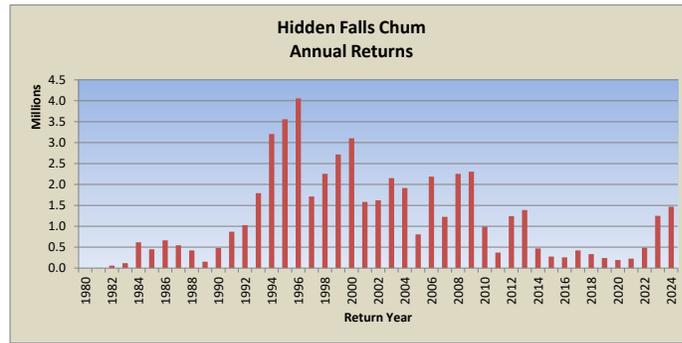


### Hidden Falls Chum Returns by Return Year

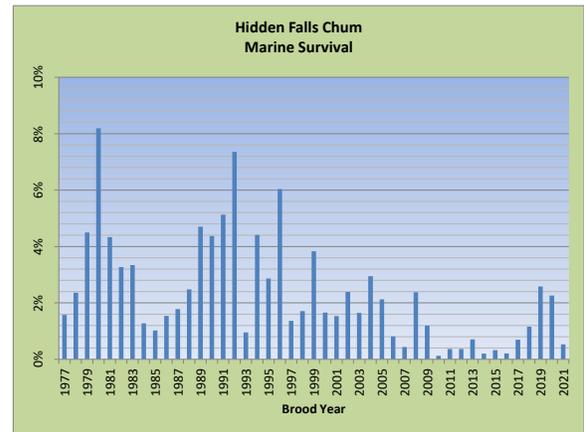
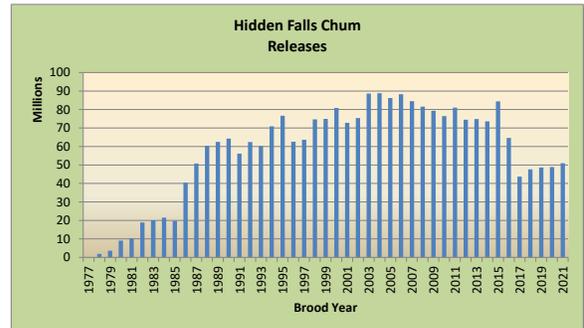
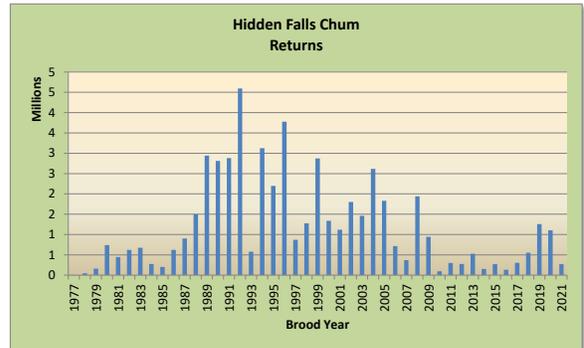
| Project           | Return Year | Adult Return      |
|-------------------|-------------|-------------------|
| Hidden Falls Chum | 1980        | 5                 |
| Hidden Falls Chum | 1981        | 3,431             |
| Hidden Falls Chum | 1982        | 58,030            |
| Hidden Falls Chum | 1983        | 118,587           |
| Hidden Falls Chum | 1984        | 616,193           |
| Hidden Falls Chum | 1985        | 450,587           |
| Hidden Falls Chum | 1986        | 664,819           |
| Hidden Falls Chum | 1987        | 543,639           |
| Hidden Falls Chum | 1988        | 421,971           |
| Hidden Falls Chum | 1989        | 154,963           |
| Hidden Falls Chum | 1990        | 479,719           |
| Hidden Falls Chum | 1991        | 869,903           |
| Hidden Falls Chum | 1992        | 1,026,984         |
| Hidden Falls Chum | 1993        | 1,791,205         |
| Hidden Falls Chum | 1994        | 3,207,873         |
| Hidden Falls Chum | 1995        | 3,557,753         |
| Hidden Falls Chum | 1996        | 4,055,342         |
| Hidden Falls Chum | 1997        | 1,709,864         |
| Hidden Falls Chum | 1998        | 2,252,468         |
| Hidden Falls Chum | 1999        | 2,714,699         |
| Hidden Falls Chum | 2000        | 3,103,707         |
| Hidden Falls Chum | 2001        | 1,581,547         |
| Hidden Falls Chum | 2002        | 1,620,490         |
| Hidden Falls Chum | 2003        | 2,148,941         |
| Hidden Falls Chum | 2004        | 1,914,938         |
| Hidden Falls Chum | 2005        | 806,561           |
| Hidden Falls Chum | 2006        | 2,185,079         |
| Hidden Falls Chum | 2007        | 1,227,094         |
| Hidden Falls Chum | 2008        | 2,251,557         |
| Hidden Falls Chum | 2009        | 2,306,292         |
| Hidden Falls Chum | 2010        | 993,556           |
| Hidden Falls Chum | 2011        | 371,941           |
| Hidden Falls Chum | 2012        | 1,240,087         |
| Hidden Falls Chum | 2013        | 1,386,651         |
| Hidden Falls Chum | 2014        | 470,647           |
| Hidden Falls Chum | 2015        | 276,059           |
| Hidden Falls Chum | 2016        | 255,020           |
| Hidden Falls Chum | 2017        | 424,165           |
| Hidden Falls Chum | 2018        | 336,155           |
| Hidden Falls Chum | 2019        | 238,708           |
| Hidden Falls Chum | 2020        | 194,592           |
| Hidden Falls Chum | 2021        | 224,589           |
| Hidden Falls Chum | 2022        | 485,663           |
| Hidden Falls Chum | 2023        | 1,248,904         |
| Hidden Falls Chum | 2024        | 1,468,288         |
| <b>Total</b>      |             | <b>53,459,267</b> |



## Hidden Falls Chum Returns by Brood Year & Marine Survival

| Project           | Year Brood | Release              | Adults            | MS    | Status |
|-------------------|------------|----------------------|-------------------|-------|--------|
| Hidden Falls Chum | 1977       | 212,551              | 3,340             | 1.57% | F      |
| Hidden Falls Chum | 1978       | 1,889,184            | 44,540            | 2.36% | F      |
| Hidden Falls Chum | 1979       | 3,599,384            | 161,884           | 4.50% | F      |
| Hidden Falls Chum | 1980       | 9,013,938            | 738,628           | 8.19% | F      |
| Hidden Falls Chum | 1981       | 10,291,351           | 445,910           | 4.33% | F      |
| Hidden Falls Chum | 1982       | 18,909,761           | 618,539           | 3.27% | F      |
| Hidden Falls Chum | 1983       | 20,100,000           | 671,469           | 3.34% | F      |
| Hidden Falls Chum | 1984       | 21,530,000           | 273,967           | 1.27% | F      |
| Hidden Falls Chum | 1985       | 19,680,000           | 201,730           | 1.03% | F      |
| Hidden Falls Chum | 1986       | 40,390,000           | 620,857           | 1.54% | F      |
| Hidden Falls Chum | 1987       | 50,755,717           | 901,881           | 1.78% | F      |
| Hidden Falls Chum | 1988       | 60,300,600           | 1,494,332         | 2.48% | F      |
| Hidden Falls Chum | 1989       | 62,506,791           | 2,940,331         | 4.70% | F      |
| Hidden Falls Chum | 1990       | 64,275,400           | 2,812,054         | 4.38% | F      |
| Hidden Falls Chum | 1991       | 56,129,200           | 2,879,438         | 5.13% | F      |
| Hidden Falls Chum | 1992       | 62,442,900           | 4,596,885         | 7.36% | F      |
| Hidden Falls Chum | 1993       | 60,222,973           | 574,853           | 0.95% | F      |
| Hidden Falls Chum | 1994       | 70,889,750           | 3,125,145         | 4.41% | F      |
| Hidden Falls Chum | 1995       | 76,671,678           | 2,198,109         | 2.87% | F      |
| Hidden Falls Chum | 1996       | 62,565,996           | 3,777,135         | 6.04% | F      |
| Hidden Falls Chum | 1997       | 63,691,981           | 867,533           | 1.36% | F      |
| Hidden Falls Chum | 1998       | 74,650,314           | 1,276,322         | 1.71% | F      |
| Hidden Falls Chum | 1999       | 74,949,068           | 2,873,891         | 3.83% | F      |
| Hidden Falls Chum | 2000       | 80,844,732           | 1,337,415         | 1.65% | F      |
| Hidden Falls Chum | 2001       | 72,820,877           | 1,116,972         | 1.53% | F      |
| Hidden Falls Chum | 2002       | 75,415,683           | 1,803,004         | 2.39% | F      |
| Hidden Falls Chum | 2003       | 88,598,169           | 1,458,159         | 1.65% | F      |
| Hidden Falls Chum | 2004       | 88,800,300           | 2,614,584         | 2.94% | F      |
| Hidden Falls Chum | 2005       | 86,198,298           | 1,830,789         | 2.12% | F      |
| Hidden Falls Chum | 2006       | 88,301,824           | 714,090           | 0.81% | F      |
| Hidden Falls Chum | 2007       | 84,482,754           | 368,385           | 0.44% | F      |
| Hidden Falls Chum | 2008       | 81,597,511           | 1,938,882         | 2.38% | F      |
| Hidden Falls Chum | 2009       | 79,307,655           | 944,227           | 1.19% | F      |
| Hidden Falls Chum | 2010       | 76,438,022           | 96,704            | 0.13% | F      |
| Hidden Falls Chum | 2011       | 80,990,646           | 297,476           | 0.37% | F      |
| Hidden Falls Chum | 2012       | 74,521,716           | 274,410           | 0.37% | F      |
| Hidden Falls Chum | 2013       | 74,815,037           | 526,646           | 0.70% | F      |
| Hidden Falls Chum | 2014       | 73,605,540           | 150,205           | 0.20% | F      |
| Hidden Falls Chum | 2015       | 84,397,127           | 272,198           | 0.32% | F      |
| Hidden Falls Chum | 2016       | 64,602,663           | 132,499           | 0.21% | F      |
| Hidden Falls Chum | 2017       | 43,725,791           | 302,662           | 0.69% | F      |
| Hidden Falls Chum | 2018       | 47,623,744           | 551,608           | 1.16% | F      |
| Hidden Falls Chum | 2019       | 48,589,947           | 1,254,291         | 2.58% | I      |
| Hidden Falls Chum | 2020       | 48,895,105           | 1,106,299         | 2.26% | I      |
| Hidden Falls Chum | 2021       | 50,982,098           | 268,987           | 0.53% | I      |
| <b>Total</b>      |            | <b>2,581,223,776</b> | <b>53,459,267</b> |       |        |

Status: F= Final; F\*= Final except for small 6-year-old return; I= Incomplete adult returns



|                                   | Release    | Adults    | MS   |
|-----------------------------------|------------|-----------|------|
| Completed Avg. (BY1977-2018)      | 57,922,777 | 1,210,231 | 2.1% |
| Completed 5-yr avg (BY2014-2018)  | 62,790,973 | 281,835   | 0.4% |
| Completed 10-yr avg (BY2009-2018) | 70,002,794 | 354,864   | 0.5% |

Hidden Falls Chum Returns - Age Class Estimates

| Project     | Hidden Falls Chum   |            |            |         |   | Grand Total | Release    | M.S.  |
|-------------|---------------------|------------|------------|---------|---|-------------|------------|-------|
|             | Sum of Adult at Age | Age        |            |         |   |             |            |       |
| Year Brood  | 3                   | 4          | 5          | 6       |   |             |            |       |
| 1977        | 5                   | 1,855      | 1,480      | -       | - | 3,340       | 212,551    | 1.57% |
| 1978        | 1,576               | 35,011     | 7,953      | -       | - | 44,540      | 1,889,184  | 2.36% |
| 1979        | 21,539              | 94,755     | 45,590     | -       | - | 161,884     | 3,599,384  | 4.50% |
| 1980        | 15,879              | 555,226    | 162,798    | 4,725   | - | 738,628     | 9,013,938  | 8.19% |
| 1981        | 15,377              | 261,552    | 168,981    | -       | - | 445,910     | 10,291,351 | 4.33% |
| 1982        | 26,237              | 476,291    | 116,011    | -       | - | 618,539     | 18,909,761 | 3.27% |
| 1983        | 14,822              | 401,216    | 245,833    | 9,598   | - | 671,469     | 20,100,000 | 3.34% |
| 1984        | 26,412              | 175,293    | 71,288     | 974     | - | 273,967     | 21,530,000 | 1.27% |
| 1985        | 845                 | 72,527     | 119,492    | 8,866   | - | 201,730     | 19,680,000 | 1.03% |
| 1986        | 1,550               | 343,053    | 265,136    | 11,118  | - | 620,857     | 40,390,000 | 1.54% |
| 1987        | 16,200              | 585,756    | 291,510    | 8,415   | - | 901,881     | 50,755,717 | 1.78% |
| 1988        | 10,145              | 707,892    | 721,297    | 54,998  | - | 1,494,332   | 60,300,600 | 2.48% |
| 1989        | 16,464              | 1,053,260  | 1,642,696  | 227,911 | - | 2,940,331   | 62,506,791 | 4.70% |
| 1990        | 8,233               | 1,454,280  | 1,272,563  | 76,978  | - | 2,812,054   | 64,275,400 | 4.38% |
| 1991        | 55,899              | 1,909,095  | 899,947    | 14,497  | - | 2,879,438   | 56,129,200 | 5.13% |
| 1992        | 148,184             | 3,076,449  | 1,315,714  | 56,538  | - | 4,596,885   | 62,442,900 | 7.36% |
| 1993        | 1,968               | 311,614    | 240,087    | 21,184  | - | 574,853     | 60,222,973 | 0.95% |
| 1994        | 68,039              | 1,927,239  | 1,079,075  | 50,792  | - | 3,125,145   | 70,889,750 | 4.41% |
| 1995        | 28,604              | 1,531,831  | 606,949    | 30,725  | - | 2,198,109   | 76,671,678 | 2.87% |
| 1996        | 82,609              | 2,444,194  | 1,216,434  | 33,898  | - | 3,777,135   | 62,565,996 | 6.04% |
| 1997        | 1,772               | 298,774    | 548,970    | 18,017  | - | 867,533     | 63,691,981 | 1.36% |
| 1998        | 35,614              | 919,614    | 309,515    | 11,579  | - | 1,276,322   | 74,650,314 | 1.71% |
| 1999        | 118,008             | 1,785,632  | 944,615    | 25,636  | - | 2,873,891   | 74,949,068 | 3.83% |
| 2000        | 35,777              | 936,465    | 334,380    | 30,793  | - | 1,337,415   | 80,844,732 | 1.65% |
| 2001        | 22,279              | 412,713    | 646,214    | 35,766  | - | 1,116,972   | 72,820,877 | 1.53% |
| 2002        | 33,832              | 1,446,318  | 316,784    | 6,070   | - | 1,803,004   | 75,415,683 | 2.39% |
| 2003        | 61,754              | 823,191    | 560,979    | 12,235  | - | 1,458,159   | 88,598,169 | 1.65% |
| 2004        | 51,353              | 1,614,084  | 916,755    | 32,392  | - | 2,614,584   | 88,800,300 | 2.94% |
| 2005        | 70,424              | 1,345,833  | 402,300    | 12,232  | - | 1,830,789   | 86,198,298 | 2.12% |
| 2006        | 31,469              | 536,905    | 141,216    | 4,500   | - | 714,090     | 88,301,824 | 0.81% |
| 2007        | 21,959              | 201,275    | 136,167    | 8,984   | - | 368,385     | 84,482,754 | 0.44% |
| 2008        | 17,218              | 1,091,265  | 806,752    | 23,647  | - | 1,938,882   | 81,597,511 | 2.38% |
| 2009        | 8,155               | 568,304    | 363,570    | 4,198   | - | 944,227     | 79,307,655 | 1.19% |
| 2010        | 2,611               | 67,025     | 26,369     | 699     | - | 96,704      | 76,438,022 | 0.13% |
| 2011        | 16,405              | 209,504    | 68,872     | 2,695   | - | 297,476     | 80,990,646 | 0.37% |
| 2012        | 35,988              | 182,531    | 39,721     | 16,170  | - | 274,410     | 74,521,716 | 0.37% |
| 2013        | 2,918               | 377,592    | 144,231    | 1,905   | - | 526,646     | 74,815,037 | 0.70% |
| 2014        | 4,157               | 113,062    | 32,403     | 583     | - | 150,205     | 73,605,540 | 0.20% |
| 2015        | 62,692              | 190,692    | 18,570     | 244     | - | 272,198     | 84,397,127 | 0.32% |
| 2016        | 13,708              | 110,974    | 7,807      | 10      | - | 132,499     | 64,602,663 | 0.21% |
| 2017        | 64,465              | 192,360    | 40,952     | 4,885   | - | 302,662     | 43,725,791 | 0.69% |
| 2018        | 24,178              | 359,746    | 165,480    | 2,205   | - | 551,608     | 47,623,744 | 1.16% |
| 2019        | 84,955              | 952,235    | 217,102    | -       | - | 1,254,291   | 48,589,947 | 2.58% |
| 2020        | 126,304             | 979,995    | -          | -       | - | 1,106,299   | 48,895,105 | 2.26% |
| 2021        | 268,987             | -          | -          | -       | - | 268,987     | 50,982,098 | 0.53% |
| Grand Total | 1,508,583           | 33,134,477 | 17,680,557 | 866,663 | - | 53,190,279  |            |       |

Incomplete  
Incomplete  
Incomplete

Hidden Falls Chum Returns - Age Class Estimates

| Project                      |        | Hidden Falls Chum |       |      |             |            |       |
|------------------------------|--------|-------------------|-------|------|-------------|------------|-------|
| Sum of Pcnt at Age           | Age    |                   |       |      |             |            |       |
| Year Brood                   | 3      | 4                 | 5     | 6    | Grand Total | Release    | M.S.  |
| 1977                         | 0.1%   | 55.5%             | 44.3% | 0.0% | 100%        | 212,551    | 1.6%  |
| 1978                         | 3.5%   | 78.6%             | 17.9% | 0.0% | 100%        | 1,889,184  | 2.4%  |
| 1979                         | 13.3%  | 58.5%             | 28.2% | 0.0% | 100%        | 3,599,384  | 4.5%  |
| 1980                         | 2.1%   | 75.2%             | 22.0% | 0.6% | 100%        | 9,013,938  | 8.2%  |
| 1981                         | 3.4%   | 58.7%             | 37.9% | 0.0% | 100%        | 10,291,351 | 4.3%  |
| 1982                         | 4.2%   | 77.0%             | 18.8% | 0.0% | 100%        | 18,909,761 | 3.3%  |
| 1983                         | 2.2%   | 59.8%             | 36.6% | 1.4% | 100%        | 20,100,000 | 3.3%  |
| 1984                         | 9.6%   | 64.0%             | 26.0% | 0.4% | 100%        | 21,530,000 | 1.3%  |
| 1985                         | 0.4%   | 36.0%             | 59.2% | 4.4% | 100%        | 19,680,000 | 1.0%  |
| 1986                         | 0.2%   | 55.3%             | 42.7% | 1.8% | 100%        | 40,390,000 | 1.5%  |
| 1987                         | 1.8%   | 64.9%             | 32.3% | 0.9% | 100%        | 50,755,717 | 1.8%  |
| 1988                         | 0.7%   | 47.4%             | 48.3% | 3.7% | 100%        | 60,300,600 | 2.5%  |
| 1989                         | 0.6%   | 35.8%             | 55.9% | 7.8% | 100%        | 62,506,791 | 4.7%  |
| 1990                         | 0.3%   | 51.7%             | 45.3% | 2.7% | 100%        | 64,275,400 | 4.4%  |
| 1991                         | 1.9%   | 66.3%             | 31.3% | 0.5% | 100%        | 56,129,200 | 5.1%  |
| 1992                         | 3.2%   | 66.9%             | 28.6% | 1.2% | 100%        | 62,442,900 | 7.4%  |
| 1993                         | 0.3%   | 54.2%             | 41.8% | 3.7% | 100%        | 60,222,973 | 1.0%  |
| 1994                         | 2.2%   | 61.7%             | 34.5% | 1.6% | 100%        | 70,889,750 | 4.4%  |
| 1995                         | 1.3%   | 69.7%             | 27.6% | 1.4% | 100%        | 76,671,678 | 2.9%  |
| 1996                         | 2.2%   | 64.7%             | 32.2% | 0.9% | 100%        | 62,565,996 | 6.0%  |
| 1997                         | 0.2%   | 34.4%             | 63.3% | 2.1% | 100%        | 63,691,981 | 1.4%  |
| 1998                         | 2.8%   | 72.1%             | 24.3% | 0.9% | 100%        | 74,650,314 | 1.7%  |
| 1999                         | 4.1%   | 62.1%             | 32.9% | 0.9% | 100%        | 74,949,068 | 3.8%  |
| 2000                         | 2.7%   | 70.0%             | 25.0% | 2.3% | 100%        | 80,844,732 | 1.7%  |
| 2001                         | 2.0%   | 36.9%             | 57.9% | 3.2% | 100%        | 72,820,877 | 1.5%  |
| 2002                         | 1.9%   | 80.2%             | 17.6% | 0.3% | 100%        | 75,415,683 | 2.4%  |
| 2003                         | 4.2%   | 56.5%             | 38.5% | 0.8% | 100%        | 88,598,169 | 1.6%  |
| 2004                         | 2.0%   | 61.7%             | 35.1% | 1.2% | 100%        | 88,800,300 | 2.9%  |
| 2005                         | 3.8%   | 73.5%             | 22.0% | 0.7% | 100%        | 86,198,298 | 2.1%  |
| 2006                         | 4.4%   | 75.2%             | 19.8% | 0.6% | 100%        | 88,301,824 | 0.8%  |
| 2007                         | 6.0%   | 54.6%             | 37.0% | 2.4% | 100%        | 84,482,754 | 0.4%  |
| 2008                         | 0.9%   | 56.3%             | 41.6% | 1.2% | 100%        | 81,597,511 | 2.4%  |
| 2009                         | 0.9%   | 60.2%             | 38.5% | 0.4% | 100%        | 79,307,655 | 1.2%  |
| 2010                         | 2.7%   | 69.3%             | 27.3% | 0.7% | 100%        | 76,438,022 | 0.1%  |
| 2011                         | 5.5%   | 70.4%             | 23.2% | 0.9% | 100%        | 80,990,646 | 0.4%  |
| 2012                         | 13.1%  | 66.5%             | 14.5% | 5.9% | 100%        | 74,521,716 | 0.4%  |
| 2013                         | 0.6%   | 71.7%             | 27.4% | 0.4% | 100%        | 74,815,037 | 0.7%  |
| 2014                         | 2.8%   | 75.3%             | 21.6% | 0.4% | 100%        | 73,605,540 | 0.2%  |
| 2015                         | 23.0%  | 70.1%             | 6.8%  | 0.1% | 100%        | 84,397,127 | 0.3%  |
| 2016                         | 10.3%  | 83.8%             | 5.9%  | 0.0% | 100%        | 64,602,663 | 0.2%  |
| 2017                         | 21.3%  | 63.6%             | 13.5% | 1.6% | 100%        | 43,725,791 | 0.7%  |
| 2018                         | 4.4%   | 65.2%             | 30.0% | 0.4% | 100%        | 47,623,744 | 1.2%  |
| 2019                         | 6.8%   | 75.9%             | 17.3% |      | 100%        | 48,589,947 | 2.6%  |
| 2020                         | 11.4%  | 88.6%             |       |      | 100%        | 48,895,105 | 2.3%  |
| 2021                         | 100.0% |                   |       |      | 100%        | 50,982,098 | 0.5%  |
|                              |        |                   |       |      |             | Incomplete |       |
|                              |        |                   |       |      |             | Incomplete |       |
|                              |        |                   |       |      |             | Incomplete |       |
| Completed Avg. (BY1977-2018) | 4.1%   | 62.7%             | 31.8% | 1.4% |             | 57,922,777 | 2.37% |
| 5-yr avg (BY2014-2018)       | 12.4%  | 71.6%             | 15.6% | 0.5% |             | 62,790,973 | 0.52% |
| 10-yr avg (BY2009-2018)      | 8.5%   | 69.6%             | 20.9% | 1.1% |             | 70,002,794 | 0.5%  |