 | 0.42 | 0.43 | 0.43 |
|  |  | HCR 4 (NEFMC) | 0.36 | 0.55 | 0.33 | 0.4 | 0.4 |
|  |  | HCR 5 (Avg F) | 0.46 | 0.7 | 0.42 | 0.52 | 0.52 |
|  | *Est M* | HCR 1a (NPFMC) | 0.34 | 0.5 | 0.32 | 0.38 | 0.38 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.33 | 0.34 | 0.32 | 0.33 | 0.33 |
|  |  | HCR 2a (PFMC) | 0.38 | 0.57 | 0.35 | 0.43 | 0.42 |
|  |  | HCR 2b (Dynamic PFMC) | 0.38 | 0.39 | 0.37 | 0.38 | 0.38 |
|  |  | HCR 3a (SESSF) | 0.38 | 0.57 | 0.36 | 0.43 | 0.43 |
|  |  | HCR 3b (Dynamic SESSF) | 0.37 | 0.38 | 0.36 | 0.37 | 0.37 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.5 | 0.3 | 0.37 | 0.37 |
|  |  | HCR 5 (Avg F) | 0.45 | 0.68 | 0.41 | 0.5 | 0.5 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.37 | 0.55 | 0.35 | 0.42 | 0.42 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.36 | 0.37 | 0.35 | 0.36 | 0.36 |
|  |  | HCR 2a (PFMC) | 0.48 | 0.73 | 0.44 | 0.54 | 0.54 |
|  |  | HCR 2b (Dynamic PFMC) | 0.48 | 0.49 | 0.47 | 0.48 | 0.48 |
|  |  | HCR 3a (SESSF) | 0.43 | 0.65 | 0.41 | 0.48 | 0.49 |
|  |  | HCR 3b (Dynamic SESSF) | 0.42 | 0.44 | 0.41 | 0.42 | 0.42 |
|  |  | HCR 4 (NEFMC) | 0.35 | 0.54 | 0.32 | 0.4 | 0.4 |
|  |  | HCR 5 (Avg F) | 0.46 | 0.7 | 0.42 | 0.51 | 0.51 |
|  | *Est M* | HCR 1a (NPFMC) | 0.39 | 0.59 | 0.37 | 0.43 | 0.43 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.4 | 0.4 | 0.39 | 0.4 | 0.4 |
|  |  | HCR 2a (PFMC) | 0.4 | 0.66 | 0.4 | 0.49 | 0.49 |
|  |  | HCR 2b (Dynamic PFMC) | 0.45 | 0.46 | 0.43 | 0.44 | 0.44 |
|  |  | HCR 3a (SESSF) | 0.45 | 0.63 | 0.4 | 0.46 | 0.47 |
|  |  | HCR 3b (Dynamic SESSF) | 0.45 | 0.44 | 0.42 | 0.42 | 0.43 |
|  |  | HCR 4 (NEFMC) | 0.39 | 0.59 | 0.35 | 0.43 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.49 | 0.74 | 0.45 | 0.54 | 0.54 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1.06 | 1.1 | 0.98 | 0.96 | 1.1 |
|  |  | HCR 1b (Dynamic NPFMC) | 1.06 | 1.11 | 0.98 | 0.94 | 1.11 |
|  |  | HCR 2a (PFMC) | 1.42 | 1.52 | 1.31 | 1.32 | 1.45 |
|  |  | HCR 2b (Dynamic PFMC) | 1.42 | 1.52 | 1.3 | 1.31 | 1.45 |
|  |  | HCR 3a (SESSF) | 1.11 | 1.15 | 1.03 | 0.99 | 1.17 |
|  |  | HCR 3b (Dynamic SESSF) | 1.11 | 1.15 | 1.03 | 0.97 | 1.16 |
|  |  | HCR 4 (NEFMC) | 1.05 | 1.1 | 0.98 | 0.93 | 1.1 |
|  |  | HCR 5 (Avg F) | 0.91 | 0.92 | 0.86 | 0.75 | 0.99 |
|  | *Est M* | HCR 1a (NPFMC) | 0.64 | 0.66 | 0.6 | 0.58 | 0.66 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.64 | 0.66 | 0.6 | 0.57 | 0.67 |
|  |  | HCR 2a (PFMC) | 0.85 | 0.88 | 0.78 | 0.78 | 0.88 |
|  |  | HCR 2b (Dynamic PFMC) | 0.84 | 0.89 | 0.78 | 0.77 | 0.87 |
|  |  | HCR 3a (SESSF) | 0.71 | 0.72 | 0.67 | 0.63 | 0.74 |
|  |  | HCR 3b (Dynamic SESSF) | 0.7 | 0.71 | 0.66 | 0.61 | 0.74 |
|  |  | HCR 4 (NEFMC) | 0.63 | 0.65 | 0.59 | 0.55 | 0.66 |
|  |  | HCR 5 (Avg F) | 0.88 | 0.88 | 0.84 | 0.72 | 0.96 |

[1] “**Supplementary Table 5.EBS.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 143,606 | 203,304 | 111,395 | 143,616 | 143,620 |
|  |  | HCR 1b (Dynamic NPFMC) | 144,669 | 202,642 | 115,497 | 144,711 | 144,675 |
|  |  | HCR 2a (PFMC) | 122,770 | 170,706 | 98,074 | 122,798 | 122,801 |
|  |  | HCR 2b (Dynamic PFMC) | 122,840 | 170,684 | 98,826 | 122,844 | 122,862 |
|  |  | HCR 3a (SESSF) | 127,905 | 178,743 | 99,935 | 127,913 | 127,918 |
|  |  | HCR 3b (Dynamic SESSF) | 128,316 | 178,842 | 102,976 | 128,318 | 128,312 |
|  |  | HCR 4 (NEFMC) | 147,026 | 204,933 | 117,942 | 147,030 | 147,038 |
|  |  | HCR 5 (Avg F) | 167,554 | 234,671 | 133,925 | 167,553 | 167,523 |
|  | *Est M* | HCR 1a (NPFMC) | 146,857 | 207,745 | 114,095 | 146,858 | 146,931 |
|  |  | HCR 1b (Dynamic NPFMC) | 147,844 | 207,209 | 118,144 | 147,992 | 147,848 |
|  |  | HCR 2a (PFMC) | 126,931 | 176,598 | 101,322 | 126,861 | 126,942 |
|  |  | HCR 2b (Dynamic PFMC) | 126,974 | 176,431 | 102,266 | 127,052 | 126,987 |
|  |  | HCR 3a (SESSF) | 130,852 | 182,912 | 102,367 | 130,807 | 130,918 |
|  |  | HCR 3b (Dynamic SESSF) | 131,517 | 183,206 | 105,617 | 131,436 | 131,498 |
|  |  | HCR 4 (NEFMC) | 150,117 | 209,307 | 120,424 | 150,135 | 150,198 |
|  |  | HCR 5 (Avg F) | 168,811 | 236,433 | 134,800 | 168,808 | 168,812 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 144,232 | 203,931 | 112,012 | 144,235 | 144,228 |
|  |  | HCR 1b (Dynamic NPFMC) | 145,256 | 203,272 | 116,003 | 145,256 | 145,238 |
|  |  | HCR 2a (PFMC) | 123,293 | 171,333 | 98,555 | 123,299 | 123,318 |
|  |  | HCR 2b (Dynamic PFMC) | 123,371 | 171,261 | 99,263 | 123,327 | 123,334 |
|  |  | HCR 3a (SESSF) | 128,636 | 179,535 | 100,641 | 128,595 | 128,610 |
|  |  | HCR 3b (Dynamic SESSF) | 128,946 | 179,608 | 103,559 | 128,989 | 128,958 |
|  |  | HCR 4 (NEFMC) | 147,490 | 205,504 | 118,394 | 147,498 | 147,530 |
|  |  | HCR 5 (Avg F) | 168,295 | 235,614 | 134,551 | 168,287 | 168,352 |
|  | *Est M* | HCR 1a (NPFMC) | 142,375 | 201,361 | 110,431 | 142,380 | 142,356 |
|  |  | HCR 1b (Dynamic NPFMC) | 143,321 | 200,546 | 114,484 | 143,302 | 143,265 |
|  |  | HCR 2a (PFMC) | 120,777 | 167,706 | 96,537 | 120,681 | 120,704 |
|  |  | HCR 2b (Dynamic PFMC) | 120,904 | 167,763 | 97,257 | 120,796 | 120,723 |
|  |  | HCR 3a (SESSF) | 126,644 | 176,782 | 99,103 | 126,665 | 126,633 |
|  |  | HCR 3b (Dynamic SESSF) | 126,945 | 176,834 | 101,871 | 126,921 | 126,962 |
|  |  | HCR 4 (NEFMC) | 145,730 | 202,868 | 116,999 | 145,641 | 145,690 |
|  |  | HCR 5 (Avg F) | 168,422 | 235,856 | 134,639 | 168,447 | 168,484 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 153,126 | 200,049 | 122,738 | 152,311 | 153,527 |
|  |  | HCR 1b (Dynamic NPFMC) | 153,409 | 198,388 | 125,940 | 152,677 | 153,816 |
|  |  | HCR 2a (PFMC) | 125,550 | 159,054 | 103,961 | 124,999 | 125,865 |
|  |  | HCR 2b (Dynamic PFMC) | 125,526 | 158,953 | 104,383 | 124,918 | 125,826 |
|  |  | HCR 3a (SESSF) | 131,483 | 167,407 | 107,113 | 130,687 | 131,855 |
|  |  | HCR 3b (Dynamic SESSF) | 131,507 | 167,102 | 109,059 | 130,795 | 131,887 |
|  |  | HCR 4 (NEFMC) | 156,527 | 201,997 | 128,997 | 155,794 | 156,896 |
|  |  | HCR 5 (Avg F) | 175,730 | 223,418 | 145,536 | 174,578 | 176,164 |
|  | *Est M* | HCR 1a (NPFMC) | 158,453 | 210,079 | 126,596 | 157,708 | 158,975 |
|  |  | HCR 1b (Dynamic NPFMC) | 158,609 | 208,461 | 129,520 | 157,888 | 158,944 |
|  |  | HCR 2a (PFMC) | 131,248 | 169,281 | 107,745 | 130,495 | 131,391 |
|  |  | HCR 2b (Dynamic PFMC) | 131,120 | 169,167 | 108,315 | 130,610 | 131,398 |
|  |  | HCR 3a (SESSF) | 136,568 | 176,933 | 110,758 | 135,805 | 137,020 |
|  |  | HCR 3b (Dynamic SESSF) | 136,673 | 176,930 | 112,603 | 135,880 | 137,029 |
|  |  | HCR 4 (NEFMC) | 161,628 | 211,731 | 132,391 | 160,913 | 161,932 |
|  |  | HCR 5 (Avg F) | 175,200 | 222,757 | 145,148 | 174,055 | 175,775 |

[1] “**Supplementary Table 5.GOA.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 31,787 | 45,853 | 24,628 | 31,822 | 31,823 |
|  |  | HCR 1b (Dynamic NPFMC) | 31,708 | 45,305 | 24,841 | 31,701 | 31,720 |
|  |  | HCR 2a (PFMC) | 28,056 | 40,001 | 21,872 | 28,062 | 28,043 |
|  |  | HCR 2b (Dynamic PFMC) | 28,208 | 40,046 | 22,185 | 28,201 | 28,179 |
|  |  | HCR 3a (SESSF) | 26,452 | 38,104 | 20,289 | 26,575 | 26,554 |
|  |  | HCR 3b (Dynamic SESSF) | 26,935 | 38,397 | 21,250 | 27,044 | 27,023 |
|  |  | HCR 4 (NEFMC) | 32,197 | 45,944 | 25,274 | 32,195 | 32,206 |
|  |  | HCR 5 (Avg F) | 24,039 | 33,948 | 18,990 | 24,054 | 24,028 |
|  | *Est M* | HCR 1a (NPFMC) | 25,975 | 37,876 | 19,873 | 26,005 | 25,976 |
|  |  | HCR 1b (Dynamic NPFMC) | 26,008 | 37,819 | 20,174 | 26,030 | 26,019 |
|  |  | HCR 2a (PFMC) | 20,187 | 29,156 | 15,631 | 20,207 | 20,191 |
|  |  | HCR 2b (Dynamic PFMC) | 20,041 | 28,779 | 15,671 | 20,047 | 20,048 |
|  |  | HCR 3a (SESSF) | 22,870 | 33,258 | 17,394 | 22,819 | 22,938 |
|  |  | HCR 3b (Dynamic SESSF) | 21,798 | 31,415 | 17,026 | 21,804 | 21,803 |
|  |  | HCR 4 (NEFMC) | 26,511 | 38,266 | 20,628 | 26,488 | 26,478 |
|  |  | HCR 5 (Avg F) | 24,453 | 34,920 | 19,204 | 24,446 | 24,403 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 20,282 | 29,401 | 15,603 | 20,294 | 20,282 |
|  |  | HCR 1b (Dynamic NPFMC) | 20,542 | 29,395 | 16,101 | 20,552 | 20,540 |
|  |  | HCR 2a (PFMC) | 19,303 | 27,582 | 15,017 | 19,303 | 19,285 |
|  |  | HCR 2b (Dynamic PFMC) | 19,349 | 27,596 | 15,210 | 19,351 | 19,350 |
|  |  | HCR 3a (SESSF) | 18,820 | 27,117 | 14,373 | 18,851 | 18,847 |
|  |  | HCR 3b (Dynamic SESSF) | 18,916 | 26,976 | 14,891 | 18,931 | 18,928 |
|  |  | HCR 4 (NEFMC) | 20,624 | 29,470 | 16,178 | 20,616 | 20,624 |
|  |  | HCR 5 (Avg F) | 18,345 | 25,960 | 14,504 | 18,349 | 18,354 |
|  | *Est M* | HCR 1a (NPFMC) | 13,757 | 20,077 | 10,095 | 13,763 | 13,747 |
|  |  | HCR 1b (Dynamic NPFMC) | 14,747 | 20,928 | 11,595 | 14,724 | 14,760 |
|  |  | HCR 2a (PFMC) | 11,976 | 16,818 | 9,416 | 11,993 | 11,972 |
|  |  | HCR 2b (Dynamic PFMC) | 12,014 | 16,771 | 9,561 | 12,032 | 12,015 |
|  |  | HCR 3a (SESSF) | 11,627 | 16,628 | 8,712 | 11,627 | 11,901 |
|  |  | HCR 3b (Dynamic SESSF) | 11,936 | 16,871 | 9,415 | 11,933 | 11,932 |
|  |  | HCR 4 (NEFMC) | 14,453 | 20,401 | 11,439 | 14,456 | 14,440 |
|  |  | HCR 5 (Avg F) | 18,675 | 26,644 | 14,656 | 18,675 | 18,674 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 29,453 | 38,286 | 23,629 | 26,454 | 31,216 |
|  |  | HCR 1b (Dynamic NPFMC) | 29,451 | 37,511 | 24,221 | 26,636 | 31,116 |
|  |  | HCR 2a (PFMC) | 27,293 | 35,249 | 22,338 | 24,733 | 28,742 |
|  |  | HCR 2b (Dynamic PFMC) | 26,748 | 35,210 | 22,468 | 24,822 | 28,762 |
|  |  | HCR 3a (SESSF) | 25,304 | 32,641 | 20,546 | 22,691 | 26,836 |
|  |  | HCR 3b (Dynamic SESSF) | 24,997 | 32,433 | 20,947 | 22,878 | 26,809 |
|  |  | HCR 4 (NEFMC) | 29,671 | 38,129 | 24,441 | 26,818 | 31,343 |
|  |  | HCR 5 (Avg F) | 22,420 | 28,386 | 18,670 | 20,135 | 23,893 |
|  | *Est M* | HCR 1a (NPFMC) | 22,706 | 29,661 | 18,166 | 20,518 | 23,990 |
|  |  | HCR 1b (Dynamic NPFMC) | 22,757 | 29,486 | 18,553 | 20,520 | 24,044 |
|  |  | HCR 2a (PFMC) | 18,443 | 23,839 | 15,087 | 16,819 | 19,407 |
|  |  | HCR 2b (Dynamic PFMC) | 18,236 | 23,544 | 15,027 | 16,654 | 19,184 |
|  |  | HCR 3a (SESSF) | 19,940 | 25,915 | 16,168 | 17,929 | 21,145 |
|  |  | HCR 3b (Dynamic SESSF) | 19,225 | 24,722 | 15,842 | 17,349 | 20,320 |
|  |  | HCR 4 (NEFMC) | 22,642 | 29,326 | 18,575 | 20,496 | 23,939 |
|  |  | HCR 5 (Avg F) | 22,583 | 28,748 | 18,678 | 20,177 | 24,012 |

[1] “**Supplementary Table 5.EBS.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 3,103 | 3,258 | 3,091 | 3,100 | 3,092 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,334 | 3,184 | 2,040 | 2,324 | 2,344 |
|  |  | HCR 2a (PFMC) | 1,275 | 1,768 | 1,185 | 1,275 | 1,274 |
|  |  | HCR 2b (Dynamic PFMC) | 1,154 | 1,693 | 970 | 1,149 | 1,157 |
|  |  | HCR 3a (SESSF) | 2,305 | 2,468 | 3,296 | 2,301 | 2,312 |
|  |  | HCR 3b (Dynamic SESSF) | 1,745 | 2,222 | 1,662 | 1,736 | 1,736 |
|  |  | HCR 4 (NEFMC) | 2,026 | 2,832 | 1,779 | 2,021 | 2,029 |
|  |  | HCR 5 (Avg F) | 3,877 | 4,996 | 3,597 | 3,891 | 3,871 |
|  | *Est M* | HCR 1a (NPFMC) | 3,356 | 3,514 | 3,425 | 3,364 | 3,375 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,497 | 3,424 | 2,216 | 2,516 | 2,502 |
|  |  | HCR 2a (PFMC) | 1,410 | 1,927 | 1,345 | 1,414 | 1,410 |
|  |  | HCR 2b (Dynamic PFMC) | 1,266 | 1,833 | 1,091 | 1,262 | 1,268 |
|  |  | HCR 3a (SESSF) | 2,395 | 2,546 | 3,440 | 2,401 | 2,400 |
|  |  | HCR 3b (Dynamic SESSF) | 2,334 | 2,682 | 2,357 | 2,330 | 2,335 |
|  |  | HCR 4 (NEFMC) | 2,183 | 3,018 | 1,938 | 2,180 | 2,181 |
|  |  | HCR 5 (Avg F) | 3,854 | 5,006 | 3,523 | 3,857 | 3,859 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 3,003 | 3,136 | 3,004 | 2,996 | 2,983 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,209 | 3,033 | 1,945 | 2,221 | 2,200 |
|  |  | HCR 2a (PFMC) | 1,196 | 1,669 | 1,123 | 1,199 | 1,196 |
|  |  | HCR 2b (Dynamic PFMC) | 1,075 | 1,596 | 912 | 1,075 | 1,073 |
|  |  | HCR 3a (SESSF) | 2,207 | 2,341 | 3,185 | 2,211 | 2,200 |
|  |  | HCR 3b (Dynamic SESSF) | 1,532 | 2,014 | 1,418 | 1,520 | 1,528 |
|  |  | HCR 4 (NEFMC) | 1,956 | 2,704 | 1,709 | 1,959 | 1,942 |
|  |  | HCR 5 (Avg F) | 3,929 | 4,931 | 3,694 | 3,921 | 3,938 |
|  | *Est M* | HCR 1a (NPFMC) | 2,878 | 3,027 | 2,877 | 2,874 | 2,858 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,140 | 2,933 | 1,879 | 2,136 | 2,133 |
|  |  | HCR 2a (PFMC) | 1,170 | 1,632 | 1,092 | 1,165 | 1,164 |
|  |  | HCR 2b (Dynamic PFMC) | 1,053 | 1,569 | 884 | 1,052 | 1,048 |
|  |  | HCR 3a (SESSF) | 2,199 | 2,346 | 3,161 | 2,194 | 2,185 |
|  |  | HCR 3b (Dynamic SESSF) | 1,432 | 1,928 | 1,285 | 1,424 | 1,427 |
|  |  | HCR 4 (NEFMC) | 1,870 | 2,613 | 1,656 | 1,867 | 1,876 |
|  |  | HCR 5 (Avg F) | 3,931 | 4,974 | 3,709 | 3,928 | 3,952 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 3,521 | 3,901 | 3,584 | 3,545 | 3,530 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,776 | 3,840 | 2,433 | 2,792 | 2,779 |
|  |  | HCR 2a (PFMC) | 1,506 | 2,067 | 1,383 | 1,512 | 1,508 |
|  |  | HCR 2b (Dynamic PFMC) | 1,378 | 1,968 | 1,168 | 1,385 | 1,376 |
|  |  | HCR 3a (SESSF) | 2,504 | 2,859 | 3,258 | 2,522 | 2,495 |
|  |  | HCR 3b (Dynamic SESSF) | 1,682 | 2,321 | 1,471 | 1,687 | 1,675 |
|  |  | HCR 4 (NEFMC) | 2,468 | 3,405 | 2,148 | 2,465 | 2,458 |
|  |  | HCR 5 (Avg F) | 4,946 | 6,363 | 4,590 | 4,973 | 4,936 |
|  | *Est M* | HCR 1a (NPFMC) | 3,621 | 4,057 | 3,738 | 3,663 | 3,605 |
|  |  | HCR 1b (Dynamic NPFMC) | 2,905 | 4,013 | 2,556 | 2,933 | 2,904 |
|  |  | HCR 2a (PFMC) | 1,601 | 2,181 | 1,459 | 1,595 | 1,584 |
|  |  | HCR 2b (Dynamic PFMC) | 1,460 | 2,093 | 1,256 | 1,465 | 1,464 |
|  |  | HCR 3a (SESSF) | 2,494 | 2,912 | 3,206 | 2,513 | 2,505 |
|  |  | HCR 3b (Dynamic SESSF) | 1,872 | 2,515 | 1,698 | 1,854 | 1,866 |
|  |  | HCR 4 (NEFMC) | 2,564 | 3,534 | 2,263 | 2,569 | 2,572 |
|  |  | HCR 5 (Avg F) | 4,849 | 6,182 | 4,489 | 4,845 | 4,839 |

[1] “**Supplementary Table 5.GOA.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 12,896 | 15,663 | 13,124 | 12,821 | 12,806 |
|  |  | HCR 1b (Dynamic NPFMC) | 11,382 | 16,147 | 9,630 | 11,493 | 11,280 |
|  |  | HCR 2a (PFMC) | 6,770 | 9,507 | 5,855 | 6,744 | 6,717 |
|  |  | HCR 2b (Dynamic PFMC) | 6,513 | 9,499 | 5,390 | 6,539 | 6,527 |
|  |  | HCR 3a (SESSF) | 6,891 | 9,007 | 7,325 | 6,977 | 6,912 |
|  |  | HCR 3b (Dynamic SESSF) | 6,219 | 9,101 | 5,229 | 6,316 | 6,167 |
|  |  | HCR 4 (NEFMC) | 9,434 | 13,676 | 7,832 | 9,395 | 9,458 |
|  |  | HCR 5 (Avg F) | 4,345 | 6,377 | 3,658 | 4,407 | 4,384 |
|  | *Est M* | HCR 1a (NPFMC) | 6,868 | 9,170 | 6,474 | 6,818 | 6,731 |
|  |  | HCR 1b (Dynamic NPFMC) | 6,561 | 10,142 | 5,262 | 6,605 | 6,592 |
|  |  | HCR 2a (PFMC) | 3,308 | 5,041 | 2,874 | 3,337 | 3,323 |
|  |  | HCR 2b (Dynamic PFMC) | 3,202 | 4,876 | 2,551 | 3,188 | 3,197 |
|  |  | HCR 3a (SESSF) | 4,841 | 6,658 | 5,055 | 4,756 | 4,730 |
|  |  | HCR 3b (Dynamic SESSF) | 3,752 | 5,782 | 3,042 | 3,769 | 3,769 |
|  |  | HCR 4 (NEFMC) | 5,511 | 8,694 | 4,448 | 5,556 | 5,494 |
|  |  | HCR 5 (Avg F) | 4,609 | 7,033 | 3,838 | 4,681 | 4,645 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 13,063 | 12,033 | 13,799 | 12,708 | 12,907 |
|  |  | HCR 1b (Dynamic NPFMC) | 9,322 | 10,662 | 9,009 | 9,322 | 9,276 |
|  |  | HCR 2a (PFMC) | 4,831 | 5,838 | 4,748 | 4,786 | 4,936 |
|  |  | HCR 2b (Dynamic PFMC) | 4,484 | 5,644 | 4,074 | 4,380 | 4,419 |
|  |  | HCR 3a (SESSF) | 5,958 | 5,899 | 7,798 | 6,151 | 6,252 |
|  |  | HCR 3b (Dynamic SESSF) | 4,100 | 5,321 | 3,934 | 4,156 | 4,187 |
|  |  | HCR 4 (NEFMC) | 6,949 | 8,490 | 6,541 | 7,037 | 6,885 |
|  |  | HCR 5 (Avg F) | 2,983 | 3,994 | 2,703 | 2,949 | 3,013 |
|  | *Est M* | HCR 1a (NPFMC) | 2,270 | 2,486 | 2,359 | 2,266 | 2,306 |
|  |  | HCR 1b (Dynamic NPFMC) | 1,706 | 2,508 | 1,447 | 1,711 | 1,712 |
|  |  | HCR 2a (PFMC) | 963 | 1,362 | 901 | 980 | 978 |
|  |  | HCR 2b (Dynamic PFMC) | 894 | 1,314 | 753 | 910 | 900 |
|  |  | HCR 3a (SESSF) | 1,569 | 1,805 | 2,251 | 1,614 | 7,433 |
|  |  | HCR 3b (Dynamic SESSF) | 1,177 | 1,605 | 1,038 | 1,172 | 1,169 |
|  |  | HCR 4 (NEFMC) | 1,349 | 1,990 | 1,131 | 1,340 | 1,357 |
|  |  | HCR 5 (Avg F) | 3,329 | 4,638 | 2,929 | 3,365 | 3,373 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 11,107 | 12,198 | 10,614 | 11,683 | 11,027 |
|  |  | HCR 1b (Dynamic NPFMC) | 9,277 | 10,781 | 8,583 | 9,276 | 9,553 |
|  |  | HCR 2a (PFMC) | 5,282 | 6,617 | 4,913 | 5,232 | 5,401 |
|  |  | HCR 2b (Dynamic PFMC) | 5,121 | 6,552 | 4,493 | 4,884 | 5,258 |
|  |  | HCR 3a (SESSF) | 5,591 | 6,157 | 6,196 | 5,971 | 5,444 |
|  |  | HCR 3b (Dynamic SESSF) | 4,741 | 5,825 | 4,159 | 4,525 | 4,811 |
|  |  | HCR 4 (NEFMC) | 7,374 | 9,144 | 6,631 | 7,182 | 7,572 |
|  |  | HCR 5 (Avg F) | 3,172 | 4,048 | 2,802 | 2,999 | 3,358 |
|  | *Est M* | HCR 1a (NPFMC) | 4,382 | 5,271 | 4,265 | 4,423 | 4,433 |
|  |  | HCR 1b (Dynamic NPFMC) | 4,013 | 5,396 | 3,388 | 3,795 | 4,244 |
|  |  | HCR 2a (PFMC) | 2,206 | 2,852 | 1,950 | 2,074 | 2,266 |
|  |  | HCR 2b (Dynamic PFMC) | 2,048 | 2,744 | 1,765 | 1,930 | 2,131 |
|  |  | HCR 3a (SESSF) | 3,008 | 3,702 | 3,208 | 3,128 | 3,045 |
|  |  | HCR 3b (Dynamic SESSF) | 2,372 | 3,127 | 1,987 | 2,186 | 2,448 |
|  |  | HCR 4 (NEFMC) | 3,337 | 4,426 | 2,805 | 3,041 | 3,515 |
|  |  | HCR 5 (Avg F) | 3,769 | 4,758 | 3,222 | 3,470 | 3,901 |

[1] “**Supplementary Table 5.EBS.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.07 | 0.06 | 0.09 | 0.06 | 0.06 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.1 | 0.1 | 0.11 | 0.1 | 0.1 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 3b (Dynamic SESSF) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.EBS.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.07 | 0.06 | 0.08 | 0.07 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0.07 | 0.06 | 0.08 | 0.07 | 0.07 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.16 | 0.15 | 0.19 | 0.15 | 0.15 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
|  |  | HCR 2a (PFMC) | 0.15 | 0.14 | 0.15 | 0.14 | 0.14 |
|  |  | HCR 2b (Dynamic PFMC) | 0.14 | 0.14 | 0.13 | 0.14 | 0.14 |
|  |  | HCR 3a (SESSF) | 0.17 | 0.16 | 0.19 | 0.17 | 0.16 |
|  |  | HCR 3b (Dynamic SESSF) | 0.15 | 0.16 | 0.15 | 0.15 | 0.15 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 |
|  |  | HCR 5 (Avg F) | 0.18 | 0.18 | 0.18 | 0.17 | 0.18 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.02 | 0.02 | 0.01 | 2.05 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 |
|  |  | HCR 3a (SESSF) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 3b (Dynamic SESSF) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 2b (Dynamic PFMC) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  |  | HCR 3a (SESSF) | 0.01 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |

[1] “**Supplementary Table 5.EBS.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.37 | 0.29 | 0.44 | 0.38 | 0.37 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.32 | 0.26 | 0.39 | 0.33 | 0.33 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.27 | 0.2 | 0.32 | 0.26 | 0.27 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.29 | 0.22 | 0.35 | 0.3 | 0.29 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.27 | 0.24 | 0.3 | 0.26 | 0.27 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.23 | 0.2 | 0.27 | 0.24 | 0.23 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.06 | 0.04 | 0.08 | 0.06 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.06 | 0.05 | 0.07 | 0.06 | 0.06 |
|  |  | HCR 2a (PFMC) | 0.16 | 0.14 | 0.15 | 0.16 | 0.16 |
|  |  | HCR 2b (Dynamic PFMC) | 0.2 | 0.17 | 0.22 | 0.19 | 0.2 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.4 | 0.38 | 0.42 | 0.4 | 0.41 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.04 | 0.02 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0.06 | 0.05 | 0.07 | 0.06 | 0.06 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.3 | 0.36 | 0.34 | 0.33 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.17 | 0.15 | 0.17 | 0.18 | 0.17 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.17 | 0.14 | 0.19 | 0.17 | 0.17 |
|  |  | HCR 2a (PFMC) | 0.31 | 0.32 | 0.25 | 0.32 | 0.31 |
|  |  | HCR 2b (Dynamic PFMC) | 0.35 | 0.32 | 0.37 | 0.34 | 0.35 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.63 | 0.6 | 0.64 | 0.63 | 0.63 |
|  |  | HCR 5 (Avg F) | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 |
|  | *Est M* | HCR 1a (NPFMC) | 0.11 | 0.1 | 0.13 | 0.11 | 0.11 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.46 | 0.43 | 0.48 | 0.47 | 0.46 |
|  |  | HCR 5 (Avg F) | 0.9 | 0.87 | 0.91 | 0.9 | 0.9 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.08 | 0.07 | 0.07 | 0.09 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.08 | 0.06 | 0.09 | 0.09 | 0.07 |
|  |  | HCR 2a (PFMC) | 0.19 | 0.19 | 0.18 | 0.19 | 0.18 |
|  |  | HCR 2b (Dynamic PFMC) | 0.2 | 0.2 | 0.22 | 0.23 | 0.21 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.44 | 0.43 | 0.46 | 0.46 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.32 | 0.3 | 0.33 | 0.33 | 0.3 |
|  |  | HCR 5 (Avg F) | 0.29 | 0.29 | 0.3 | 0.31 | 0.28 |

[1] “**Supplementary Table 5.EBS.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.03 | 0.13 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.02 | 0.09 | 0.02 | 0.02 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.03 | 0.13 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.03 | 0.14 | 0.04 | 0.04 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.03 | 0.1 | 0.04 | 0.03 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.02 | 0.07 | 0.02 | 0.02 |

[1] “**Supplementary Table 5.GOA.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.06 | 0.06 | 0.11 | 0.06 | 0.06 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.06 | 0.05 | 0.11 | 0.06 | 0.06 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.06 | 0.06 | 0.08 | 0.06 | 0.06 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.06 | 0.05 | 0.08 | 0.05 | 0.05 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.06 | 0.05 | 0.07 | 0.06 | 0.06 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 2a (PFMC) | 0.1 | 0.08 | 0.18 | 0.1 | 0.1 |
|  |  | HCR 2b (Dynamic PFMC) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 4 (NEFMC) | 0.12 | 0.09 | 0.23 | 0.12 | 0.12 |
|  |  | HCR 5 (Avg F) | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 |
|  | *Est M* | HCR 1a (NPFMC) | 0.07 | 0.07 | 0.08 | 0.07 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.1 | 0.1 | 0.11 | 0.1 | 0.1 |
|  |  | HCR 2b (Dynamic PFMC) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 3a (SESSF) | 0.1 | 0.1 | 0.11 | 0.1 | 0.11 |
|  |  | HCR 3b (Dynamic SESSF) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0.1 | 0.12 | 0.1 | 0.1 |
|  |  | HCR 5 (Avg F) | 0.14 | 0.1 | 0.33 | 0.15 | 0.14 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.06 | 0.06 | 0.09 | 0.07 | 0.06 |
|  |  | HCR 2b (Dynamic PFMC) | 0.01 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.07 | 0.06 | 0.09 | 0.08 | 0.06 |
|  |  | HCR 5 (Avg F) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.08 | 0.08 | 0.09 | 0.09 | 0.08 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 |
|  |  | HCR 5 (Avg F) | 0.06 | 0.05 | 0.07 | 0.06 | 0.05 |

[1] “**Supplementary Table 5.EBS.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.18 | 0.11 | 0.28 | 0.19 | 0.19 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.1 | 0.01 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.87 | 0.8 | 0.91 | 0.87 | 0.88 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.06 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.71 | 0.58 | 0.8 | 0.71 | 0.73 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.27 | 0.19 | 0.35 | 0.27 | 0.28 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.26 | 0.09 | 0.33 | 0.19 | 0.2 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.12 | 0.1 | 0.15 | 0.12 | 0.13 |
|  |  | HCR 2a (PFMC) | 0.41 | 0.37 | 0.38 | 0.42 | 0.41 |
|  |  | HCR 2b (Dynamic PFMC) | 0.49 | 0.41 | 0.52 | 0.48 | 0.48 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.77 | 0.72 | 0.81 | 0.77 | 0.78 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 0.95 | 0.95 | 0.95 | 0.95 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 |
|  |  | HCR 2a (PFMC) | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
|  |  | HCR 3b (Dynamic SESSF) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 |
|  |  | HCR 5 (Avg F) | 0.76 | 0.7 | 0.81 | 0.77 | 0.77 |
|  | *Est M* | HCR 1a (NPFMC) | 0.12 | 0 | 0.02 | 0.01 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.09 | 0.08 | 0.09 | 0.08 | 0.08 |
|  |  | HCR 5 (Avg F) | 0.93 | 0.91 | 0.95 | 0.93 | 0.93 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.EBS.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.05 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0 | 0.15 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.06 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.04 | 0 | 0.17 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.06 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.05 | 0 | 0.18 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.05 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.05 | 0 | 0.18 | 0.01 | 0.01 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.04 | 0.07 | 0.05 | 0.05 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.04 | 0.06 | 0.05 | 0.05 |

[1] “**Supplementary Table 5.GOA.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.05 | 0 | 0.04 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.1 | 0 | 0.16 | 0.03 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.03 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0 | 0.16 | 0.03 | 0.03 |
|  |  | HCR 5 (Avg F) | 0.05 | 0 | 0.01 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.06 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.06 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.05 | 0 | 0.01 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.35 | 0.05 | 0.48 | 0.2 | 0.2 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.29 | 0.23 | 0.37 | 0.29 | 0.29 |
|  |  | HCR 2a (PFMC) | 0.59 | 0.09 | 0.7 | 0.4 | 0.4 |
|  |  | HCR 2b (Dynamic PFMC) | 0.51 | 0.4 | 0.61 | 0.51 | 0.51 |
|  |  | HCR 3a (SESSF) | 0.23 | 0.02 | 0.37 | 0.11 | 0.11 |
|  |  | HCR 3b (Dynamic SESSF) | 0.16 | 0.13 | 0.2 | 0.16 | 0.16 |
|  |  | HCR 4 (NEFMC) | 0.56 | 0.15 | 0.73 | 0.43 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.16 | 0.01 | 0.21 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0.09 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.1 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 3a (SESSF) | 0.1 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.16 | 0 | 0.26 | 0.04 | 0.04 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.16 | 0.07 | 0.14 | 0.13 | 0.1 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.16 | 0.09 | 0.2 | 0.17 | 0.12 |
|  |  | HCR 2a (PFMC) | 0.11 | 0.04 | 0.08 | 0.07 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0.11 | 0.05 | 0.09 | 0.08 | 0.06 |
|  |  | HCR 3a (SESSF) | 0.09 | 0.01 | 0.03 | 0.03 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.11 | 0.04 | 0.09 | 0.07 | 0.06 |
|  |  | HCR 4 (NEFMC) | 0.18 | 0.11 | 0.22 | 0.19 | 0.14 |
|  |  | HCR 5 (Avg F) | 0.11 | 0.05 | 0.08 | 0.07 | 0.05 |
|  | *Est M* | HCR 1a (NPFMC) | 0.08 | 0 | 0.01 | 0.01 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.07 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0.08 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.07 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.08 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.09 | 0.03 | 0.04 | 0.04 | 0.03 |
|  |  | HCR 5 (Avg F) | 0.11 | 0.04 | 0.08 | 0.07 | 0.05 |

[1] “**Supplementary Table 5.EBS.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.27 | 0.24 | 0.27 | 0.27 | 0.27 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.03 | 0.02 | 0.03 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.04 | 0.03 | 0.04 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.17 | 0.14 | 0.18 | 0.18 | 0.17 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.27 | 0.24 | 0.3 | 0.26 | 0.27 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.23 | 0.2 | 0.27 | 0.24 | 0.23 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.04 | 0.02 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0.06 | 0.05 | 0.07 | 0.06 | 0.06 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.33 | 0.3 | 0.36 | 0.33 | 0.33 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.1 | 0.12 | 0.11 | 0.11 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.38 | 0.36 | 0.4 | 0.39 | 0.38 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.08 | 0.07 | 0.07 | 0.09 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.08 | 0.06 | 0.09 | 0.09 | 0.07 |
|  |  | HCR 2a (PFMC) | 0.19 | 0.19 | 0.18 | 0.19 | 0.18 |
|  |  | HCR 2b (Dynamic PFMC) | 0.2 | 0.2 | 0.22 | 0.23 | 0.21 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.42 | 0.41 | 0.44 | 0.44 | 0.41 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.32 | 0.3 | 0.33 | 0.33 | 0.3 |
|  |  | HCR 5 (Avg F) | 0.29 | 0.29 | 0.3 | 0.31 | 0.28 |

[1] “**Supplementary Table 5.EBS.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.05 | 0.11 | 0.08 | 0.08 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0 | 0.1 | 0.01 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.58 | 0.57 | 0.54 | 0.57 | 0.58 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.06 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.48 | 0.42 | 0.51 | 0.49 | 0.49 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.15 | 0.11 | 0.18 | 0.15 | 0.15 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.2 | 0.06 | 0.26 | 0.14 | 0.15 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.07 | 0.05 | 0.08 | 0.06 | 0.07 |
|  |  | HCR 2a (PFMC) | 0.27 | 0.26 | 0.24 | 0.27 | 0.27 |
|  |  | HCR 2b (Dynamic PFMC) | 0.31 | 0.27 | 0.32 | 0.31 | 0.3 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.38 | 0.37 | 0.4 | 0.38 | 0.39 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.83 | 0.8 | 0.78 | 0.78 | 0.78 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.83 | 0.86 | 0.81 | 0.83 | 0.83 |
|  |  | HCR 2a (PFMC) | 0.67 | 0.66 | 0.74 | 0.66 | 0.67 |
|  |  | HCR 2b (Dynamic PFMC) | 0.65 | 0.68 | 0.63 | 0.66 | 0.65 |
|  |  | HCR 3a (SESSF) | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
|  |  | HCR 3b (Dynamic SESSF) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 4 (NEFMC) | 0.37 | 0.4 | 0.36 | 0.37 | 0.37 |
|  |  | HCR 5 (Avg F) | 0.71 | 0.66 | 0.76 | 0.72 | 0.72 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.05 | 0.07 | 0.05 | 0.05 | 0.05 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 5.EBS.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.03 | 0.04 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.03 | 0.04 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.03 | 0.04 | 0.04 | 0.04 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0 | 0.05 | 0.01 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.03 | 0 | 0 |

[1] “**Supplementary Table 5.GOA.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.06 | 0.07 | 0.06 | 0.06 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.05 | 0.06 | 0.05 | 0.05 |
|  |  | HCR 5 (Avg F) | 0 | 0.04 | 0.04 | 0.04 | 0.04 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.05 | 0.05 | 0.05 | 0.05 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.02 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0.05 | 0.05 | 0.05 | 0.05 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.07 | 0.08 | 0.07 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.1 | 0.11 | 0.1 | 0.11 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.1 | 0.11 | 0.1 | 0.1 |
|  |  | HCR 5 (Avg F) | 0.02 | 0.09 | 0.11 | 0.11 | 0.11 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.02 | 0.03 | 0.03 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0.02 | 0.01 | 0.02 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.01 | 0.08 | 0.09 | 0.09 | 0.08 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0.03 | 0.03 | 0.03 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0.02 | 0.03 | 0.02 | 0.02 |

[1] “**Supplementary Table 5.EBS.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0.06 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.04 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.02 | 0 | 0.1 | 0.01 | 0.01 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.04 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.09 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.03 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0.08 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0.02 | 0.03 | 0.03 | 0.02 |

[1] “**Supplementary Table 5.GOA.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.02 | 0 | 0.03 | 0 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0 | 0.11 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.03 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0 | 0.11 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0.05 | 0 | 0.01 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.29 | 0.04 | 0.46 | 0.19 | 0.19 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.25 | 0.18 | 0.32 | 0.25 | 0.25 |
|  |  | HCR 2a (PFMC) | 0.49 | 0.08 | 0.59 | 0.37 | 0.37 |
|  |  | HCR 2b (Dynamic PFMC) | 0.46 | 0.35 | 0.56 | 0.46 | 0.46 |
|  |  | HCR 3a (SESSF) | 0.21 | 0.02 | 0.37 | 0.11 | 0.11 |
|  |  | HCR 3b (Dynamic SESSF) | 0.13 | 0.1 | 0.17 | 0.13 | 0.13 |
|  |  | HCR 4 (NEFMC) | 0.44 | 0.08 | 0.53 | 0.33 | 0.33 |
|  |  | HCR 5 (Avg F) | 0.1 | 0.01 | 0.21 | 0.04 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.03 | 0 | 0.04 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.12 | 0.06 | 0.13 | 0.12 | 0.09 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.16 | 0.09 | 0.2 | 0.17 | 0.12 |
|  |  | HCR 2a (PFMC) | 0.05 | 0.01 | 0.03 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.1 | 0.05 | 0.09 | 0.08 | 0.06 |
|  |  | HCR 3a (SESSF) | 0.09 | 0.01 | 0.03 | 0.03 | 0.02 |
|  |  | HCR 3b (Dynamic SESSF) | 0.11 | 0.04 | 0.09 | 0.07 | 0.06 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.05 | 0.13 | 0.11 | 0.08 |
|  |  | HCR 5 (Avg F) | 0.08 | 0.03 | 0.07 | 0.06 | 0.04 |
|  | *Est M* | HCR 1a (NPFMC) | 0.06 | 0 | 0.01 | 0.01 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0.06 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0.07 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0.08 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.06 | 0.02 | 0.04 | 0.03 | 0.02 |

[1] “**Supplementary Table 5.EBS.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Cod in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.4 | 0.62 | 0.4 | 0.47 | 0.47 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.4 | 0.42 | 0.39 | 0.4 | 0.4 |
|  |  | HCR 2a (PFMC) | 0.49 | 0.76 | 0.46 | 0.56 | 0.56 |
|  |  | HCR 2b (Dynamic PFMC) | 0.49 | 0.51 | 0.48 | 0.49 | 0.49 |
|  |  | HCR 3a (SESSF) | 0.47 | 0.73 | 0.45 | 0.54 | 0.54 |
|  |  | HCR 3b (Dynamic SESSF) | 0.47 | 0.48 | 0.46 | 0.47 | 0.47 |
|  |  | HCR 4 (NEFMC) | 0.39 | 0.61 | 0.37 | 0.45 | 0.45 |
|  |  | HCR 5 (Avg F) | 0.3 | 0.47 | 0.29 | 0.35 | 0.35 |
|  | *Est M* | HCR 1a (NPFMC) | 0.39 | 0.6 | 0.39 | 0.45 | 0.45 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.39 | 0.4 | 0.38 | 0.39 | 0.39 |
|  |  | HCR 2a (PFMC) | 0.47 | 0.73 | 0.45 | 0.54 | 0.54 |
|  |  | HCR 2b (Dynamic PFMC) | 0.47 | 0.49 | 0.46 | 0.47 | 0.47 |
|  |  | HCR 3a (SESSF) | 0.46 | 0.71 | 0.44 | 0.53 | 0.53 |
|  |  | HCR 3b (Dynamic SESSF) | 0.46 | 0.47 | 0.45 | 0.46 | 0.46 |
|  |  | HCR 4 (NEFMC) | 0.38 | 0.59 | 0.36 | 0.44 | 0.44 |
|  |  | HCR 5 (Avg F) | 0.29 | 0.46 | 0.28 | 0.34 | 0.34 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.4 | 0.61 | 0.39 | 0.46 | 0.46 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.39 | 0.41 | 0.38 | 0.39 | 0.39 |
|  |  | HCR 2a (PFMC) | 0.48 | 0.75 | 0.46 | 0.55 | 0.55 |
|  |  | HCR 2b (Dynamic PFMC) | 0.48 | 0.5 | 0.47 | 0.48 | 0.48 |
|  |  | HCR 3a (SESSF) | 0.46 | 0.71 | 0.45 | 0.53 | 0.53 |
|  |  | HCR 3b (Dynamic SESSF) | 0.46 | 0.48 | 0.45 | 0.46 | 0.46 |
|  |  | HCR 4 (NEFMC) | 0.38 | 0.6 | 0.37 | 0.44 | 0.44 |
|  |  | HCR 5 (Avg F) | 0.28 | 0.45 | 0.27 | 0.33 | 0.33 |
|  | *Est M* | HCR 1a (NPFMC) | 0.4 | 0.62 | 0.4 | 0.47 | 0.47 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.4 | 0.42 | 0.39 | 0.4 | 0.4 |
|  |  | HCR 2a (PFMC) | 0.49 | 0.76 | 0.47 | 0.56 | 0.56 |
|  |  | HCR 2b (Dynamic PFMC) | 0.49 | 0.51 | 0.48 | 0.49 | 0.49 |
|  |  | HCR 3a (SESSF) | 0.47 | 0.73 | 0.46 | 0.54 | 0.54 |
|  |  | HCR 3b (Dynamic SESSF) | 0.47 | 0.48 | 0.46 | 0.47 | 0.47 |
|  |  | HCR 4 (NEFMC) | 0.39 | 0.61 | 0.37 | 0.45 | 0.45 |
|  |  | HCR 5 (Avg F) | 0.28 | 0.45 | 0.27 | 0.33 | 0.33 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.67 | 0.81 | 0.59 | 0.67 | 0.66 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.67 | 0.82 | 0.57 | 0.66 | 0.66 |
|  |  | HCR 2a (PFMC) | 0.79 | 0.95 | 0.68 | 0.78 | 0.78 |
|  |  | HCR 2b (Dynamic PFMC) | 0.79 | 0.95 | 0.68 | 0.78 | 0.78 |
|  |  | HCR 3a (SESSF) | 0.76 | 0.91 | 0.66 | 0.75 | 0.75 |
|  |  | HCR 3b (Dynamic SESSF) | 0.76 | 0.91 | 0.65 | 0.75 | 0.75 |
|  |  | HCR 4 (NEFMC) | 0.66 | 0.81 | 0.56 | 0.65 | 0.65 |
|  |  | HCR 5 (Avg F) | 0.46 | 0.56 | 0.4 | 0.46 | 0.46 |
|  | *Est M* | HCR 1a (NPFMC) | 0.68 | 0.84 | 0.59 | 0.67 | 0.67 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.68 | 0.84 | 0.58 | 0.67 | 0.67 |
|  |  | HCR 2a (PFMC) | 0.81 | 0.99 | 0.69 | 0.8 | 0.8 |
|  |  | HCR 2b (Dynamic PFMC) | 0.81 | 0.99 | 0.69 | 0.8 | 0.8 |
|  |  | HCR 3a (SESSF) | 0.77 | 0.95 | 0.67 | 0.76 | 0.76 |
|  |  | HCR 3b (Dynamic SESSF) | 0.77 | 0.95 | 0.66 | 0.77 | 0.76 |
|  |  | HCR 4 (NEFMC) | 0.66 | 0.83 | 0.56 | 0.66 | 0.66 |
|  |  | HCR 5 (Avg F) | 0.47 | 0.57 | 0.4 | 0.46 | 0.46 |

[1] “**Supplementary Table 5.GOA.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Cod in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.37 | 0.61 | 0.37 | 0.45 | 0.44 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.41 | 0.42 | 0.4 | 0.41 | 0.41 |
|  |  | HCR 2a (PFMC) | 0.43 | 0.7 | 0.41 | 0.5 | 0.5 |
|  |  | HCR 2b (Dynamic PFMC) | 0.46 | 0.48 | 0.45 | 0.46 | 0.46 |
|  |  | HCR 3a (SESSF) | 0.46 | 0.74 | 0.44 | 0.54 | 0.54 |
|  |  | HCR 3b (Dynamic SESSF) | 0.49 | 0.5 | 0.47 | 0.48 | 0.48 |
|  |  | HCR 4 (NEFMC) | 0.37 | 0.6 | 0.35 | 0.43 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.49 | 0.8 | 0.46 | 0.57 | 0.57 |
|  | *Est M* | HCR 1a (NPFMC) | 0.46 | 0.74 | 0.45 | 0.55 | 0.55 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.51 | 0.51 | 0.5 | 0.51 | 0.51 |
|  |  | HCR 2a (PFMC) | 0.56 | 0.88 | 0.53 | 0.64 | 0.64 |
|  |  | HCR 2b (Dynamic PFMC) | 0.61 | 0.62 | 0.6 | 0.61 | 0.61 |
|  |  | HCR 3a (SESSF) | 0.51 | 0.82 | 0.5 | 0.61 | 0.6 |
|  |  | HCR 3b (Dynamic SESSF) | 0.58 | 0.59 | 0.57 | 0.58 | 0.58 |
|  |  | HCR 4 (NEFMC) | 0.46 | 0.73 | 0.43 | 0.53 | 0.53 |
|  |  | HCR 5 (Avg F) | 0.49 | 0.78 | 0.46 | 0.57 | 0.57 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.2 | 0.35 | 0.23 | 0.26 | 0.26 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.2 | 0.22 | 0.19 | 0.2 | 0.2 |
|  |  | HCR 2a (PFMC) | 0.23 | 0.41 | 0.25 | 0.3 | 0.3 |
|  |  | HCR 2b (Dynamic PFMC) | 0.25 | 0.26 | 0.23 | 0.25 | 0.25 |
|  |  | HCR 3a (SESSF) | 0.25 | 0.45 | 0.29 | 0.34 | 0.34 |
|  |  | HCR 3b (Dynamic SESSF) | 0.26 | 0.28 | 0.25 | 0.26 | 0.26 |
|  |  | HCR 4 (NEFMC) | 0.19 | 0.33 | 0.2 | 0.24 | 0.24 |
|  |  | HCR 5 (Avg F) | 0.26 | 0.46 | 0.27 | 0.33 | 0.33 |
|  | *Est M* | HCR 1a (NPFMC) | 0.41 | 0.68 | 0.43 | 0.51 | 0.51 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.42 | 0.44 | 0.41 | 0.42 | 0.42 |
|  |  | HCR 2a (PFMC) | 0.49 | 0.81 | 0.5 | 0.6 | 0.6 |
|  |  | HCR 2b (Dynamic PFMC) | 0.51 | 0.53 | 0.5 | 0.51 | 0.51 |
|  |  | HCR 3a (SESSF) | 0.48 | 0.79 | 0.49 | 0.58 | 0.58 |
|  |  | HCR 3b (Dynamic SESSF) | 0.5 | 0.52 | 0.49 | 0.5 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.4 | 0.68 | 0.41 | 0.5 | 0.5 |
|  |  | HCR 5 (Avg F) | 0.25 | 0.45 | 0.27 | 0.33 | 0.33 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.36 | 0.44 | 0.36 | 0.37 | 0.4 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.36 | 0.45 | 0.34 | 0.37 | 0.4 |
|  |  | HCR 2a (PFMC) | 0.42 | 0.52 | 0.4 | 0.43 | 0.46 |
|  |  | HCR 2b (Dynamic PFMC) | 0.44 | 0.52 | 0.4 | 0.43 | 0.46 |
|  |  | HCR 3a (SESSF) | 0.43 | 0.52 | 0.42 | 0.43 | 0.47 |
|  |  | HCR 3b (Dynamic SESSF) | 0.43 | 0.52 | 0.4 | 0.43 | 0.46 |
|  |  | HCR 4 (NEFMC) | 0.36 | 0.44 | 0.34 | 0.36 | 0.39 |
|  |  | HCR 5 (Avg F) | 0.43 | 0.52 | 0.41 | 0.43 | 0.47 |
|  | *Est M* | HCR 1a (NPFMC) | 0.5 | 0.6 | 0.49 | 0.51 | 0.54 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.5 | 0.6 | 0.48 | 0.51 | 0.55 |
|  |  | HCR 2a (PFMC) | 0.62 | 0.74 | 0.59 | 0.63 | 0.67 |
|  |  | HCR 2b (Dynamic PFMC) | 0.63 | 0.75 | 0.59 | 0.63 | 0.67 |
|  |  | HCR 3a (SESSF) | 0.55 | 0.65 | 0.53 | 0.55 | 0.59 |
|  |  | HCR 3b (Dynamic SESSF) | 0.56 | 0.67 | 0.53 | 0.56 | 0.61 |
|  |  | HCR 4 (NEFMC) | 0.51 | 0.6 | 0.48 | 0.51 | 0.55 |
|  |  | HCR 5 (Avg F) | 0.43 | 0.51 | 0.41 | 0.43 | 0.47 |

[1] “**Supplementary Table 6.EBS.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 32,708 | 43,344 | 26,754 | 43,355 | 26,756 |
|  |  | HCR 1b (Dynamic NPFMC) | 32,797 | 43,336 | 27,447 | 43,343 | 27,445 |
|  |  | HCR 2a (PFMC) | 35,017 | 46,268 | 29,358 | 46,257 | 29,362 |
|  |  | HCR 2b (Dynamic PFMC) | 35,019 | 46,269 | 29,371 | 46,260 | 29,376 |
|  |  | HCR 3a (SESSF) | 28,926 | 38,000 | 24,127 | 37,994 | 24,129 |
|  |  | HCR 3b (Dynamic SESSF) | 28,929 | 37,997 | 24,369 | 38,004 | 24,368 |
|  |  | HCR 4 (NEFMC) | 32,910 | 43,363 | 27,662 | 43,378 | 27,663 |
|  |  | HCR 5 (Avg F) | 11,407 | 14,761 | 9,715 | 14,754 | 9,720 |
|  | *Est M* | HCR 1a (NPFMC) | 33,556 | 44,604 | 27,413 | 44,615 | 27,421 |
|  |  | HCR 1b (Dynamic NPFMC) | 33,692 | 44,574 | 28,176 | 44,598 | 28,175 |
|  |  | HCR 2a (PFMC) | 36,009 | 47,650 | 30,160 | 47,663 | 30,160 |
|  |  | HCR 2b (Dynamic PFMC) | 36,007 | 47,661 | 30,184 | 47,653 | 30,190 |
|  |  | HCR 3a (SESSF) | 29,874 | 39,327 | 24,867 | 39,329 | 24,861 |
|  |  | HCR 3b (Dynamic SESSF) | 29,883 | 39,338 | 25,148 | 39,338 | 25,152 |
|  |  | HCR 4 (NEFMC) | 33,791 | 44,629 | 28,394 | 44,632 | 28,393 |
|  |  | HCR 5 (Avg F) | 11,331 | 14,697 | 9,633 | 14,705 | 9,631 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 37,996 | 51,314 | 30,722 | 51,322 | 30,717 |
|  |  | HCR 1b (Dynamic NPFMC) | 37,833 | 51,193 | 31,042 | 51,193 | 31,050 |
|  |  | HCR 2a (PFMC) | 41,712 | 56,329 | 34,367 | 56,326 | 34,366 |
|  |  | HCR 2b (Dynamic PFMC) | 41,712 | 56,340 | 34,374 | 56,351 | 34,373 |
|  |  | HCR 3a (SESSF) | 32,552 | 43,737 | 26,825 | 43,702 | 26,817 |
|  |  | HCR 3b (Dynamic SESSF) | 32,554 | 43,726 | 26,955 | 43,721 | 26,953 |
|  |  | HCR 4 (NEFMC) | 38,095 | 51,319 | 31,461 | 51,297 | 31,460 |
|  |  | HCR 5 (Avg F) | 11,812 | 15,619 | 9,900 | 15,669 | 9,896 |
|  | *Est M* | HCR 1a (NPFMC) | 47,342 | 64,627 | 37,958 | 64,654 | 37,957 |
|  |  | HCR 1b (Dynamic NPFMC) | 47,569 | 64,522 | 39,023 | 64,595 | 39,019 |
|  |  | HCR 2a (PFMC) | 52,780 | 71,670 | 43,229 | 71,712 | 43,225 |
|  |  | HCR 2b (Dynamic PFMC) | 52,797 | 71,694 | 43,323 | 71,694 | 43,322 |
|  |  | HCR 3a (SESSF) | 42,140 | 56,899 | 34,157 | 56,890 | 34,167 |
|  |  | HCR 3b (Dynamic SESSF) | 42,154 | 56,896 | 34,770 | 56,903 | 34,783 |
|  |  | HCR 4 (NEFMC) | 47,839 | 64,726 | 39,345 | 64,765 | 39,361 |
|  |  | HCR 5 (Avg F) | 12,104 | 16,081 | 10,090 | 16,104 | 10,093 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 35,236 | 43,307 | 29,815 | 46,253 | 28,986 |
|  |  | HCR 1b (Dynamic NPFMC) | 35,220 | 43,157 | 30,264 | 46,190 | 29,501 |
|  |  | HCR 2a (PFMC) | 36,914 | 44,863 | 31,875 | 48,374 | 31,013 |
|  |  | HCR 2b (Dynamic PFMC) | 36,913 | 44,871 | 31,890 | 48,386 | 31,023 |
|  |  | HCR 3a (SESSF) | 30,415 | 36,880 | 26,287 | 39,621 | 25,518 |
|  |  | HCR 3b (Dynamic SESSF) | 30,425 | 36,880 | 26,369 | 39,637 | 25,678 |
|  |  | HCR 4 (NEFMC) | 35,405 | 43,368 | 30,522 | 46,362 | 29,779 |
|  |  | HCR 5 (Avg F) | 11,887 | 14,198 | 10,429 | 15,226 | 10,158 |
|  | *Est M* | HCR 1a (NPFMC) | 36,997 | 46,023 | 31,149 | 48,741 | 30,398 |
|  |  | HCR 1b (Dynamic NPFMC) | 36,972 | 45,884 | 31,610 | 48,655 | 30,904 |
|  |  | HCR 2a (PFMC) | 38,943 | 47,982 | 33,399 | 51,195 | 32,625 |
|  |  | HCR 2b (Dynamic PFMC) | 38,924 | 47,969 | 33,408 | 51,209 | 32,621 |
|  |  | HCR 3a (SESSF) | 32,190 | 39,550 | 27,637 | 42,081 | 26,952 |
|  |  | HCR 3b (Dynamic SESSF) | 32,212 | 39,532 | 27,746 | 42,068 | 27,104 |
|  |  | HCR 4 (NEFMC) | 37,167 | 46,064 | 31,871 | 48,834 | 31,187 |
|  |  | HCR 5 (Avg F) | 11,827 | 14,155 | 10,346 | 15,210 | 10,090 |

[1] “**Supplementary Table 6.GOA.PM-1.** Summary of performance metric 1: average annual catch across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 85,510 | 111,297 | 70,793 | 111,297 | 70,789 |
|  |  | HCR 1b (Dynamic NPFMC) | 85,815 | 111,331 | 72,687 | 111,370 | 72,695 |
|  |  | HCR 2a (PFMC) | 94,495 | 122,598 | 80,310 | 122,562 | 80,293 |
|  |  | HCR 2b (Dynamic PFMC) | 94,537 | 122,577 | 80,363 | 122,579 | 80,348 |
|  |  | HCR 3a (SESSF) | 74,509 | 95,923 | 63,164 | 95,929 | 63,156 |
|  |  | HCR 3b (Dynamic SESSF) | 74,500 | 95,939 | 63,745 | 95,951 | 63,739 |
|  |  | HCR 4 (NEFMC) | 86,048 | 111,368 | 73,267 | 111,401 | 73,282 |
|  |  | HCR 5 (Avg F) | 21,582 | 27,211 | 18,736 | 27,219 | 18,742 |
|  | *Est M* | HCR 1a (NPFMC) | 84,908 | 110,012 | 70,628 | 110,063 | 70,639 |
|  |  | HCR 1b (Dynamic NPFMC) | 85,229 | 110,165 | 72,410 | 110,170 | 72,415 |
|  |  | HCR 2a (PFMC) | 94,581 | 122,540 | 80,542 | 122,598 | 80,559 |
|  |  | HCR 2b (Dynamic PFMC) | 94,622 | 122,551 | 80,568 | 122,542 | 80,634 |
|  |  | HCR 3a (SESSF) | 74,394 | 95,307 | 63,212 | 95,357 | 63,235 |
|  |  | HCR 3b (Dynamic SESSF) | 74,453 | 95,300 | 63,710 | 95,268 | 63,727 |
|  |  | HCR 4 (NEFMC) | 85,492 | 110,225 | 73,035 | 110,233 | 73,043 |
|  |  | HCR 5 (Avg F) | 23,954 | 30,197 | 20,781 | 30,199 | 20,781 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 98,592 | 129,996 | 81,014 | 130,003 | 80,990 |
|  |  | HCR 1b (Dynamic NPFMC) | 98,382 | 129,924 | 82,190 | 129,894 | 82,193 |
|  |  | HCR 2a (PFMC) | 110,885 | 146,175 | 93,057 | 146,191 | 93,060 |
|  |  | HCR 2b (Dynamic PFMC) | 110,884 | 146,195 | 93,082 | 146,203 | 93,095 |
|  |  | HCR 3a (SESSF) | 83,881 | 109,903 | 70,423 | 109,915 | 70,428 |
|  |  | HCR 3b (Dynamic SESSF) | 83,890 | 109,923 | 70,777 | 109,911 | 70,777 |
|  |  | HCR 4 (NEFMC) | 98,782 | 130,022 | 83,026 | 130,023 | 83,014 |
|  |  | HCR 5 (Avg F) | 20,837 | 26,718 | 17,875 | 26,712 | 17,875 |
|  | *Est M* | HCR 1a (NPFMC) | 108,692 | 144,560 | 88,547 | 144,633 | 88,530 |
|  |  | HCR 1b (Dynamic NPFMC) | 108,990 | 144,728 | 90,950 | 144,666 | 90,927 |
|  |  | HCR 2a (PFMC) | 124,610 | 166,389 | 103,549 | 166,257 | 103,519 |
|  |  | HCR 2b (Dynamic PFMC) | 124,547 | 166,369 | 103,701 | 166,315 | 103,642 |
|  |  | HCR 3a (SESSF) | 94,181 | 123,831 | 78,417 | 123,840 | 78,426 |
|  |  | HCR 3b (Dynamic SESSF) | 94,153 | 123,817 | 79,300 | 123,814 | 79,382 |
|  |  | HCR 4 (NEFMC) | 109,439 | 144,898 | 91,829 | 144,932 | 91,755 |
|  |  | HCR 5 (Avg F) | 21,934 | 28,077 | 18,798 | 28,100 | 18,807 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 101,402 | 130,510 | 84,502 | 130,400 | 84,422 |
|  |  | HCR 1b (Dynamic NPFMC) | 101,058 | 130,473 | 85,140 | 130,232 | 85,078 |
|  |  | HCR 2a (PFMC) | 114,400 | 147,603 | 96,776 | 147,730 | 96,593 |
|  |  | HCR 2b (Dynamic PFMC) | 114,380 | 147,574 | 96,761 | 147,722 | 96,623 |
|  |  | HCR 3a (SESSF) | 85,339 | 109,032 | 72,540 | 108,859 | 72,472 |
|  |  | HCR 3b (Dynamic SESSF) | 85,327 | 109,058 | 72,641 | 108,859 | 72,613 |
|  |  | HCR 4 (NEFMC) | 101,488 | 130,522 | 85,991 | 130,387 | 85,915 |
|  |  | HCR 5 (Avg F) | 21,135 | 26,340 | 18,338 | 26,223 | 18,345 |
|  | *Est M* | HCR 1a (NPFMC) | 109,682 | 142,037 | 90,779 | 141,785 | 90,756 |
|  |  | HCR 1b (Dynamic NPFMC) | 109,568 | 142,004 | 92,322 | 141,704 | 92,281 |
|  |  | HCR 2a (PFMC) | 126,362 | 164,861 | 106,121 | 165,014 | 105,948 |
|  |  | HCR 2b (Dynamic PFMC) | 126,373 | 164,935 | 106,199 | 165,034 | 106,042 |
|  |  | HCR 3a (SESSF) | 93,594 | 119,856 | 79,230 | 119,667 | 79,173 |
|  |  | HCR 3b (Dynamic SESSF) | 93,569 | 119,861 | 79,633 | 119,639 | 79,630 |
|  |  | HCR 4 (NEFMC) | 110,103 | 142,198 | 93,162 | 141,967 | 93,078 |
|  |  | HCR 5 (Avg F) | 22,287 | 27,694 | 19,336 | 27,574 | 19,364 |

[1] “**Supplementary Table 6.EBS.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 237 | 244 | 258 | 246 | 258 |
|  |  | HCR 1b (Dynamic NPFMC) | 218 | 248 | 225 | 251 | 225 |
|  |  | HCR 2a (PFMC) | 286 | 324 | 296 | 323 | 296 |
|  |  | HCR 2b (Dynamic PFMC) | 286 | 325 | 295 | 325 | 294 |
|  |  | HCR 3a (SESSF) | 118 | 155 | 173 | 155 | 174 |
|  |  | HCR 3b (Dynamic SESSF) | 117 | 156 | 112 | 156 | 112 |
|  |  | HCR 4 (NEFMC) | 201 | 240 | 203 | 240 | 203 |
|  |  | HCR 5 (Avg F) | 18 | 32 | 16 | 31 | 16 |
|  | *Est M* | HCR 1a (NPFMC) | 295 | 287 | 323 | 287 | 325 |
|  |  | HCR 1b (Dynamic NPFMC) | 269 | 290 | 283 | 293 | 283 |
|  |  | HCR 2a (PFMC) | 375 | 396 | 403 | 395 | 402 |
|  |  | HCR 2b (Dynamic PFMC) | 376 | 397 | 400 | 396 | 399 |
|  |  | HCR 3a (SESSF) | 140 | 174 | 214 | 174 | 215 |
|  |  | HCR 3b (Dynamic SESSF) | 139 | 174 | 137 | 173 | 137 |
|  |  | HCR 4 (NEFMC) | 248 | 279 | 258 | 279 | 259 |
|  |  | HCR 5 (Avg F) | 18 | 31 | 15 | 31 | 15 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 322 | 434 | 327 | 436 | 324 |
|  |  | HCR 1b (Dynamic NPFMC) | 340 | 463 | 307 | 462 | 306 |
|  |  | HCR 2a (PFMC) | 413 | 565 | 372 | 564 | 372 |
|  |  | HCR 2b (Dynamic PFMC) | 412 | 564 | 372 | 570 | 370 |
|  |  | HCR 3a (SESSF) | 199 | 307 | 206 | 304 | 206 |
|  |  | HCR 3b (Dynamic SESSF) | 199 | 308 | 168 | 305 | 169 |
|  |  | HCR 4 (NEFMC) | 302 | 431 | 265 | 430 | 265 |
|  |  | HCR 5 (Avg F) | 42 | 69 | 34 | 69 | 33 |
|  | *Est M* | HCR 1a (NPFMC) | 787 | 733 | 881 | 734 | 880 |
|  |  | HCR 1b (Dynamic NPFMC) | 709 | 763 | 746 | 766 | 744 |
|  |  | HCR 2a (PFMC) | 1,344 | 1,290 | 1,508 | 1,296 | 1,508 |
|  |  | HCR 2b (Dynamic PFMC) | 1,341 | 1,291 | 1,484 | 1,288 | 1,484 |
|  |  | HCR 3a (SESSF) | 366 | 412 | 587 | 412 | 579 |
|  |  | HCR 3b (Dynamic SESSF) | 331 | 406 | 328 | 406 | 328 |
|  |  | HCR 4 (NEFMC) | 639 | 695 | 672 | 692 | 670 |
|  |  | HCR 5 (Avg F) | 25 | 44 | 21 | 44 | 20 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 214 | 242 | 229 | 250 | 230 |
|  |  | HCR 1b (Dynamic NPFMC) | 209 | 253 | 202 | 258 | 205 |
|  |  | HCR 2a (PFMC) | 266 | 315 | 258 | 324 | 262 |
|  |  | HCR 2b (Dynamic PFMC) | 266 | 316 | 258 | 325 | 260 |
|  |  | HCR 3a (SESSF) | 116 | 154 | 126 | 165 | 147 |
|  |  | HCR 3b (Dynamic SESSF) | 115 | 155 | 104 | 163 | 104 |
|  |  | HCR 4 (NEFMC) | 192 | 239 | 181 | 247 | 183 |
|  |  | HCR 5 (Avg F) | 21 | 32 | 17 | 35 | 17 |
|  | *Est M* | HCR 1a (NPFMC) | 250 | 276 | 272 | 282 | 274 |
|  |  | HCR 1b (Dynamic NPFMC) | 246 | 292 | 243 | 295 | 246 |
|  |  | HCR 2a (PFMC) | 326 | 374 | 328 | 382 | 332 |
|  |  | HCR 2b (Dynamic PFMC) | 326 | 375 | 327 | 381 | 332 |
|  |  | HCR 3a (SESSF) | 134 | 175 | 147 | 184 | 168 |
|  |  | HCR 3b (Dynamic SESSF) | 133 | 175 | 124 | 184 | 125 |
|  |  | HCR 4 (NEFMC) | 224 | 273 | 218 | 282 | 219 |
|  |  | HCR 5 (Avg F) | 21 | 31 | 17 | 35 | 17 |

[1] “**Supplementary Table 6.GOA.PM-2.** Summary of performance metric 2: average interannual variation in catch (IAV) across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 515 | 452 | 639 | 453 | 640 |
|  |  | HCR 1b (Dynamic NPFMC) | 491 | 447 | 581 | 447 | 581 |
|  |  | HCR 2a (PFMC) | 1,107 | 937 | 1,296 | 937 | 1,298 |
|  |  | HCR 2b (Dynamic PFMC) | 1,106 | 937 | 1,294 | 937 | 1,295 |
|  |  | HCR 3a (SESSF) | 215 | 224 | 374 | 224 | 373 |
|  |  | HCR 3b (Dynamic SESSF) | 215 | 224 | 246 | 224 | 246 |
|  |  | HCR 4 (NEFMC) | 480 | 444 | 557 | 444 | 557 |
|  |  | HCR 5 (Avg F) | 8 | 19 | 8 | 19 | 8 |
|  | *Est M* | HCR 1a (NPFMC) | 1,762 | 1,423 | 2,135 | 1,421 | 2,134 |
|  |  | HCR 1b (Dynamic NPFMC) | 1,722 | 1,401 | 2,026 | 1,401 | 2,025 |
|  |  | HCR 2a (PFMC) | 2,927 | 2,346 | 3,433 | 2,344 | 3,428 |
|  |  | HCR 2b (Dynamic PFMC) | 2,925 | 2,346 | 3,430 | 2,346 | 3,423 |
|  |  | HCR 3a (SESSF) | 730 | 624 | 951 | 624 | 942 |
|  |  | HCR 3b (Dynamic SESSF) | 729 | 624 | 842 | 624 | 841 |
|  |  | HCR 4 (NEFMC) | 1,706 | 1,397 | 1,988 | 1,397 | 1,988 |
|  |  | HCR 5 (Avg F) | 9 | 26 | 7 | 26 | 7 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 503 | 496 | 639 | 496 | 639 |
|  |  | HCR 1b (Dynamic NPFMC) | 514 | 505 | 602 | 504 | 602 |
|  |  | HCR 2a (PFMC) | 1,058 | 950 | 1,229 | 950 | 1,229 |
|  |  | HCR 2b (Dynamic PFMC) | 1,057 | 950 | 1,228 | 950 | 1,227 |
|  |  | HCR 3a (SESSF) | 236 | 272 | 336 | 271 | 338 |
|  |  | HCR 3b (Dynamic SESSF) | 236 | 272 | 263 | 272 | 263 |
|  |  | HCR 4 (NEFMC) | 489 | 495 | 556 | 496 | 557 |
|  |  | HCR 5 (Avg F) | 12 | 23 | 13 | 23 | 13 |
|  | *Est M* | HCR 1a (NPFMC) | 1,504 | 1,241 | 1,881 | 1,240 | 1,883 |
|  |  | HCR 1b (Dynamic NPFMC) | 1,444 | 1,225 | 1,715 | 1,224 | 1,716 |
|  |  | HCR 2a (PFMC) | 2,919 | 2,376 | 3,482 | 2,381 | 3,482 |
|  |  | HCR 2b (Dynamic PFMC) | 2,918 | 2,378 | 3,469 | 2,380 | 3,468 |
|  |  | HCR 3a (SESSF) | 610 | 572 | 949 | 571 | 961 |
|  |  | HCR 3b (Dynamic SESSF) | 611 | 573 | 705 | 572 | 705 |
|  |  | HCR 4 (NEFMC) | 1,394 | 1,195 | 1,634 | 1,196 | 1,636 |
|  |  | HCR 5 (Avg F) | 10 | 24 | 10 | 24 | 10 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 479 | 483 | 592 | 481 | 592 |
|  |  | HCR 1b (Dynamic NPFMC) | 500 | 492 | 574 | 496 | 574 |
|  |  | HCR 2a (PFMC) | 1,012 | 926 | 1,160 | 927 | 1,161 |
|  |  | HCR 2b (Dynamic PFMC) | 1,013 | 928 | 1,160 | 926 | 1,161 |
|  |  | HCR 3a (SESSF) | 232 | 263 | 283 | 261 | 287 |
|  |  | HCR 3b (Dynamic SESSF) | 232 | 263 | 253 | 261 | 253 |
|  |  | HCR 4 (NEFMC) | 473 | 483 | 528 | 482 | 528 |
|  |  | HCR 5 (Avg F) | 12 | 20 | 13 | 20 | 13 |
|  | *Est M* | HCR 1a (NPFMC) | 1,322 | 1,141 | 1,620 | 1,141 | 1,621 |
|  |  | HCR 1b (Dynamic NPFMC) | 1,305 | 1,140 | 1,516 | 1,141 | 1,518 |
|  |  | HCR 2a (PFMC) | 2,608 | 2,193 | 3,054 | 2,189 | 3,057 |
|  |  | HCR 2b (Dynamic PFMC) | 2,607 | 2,193 | 3,049 | 2,189 | 3,052 |
|  |  | HCR 3a (SESSF) | 557 | 531 | 754 | 531 | 751 |
|  |  | HCR 3b (Dynamic SESSF) | 557 | 531 | 631 | 531 | 631 |
|  |  | HCR 4 (NEFMC) | 1,257 | 1,110 | 1,450 | 1,110 | 1,451 |
|  |  | HCR 5 (Avg F) | 10 | 21 | 10 | 20 | 10 |

[1] “**Supplementary Table 6.EBS.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-3.** Summary of performance metric 3: probability of the fishery being open across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-4.** Summary of performance metric 4: average relative mean squared error in estimate of spawning biomass in 2060 across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0.01 | 0 | 0.01 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.13 | 0.14 | 0.13 | 0.14 | 0.13 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.13 | 0.14 | 0.13 | 0.13 | 0.13 |
|  |  | HCR 2a (PFMC) | 0.15 | 0.15 | 0.14 | 0.15 | 0.14 |
|  |  | HCR 2b (Dynamic PFMC) | 0.15 | 0.15 | 0.14 | 0.15 | 0.14 |
|  |  | HCR 3a (SESSF) | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
|  |  | HCR 3b (Dynamic SESSF) | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
|  |  | HCR 4 (NEFMC) | 0.13 | 0.14 | 0.13 | 0.14 | 0.13 |
|  |  | HCR 5 (Avg F) | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
|  | *Est M* | HCR 1a (NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
|  |  | HCR 2a (PFMC) | 0.19 | 0.18 | 0.18 | 0.18 | 0.18 |
|  |  | HCR 2b (Dynamic PFMC) | 0.19 | 0.18 | 0.18 | 0.18 | 0.18 |
|  |  | HCR 3a (SESSF) | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
|  |  | HCR 3b (Dynamic SESSF) | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
|  |  | HCR 4 (NEFMC) | 0.17 | 0.16 | 0.17 | 0.16 | 0.17 |
|  |  | HCR 5 (Avg F) | 0.11 | 0.1 | 0.11 | 0.1 | 0.11 |
|  | *Est M* | HCR 1a (NPFMC) | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2a (PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 3a (SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 3b (Dynamic SESSF) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.2 | 0.13 | 0.27 | 0.14 | 0.27 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.25 | 0.18 | 0.34 | 0.19 | 0.33 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.5 | 0.4 | 0.6 | 0.39 | 0.6 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.25 | 0.2 | 0.31 | 0.2 | 0.32 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.12 | 0.12 | 0.14 | 0.08 | 0.16 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.15 | 0.14 | 0.18 | 0.1 | 0.2 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-5.** Summary of performance metric 5: probability that the population is perceived as undergoing overfishing in the terminal year of the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.14 | 0.02 | 0.14 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.11 | 0.1 | 0.24 | 0.1 | 0.24 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.03 | 0.22 | 0.03 | 0.22 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.05 | 0.02 | 0.21 | 0.02 | 0.22 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.04 | 0.19 | 0.04 | 0.2 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.02 | 0.12 | 0.02 | 0.12 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-6.** Summary of performance metric 6: probability that the population is perceived to be overfished in the terminal year of the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.09 | 0 | 0.09 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.5 | 0.36 | 0.64 | 0.37 | 0.64 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.06 | 0 | 0.37 | 0 | 0.37 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0 | 0.04 | 0 | 0.04 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.98 | 0.97 | 0.99 | 0.97 | 0.99 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.06 | 0 | 0.05 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.77 | 0.69 | 0.8 | 0.71 | 0.81 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-7.** Summary of performance metric 7: probability that the population is undergoing overfishing as determined from the OM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.32 | 0.23 | 0.7 | 0.23 | 0.71 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 2a (PFMC) | 0.13 | 0.12 | 0.13 | 0.12 | 0.13 |
|  |  | HCR 2b (Dynamic PFMC) | 0.13 | 0.12 | 0.13 | 0.12 | 0.13 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.21 | 0.2 | 0.21 | 0.2 | 0.21 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0.1 | 0.1 | 0.09 | 0.1 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.03 | 0 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-8.** Summary of performance metric 8: probability that the population is overfished as determined from the OM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0.02 | 0 | 0.03 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.04 | 0.03 | 0.03 | 0.04 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.5 | 0.4 | 0.6 | 0.39 | 0.6 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.12 | 0.12 | 0.14 | 0.08 | 0.16 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.15 | 0.14 | 0.18 | 0.1 | 0.2 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-9.** Summary of performance metric 9: probability that the population is overfished as determined from the OM, but is perceived as not overfished by the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.01 | 0 | 0.13 | 0 | 0.13 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.03 | 0.22 | 0.03 | 0.22 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0 | 0.19 | 0 | 0.19 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.04 | 0.19 | 0.04 | 0.2 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.03 | 0.02 | 0.12 | 0.02 | 0.12 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.09 | 0 | 0.09 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.34 | 0.27 | 0.4 | 0.27 | 0.4 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.06 | 0 | 0.37 | 0 | 0.37 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.01 | 0 | 0.04 | 0 | 0.04 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.73 | 0.8 | 0.65 | 0.78 | 0.66 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0.06 | 0 | 0.05 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.54 | 0.51 | 0.51 | 0.53 | 0.52 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-10.** Summary of performance metric 10: probability that the population is not overfished as determined from the OM, but is perceived as overfished by the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0.02 | 0 | 0.02 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 2b (Dynamic PFMC) | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.3 | 0.21 | 0.57 | 0.22 | 0.58 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
|  |  | HCR 2a (PFMC) | 0.13 | 0.12 | 0.13 | 0.12 | 0.13 |
|  |  | HCR 2b (Dynamic PFMC) | 0.13 | 0.12 | 0.13 | 0.12 | 0.13 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-11.** Summary of performance metric 11: probability that the population undergoing overfishing as determined from the OM, but is perceived as not undergoing overfishing by the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.01 | 0 | 0.01 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0.02 | 0 | 0.02 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.GOA.PM-12.** Summary of performance metric 12: probability that the population is not undergoing overfishing as determined from the OM, but is perceived as undergoing overfishing by the EM across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0.02 | 0 | 0.02 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0.02 | 0 | 0.03 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 5 (Avg F) | 0 | 0 | 0 | 0 | 0 |

[1] “**Supplementary Table 6.EBS.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Arrowtooth flounder in the **EBS**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.44 | 0.6 | 0.41 | 0.6 | 0.41 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.44 | 0.45 | 0.43 | 0.45 | 0.43 |
|  |  | HCR 2a (PFMC) | 0.39 | 0.54 | 0.36 | 0.54 | 0.36 |
|  |  | HCR 2b (Dynamic PFMC) | 0.39 | 0.41 | 0.38 | 0.41 | 0.38 |
|  |  | HCR 3a (SESSF) | 0.51 | 0.7 | 0.46 | 0.7 | 0.46 |
|  |  | HCR 3b (Dynamic SESSF) | 0.51 | 0.53 | 0.5 | 0.53 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.43 | 0.6 | 0.39 | 0.6 | 0.39 |
|  |  | HCR 5 (Avg F) | 0.78 | 1.06 | 0.71 | 1.06 | 0.71 |
|  | *Est M* | HCR 1a (NPFMC) | 0.42 | 0.58 | 0.39 | 0.58 | 0.39 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.42 | 0.44 | 0.41 | 0.44 | 0.41 |
|  |  | HCR 2a (PFMC) | 0.37 | 0.51 | 0.34 | 0.51 | 0.34 |
|  |  | HCR 2b (Dynamic PFMC) | 0.37 | 0.39 | 0.36 | 0.39 | 0.36 |
|  |  | HCR 3a (SESSF) | 0.49 | 0.67 | 0.45 | 0.67 | 0.45 |
|  |  | HCR 3b (Dynamic SESSF) | 0.49 | 0.51 | 0.48 | 0.51 | 0.48 |
|  |  | HCR 4 (NEFMC) | 0.42 | 0.57 | 0.38 | 0.57 | 0.38 |
|  |  | HCR 5 (Avg F) | 0.79 | 1.07 | 0.71 | 1.07 | 0.71 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.54 | 0.76 | 0.48 | 0.76 | 0.48 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.55 | 0.57 | 0.55 | 0.57 | 0.55 |
|  |  | HCR 2a (PFMC) | 0.5 | 0.7 | 0.43 | 0.7 | 0.43 |
|  |  | HCR 2b (Dynamic PFMC) | 0.51 | 0.52 | 0.49 | 0.52 | 0.49 |
|  |  | HCR 3a (SESSF) | 0.61 | 0.85 | 0.53 | 0.85 | 0.53 |
|  |  | HCR 3b (Dynamic SESSF) | 0.62 | 0.63 | 0.61 | 0.63 | 0.61 |
|  |  | HCR 4 (NEFMC) | 0.54 | 0.76 | 0.47 | 0.76 | 0.47 |
|  |  | HCR 5 (Avg F) | 0.84 | 1.16 | 0.73 | 1.16 | 0.73 |
|  | *Est M* | HCR 1a (NPFMC) | 0.42 | 0.58 | 0.38 | 0.58 | 0.38 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.42 | 0.44 | 0.41 | 0.44 | 0.41 |
|  |  | HCR 2a (PFMC) | 0.34 | 0.48 | 0.3 | 0.48 | 0.3 |
|  |  | HCR 2b (Dynamic PFMC) | 0.34 | 0.36 | 0.33 | 0.36 | 0.33 |
|  |  | HCR 3a (SESSF) | 0.49 | 0.69 | 0.43 | 0.69 | 0.43 |
|  |  | HCR 3b (Dynamic SESSF) | 0.5 | 0.51 | 0.49 | 0.51 | 0.49 |
|  |  | HCR 4 (NEFMC) | 0.41 | 0.58 | 0.36 | 0.58 | 0.36 |
|  |  | HCR 5 (Avg F) | 0.83 | 1.15 | 0.73 | 1.15 | 0.73 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.53 | 0.6 | 0.49 | 0.61 | 0.49 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.52 | 0.6 | 0.48 | 0.61 | 0.48 |
|  |  | HCR 2a (PFMC) | 0.46 | 0.53 | 0.42 | 0.54 | 0.42 |
|  |  | HCR 2b (Dynamic PFMC) | 0.46 | 0.53 | 0.42 | 0.54 | 0.42 |
|  |  | HCR 3a (SESSF) | 0.6 | 0.68 | 0.55 | 0.69 | 0.55 |
|  |  | HCR 3b (Dynamic SESSF) | 0.6 | 0.68 | 0.55 | 0.69 | 0.55 |
|  |  | HCR 4 (NEFMC) | 0.52 | 0.6 | 0.48 | 0.61 | 0.48 |
|  |  | HCR 5 (Avg F) | 0.91 | 1.02 | 0.85 | 1.04 | 0.84 |
|  | *Est M* | HCR 1a (NPFMC) | 0.52 | 0.6 | 0.48 | 0.6 | 0.48 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.52 | 0.6 | 0.47 | 0.6 | 0.47 |
|  |  | HCR 2a (PFMC) | 0.45 | 0.52 | 0.41 | 0.53 | 0.41 |
|  |  | HCR 2b (Dynamic PFMC) | 0.45 | 0.52 | 0.41 | 0.53 | 0.41 |
|  |  | HCR 3a (SESSF) | 0.6 | 0.69 | 0.55 | 0.69 | 0.55 |
|  |  | HCR 3b (Dynamic SESSF) | 0.6 | 0.69 | 0.55 | 0.69 | 0.54 |
|  |  | HCR 4 (NEFMC) | 0.52 | 0.6 | 0.47 | 0.6 | 0.47 |
|  |  | HCR 5 (Avg F) | 0.91 | 1.02 | 0.85 | 1.03 | 0.84 |

[1] “**Supplementary Table 6.GOA.PM-13.** Summary of performance metric 13: terminal spawning stock biomass depletion across scenarios for Arrowtooth flounder in the **GOA**.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0.42 | 0.59 | 0.41 | 0.59 | 0.41 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.44 | 0.46 | 0.43 | 0.46 | 0.43 |
|  |  | HCR 2a (PFMC) | 0.36 | 0.51 | 0.34 | 0.51 | 0.34 |
|  |  | HCR 2b (Dynamic PFMC) | 0.38 | 0.4 | 0.36 | 0.4 | 0.36 |
|  |  | HCR 3a (SESSF) | 0.5 | 0.69 | 0.47 | 0.69 | 0.47 |
|  |  | HCR 3b (Dynamic SESSF) | 0.52 | 0.54 | 0.5 | 0.54 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.42 | 0.59 | 0.39 | 0.59 | 0.39 |
|  |  | HCR 5 (Avg F) | 0.81 | 1.1 | 0.76 | 1.1 | 0.76 |
|  | *Est M* | HCR 1a (NPFMC) | 0.43 | 0.6 | 0.41 | 0.6 | 0.41 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.44 | 0.46 | 0.43 | 0.46 | 0.43 |
|  |  | HCR 2a (PFMC) | 0.36 | 0.51 | 0.33 | 0.51 | 0.33 |
|  |  | HCR 2b (Dynamic PFMC) | 0.37 | 0.39 | 0.36 | 0.39 | 0.36 |
|  |  | HCR 3a (SESSF) | 0.5 | 0.69 | 0.46 | 0.69 | 0.46 |
|  |  | HCR 3b (Dynamic SESSF) | 0.52 | 0.54 | 0.5 | 0.54 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.42 | 0.6 | 0.39 | 0.6 | 0.39 |
|  |  | HCR 5 (Avg F) | 0.8 | 1.09 | 0.75 | 1.09 | 0.75 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0.48 | 0.67 | 0.44 | 0.67 | 0.44 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.5 | 0.52 | 0.49 | 0.52 | 0.49 |
|  |  | HCR 2a (PFMC) | 0.42 | 0.59 | 0.37 | 0.59 | 0.37 |
|  |  | HCR 2b (Dynamic PFMC) | 0.43 | 0.45 | 0.42 | 0.45 | 0.42 |
|  |  | HCR 3a (SESSF) | 0.55 | 0.77 | 0.49 | 0.77 | 0.49 |
|  |  | HCR 3b (Dynamic SESSF) | 0.57 | 0.59 | 0.56 | 0.59 | 0.56 |
|  |  | HCR 4 (NEFMC) | 0.48 | 0.67 | 0.43 | 0.67 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.85 | 1.17 | 0.77 | 1.17 | 0.77 |
|  | *Est M* | HCR 1a (NPFMC) | 0.43 | 0.6 | 0.39 | 0.6 | 0.39 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.44 | 0.46 | 0.43 | 0.46 | 0.43 |
|  |  | HCR 2a (PFMC) | 0.35 | 0.5 | 0.32 | 0.5 | 0.32 |
|  |  | HCR 2b (Dynamic PFMC) | 0.37 | 0.38 | 0.35 | 0.38 | 0.35 |
|  |  | HCR 3a (SESSF) | 0.5 | 0.7 | 0.45 | 0.7 | 0.45 |
|  |  | HCR 3b (Dynamic SESSF) | 0.52 | 0.54 | 0.5 | 0.54 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.42 | 0.6 | 0.38 | 0.6 | 0.38 |
|  |  | HCR 5 (Avg F) | 0.84 | 1.16 | 0.76 | 1.16 | 0.76 |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0.5 | 0.6 | 0.47 | 0.6 | 0.47 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.5 | 0.6 | 0.47 | 0.6 | 0.47 |
|  |  | HCR 2a (PFMC) | 0.44 | 0.53 | 0.4 | 0.53 | 0.4 |
|  |  | HCR 2b (Dynamic PFMC) | 0.44 | 0.53 | 0.4 | 0.53 | 0.4 |
|  |  | HCR 3a (SESSF) | 0.57 | 0.68 | 0.53 | 0.68 | 0.53 |
|  |  | HCR 3b (Dynamic SESSF) | 0.57 | 0.68 | 0.53 | 0.68 | 0.53 |
|  |  | HCR 4 (NEFMC) | 0.5 | 0.6 | 0.46 | 0.6 | 0.46 |
|  |  | HCR 5 (Avg F) | 0.86 | 0.99 | 0.81 | 0.99 | 0.81 |
|  | *Est M* | HCR 1a (NPFMC) | 0.46 | 0.56 | 0.44 | 0.56 | 0.44 |
|  |  | HCR 1b (Dynamic NPFMC) | 0.47 | 0.56 | 0.43 | 0.56 | 0.43 |
|  |  | HCR 2a (PFMC) | 0.39 | 0.47 | 0.36 | 0.47 | 0.36 |
|  |  | HCR 2b (Dynamic PFMC) | 0.39 | 0.47 | 0.36 | 0.47 | 0.36 |
|  |  | HCR 3a (SESSF) | 0.54 | 0.64 | 0.5 | 0.64 | 0.5 |
|  |  | HCR 3b (Dynamic SESSF) | 0.54 | 0.64 | 0.5 | 0.64 | 0.5 |
|  |  | HCR 4 (NEFMC) | 0.46 | 0.56 | 0.43 | 0.56 | 0.43 |
|  |  | HCR 5 (Avg F) | 0.85 | 0.98 | 0.81 | 0.98 | 0.81 |

# Count of dominated systems

[1] “**Supplementary Table 7.EBS.** Number of times a management strategy performed the best for performance metrics across scenarios for Pollock in the **EBS**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 7 | 9 | 1 | 7 | 7 | 31 | 110 |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 132 |
|  |  | HCR 2a (PFMC) | 6 | 7 | 6 | 5 | 5 | 29 | 98 |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 130 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 7 | 9 | 9 | 43 | 133 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 1 | 1 | 7 | 57 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 7 | 9 | 9 | 43 | 145 |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 3 | 2 | 3 | 1 | 12 | 44 |
|  |  | HCR 1b (Dynamic NPFMC) | 4 | 4 | 4 | 4 | 4 | 20 | 69 |
|  |  | HCR 2a (PFMC) | 3 | 2 | 2 | 2 | 2 | 11 | 37 |
|  |  | HCR 2b (Dynamic PFMC) | 4 | 4 | 4 | 4 | 4 | 20 | 52 |
|  |  | HCR 3a (SESSF) | 7 | 9 | 7 | 7 | 7 | 37 | 107 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 127 |
|  |  | HCR 4 (NEFMC) | 4 | 3 | 3 | 3 | 3 | 16 | 47 |
|  |  | HCR 5 (Avg F) | 12 | 12 | 10 | 12 | 12 | 58 | 165 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 9 | 9 | 4 | 9 | 9 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 7 | 9 | 6 | 7 | 7 | 36 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 10 | 9 | 9 | 46 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 5 | 7 | 3 | 5 | 5 | 25 |  |
|  |  | HCR 5 (Avg F) | 11 | 11 | 11 | 11 | 11 | 55 |  |
|  | *Est M* | HCR 1a (NPFMC) | 4 | 6 | 3 | 3 | 4 | 20 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 5 | 2 | 3 | 3 | 15 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 6 | 9 | 9 | 42 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 10 | 10 | 9 | 10 | 10 | 49 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 9 | 7 | 8 | 6 | 9 | 39 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 6 | 9 | 9 | 9 | 42 |  |
|  |  | HCR 2a (PFMC) | 7 | 5 | 7 | 7 | 7 | 33 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 5 | 9 | 7 | 9 | 39 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 5 | 5 | 5 | 5 | 5 | 25 |  |
|  |  | HCR 5 (Avg F) | 9 | 11 | 9 | 9 | 9 | 47 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 3 | 12 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 2 | 3 | 3 | 3 | 14 |  |
|  |  | HCR 2a (PFMC) | 5 | 4 | 4 | 4 | 4 | 21 |  |
|  |  | HCR 2b (Dynamic PFMC) | 5 | 3 | 3 | 3 | 3 | 17 |  |
|  |  | HCR 3a (SESSF) | 7 | 5 | 6 | 5 | 5 | 28 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 7 | 7 | 7 | 7 | 37 |  |
|  |  | HCR 4 (NEFMC) | 5 | 4 | 4 | 4 | 4 | 21 |  |
|  |  | HCR 5 (Avg F) | 12 | 10 | 12 | 12 | 12 | 58 |  |

[1] “**Supplementary Table 7.GOA.** Number of times a management strategy performed the best for performance metrics across scenarios for Pollock in the **GOA**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 0 | 0 | 2 | 31 |
|  |  | HCR 1b (Dynamic NPFMC) | 5 | 5 | 5 | 6 | 5 | 26 | 85 |
|  |  | HCR 2a (PFMC) | 4 | 4 | 3 | 4 | 4 | 19 | 71 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 9 | 8 | 8 | 41 | 117 |
|  |  | HCR 3a (SESSF) | 5 | 7 | 4 | 4 | 5 | 25 | 94 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 131 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 38 |
|  |  | HCR 5 (Avg F) | 6 | 7 | 6 | 6 | 6 | 31 | 99 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 3 | 1 | 3 | 3 | 13 | 46 |
|  |  | HCR 2a (PFMC) | 3 | 2 | 2 | 2 | 2 | 11 | 36 |
|  |  | HCR 2b (Dynamic PFMC) | 4 | 4 | 4 | 2 | 4 | 18 | 52 |
|  |  | HCR 3a (SESSF) | 3 | 2 | 2 | 2 | 3 | 12 | 47 |
|  |  | HCR 3b (Dynamic SESSF) | 7 | 5 | 5 | 7 | 5 | 29 | 92 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 35 |
|  |  | HCR 5 (Avg F) | 7 | 8 | 7 | 7 | 8 | 37 | 119 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 0 | 1 | 3 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 5 | 6 | 6 | 5 | 28 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2b (Dynamic PFMC) | 7 | 6 | 8 | 6 | 6 | 33 |  |
|  |  | HCR 3a (SESSF) | 5 | 7 | 5 | 5 | 5 | 27 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 6 | 7 | 6 | 6 | 6 | 31 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 1 | 0 | 0 | 0 | 1 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 5 | 5 | 3 | 3 | 19 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 4 | 4 | 4 | 4 | 19 |  |
|  |  | HCR 3a (SESSF) | 5 | 3 | 2 | 2 | 2 | 14 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 5 | 4 | 5 | 5 | 28 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 9 | 10 | 7 | 10 | 9 | 45 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 7 | 4 | 6 | 2 | 7 | 26 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 7 | 5 | 7 | 5 | 7 | 31 |  |
|  |  | HCR 2a (PFMC) | 10 | 8 | 8 | 6 | 10 | 42 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 7 | 9 | 9 | 43 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 6 | 9 | 42 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 7 | 9 | 7 | 9 | 41 |  |
|  |  | HCR 4 (NEFMC) | 4 | 3 | 5 | 4 | 7 | 23 |  |
|  |  | HCR 5 (Avg F) | 8 | 7 | 8 | 6 | 8 | 37 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 3 | 12 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 4 | 2 | 2 | 1 | 5 | 14 |  |
|  |  | HCR 2a (PFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 3a (SESSF) | 4 | 4 | 4 | 4 | 5 | 21 |  |
|  |  | HCR 3b (Dynamic SESSF) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 5 (Avg F) | 8 | 7 | 8 | 6 | 8 | 37 |  |

[1] “**Supplementary Table 8.EBS.** Number of times a management strategy performed the best for performance metrics across scenarios for Cod in the **EBS**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 3 | 9 | 1 | 4 | 4 | 21 | 91 |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 127 |
|  |  | HCR 2a (PFMC) | 6 | 8 | 5 | 8 | 8 | 35 | 102 |
|  |  | HCR 2b (Dynamic PFMC) | 11 | 10 | 11 | 10 | 10 | 52 | 147 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 1 | 1 | 7 | 31 |
|  |  | HCR 5 (Avg F) | 5 | 6 | 6 | 5 | 5 | 27 | 87 |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 5 | 1 | 5 | 5 | 19 | 91 |
|  |  | HCR 1b (Dynamic NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 | 117 |
|  |  | HCR 2a (PFMC) | 5 | 7 | 5 | 7 | 7 | 31 | 103 |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 145 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 1 | 1 | 7 | 33 |
|  |  | HCR 5 (Avg F) | 7 | 7 | 6 | 7 | 7 | 34 | 96 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 7 | 9 | 3 | 7 | 7 | 33 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 6 | 7 | 5 | 7 | 7 | 32 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 1 | 1 | 7 |  |
|  |  | HCR 5 (Avg F) | 6 | 7 | 6 | 6 | 5 | 30 |  |
|  | *Est M* | HCR 1a (NPFMC) | 9 | 9 | 3 | 7 | 7 | 35 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 5 | 8 | 8 | 35 |  |
|  |  | HCR 2b (Dynamic PFMC) | 11 | 10 | 11 | 10 | 10 | 52 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 1 | 1 | 7 |  |
|  |  | HCR 5 (Avg F) | 6 | 7 | 6 | 6 | 7 | 32 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 9 | 7 | 7 | 7 | 7 | 37 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 7 | 7 | 7 | 7 | 37 |  |
|  |  | HCR 2a (PFMC) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 2b (Dynamic PFMC) | 10 | 10 | 10 | 10 | 10 | 50 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 3 | 3 | 3 | 17 |  |
|  |  | HCR 5 (Avg F) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  | *Est M* | HCR 1a (NPFMC) | 9 | 7 | 7 | 7 | 7 | 37 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 7 | 7 | 7 | 7 | 37 |  |
|  |  | HCR 2a (PFMC) | 7 | 7 | 8 | 8 | 7 | 37 |  |
|  |  | HCR 2b (Dynamic PFMC) | 10 | 10 | 9 | 9 | 10 | 48 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 3 | 4 | 4 | 19 |  |
|  |  | HCR 5 (Avg F) | 6 | 6 | 6 | 6 | 6 | 30 |  |

[1] “**Supplementary Table 8.GOA.** Number of times a management strategy performed the best for performance metrics across scenarios for Cod in the **GOA**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 0 | 0 | 0 | 0 | 1 | 13 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 1 | 0 | 0 | 1 | 2 | 22 |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 1 | 1 | 6 | 27 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 36 |
|  |  | HCR 3a (SESSF) | 5 | 6 | 4 | 5 | 4 | 24 | 57 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 95 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 44 |
|  |  | HCR 5 (Avg F) | 3 | 4 | 3 | 2 | 2 | 14 | 46 |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 4 | 1 | 3 | 2 | 11 | 27 |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 7 | 6 | 7 | 6 | 32 | 68 |
|  |  | HCR 2a (PFMC) | 3 | 6 | 3 | 5 | 5 | 22 | 56 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 9 | 8 | 9 | 9 | 43 | 93 |
|  |  | HCR 3a (SESSF) | 7 | 7 | 5 | 9 | 7 | 35 | 88 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 100 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 1 | 2 | 9 | 33 |
|  |  | HCR 5 (Avg F) | 1 | 3 | 1 | 2 | 3 | 10 | 32 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 2 | 1 | 1 | 0 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 1 | 1 | 6 |  |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 3a (SESSF) | 3 | 2 | 3 | 2 | 2 | 12 |  |
|  |  | HCR 3b (Dynamic SESSF) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 4 (NEFMC) | 4 | 3 | 3 | 3 | 3 | 16 |  |
|  |  | HCR 5 (Avg F) | 4 | 3 | 2 | 3 | 2 | 14 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 3 | 0 | 2 | 0 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 2a (PFMC) | 1 | 4 | 1 | 4 | 4 | 14 |  |
|  |  | HCR 2b (Dynamic PFMC) | 5 | 3 | 5 | 4 | 4 | 21 |  |
|  |  | HCR 3a (SESSF) | 4 | 6 | 4 | 6 | 2 | 22 |  |
|  |  | HCR 3b (Dynamic SESSF) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 4 (NEFMC) | 1 | 3 | 1 | 2 | 2 | 9 |  |
|  |  | HCR 5 (Avg F) | 1 | 2 | 1 | 1 | 1 | 6 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 2 | 2 | 1 | 1 | 1 | 7 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2a (PFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 2b (Dynamic PFMC) | 4 | 3 | 3 | 3 | 3 | 16 |  |
|  |  | HCR 3a (SESSF) | 5 | 4 | 4 | 4 | 4 | 21 |  |
|  |  | HCR 3b (Dynamic SESSF) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 4 (NEFMC) | 4 | 3 | 3 | 4 | 4 | 18 |  |
|  |  | HCR 5 (Avg F) | 4 | 4 | 3 | 3 | 4 | 18 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 5 | 5 | 5 | 5 | 5 | 25 |  |
|  |  | HCR 2a (PFMC) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 2b (Dynamic PFMC) | 7 | 5 | 6 | 6 | 5 | 29 |  |
|  |  | HCR 3a (SESSF) | 7 | 6 | 6 | 6 | 6 | 31 |  |
|  |  | HCR 3b (Dynamic SESSF) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 4 (NEFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 5 (Avg F) | 4 | 3 | 3 | 3 | 3 | 16 |  |

[1] “**Supplementary Table 9.EBS.** Number of times a management strategy performed the best for performance metrics across scenarios for Arrowtooth flounder in the **EBS**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 7 | 9 | 7 | 9 | 7 | 39 | 129 |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 2a (PFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 129 |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 129 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 5 | 5 | 2 | 5 | 2 | 19 | 81 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 | 147 |
|  | *Est M* | HCR 1a (NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 | 119 |
|  |  | HCR 1b (Dynamic NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 | 125 |
|  |  | HCR 2a (PFMC) | 10 | 9 | 10 | 11 | 10 | 50 | 125 |
|  |  | HCR 2b (Dynamic PFMC) | 10 | 11 | 10 | 9 | 10 | 50 | 133 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 5 | 5 | 3 | 5 | 2 | 20 | 68 |
|  |  | HCR 5 (Avg F) | 11 | 11 | 11 | 11 | 11 | 55 | 158 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 5 | 7 | 5 | 31 |  |
|  |  | HCR 5 (Avg F) | 11 | 11 | 11 | 11 | 11 | 55 |  |
|  | *Est M* | HCR 1a (NPFMC) | 7 | 9 | 7 | 9 | 7 | 39 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 7 | 7 | 4 | 8 | 5 | 31 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 7 | 8 | 39 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 3 | 5 | 2 | 5 | 2 | 17 |  |
|  |  | HCR 5 (Avg F) | 10 | 10 | 10 | 10 | 10 | 50 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 7 | 9 | 7 | 9 | 7 | 39 |  |
|  |  | HCR 2b (Dynamic PFMC) | 7 | 9 | 7 | 9 | 7 | 39 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 5 | 7 | 5 | 31 |  |
|  |  | HCR 5 (Avg F) | 9 | 10 | 9 | 10 | 9 | 47 |  |
|  | *Est M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 8 | 10 | 7 | 10 | 9 | 44 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 10 | 9 | 10 | 7 | 44 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 5 | 7 | 5 | 31 |  |
|  |  | HCR 5 (Avg F) | 11 | 10 | 11 | 10 | 11 | 53 |  |

[1] “**Supplementary Table 9.GOA.** Number of times a management strategy performed the best for performance metrics across scenarios for Arrowtooth flounder in the **GOA**. Note, the maximum across experiments for each OM is 65 and across experiments and OMs is 195.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 7 | 9 | 7 | 9 | 7 | 39 | 129 |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 2a (PFMC) | 7 | 9 | 7 | 8 | 7 | 38 | 132 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 7 | 7 | 7 | 7 | 36 | 122 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 5 | 6 | 3 | 6 | 3 | 23 | 89 |
|  |  | HCR 5 (Avg F) | 11 | 11 | 10 | 11 | 10 | 53 | 157 |
|  | *Est M* | HCR 1a (NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 | 125 |
|  |  | HCR 1b (Dynamic NPFMC) | 7 | 7 | 7 | 7 | 7 | 35 | 125 |
|  |  | HCR 2a (PFMC) | 7 | 7 | 7 | 8 | 7 | 36 | 120 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 7 | 9 | 7 | 9 | 40 | 132 |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  |  | HCR 4 (NEFMC) | 5 | 5 | 3 | 5 | 3 | 21 | 73 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 10 | 9 | 10 | 47 | 143 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 10 | 10 | 10 | 9 | 10 | 49 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 9 | 10 | 9 | 46 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 5 | 7 | 5 | 31 |  |
|  |  | HCR 5 (Avg F) | 10 | 11 | 10 | 11 | 10 | 52 |  |
|  | *Est M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 8 | 10 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 10 | 10 | 10 | 48 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 5 | 5 | 3 | 5 | 3 | 21 |  |
|  |  | HCR 5 (Avg F) | 10 | 9 | 10 | 9 | 10 | 48 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 10 | 9 | 8 | 10 | 8 | 45 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 10 | 7 | 9 | 5 | 40 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 7 | 7 | 7 | 35 |  |
|  |  | HCR 5 (Avg F) | 10 | 11 | 10 | 11 | 10 | 52 |  |
|  | *Est M* | HCR 1a (NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 2a (PFMC) | 7 | 9 | 7 | 9 | 7 | 39 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 10 | 8 | 10 | 8 | 44 |  |
|  |  | HCR 3a (SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 3b (Dynamic SESSF) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  |  | HCR 4 (NEFMC) | 7 | 7 | 5 | 7 | 5 | 31 |  |
|  |  | HCR 5 (Avg F) | 10 | 9 | 10 | 9 | 10 | 48 |  |

# Count of dominated systems for economic PMs

[1] “**Supplementary Table 10.EBS.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Pollock in the **EBS**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 1 | 1 | 4 | 11 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 14 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 21 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 10 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 30 |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 | 24 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 1 | 1 | 4 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 0 | 1 | 3 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 0 | 1 | 1 | 1 | 4 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 2 | 1 | 1 | 1 | 6 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 2 | 1 | 2 | 2 | 2 | 9 |  |

[1] “**Supplementary Table 10.GOA.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Pollock in the **GOA**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 22 |
|  |  | HCR 3a (SESSF) | 0 | 1 | 0 | 0 | 0 | 1 | 6 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 20 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 20 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 0 | 1 | 1 | 4 | 10 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 0 | 1 | 4 | 14 |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 25 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 18 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 1 | 2 | 1 | 1 | 7 |  |
|  |  | HCR 3a (SESSF) | 0 | 1 | 0 | 0 | 0 | 1 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 0 | 1 | 0 | 0 | 0 | 1 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 2 | 1 | 2 | 2 | 8 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1 | 0 | 0 | 0 | 1 | 2 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 0 | 1 | 4 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 1 | 1 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |

[1] “**Supplementary Table 11.EBS.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Cod in the **EBS**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 1 | 0 | 0 | 0 | 1 | 10 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 25 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 20 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 20 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 | 25 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 1 | 1 | 4 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 1 | 1 | 4 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |

[1] “**Supplementary Table 11.GOA.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Cod in the **GOA**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 10 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3a (SESSF) | 1 | 0 | 0 | 1 | 0 | 2 | 2 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 10 |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 29 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 1 | 0 | 1 | 0 | 2 | 7 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 | 30 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 10 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 10 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 3b (Dynamic SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 0 | 1 | 0 | 0 | 0 | 1 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 2 | 1 | 2 | 2 | 2 | 9 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |

[1] “**Supplementary Table 12.EBS.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Arrowtooth flounder in the **EBS**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 2 | 1 | 7 | 21 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 2 | 2 | 1 | 2 | 8 | 24 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 | 30 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 2 | 1 | 6 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 1 | 2 | 9 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 1 | 1 | 2 | 8 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 2 | 2 | 1 | 7 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 2 | 2 | 2 | 2 | 10 |  |

[1] “**Supplementary Table 12.GOA.** Number of times a management strategy performed the best for economic performance metrics (1-3) across scenarios for Arrowtooth flounder in the **GOA**. Note, the maximum across experiments for each OM is 15 and across experiments and OMs is 45.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 2 | 1 | 1 | 1 | 6 | 16 |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 2 | 2 | 1 | 2 | 1 | 8 | 22 |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 2 | 1 | 6 | 18 |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 1 | 2 | 1 | 2 | 8 | 26 |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 | 15 |
|  |  | HCR 5 (Avg F) | 1 | 1 | 2 | 1 | 2 | 7 | 23 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 2 | 1 | 2 | 1 | 7 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 1 | 1 | 1 | 7 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 2 | 2 | 2 | 8 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 1 | 2 | 1 | 2 | 8 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 1 | 2 | 1 | 2 | 1 | 7 |  |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 3b (Dynamic SESSF) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 5 (Avg F) | 2 | 1 | 2 | 1 | 2 | 8 |  |

# Count of dominated systems for conservation PMs

[1] “**Supplementary Table 13.EBS.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Pollock in the **EBS**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 6 | 8 | 1 | 6 | 6 | 27 | 99 |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 118 |
|  |  | HCR 2a (PFMC) | 5 | 6 | 5 | 4 | 4 | 24 | 83 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 115 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 6 | 8 | 8 | 38 | 118 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 0 | 0 | 2 | 42 |
|  |  | HCR 5 (Avg F) | 8 | 8 | 6 | 8 | 8 | 38 | 119 |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 3 | 2 | 3 | 1 | 12 | 44 |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 3 | 3 | 3 | 3 | 15 | 59 |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 1 | 1 | 6 | 22 |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 3 | 3 | 3 | 3 | 15 | 37 |
|  |  | HCR 3a (SESSF) | 6 | 8 | 6 | 6 | 6 | 32 | 92 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 112 |
|  |  | HCR 4 (NEFMC) | 2 | 1 | 1 | 1 | 1 | 6 | 17 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 7 | 9 | 9 | 43 | 131 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 8 | 8 | 4 | 8 | 8 | 36 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 5 | 6 | 6 | 31 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 9 | 8 | 8 | 41 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 4 | 6 | 2 | 4 | 4 | 20 |  |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  | *Est M* | HCR 1a (NPFMC) | 4 | 6 | 3 | 3 | 4 | 20 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 2a (PFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 2b (Dynamic PFMC) | 1 | 4 | 1 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 5 | 8 | 8 | 37 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 5 (Avg F) | 9 | 9 | 8 | 9 | 9 | 44 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 8 | 6 | 8 | 6 | 8 | 36 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 6 | 8 | 8 | 8 | 38 |  |
|  |  | HCR 2a (PFMC) | 6 | 4 | 6 | 6 | 6 | 28 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 4 | 8 | 6 | 8 | 34 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 5 (Avg F) | 8 | 9 | 8 | 8 | 8 | 41 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 3 | 12 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 2 | 3 | 3 | 3 | 14 |  |
|  |  | HCR 2a (PFMC) | 4 | 3 | 3 | 3 | 3 | 16 |  |
|  |  | HCR 2b (Dynamic PFMC) | 4 | 2 | 2 | 2 | 2 | 12 |  |
|  |  | HCR 3a (SESSF) | 6 | 4 | 5 | 4 | 4 | 23 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 6 | 6 | 6 | 6 | 32 |  |
|  |  | HCR 4 (NEFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 5 (Avg F) | 9 | 8 | 9 | 9 | 9 | 44 |  |

[1] “**Supplementary Table 13.GOA.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Pollock in the **GOA**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 0 | 0 | 2 | 29 |
|  |  | HCR 1b (Dynamic NPFMC) | 4 | 4 | 4 | 5 | 4 | 21 | 70 |
|  |  | HCR 2a (PFMC) | 3 | 3 | 2 | 3 | 3 | 14 | 56 |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 6 | 7 | 6 | 6 | 31 | 95 |
|  |  | HCR 3a (SESSF) | 5 | 6 | 4 | 4 | 5 | 24 | 88 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 116 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
|  |  | HCR 5 (Avg F) | 5 | 6 | 5 | 5 | 5 | 26 | 79 |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 2 | 1 | 2 | 2 | 9 | 36 |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 1 | 1 | 6 | 21 |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 3 | 3 | 2 | 3 | 14 | 38 |
|  |  | HCR 3a (SESSF) | 3 | 2 | 2 | 2 | 3 | 12 | 46 |
|  |  | HCR 3b (Dynamic SESSF) | 6 | 4 | 4 | 6 | 4 | 24 | 77 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
|  |  | HCR 5 (Avg F) | 5 | 6 | 5 | 5 | 6 | 27 | 86 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 1 | 1 | 0 | 0 | 1 | 3 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 5 | 4 | 5 | 5 | 4 | 23 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 5 | 5 | 6 | 5 | 5 | 26 |  |
|  |  | HCR 3a (SESSF) | 5 | 6 | 5 | 5 | 5 | 26 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 5 (Avg F) | 5 | 6 | 5 | 5 | 5 | 26 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 1 | 0 | 0 | 0 | 1 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 4 | 4 | 2 | 2 | 14 |  |
|  |  | HCR 2a (PFMC) | 1 | 1 | 1 | 1 | 1 | 5 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 3 | 3 | 3 | 3 | 14 |  |
|  |  | HCR 3a (SESSF) | 5 | 2 | 2 | 2 | 2 | 13 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 4 | 3 | 4 | 4 | 23 |  |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 |  |
|  |  | HCR 5 (Avg F) | 7 | 7 | 5 | 7 | 6 | 32 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 6 | 4 | 6 | 2 | 6 | 24 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 4 | 6 | 4 | 6 | 26 |  |
|  |  | HCR 2a (PFMC) | 9 | 7 | 7 | 5 | 9 | 37 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 6 | 8 | 8 | 38 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 6 | 8 | 38 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 6 | 8 | 6 | 8 | 36 |  |
|  |  | HCR 4 (NEFMC) | 3 | 2 | 4 | 3 | 6 | 18 |  |
|  |  | HCR 5 (Avg F) | 6 | 5 | 6 | 4 | 6 | 27 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 3 | 12 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 4 | 2 | 2 | 1 | 4 | 13 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 4 | 4 | 4 | 4 | 5 | 21 |  |
|  |  | HCR 3b (Dynamic SESSF) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 6 | 5 | 6 | 4 | 6 | 27 |  |

[1] “**Supplementary Table 14.EBS.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Cod in the **EBS**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 3 | 8 | 1 | 4 | 4 | 20 | 81 |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 112 |
|  |  | HCR 2a (PFMC) | 5 | 7 | 4 | 7 | 7 | 30 | 87 |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 8 | 9 | 8 | 8 | 42 | 122 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 0 | 0 | 2 | 16 |
|  |  | HCR 5 (Avg F) | 4 | 5 | 4 | 4 | 4 | 21 | 62 |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 5 | 1 | 5 | 5 | 19 | 82 |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 102 |
|  |  | HCR 2a (PFMC) | 4 | 6 | 4 | 6 | 6 | 26 | 88 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 125 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 0 | 0 | 2 | 18 |
|  |  | HCR 5 (Avg F) | 4 | 4 | 4 | 4 | 4 | 20 | 61 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 6 | 8 | 3 | 6 | 6 | 29 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 5 | 6 | 4 | 6 | 6 | 27 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 0 | 0 | 2 |  |
|  |  | HCR 5 (Avg F) | 4 | 5 | 4 | 4 | 4 | 21 |  |
|  | *Est M* | HCR 1a (NPFMC) | 8 | 8 | 3 | 6 | 6 | 31 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 5 | 7 | 4 | 7 | 7 | 30 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 8 | 9 | 8 | 8 | 42 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 0 | 0 | 2 |  |
|  |  | HCR 5 (Avg F) | 4 | 5 | 4 | 4 | 4 | 21 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 8 | 6 | 6 | 6 | 6 | 32 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 6 | 6 | 6 | 6 | 32 |  |
|  |  | HCR 2a (PFMC) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 3 | 3 | 2 | 2 | 2 | 12 |  |
|  |  | HCR 5 (Avg F) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  | *Est M* | HCR 1a (NPFMC) | 8 | 6 | 6 | 6 | 6 | 32 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 6 | 6 | 6 | 6 | 32 |  |
|  |  | HCR 2a (PFMC) | 6 | 6 | 7 | 7 | 6 | 32 |  |
|  |  | HCR 2b (Dynamic PFMC) | 9 | 9 | 8 | 8 | 9 | 43 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 3 | 3 | 2 | 3 | 3 | 14 |  |
|  |  | HCR 5 (Avg F) | 4 | 4 | 4 | 4 | 4 | 20 |  |

[1] “**Supplementary Table 14.GOA.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Cod in the **GOA**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 1 | 0 | 0 | 0 | 0 | 1 | 12 |
|  |  | HCR 1b (Dynamic NPFMC) | 0 | 1 | 0 | 0 | 1 | 2 | 22 |
|  |  | HCR 2a (PFMC) | 1 | 0 | 0 | 0 | 0 | 1 | 17 |
|  |  | HCR 2b (Dynamic PFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
|  |  | HCR 3a (SESSF) | 4 | 6 | 4 | 4 | 4 | 22 | 54 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 85 |
|  |  | HCR 4 (NEFMC) | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
|  |  | HCR 5 (Avg F) | 2 | 3 | 2 | 1 | 1 | 9 | 26 |
|  | *Est M* | HCR 1a (NPFMC) | 1 | 4 | 1 | 3 | 2 | 11 | 27 |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 61 |
|  |  | HCR 2a (PFMC) | 2 | 5 | 2 | 4 | 4 | 17 | 41 |
|  |  | HCR 2b (Dynamic PFMC) | 5 | 6 | 5 | 6 | 6 | 28 | 55 |
|  |  | HCR 3a (SESSF) | 6 | 6 | 4 | 8 | 6 | 30 | 77 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 90 |
|  |  | HCR 4 (NEFMC) | 1 | 1 | 1 | 0 | 1 | 4 | 18 |
|  |  | HCR 5 (Avg F) | 0 | 2 | 0 | 1 | 2 | 5 | 17 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 2 | 1 | 1 | 0 | 1 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2a (PFMC) | 2 | 1 | 1 | 1 | 1 | 6 |  |
|  |  | HCR 2b (Dynamic PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 3a (SESSF) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 3b (Dynamic SESSF) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 4 (NEFMC) | 2 | 1 | 1 | 1 | 1 | 6 |  |
|  |  | HCR 5 (Avg F) | 2 | 1 | 1 | 1 | 1 | 6 |  |
|  | *Est M* | HCR 1a (NPFMC) | 0 | 3 | 0 | 2 | 0 | 5 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 2a (PFMC) | 0 | 3 | 0 | 3 | 3 | 9 |  |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 1 | 3 | 2 | 2 | 11 |  |
|  |  | HCR 3a (SESSF) | 4 | 6 | 4 | 6 | 1 | 21 |  |
|  |  | HCR 3b (Dynamic SESSF) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 4 (NEFMC) | 0 | 2 | 0 | 1 | 1 | 4 |  |
|  |  | HCR 5 (Avg F) | 0 | 1 | 0 | 0 | 0 | 1 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 2 | 1 | 1 | 1 | 1 | 6 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2a (PFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 2b (Dynamic PFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 3a (SESSF) | 5 | 4 | 4 | 4 | 4 | 21 |  |
|  |  | HCR 3b (Dynamic SESSF) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 1 | 2 | 2 | 9 |  |
|  |  | HCR 5 (Avg F) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  | *Est M* | HCR 1a (NPFMC) | 3 | 2 | 2 | 2 | 2 | 11 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 4 | 4 | 4 | 4 | 4 | 20 |  |
|  |  | HCR 2a (PFMC) | 3 | 3 | 3 | 3 | 3 | 15 |  |
|  |  | HCR 2b (Dynamic PFMC) | 4 | 3 | 3 | 3 | 3 | 16 |  |
|  |  | HCR 3a (SESSF) | 6 | 5 | 5 | 5 | 5 | 26 |  |
|  |  | HCR 3b (Dynamic SESSF) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 4 (NEFMC) | 2 | 2 | 2 | 2 | 2 | 10 |  |
|  |  | HCR 5 (Avg F) | 3 | 2 | 2 | 2 | 2 | 11 |  |

[1] “**Supplementary Table 15.EBS.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Arrowtooth flounder in the **EBS**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 6 | 8 | 6 | 8 | 6 | 34 | 114 |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 2a (PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 114 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 114 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 1 | 4 | 1 | 14 | 66 |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 | 127 |
|  | *Est M* | HCR 1a (NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 104 |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 110 |
|  |  | HCR 2a (PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 99 |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 104 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 2 | 4 | 1 | 15 | 53 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 | 128 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 4 | 6 | 4 | 26 |  |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  | *Est M* | HCR 1a (NPFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 6 | 3 | 6 | 4 | 25 |  |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 2 | 4 | 1 | 4 | 1 | 12 |  |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 4 | 6 | 4 | 26 |  |
|  |  | HCR 5 (Avg F) | 8 | 9 | 8 | 9 | 8 | 42 |  |
|  | *Est M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 4 | 6 | 4 | 26 |  |
|  |  | HCR 5 (Avg F) | 9 | 8 | 9 | 8 | 9 | 43 |  |

[1] “**Supplementary Table 15.GOA.** Number of times a strategy performed the best for conservation performance metrics (5-13) across scenarios for Arrowtooth flounder in the **GOA**. Note, the maximum for each OM is 27 and across experiments and OMs is 81.”

| **OM** | **EM** | **HCR** | **Exp. 1** | **Exp. 2** | **Exp. 3** | **Exp. 4** | **Exp. 5** | **All Exp.** | **All Exp. & OM** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *SS fix M* | *Fix M* | HCR 1a (NPFMC) | 6 | 8 | 6 | 8 | 6 | 34 | 114 |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 2a (PFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 106 |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 104 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 4 | 5 | 2 | 5 | 2 | 18 | 74 |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 | 135 |
|  | *Est M* | HCR 1a (NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 110 |
|  |  | HCR 1b (Dynamic NPFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 110 |
|  |  | HCR 2a (PFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 102 |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 6 | 6 | 6 | 6 | 30 | 104 |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 2 | 4 | 2 | 16 | 58 |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 | 120 |
| *SS est M* | *Fix M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 4 | 6 | 4 | 26 |  |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  | *Est M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 8 | 8 | 8 | 38 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 4 | 4 | 2 | 4 | 2 | 16 |  |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 |  |
| *MS* | *Fix M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 8 | 8 | 6 | 8 | 6 | 36 |  |
|  |  | HCR 2b (Dynamic PFMC) | 8 | 8 | 6 | 8 | 4 | 34 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 6 | 6 | 6 | 30 |  |
|  |  | HCR 5 (Avg F) | 9 | 9 | 9 | 9 | 9 | 45 |  |
|  | *Est M* | HCR 1a (NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 1b (Dynamic NPFMC) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 2a (PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 2b (Dynamic PFMC) | 6 | 8 | 6 | 8 | 6 | 34 |  |
|  |  | HCR 3a (SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 3b (Dynamic SESSF) | 8 | 8 | 8 | 8 | 8 | 40 |  |
|  |  | HCR 4 (NEFMC) | 6 | 6 | 4 | 6 | 4 | 26 |  |
|  |  | HCR 5 (Avg F) | 8 | 8 | 8 | 8 | 8 | 40 |  |