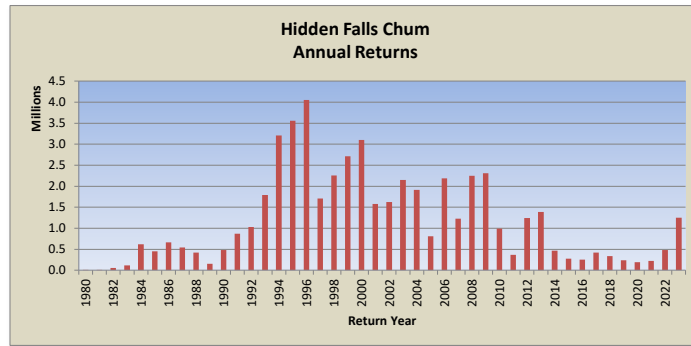


Hidden Falls Chum Returns by Return Year

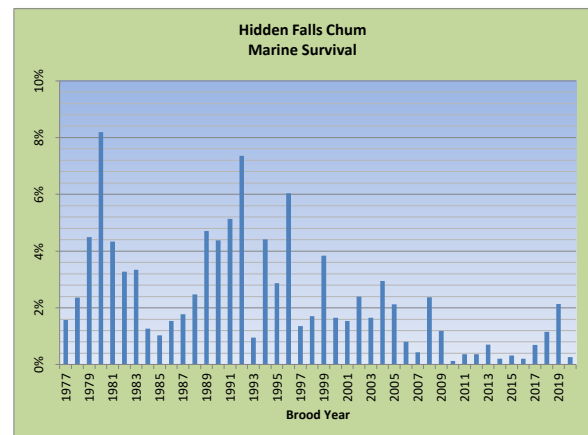
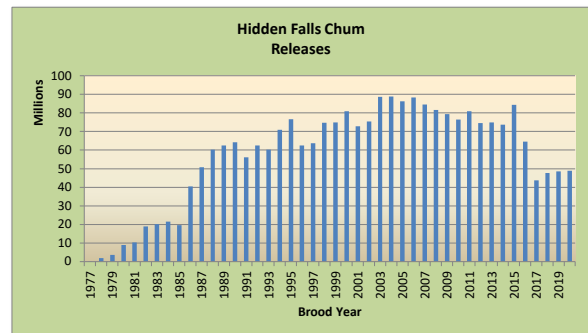
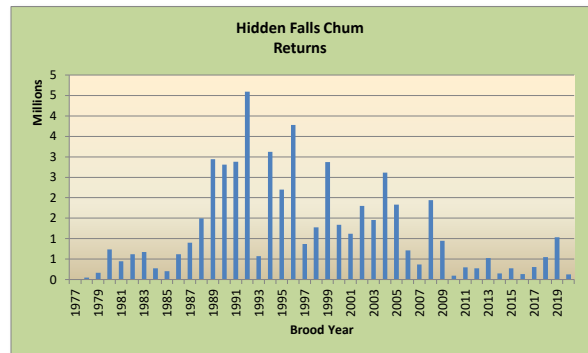
Project	Return Year	Adult Return
Hidden Falls Chum	1980	5
Hidden Falls Chum	1981	3,431
Hidden Falls Chum	1982	58,030
Hidden Falls Chum	1983	118,587
Hidden Falls Chum	1984	616,193
Hidden Falls Chum	1985	450,587
Hidden Falls Chum	1986	664,819
Hidden Falls Chum	1987	543,639
Hidden Falls Chum	1988	421,971
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
Total		51,990,978



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	549,404	1.15%	I
Hidden Falls Chum	2019	48,589,947	1,037,190	2.13%	I
Hidden Falls Chum	2020	48,895,105	126,304	0.26%	I
Total		2,530,241,678	51,990,978		

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



	Release	Adults	MS
Completed Avg. (BY1977-2017)	58,173,973	1,226,295	2.1%
Completed 5-yr avg (BY2013-2017)	68,229,232	276,842	0.4%
Completed 10-yr avg (BY2008-2017)	73,400,171	493,591	0.7%

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	-	-	549,404	47,623,744	1.15%
2019	84,955	952,235	-	-	-	1,037,190	48,589,947	2.13%
2020	126,304	-	-	-	-	126,304	48,895,105	0.26%
Grand Total	1,508,583	32,154,483	17,463,455	864,458	-	51,990,978		

Incomplete
Incomplete
Incomplete

Hidden Falls Chum Returns - Age Class Estimates

Project		Hidden Falls Chum						
Year Brood	Sum of Pcnt at Age	Age				Grand Total	Release	M.S.
		3	4	5	6			
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%	65.5%	30.1%		100%	47,623,744	1.2%
2019		8.2%	91.8%			100%	48,589,947	2.1%
2020		100.0%				100%	48,895,105	0.3%
							Incomplete	
							Incomplete	
							Incomplete	
Completed Avg. (BY1977-2017)		4.1%	62.6%	31.8%	1.5%		58,173,973	2.40%
5-yr avg (BY2013-2017)		11.6%	72.9%	15.0%	0.5%		68,229,232	0.43%
10-yr avg (BY2008-2017)		8.1%	68.7%	22.0%	1.2%		73,400,171	0.7%