NSRAA Benefit : Cost Analysis Spring 2024

Update

We developed our accounting method for Benefit-Cost in 2010. This method uses historical data and lets us track the benefit: cost ratio over the history of each project to look at trends, and to get a more complete picture of each program over time. We believe this provides a much more accurate analysis for each project than previous "pro forma" methods. In a sense, this is a record of "what actually happened" as opposed to "what we estimate might happen" based on several assumptions – which we all know have a way of playing out in unexpected ways.

This table summarizes Benefit: Cost ratios calculated using the accounting method. The ratios are calculated for brood years with "nearly complete" return data (through 5-year-old returns for chum and through 4–ocean returns for Chinook).

			Cumulative Benefit : Cost Ratios	
Hatchery	Species	Through Brood Year	B:C 1	B:C2
Medvejie	Chum	2018	7.7	9.0
Hidden Falls	Chum	2018	3.7	5.0
Southeast Cove	Chum	2018	1.0	4.3
Crawfish Inlet	Chum	2018	22.3	41.6
Thomas Bay	Chum	2018	1.9	1.9
Hidden Falls	Coho	2020	1.4	2.5
Deer Lake	Coho	2020	1.0	1.7
Medvejie	Coho	2020	2.7	2.7
Sawmill Creek	Coho	2020	0.9	0.9
Medvejie	Chinook	2017	1.1	1.6
Hidden Falls	Chinook	2017	1.1	1.3
NSRAA	**ALL**	2017	**3.5**	**4.7**

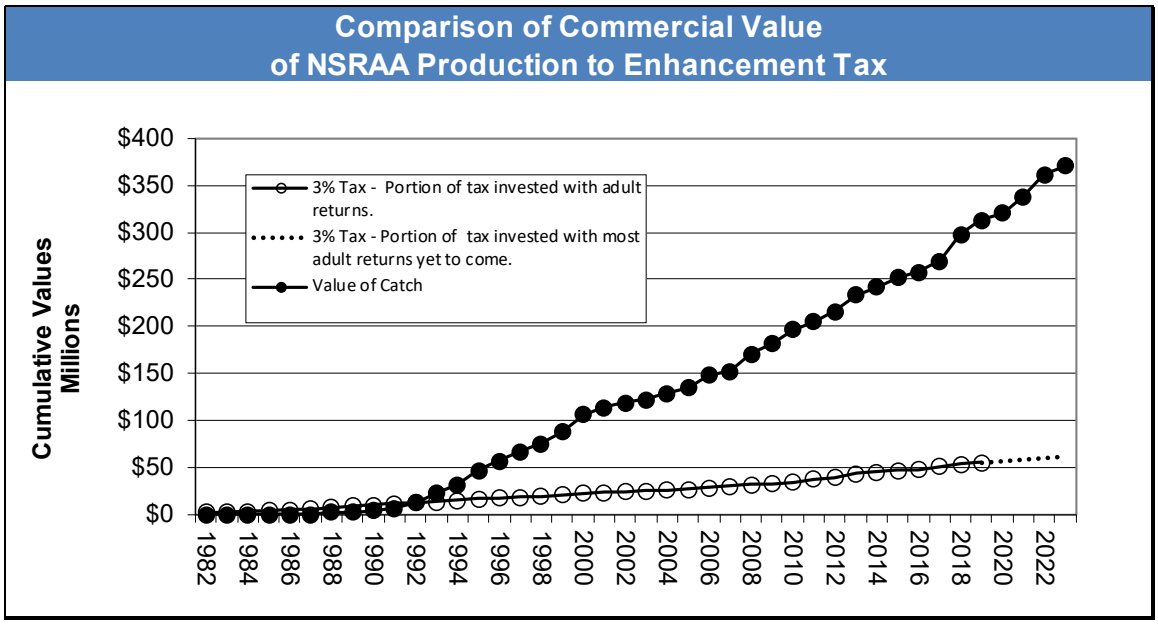
B C 1 = commercial value / project cost
B C 2 = (commercial + CR) value / project cost

Chinook and Coho tables include each program's sport catch estimate. We do not calculate a value for sport catch.

On the following pages are summaries of each of the projects shown above. Notice there is a set of Benefit: Cost calculations for each brood year individually, as well as a set of cumulative calculations. The cumulative values are shown in the above table (incomplete brood years are not included).

The next page shows Benefit: Cost in terms of Commercial Value (Benefit): 3% Tax (Cost).
The remaining pages show Benefit: Cost in terms of Commercial / CR Value (Value): Operations Budget (Cost).

NSRAA Benefit : Cost Update
Spring 2024



NSRAA Benefit:Cost

Using Commercial Value as Benefit and 3% Tax as Cost:

Enhancement (3%) Tax paid by fishermen 1980-2019: **$ 53,508,003**

This amount funds returns through 2023

Enhancement (3%) Tax paid by fishermen 1980-2023: $ 61,410,301

This amount funds returns through 2028

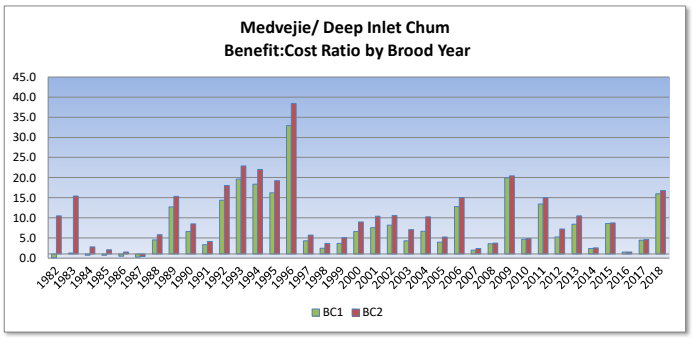
Commercial Value of NSRAA Salmon 1984-2023: **$ 370,708,962**

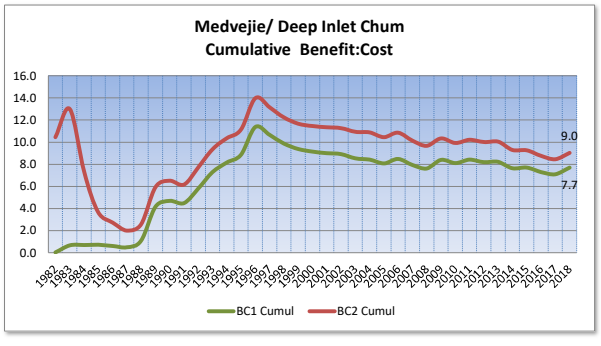
Benefit : Cost Ratio = 6.9 : 1

Medvejie Chum Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
1982	2,460,713	216,153	8.78%	1983	$20,424	$904	$212,690	$213,594	0.0	10.5	F
1983	2,558,282	111,821	4.37%	1984	$21,234	$26,910	$300,617	$327,527	1.3	15.4	F
1984	6,232,400	35,396	0.57%	1985	$51,729	$37,310	$106,065	$143,375	0.7	2.8	F
1985	25,223,405	139,402	0.55%	1986	$214,399	$157,764	$282,701	$440,465	0.7	2.1	F
1986	29,166,200	137,228	0.47%	1987	$233,888	$111,085	$248,150	$359,235	0.5	1.5	F
1987	28,140,700	42,677	0.15%	1988	$239,196	$45,012	$43,066	$88,078	0.2	0.4	F
1988	16,374,300	287,149	1.75%	1989	$139,182	$629,088	$177,277	$806,364	4.5	5.8	F
1989	34,405,100	1,933,343	5.62%	1990	$329,935	$4,195,648	$862,184	$5,057,832	12.7	15.3	F
1990	29,648,000	1,370,617	4.62%	1991	$356,409	$2,351,567	$672,208	$3,023,775	6.6	8.5	F
1991	23,354,400	488,368	2.09%	1992	$274,397	$917,250	$208,948	$1,126,198	3.3	4.1	F
1992	29,730,500	2,708,660	9.11%	1993	$283,958	$4,075,565	$1,047,657	$5,123,222	14.4	18.0	F
1993	29,264,800	3,258,597	11.13%	1994	$263,460	$5,166,613	$873,800	$6,040,413	19.6	22.9	F
1994	32,043,800	2,734,032	8.53%	1995	$209,047	$3,831,123	$766,715	$4,597,839	18.3	22.0	F
1995	39,578,000	2,637,691	6.66%	1996	$250,767	$4,066,490	$755,420	$4,821,910	16.2	19.2	F
1996	38,575,000	5,132,505	13.31%	1997	$337,463	$11,094,302	$1,869,069	$12,963,371	32.9	38.4	F
1997	39,320,000	750,129	1.91%	1998	$370,970	$1,602,435	$510,847	$2,113,283	4.3	5.7	F
1998	39,840,000	602,766	1.51%	1999	$371,737	$905,645	$443,971	$1,349,616	2.4	3.6	F
1999	39,071,000	1,171,444	3.00%	2000	$345,174	$1,250,970	$508,690	$1,759,660	3.6	5.1	F
2000	40,925,600	1,963,110	4.80%	2001	$376,232	$2,471,119	$890,655	$3,361,774	6.6	8.9	F
2001	47,741,800	2,017,267	4.23%	2002	$476,197	$3,579,963	$1,372,337	$4,952,300	7.5	10.4	F
2002	48,208,000	2,082,882	4.32%	2003	$583,937	$4,775,285	$1,372,471	$6,147,756	8.2	10.5	F
2003	50,795,650	1,025,995	2.02%	2004	$497,192	$2,146,654	$1,351,989	$3,498,643	4.3	7.0	F
2004	51,876,900	933,030	1.80%	2005	$476,955	$3,195,944	$1,700,925	$4,896,869	6.7	10.3	F
2005	59,967,387	671,885	1.12%	2006	$555,810	$2,201,505	$718,543	$2,920,048	4.0	5.3	F
2006	61,877,019	1,749,901	2.83%	2007	$683,627	$8,728,084	$1,555,909	$10,283,993	12.8	15.0	F
2007	60,718,274	288,580	0.48%	2008	$729,256	$1,462,307	$241,935	$1,704,242	2.0	2.3	F
2008	52,280,372	455,511	0.87%	2009	$661,385	$2,357,302	$86,124	$2,443,426	3.6	3.7	F
2009	60,794,478	2,762,398	4.54%	2010	$622,108	$12,421,645	$275,841	$12,697,486	20.0	20.4	F
2010	60,690,446	901,756	1.49%	2011	$839,038	$3,911,734	$128,958	$4,040,692	4.7	4.8	F
2011	67,174,164	2,480,565	3.69%	2012	$688,125	$9,246,451	$1,058,898	$10,305,349	13.4	15.0	F
2012	69,394,912	1,368,087	1.97%	2013	$903,686	$4,759,853	$1,803,348	$6,563,201	5.3	7.3	F
2013	71,017,257	1,778,484	2.50%	2014	$1,063,517	$8,947,495	$2,163,732	$11,111,228	8.4	10.5	F
2014	76,572,581	576,142	0.75%	2015	$1,454,971	$3,485,052	$198,823	$3,683,875	2.4	2.5	F
2015	69,045,791	2,007,030	2.91%	2016	$1,193,767	$10,252,198	$210,930	$10,463,128	8.6	8.8	F
2016	57,549,945	470,435	0.82%	2017	$1,110,466	$1,625,241	$44,975	$1,670,216	1.5	1.5	F
2017	85,953,676	1,260,440	1.47%	2018	$1,347,239	$5,939,352	$228,101	$6,167,452	4.4	4.6	F
2018	66,441,776	3,381,873	5.09%	2019	$1,380,147	$22,015,747	$1,109,810	$23,125,557	16.0	16.8	F
2019	86,197,657	650,474	0.75%	2020	$1,717,297	$2,463,152	$103,278	$2,566,430	1.4	1.5	I
2020	77,531,586	1,031,729	1.33%	2021	$1,733,533	$2,269,126	$45,713	$2,314,839	1.3	1.3	I
	1,807,741,871	**53,615,552**			**$23,407,851**	**$158,720,892**	**$26,553,368**	**$185,274,260**			

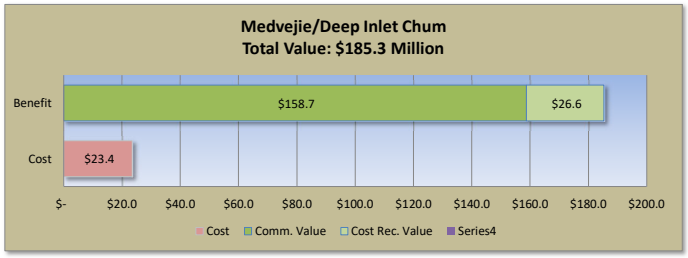
Status: F = Final ; I = Incomplete adult returns
Note: BY2018 may have a small number of 6-year-old fish returning in 2024.





Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.

Cumulative Benefit: Cost Ratio currently is 7.7:1 for BC1 and 9.0:1 for BC2.

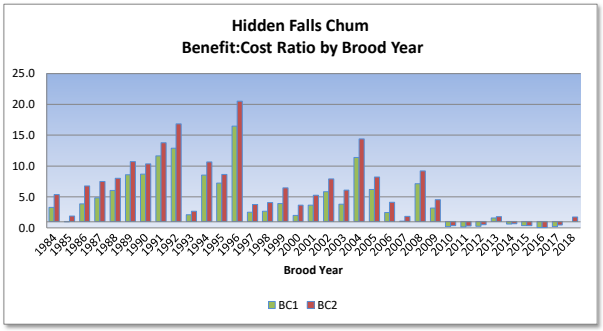


Total cost estimate in this chart is through BY20. Benefit for this period is incomplete, with further adult returns (BY19-20) in 2024-26.

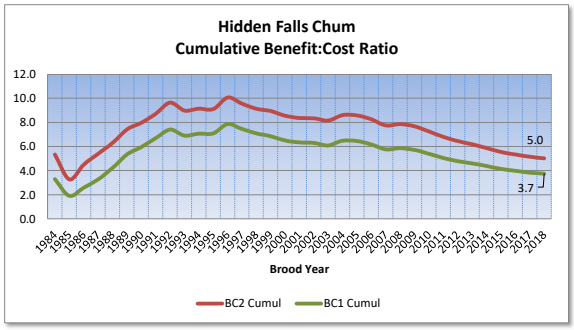
Hidden Falls Chum Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
1984	30,080,000	273,967	0.91%	1985	$240,640	$794,070	$494,152	$1,288,223	3.3	5.4	F
1985	45,300,000	201,730	0.45%	1986	$362,400	$358,629	$334,406	$693,034	1.0	1.9	F
1986	40,390,000	620,857	1.54%	1987	$323,120	$1,251,970	$937,675	$2,189,645	3.9	6.8	F
1987	50,755,717	901,881	1.78%	1988	$406,046	$1,971,290	$1,066,344	$3,037,633	4.9	7.5	F
1988	60,300,600	1,494,332	2.48%	1989	$683,227	$4,133,913	$1,346,094	$5,480,007	6.1	8.0	F
1989	62,506,791	2,940,331	4.70%	1990	$689,706	$5,934,991	$1,453,200	$7,388,192	8.6	10.7	F
1990	64,275,400	2,812,054	4.38%	1991	$627,140	$5,449,808	$1,053,285	$6,503,093	8.7	10.4	F
1991	56,129,200	2,879,438	5.13%	1992	$499,869	$5,833,792	$1,049,160	$6,882,951	11.7	13.8	F
1992	62,442,900	4,596,885	7.36%	1993	$487,684	$6,288,410	$1,909,974	$8,198,384	12.9	16.8	F
1993	60,222,973	574,853	0.95%	1994	$440,232	$920,363	$260,194	$1,180,557	2.1	2.7	F
1994	70,889,750	3,125,145	4.41%	1995	$510,400	$4,351,303	$1,085,313	$5,436,615	8.5	10.7	F
1995	76,671,678	2,198,109	2.87%	1996	$536,728	$3,892,910	$731,375	$4,624,285	7.3	8.6	F
1996	62,565,996	3,777,135	6.04%	1997	$533,065	$8,786,003	$2,138,832	$10,924,835	16.5	20.5	F
1997	63,691,981	867,533	1.36%	1998	$540,661	$1,369,303	$660,675	$2,029,978	2.5	3.8	F
1998	74,650,314	1,276,322	1.71%	1999	$563,686	$1,510,553	$775,315	$2,285,869	2.7	4.1	F
1999	74,949,068	2,873,891	3.83%	2000	$608,858	$2,383,816	$1,549,925	$3,933,740	3.9	6.5	F
2000	80,844,732	1,337,415	1.65%	2001	$624,497	$1,259,908	$1,032,246	$2,292,153	2.0	3.7	F
2001	72,820,877	1,116,972	1.53%	2002	$527,306	$1,919,810	$853,127	$2,772,936	3.6	5.3	F
2002	75,415,683	1,803,004	2.39%	2003	$624,233	$3,644,964	$1,306,191	$4,951,155	5.8	7.9	F
2003	88,598,169	1,458,159	1.65%	2004	$896,968	$3,412,868	$2,045,044	$5,457,911	3.8	6.1	F
2004	88,800,300	2,614,584	2.94%	2005	$844,275	$9,610,807	$2,524,836	$12,135,643	11.4	14.4	F
2005	86,198,298	1,830,789	2.12%	2006	$898,033	$5,573,944	$1,816,970	$7,390,914	6.2	8.2	F
2006	88,301,824	714,090	0.81%	2007	$982,032	$2,448,028	$1,585,149	$4,033,177	2.5	4.1	F
2007	84,482,754	368,385	0.44%	2008	$1,125,640	$1,192,556	$852,636	$2,045,193	1.1	1.8	F
2008	81,597,511	1,938,582	2.38%	2009	$1,073,681	$7,636,587	$2,249,795	$9,886,381	7.1	9.2	F
2009	79,307,655	945,056	1.19%	2010	$857,683	$2,725,300	$1,163,907	$3,889,207	3.2	4.5	F
2010	76,438,022	109,784	0.14%	2011	$1,025,929	$184,840	$146,449	$331,289	0.2	0.3	F
2011	80,990,646	295,485	0.36%	2012	$1,223,412	$173,476	$207,217	$380,694	0.1	0.3	F
2012	74,521,716	287,150	0.39%	2013	$1,106,342	$267,707	$263,939	$531,645	0.2	0.5	F
2013	74,815,037	549,325	0.73%	2014	$1,213,872	$1,909,461	$293,169	$2,202,630	1.6	1.8	F
2014	73,605,540	158,555	0.22%	2015	$1,198,546	$731,308	$25,623	$756,931	0.6	0.6	F
2015	84,397,127	277,342	0.33%	2016	$1,421,815	$465,693	$46,478	$512,170	0.3	0.4	F
2016	64,602,663	133,312	0.21%	2017	$963,640	$32,867	$10,813	$43,681	0.0	0.1	F
2017	43,725,791	302,646	0.69%	2018	$988,770	$153,269	$259,747	$413,016	0.2	0.4	F
2018	47,623,744	549,404	1.15%	2019	$1,008,358	$1,208,922	$557,539	$1,766,461	1.2	1.8	F
2019	48,589,947	1,037,190	2.13%	2020	$1,077,684	$1,946,223	$142,870	$2,089,093	1.8	1.9	I
2020	48,895,105	126,304	0.26%	2021	$977,802	$229,813	$2,369	$232,182	0.2	0.2	I
	2,500,395,509	**49,367,996**			**$28,713,979**	**$101,959,474**	**$34,232,032**	**$136,191,506**			

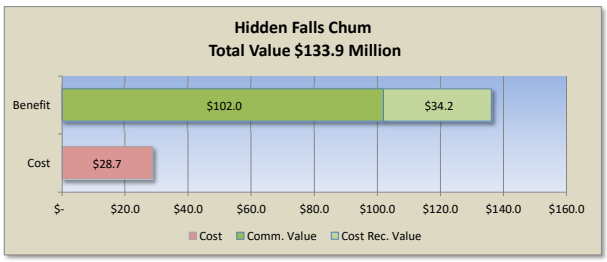
Status: F = Final ; I = Incomplete adult returns
Note: BY2018 may have a small number of 6-year-old fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 3.7:1 for BC1 and 5.0:1 for BC2.

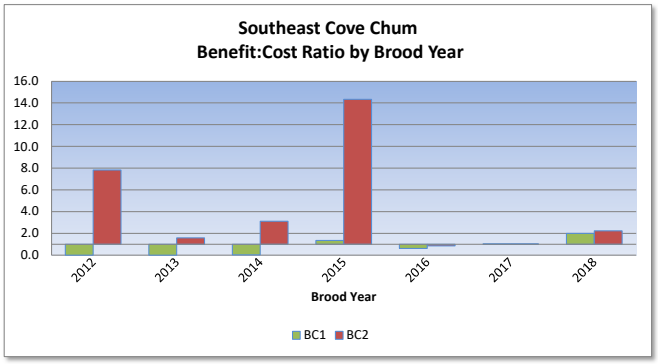


Total cost estimate in this chart is through BY20. Benefit for this period is incomplete, with further adult returns (BY18-20) in 2024-26. Commercial and cost recovery value has been adjusted for the Hidden Falls Assessment Tax for return years 2012-16 .

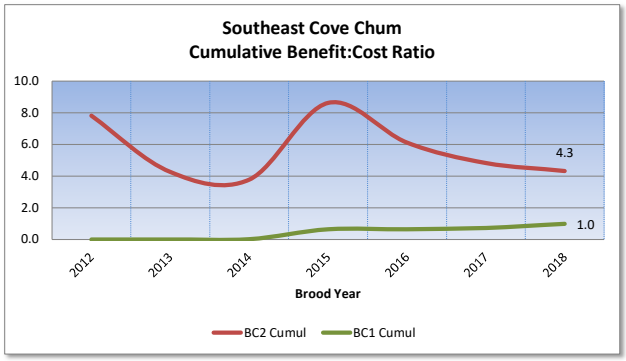
Southeast Cove Chum Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
2012	8,712,136	188,430	2.16%	2013	$125,392	$0	$981,361	$981,361	0.0	7.8	F
2013	9,142,373	32,412	0.35%	2014	$168,206	$150	$267,112	$267,262	0.0	1.6	F
2014	17,478,583	79,444	0.45%	2015	$208,528	$7,583	$643,305	$650,888	0.0	3.1	F
2015	42,758,270	1,107,287	2.59%	2016	$425,521	$581,942	$5,522,713	$6,104,654	1.4	14.4	F
2016	46,749,525	92,404	0.20%	2017	$442,333	$280,390	$97,058	$377,448	0.6	0.9	F
2017	43,109,082	72,426	0.17%	2018	$462,897	$467,770	$1,887	$469,656	1.0	1.0	F
2018	36,644,291	147,841	0.40%	2019	$434,869	$873,728	$94,165	$967,893	2.0	2.2	F
2019	40,951,776	413,713	1.01%	2020	$422,406	$436,446	$1,936,689	$2,373,135	1.0	5.6	I
2020	35,357,207	16,606	0.05%	2021	$417,768	$350	$91,982	$92,332	0.0	0.2	I
	280,903,243	**2,150,563**			**$3,107,920**	**$2,648,358**	**$9,636,271**	**$12,284,629**			

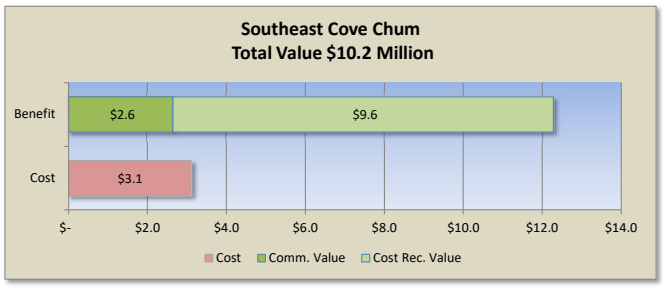
Status: F = Final ; I = Incomplete adult returns
Note: BY2018 may have a small number of 6-year-old fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 1.0:1 for BC1 and 4.3:1 for BC2.

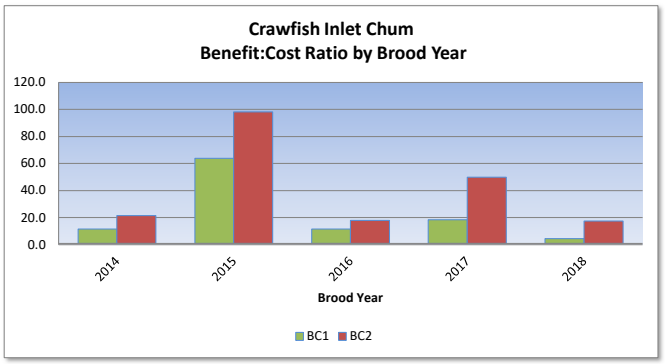


Total cost estimate in this chart is through BY20. Benefit for this period is incomplete, with further adult returns (BY18-20) in 2024-26.

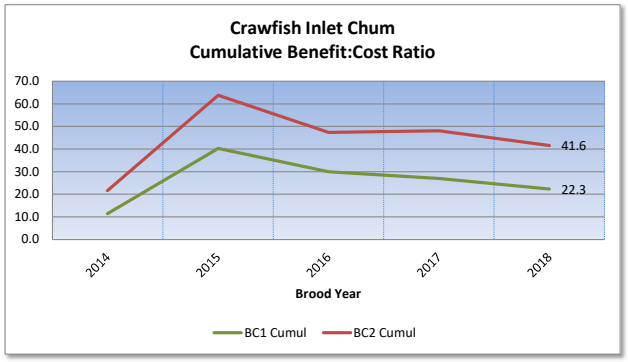
Crawfish Inlet Chum Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
2014	13,370,294	727,171	5.44%	2015	$238,685	$2,729,534	$2,414,281	$5,143,815	11.4	21.6	F
2015	27,794,243	4,614,496	16.60%	2016	$293,232	$18,716,269	$10,076,042	$28,792,311	63.8	98.2	F
2016	23,042,232	1,174,924	5.10%	2017	$298,273	$3,454,907	$1,927,576	$5,382,482	11.6	18.1	F
2017	27,319,517	2,072,097	7.58%	2018	$294,982	$5,462,656	$9,227,447	$14,690,103	18.5	49.8	F
2018	15,205,614	484,050	3.18%	2019	$296,227	$1,338,021	$3,802,432	$5,140,453	4.5	17.4	F
2019	26,506,045	1,589,936	6.00%	2020	$308,397	$2,831,606	$5,494,209	$8,325,815	9.2	27.0	I
2020	25,886,003	354,870	1.37%	2021	$303,093	$576,394	$644,170	$1,220,564	1.9	4.0	I
	159,123,948	**11,017,544**			**$2,032,889**	**$35,109,386**	**$33,586,157**	**$68,695,544**			

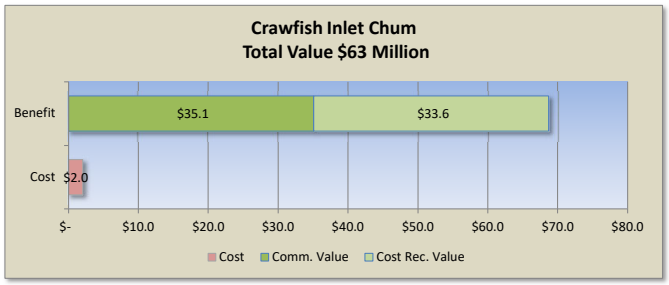
Status: F = Final ; I = Incomplete adult returns
Note: BY2018 may have a small number of 6-year-old fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 22.3:1 for BC1 and 41.6:1 for BC2.



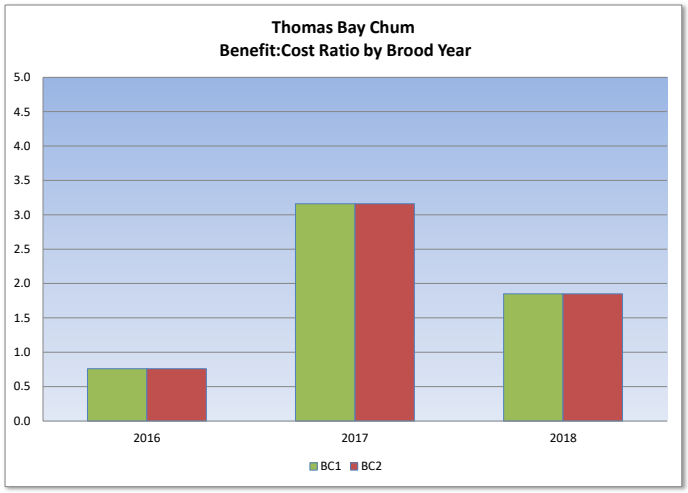
Total cost estimate in this chart is through BY20. Benefit for this period is incomplete, with further adult returns (BY18-20) in 2024-26.

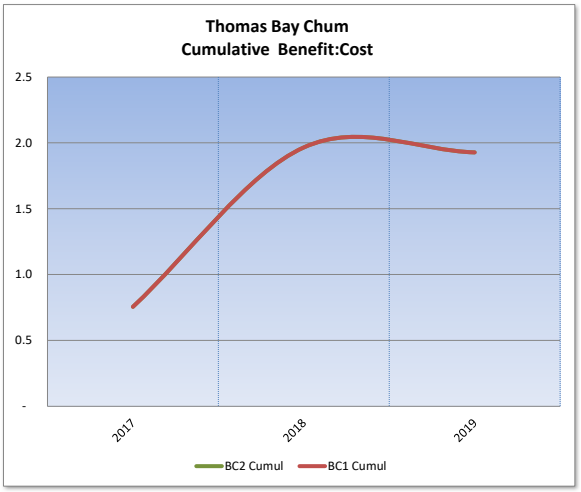
Thomas Bay Chum Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
2016	21,899,063	50,325	0.23%	2017	$250,000	$188,832	$0	$188,832	0.8	0.8	F
2017	22,255,897	116,986	0.53%	2018	$253,679	$801,360	$0	$801,360	3.2	3.2	F
2018	15,350,544	77,013	0.50%	2019	$266,616	$494,529	$0	$494,529	1.9	1.9	F
2019	21,398,311	60,706	0.28%	2020	$277,603.00	$199,000	$0	$199,000	0.7	0.72	I
2020	11,691,221	56,622	0.48%	2021	$286,236	$160,513	$0	$160,513	0.6	0.6	I
	92,595,036	**361,652**			**$1,334,134**	**$1,844,235**	**$0**	**$1,844,235**			

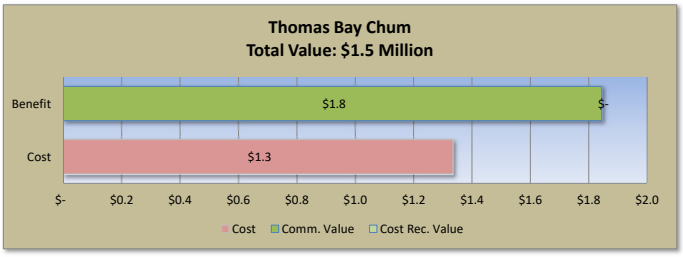
Status: F = Final ; I = Incomplete adult returns

Note: BY2018 may have a small number of 6-year-old fish returning in 2024.





Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



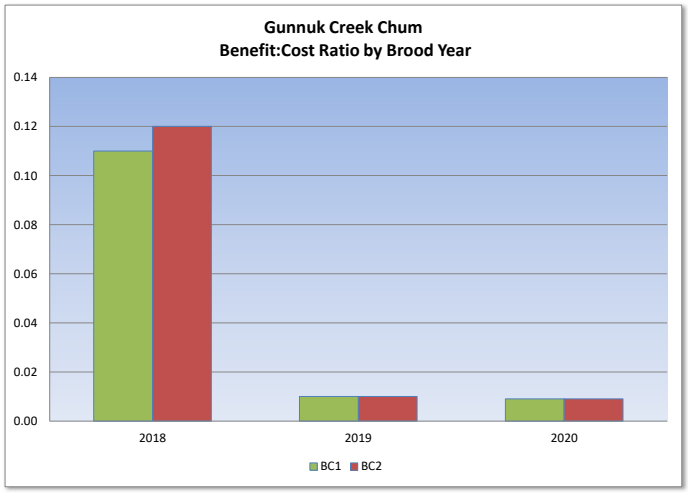
Total cost estimate in this chart is through BY20. Benefit for this period is incomplete, with further adult returns (BY18-20) in 2024-26.

Gunnuk Creek Chum Benefit:Cost Ratio

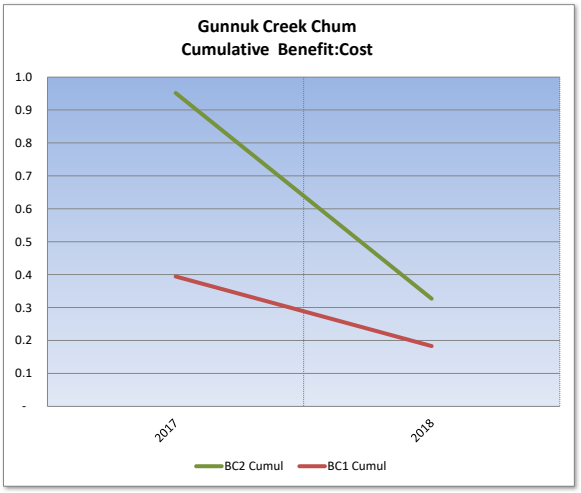
Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Status
2017	8,866,586	50,937	0.57%	2018	$108,000	$42,638	$60,164	$102,802	0.4	1.0	F
2018	15,857,078	24,353	0.15%	2019	$328,857	$37,414	$2,671	$40,085	0.11	0.12	F
2019	18,426,597	13,561	0.07%	2020	$386,268	$4,885	$0	$4,885	0.01	0.01	I
2020	17,566,539	21,059	0.12%	2021	$475,820	$4,314	$0	$4,314	0.0	0.0	I
	60,716,800	**109,910**			**$1,298,945**	**$89,252**	**$62,835**	**$152,086**			

Status: F = Final ; I = Incomplete adult returns

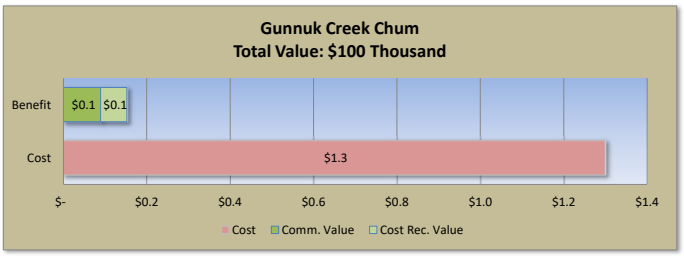
Note: BY2018 may have a small number of 6-year-old fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with ***incomplete*** *adult returns.*



Cumulative Benefit: Cost Ratio currently is 0.03 :1 for BC1 and 0.1:1 for BC2.

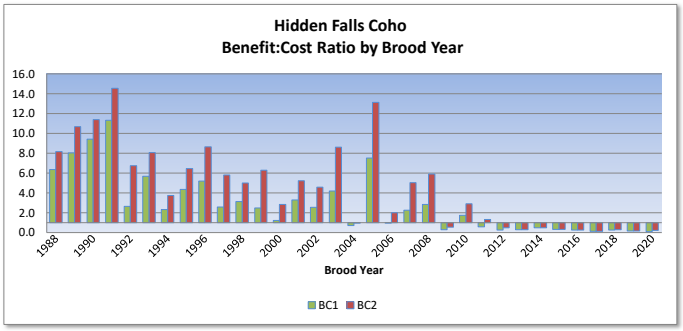


Total cost estimate in this chart is through BY19. Benefit for this period is incomplete, with further adult returns (BY18-20) in 2024-26.

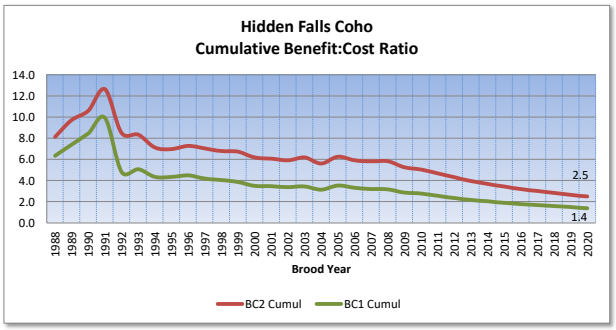
Hidden Falls Coho Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
1988	62,595	10,153	16.22%	1990	$6,787	$43,090	$12,149	$55,239	6.4	8.1	0	F
1989	64,155	18,661	29.09%	1991	$11,530	$92,591	$30,367	$122,957	8.0	10.7	200	F
1990	168,862	33,166	19.64%	1992	$21,476	$201,855	$42,285	$244,140	9.4	11.4	337	F
1991	404,069	92,400	22.87%	1993	$42,082	$475,580	$136,254	$611,833	11.3	14.5	1,831	F
1992	1,651,071	233,650	14.15%	1994	$191,253	$500,579	$785,447	$1,286,026	2.6	6.7	1,500	F
1993	1,458,657	192,045	13.17%	1995	$127,307	$722,254	$304,012	$1,026,266	5.7	8.1	3,797	F
1994	1,554,122	98,199	6.32%	1996	$145,197	$333,272	$207,134	$540,406	2.3	3.7	5,528	F
1995	1,501,428	177,425	11.82%	1997	$132,415	$577,757	$276,702	$854,459	4.4	6.5	3,750	F
1996	1,489,644	251,096	16.86%	1998	$143,884	$746,190	$497,038	$1,243,228	5.2	8.6	3,406	F
1997	1,657,809	170,082	10.26%	1999	$152,601	$391,110	$493,464	$884,573	2.6	5.8	3,473	F
1998	1,599,069	195,359	12.22%	2000	$135,903	$425,999	$250,638	$676,637	3.1	5.0	5,594	F
1999	1,758,775	412,992	23.48%	2001	$154,172	$380,515	$589,919	$970,434	2.5	6.3	3,470	F
2000	1,954,204	201,652	10.32%	2002	$205,399	$253,411	$330,875	$584,286	1.2	2.8	3,190	F
2001	2,023,849	206,819	10.22%	2003	$190,227	$621,754	$367,541	$989,295	3.3	5.2	5,186	F
2002	2,251,020	194,657	8.65%	2004	$190,659	$484,105	$389,263	$873,368	2.5	4.6	6,577	F
2003	2,199,914	226,205	10.28%	2005	$201,648	$840,717	$893,501	$1,734,218	4.2	8.6	4,637	F
2004	2,802,729	53,703	1.92%	2006	$252,225	$174,527	$73,323	$247,850	0.7	1.0	1,983	F
2005	2,487,823	243,544	9.79%	2007	$221,503	$1,665,659	$1,235,024	$2,900,683	7.5	13.1	4,058	F
2006	2,274,731	109,749	4.82%	2008	$232,346	$225,365	$237,248	$462,614	1.0	2.0	2,777	F
2007	2,797,375	194,902	6.97%	2009	$306,491	$688,869	$852,413	$1,541,283	2.3	5.0	4,693	F
2008	2,560,498	245,679	9.59%	2010	$278,903	$791,713	$848,296	$1,640,009	2.8	5.9	4,993	F
2009	3,185,142	38,415	1.21%	2011	$396,700	$113,682	$98,132	$211,814	0.3	0.5	2,500	F
2010	2,569,138	124,923	4.86%	2012	$361,269	$621,089	$423,811	$1,044,899	1.7	2.9	2,779	F
2011	3,136,431	81,465	2.60%	2013	$445,613	$249,542	$343,302	$592,844	0.6	1.3	1,683	F
2012	3,119,963	56,323	1.81%	2014	$447,130	$105,914	$102,042	$207,956	0.2	0.5	889	F
2013	3,236,886	30,505	0.94%	2015	$478,018	$133,749	$2,569	$136,318	0.3	0.3	871	F
2014	3,321,349	38,261	1.15%	2016	$446,634	$203,973	$6,451	$210,424	0.5	0.5	1,377	F
2015	3,176,580	28,867	0.91%	2017	$498,177	$149,726	$0	$149,726	0.3	0.3	1,569	F
2016	2,790,687	37,538	1.35%	2018	$522,826	$133,070	$0	$133,070	0.3	0.3	3,411	F
2017	2,265,343	29,561	1.30%	2019	$417,022	$46,664	$0	$46,664	0.1	0.1	623	F
2018	3,101,589	38,925	1.26%	2020	$509,948	$123,290	$25,697	$148,988	0.2	0.3	469	F
2019	3,413,179	46,639	1.37%	2021	$572,011	$89,282	$70	$89,352	0.2	0.2	3,738	F
2020	3,375,361	42,571	1.26%	2022	$632,752	$55,562	$89,373	$144,935	0.1	0.2	602	F
	71,414,047	**4,156,131**			**$9,072,108**	**$12,662,452**	**$9,944,339**	**$22,606,791**			**91,491**	

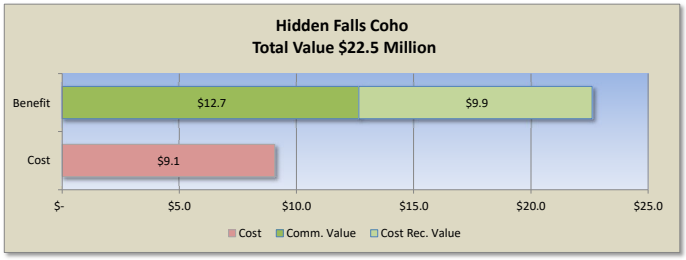
Status: F = Final ; I = Incomplete adult returns



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 1.4:1 for BC1 and 2.5:1 for BC2.

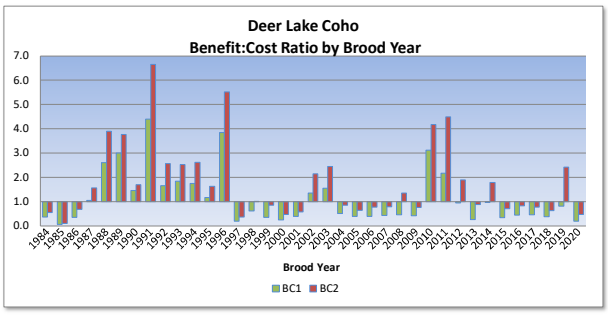


Total cost estimate in this chart is through BY20.

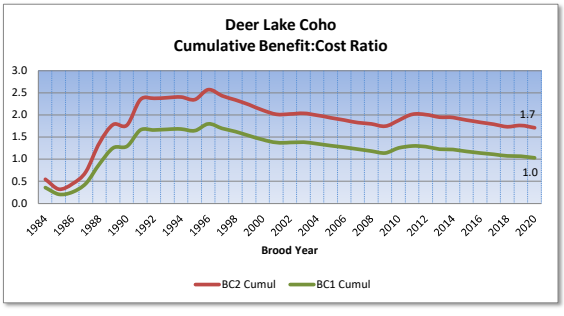
Deer Lake Coho Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
1984	317,201	20,300	6.40%	1986	$300,000	$108,127	$56,854	$164,981	0.4	0.5	129	F
1985	-	-	0.00%	1987	$300,000	$17,085	$11,770	$28,855	0.1	0.1	10	F
1986	370,485	26,700	7.21%	1988	$300,000	$106,118	$98,150	$204,268	0.4	0.7	146	F
1987	306,032	53,400	17.45%	1989	$300,000	$315,426	$152,073	$467,498	1.1	1.6	272	F
1988	680,000	165,700	24.37%	1990	$315,000	$818,775	$406,902	$1,225,677	2.6	3.9	950	F
1989	737,115	143,650	19.49%	1991	$312,637	$937,102	$239,117	$1,176,218	3.0	3.8	1,130	F
1990	591,835	100,000	16.90%	1992	$339,851	$495,432	$79,885	$575,317	1.5	1.7	880	F
1991	1,031,536	245,100	23.76%	1993	$292,392	$1,286,254	$655,469	$1,941,723	4.4	6.6	1,206	F
1992	1,131,975	154,000	13.60%	1994	$329,168	$545,039	$296,169	$841,208	1.7	2.6	1,253	F
1993	1,490,772	168,475	11.30%	1995	$333,024	$611,600	$229,306	$840,905	1.8	2.5	1,525	F
1994	1,665,000	99,640	5.98%	1996	$287,952	$501,503	$253,184	$754,688	1.7	2.6	1,176	F
1995	1,812,000	95,368	5.26%	1997	$285,726	$334,456	$129,069	$463,525	1.2	1.6	912	F
1996	1,709,000	287,280	16.81%	1998	$283,980	$1,091,202	$475,630	$1,566,831	3.8	5.5	5,877	F
1997	1,518,000	78,764	5.19%	1999	$264,861	$48,884	$45,255	$94,139	0.2	0.4	772	F
1998	408,600	131,151	32.10%	2000	$313,736	$189,773	$127,831	$317,603	0.6	1.0	2,873	F
1999	-	-	0.00%	2001	$356,410	$123,220	$178,403	$301,623	0.3	0.8	2,253	F
2000	951,300	84,122	8.84%	2002	$368,837	$87,404	$81,642	$169,046	0.2	0.5	1,767	F
2001	-	-	0.00%	2003	$341,429	$131,957	$62,839	$194,796	0.4	0.6	500	F
2002	1,031,681	134,864	13.07%	2004	$295,736	$399,102	$234,967	$634,069	1.4	2.1	2,078	F
2003	693,827	94,421	13.61%	2005	$310,585	$480,930	$276,891	$757,821	1.6	2.4	1,829	F
2004	264,290	27,198	10.29%	2006	$249,784	$124,011	$87,138	$211,150	0.5	0.9	1,098	F
2005	533,248	18,468	3.46%	2007	$289,368	$113,600	$71,109	$184,709	0.4	0.6	1,000	F
2006	675,462	50,883	7.53%	2008	$315,054	$122,094	$121,777	$243,872	0.4	0.8	1,107	F
2007	851,141	42,481	4.99%	2009	$392,444	$169,467	$135,110	$304,577	0.4	0.8	1,972	F
2008	1,063,381	81,506	7.66%	2010	$434,518	$195,441	$391,268	$586,709	0.5	1.4	2,123	F
2009	660,000	42,567	6.45%	2011	$443,742	$186,573	$152,570	$339,143	0.4	0.8	3,461	F
2010	1,711,170	246,766	14.42%	2012	$497,936	$1,554,930	$520,004	$2,074,934	3.1	4.2	6,841	F
2011	2,314,224	239,417	10.35%	2013	$484,560	$1,046,322	$1,126,590	$2,172,912	2.2	4.5	7,482	F
2012	2,364,473	143,149	6.05%	2014	$494,404	$464,227	$468,378	$932,605	0.9	1.9	2,636	F
2013	2,495,732	56,885	2.28%	2015	$522,924	$135,302	$321,635	$456,937	0.3	0.9	2,816	F
2014	2,427,271	125,719	5.18%	2016	$566,837	$550,707	$458,670	$1,009,377	1.0	1.8	5,023	F
2015	2,557,538	42,441	1.66%	2017	$542,581	$185,099	$199,144	$384,243	0.3	0.7	4,520	F
2016	2,379,970	50,224	2.11%	2018	$535,094	$235,926	$202,037	$437,962	0.4	0.8	4,352	F
2017	2,102,566	63,164	3.00%	2019	$579,308	$258,808	$187,817	$446,624	0.5	0.8	3,583	F
2018	2,073,028	42,031	2.03%	2020	$598,340	$225,572	$145,005	$370,577	0.4	0.6	2,580	F
2019	2,001,846	141,344	7.06%	2021	$584,409	$472,906	$941,408	$1,414,314	0.8	2.4	5,821	F
2020	1,413,417	31,828	2.25%	2022	$572,345	$108,653	$159,415	$268,067	0.2	0.5	914	F
	44,335,116	**3,529,006**			**$14,334,972**	**$14,779,027**	**$9,780,479**	**$24,559,506**			**84,867**	

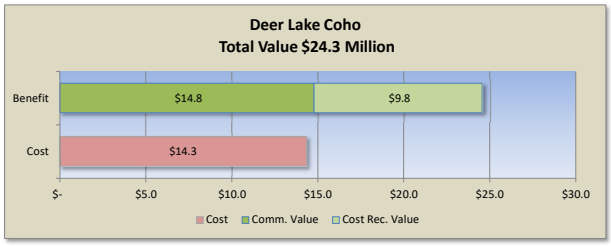
Status: F = Final ; I = Incomplete adult returns



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 1.0:1 for BC1 and 1.7:1 for BC2.

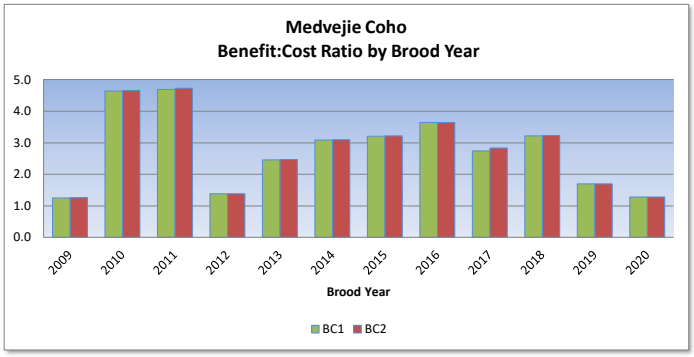


Total cost estimate in this chart is through BY20.

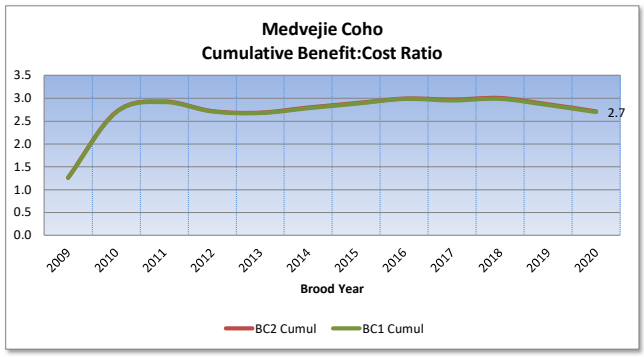
Medvejie Coho Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
2009	217,546	6,188	2.84%	2011	$37,824	$47,514	$172	$47,686	1.3	1.3	505	F
2010	166,551	19,054	11.44%	2012	$27,803	$129,060	$395	$129,455	4.6	4.7	2,185	F
2011	53,026	5,182	9.77%	2013	$8,333	$39,115	$306	$39,420	4.7	4.7	391	F
2012	72,114	4,124	5.72%	2014	$11,548	$15,983	$0	$15,983	1.4	1.4	281	F
2013	77,769	4,858	6.25%	2015	$14,378	$35,441	$65	$35,506	2.5	2.5	306	F
2014	205,176	21,228	10.35%	2016	$36,454	$112,484	$443	$112,927	3.1	3.1	1,880	F
2015	201,398	14,664	7.28%	2017	$39,524	$127,016	$419	$127,435	3.2	3.2	1,670	F
2016	205,346	11,528	5.61%	2018	$27,652	$100,861	$173	$101,034	3.7	3.7	692	F
2017	204,243	11,755	5.76%	2019	$33,003	$90,874	$2,734	$93,608	2.8	2.8	1,019	F
2018	214,017	12,395	5.79%	2020	$34,196	$110,156	$357	$110,514	3.2	3.2	1,661	F
2019	207,475	11,796	5.69%	2021	$32,399	$55,113	$0	$55,113	1.7	1.7	1,452	F
2020	199,977	8,713	4.36%	2022	$32,166	$41,593	$35	$41,628	1.3	1.3	1,347	F
	2,024,638	**131,485**			**$335,279**	**$905,210**	**$5,100**	**$910,310**			**13,389**	

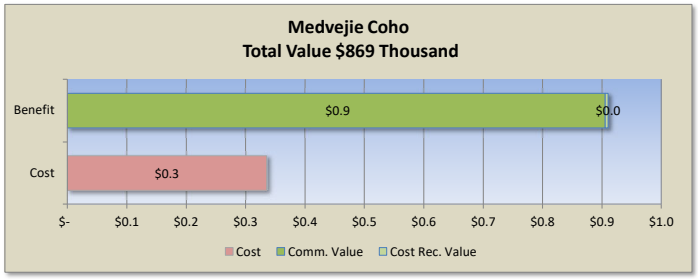
Status: F = Final ; I = Incomplete adult returns
BY 2009-10 includes Deep Inlet and Bear Cove releases. BY 2011-on = Bear Cove releases.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 2.7:1 for BC1 and 2.7:1 for BC2.

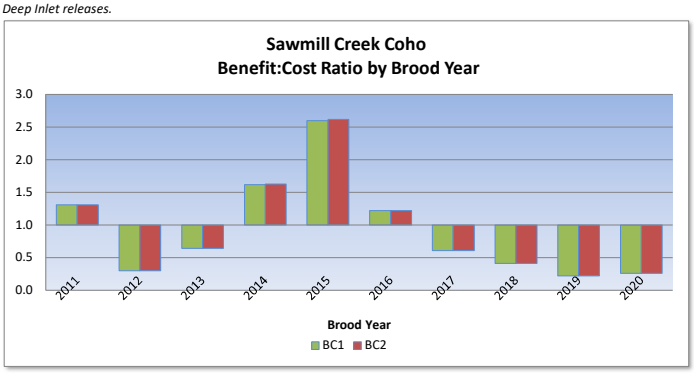


Total cost estimate in this chart is through BY20.

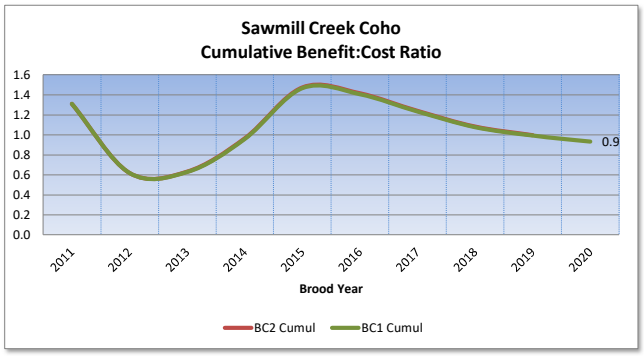
Sawmill Creek Coho Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
2011	158,968	12,671	7.97%	2013	$86,933	$113,769	$44	$113,813	1.3	1.3	921	F
2012	296,449	10,682	3.60%	2014	$187,077	$55,975	$0	$55,975	0.3	0.3	702	F
2013	949,412	16,158	1.70%	2015	$209,437	$133,256	$1,751	$135,007	0.6	0.6	857	F
2014	673,516	50,937	7.56%	2016	$241,053	$390,586	$2,170	$392,756	1.6	1.6	3,973	F
2015	907,708	88,080	9.70%	2017	$325,238	$845,106	$5,543	$850,649	2.6	2.6	6,243	F
2016	1,096,961	39,108	3.57%	2018	$324,723	$396,040	$0	$396,040	1.2	1.2	1,159	F
2017	1,828,650	22,175	1.21%	2019	$384,136	$234,541	$954	$235,495	0.6	0.6	1,739	F
2018	1,660,849	14,880	0.90%	2020	$415,007	$171,276	$0	$171,276	0.4	0.4	1,617	F
2019	1,766,291	10,469	0.59%	2021	$236,631	$52,675	$0	$52,675	0.2	0.2	862	F
2020	1,649,843	8,837	0.54%	2022	$215,625	$56,561	$0	$56,561	0.3	0.3	2,011	F
	10,988,647	**273,997**			**$2,625,860**	**$2,449,785**	**$10,461**	**$2,460,246**			**20,084**	

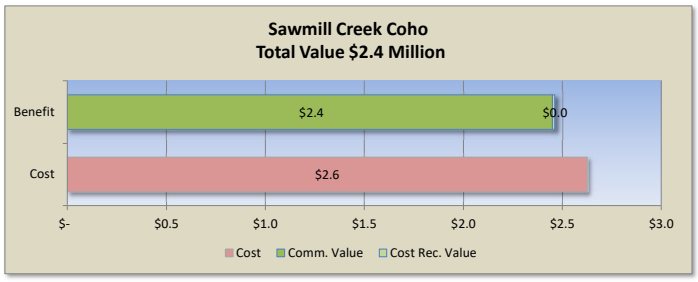
Status: F = Final ; I = Incomplete adult returns
Deep Inlet releases.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 0.9:1 for BC1 and 0.9:1 for BC2.

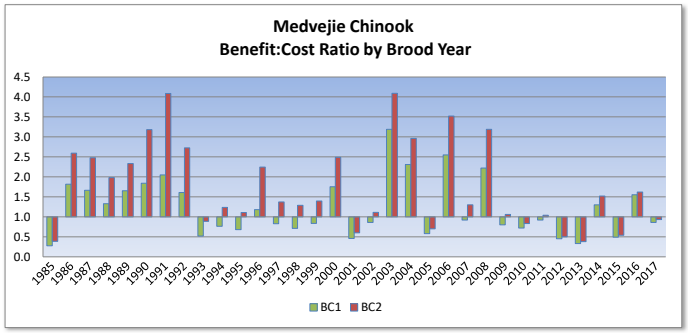


Total cost estimate in this chart is through BY20.

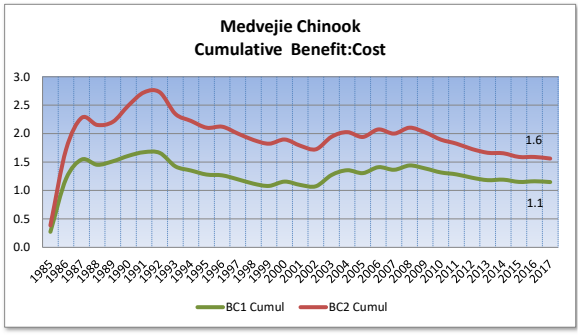
Medvejie Chinook Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
1985	227,536	1,690	0.74%	1987	$21,529	$5,875	$2,432	$8,307	0.3	0.4	342	F
1986	174,577	6,248	3.58%	1988	$33,062	$59,978	$25,768	$85,746	1.8	2.6	560	F
1987	743,511	19,101	2.57%	1989	$154,513	$257,230	$125,243	$382,473	1.7	2.5	1,387	F
1988	920,995	17,101	1.86%	1990	$152,222	$201,872	$99,700	$301,572	1.3	2.0	1,246	F
1989	866,839	22,268	2.57%	1991	$163,582	$269,995	$111,262	$381,257	1.7	2.3	2,228	F
1990	1,144,688	40,201	3.51%	1992	$220,606	$406,243	$295,356	$701,599	1.8	3.2	5,579	F
1991	762,369	32,033	4.20%	1993	$126,857	$259,560	$258,662	$518,222	2.0	4.1	3,676	F
1992	1,083,432	37,319	3.44%	1994	$207,020	$332,507	$231,246	$563,753	1.6	2.7	2,599	F
1993	1,130,236	20,495	1.81%	1995	$281,420	$145,791	$104,166	$249,957	0.5	0.9	1,389	F
1994	1,004,878	16,899	1.68%	1996	$169,413	$129,473	$80,086	$209,559	0.8	1.2	2,316	F
1995	1,052,995	15,503	1.47%	1997	$184,273	$125,015	$79,253	$204,268	0.7	1.1	1,573	F
1996	1,119,512	37,830	3.38%	1998	$242,699	$286,643	$257,726	$544,369	1.2	2.2	2,119	F
1997	1,596,867	43,263	2.71%	1999	$370,138	$306,459	$201,857	$508,316	0.8	1.4	2,492	F
1998	2,043,105	52,262	2.56%	2000	$435,347	$309,146	$251,503	$560,649	0.7	1.3	2,871	F
1999	1,872,609	38,086	2.03%	2001	$432,229	$361,586	$241,355	$602,941	0.8	1.4	1,767	F
2000	1,953,356	52,514	2.69%	2002	$406,654	$712,787	$298,766	$1,011,553	1.8	2.5	2,697	F
2001	1,502,186	7,965	0.53%	2003	$335,990	$154,835	$47,962	$202,796	0.5	0.6	379	F
2002	1,929,602	14,661	0.76%	2004	$391,083	$335,040	$99,827	$434,867	0.9	1.1	1,473	F
2003	1,538,388	41,067	2.67%	2005	$441,891	$1,409,952	$395,455	$1,805,406	3.2	4.1	1,936	F
2004	1,790,477	26,877	1.50%	2006	$422,765	$976,309	$274,015	$1,250,324	2.3	3.0	1,073	F
2005	1,491,455	6,912	0.46%	2007	$355,737	$205,858	$44,517	$250,375	0.6	0.7	495	F
2006	2,103,213	46,346	2.20%	2008	$505,987	$1,288,587	$490,847	$1,779,434	2.6	3.5	2,134	F
2007	2,128,272	20,910	0.98%	2009	$639,134	$591,025	$236,660	$827,685	0.9	1.3	1,062	F
2008	1,837,901	46,999	2.56%	2010	$649,005	$1,443,012	$625,690	$2,068,702	2.2	3.2	2,277	F
2009	1,696,344	15,927	0.94%	2011	$642,773	$511,661	$171,720	$683,381	0.8	1.1	874	F
2010	2,906,139	21,432	0.74%	2012	$942,403	$681,078	$100,664	$781,742	0.7	0.8	1,417	F
2011	2,602,453	23,627	0.91%	2013	$810,196	$745,150	$93,913	$839,063	0.9	1.0	1,710	F
2012	2,158,501	9,999	0.46%	2014	$747,946	$337,227	$38,019	$375,247	0.5	0.5	686	F
2013	1,369,006	5,329	0.39%	2015	$526,151	$175,950	$23,104	$199,054	0.3	0.4	387	F
2014	2,383,535	34,579	1.45%	2016	$845,712	$1,100,021	$181,382	$1,281,402	1.3	1.5	1,556	F
2015	1,998,042	12,002	0.60%	2017	$719,062	$349,292	$37,215	$386,507	0.5	0.5	284	F
2016	1,599,410	17,497	1.09%	2018	$390,489	$603,760	$27,134	$630,894	1.6	1.6	723	F
2017	1,897,715	11,252	0.59%	2019	$592,299	$511,243	$37,250	$548,493	0.9	0.9	1,445	F
2018	1,678,481	10,742	0.64%	2020	$378,237	$359,402	$38,098	$397,500	1.0	1.1	277	I
2019	2,241,566	9,335	0.42%	2021	$602,174	$446,377	$19,467	$465,844	0.7	0.8	348	I
2020	2,549,631	2,142	0.08%	2022	$767,503	$123,758	$2,316	$126,074	0.2	0.2	0	I
	57,099,822	**838,414**			**$15,308,101**	**$16,519,695**	**$5,649,635**	**$22,169,329**			**55,374**	

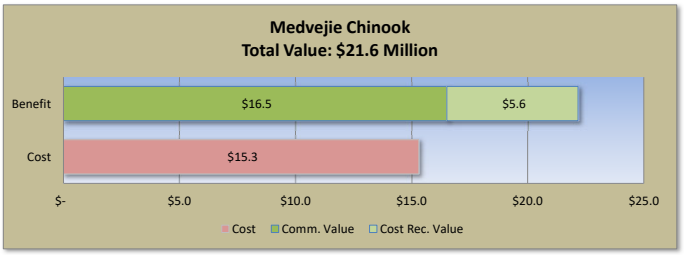
Status: F = Final ; I = Incomplete adult returns
Note: BY2017 may have a small number of 5-ocean fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 1.1:1 for BC1 and 1.6:1 for BC2.

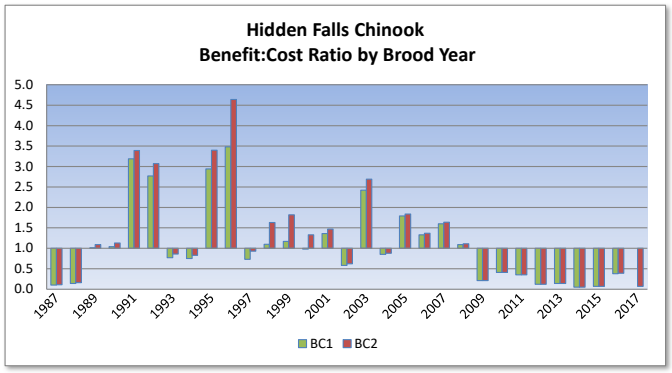


Total cost estimate in this chart is through BY18. Benefit for this period is incomplete, with further adult returns (BY17-19) in 2024-26.

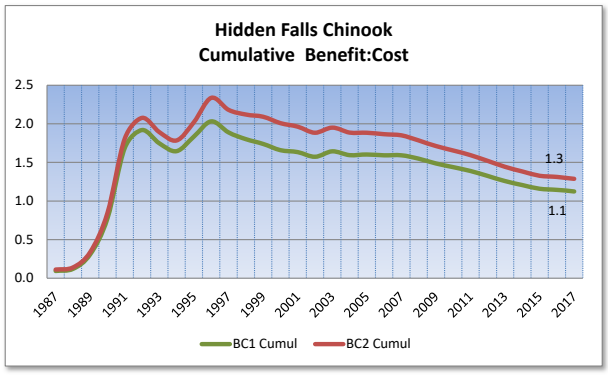
Hidden Falls Chinook Benefit:Cost Ratio

Year Brood	Release	Adults	MS	Fiscal Year	Cost	CommValue	CRValue	TotalValue	BC1	BC2	Sport	Status
1987	337,900	3,096	0.92%	1989	$52,368	$4,979	$907	$5,885	0.1	0.1	107	F
1988	349,443	1,392	0.40%	1990	$60,158	$8,682	$1,094	$9,776	0.1	0.2	153	F
1989	184,129	3,734	2.03%	1991	$30,158	$30,455	$2,268	$32,723	1.0	1.1	238	F
1990	1,584,244	27,517	1.74%	1992	$252,808	$262,758	$23,305	$286,063	1.0	1.1	1,593	F
1991	1,811,371	53,084	2.93%	1993	$240,711	$767,136	$48,484	$815,619	3.2	3.4	2,464	F
1992	1,091,827	28,929	2.65%	1994	$173,000	$479,904	$50,717	$530,621	2.8	3.1	472	F
1993	923,506	9,981	1.08%	1995	$143,087	$110,602	$11,894	$122,496	0.8	0.9	463	F
1994	888,538	8,160	0.92%	1996	$108,033	$81,023	$8,167	$89,190	0.8	0.8	451	F
1995	944,457	42,631	4.51%	1997	$181,076	$531,827	$84,119	$615,946	2.9	3.4	1,743	F
1996	1,070,885	48,496	4.53%	1998	$169,790	$590,670	$197,637	$788,307	3.5	4.6	1,046	F
1997	1,104,403	15,285	1.38%	1999	$175,749	$128,882	$35,015	$163,897	0.7	0.9	114	F
1998	1,232,716	33,906	2.75%	2000	$197,343	$216,737	$105,708	$322,445	1.1	1.6	991	F
1999	1,214,625	23,581	1.94%	2001	$188,429	$219,635	$123,015	$342,649	1.2	1.8	872	F
2000	1,145,835	19,957	1.74%	2002	$237,043	$233,174	$82,410	$315,584	1.0	1.3	457	F
2001	1,248,290	14,671	1.18%	2003	$212,695	$290,271	$22,189	$312,460	1.4	1.5	827	F
2002	922,407	3,969	0.43%	2004	$146,624	$84,592	$5,765	$90,358	0.6	0.6	306	F
2003	1,249,354	18,708	1.50%	2005	$231,335	$560,956	$60,637	$621,593	2.4	2.7	784	F
2004	1,052,892	4,807	0.46%	2006	$179,805	$152,655	$6,351	$159,006	0.9	0.9	184	F
2005	604,149	7,245	1.20%	2007	$130,867	$234,008	$7,206	$241,215	1.8	1.8	518	F
2006	498,136	6,160	1.24%	2008	$126,160	$167,687	$4,775	$172,462	1.3	1.4	195	F
2007	908,118	11,821	1.30%	2009	$212,026	$339,427	$8,130	$347,557	1.6	1.6	437	F
2008	939,962	10,546	1.12%	2010	$341,202	$372,953	$5,234	$378,188	1.1	1.1	577	F
2009	598,284	1,071	0.18%	2011	$184,022	$38,703	$214	$38,917	0.2	0.2	13	F
2010	480,642	2,477	0.52%	2012	$180,246	$73,071	$1	$73,073	0.4	0.4	251	F
2011	518,277	2,459	0.47%	2013	$199,439	$69,550	$41	$69,591	0.4	0.4	240	F
2012	558,227	872	0.16%	2014	$233,186	$26,818	$266	$27,084	0.1	0.1	147	F
2013	674,433	1,009	0.15%	2015	$271,597	$36,825	$108	$36,933	0.1	0.1	26	F
2014	588,842	362	0.06%	2016	$218,525	$10,826	$0	$10,826	0.1	0.1	-	F
2015	556,005	637	0.11%	2017	$219,774	$14,469	$0	$14,469	0.1	0.1	-	F
2016	602,669	1,125	0.19%	2018	$93,912	$36,093	$300	$36,394	0.4	0.4	17	F
2017	541,838	321	0.06%	2019	$106,643	$7,070	$70	$7,140	0.1	0.1	3	F
2018	495,020	1,050	0.21%	2020	$68,226	$19,164	$126	$19,290	0.3	0.3	5	I
2019	636,427	2,165	0.34%	2021	$113,694	$81,614	$13	$81,626	0.7	0.7	-	I
	27,557,851	**411,222**			**$5,679,728**	**$6,283,217**	**$896,166**	**$7,179,383**			**15,694**	

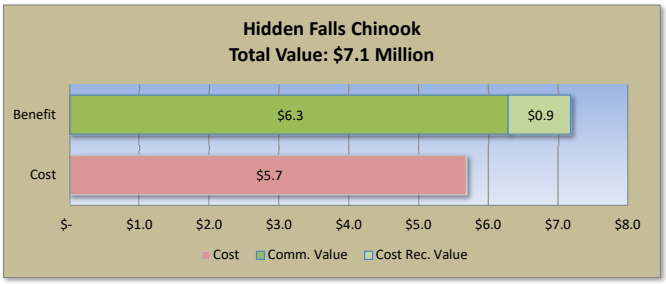
Status: F = Final ; I = Incomplete adult returns
Note: BY2017 may have a small number of 5-ocean fish returning in 2024.



Benefit:cost ratios for individual brood years. BC1 = Commercial Value / Project Cost.
BC2 = Total Value (commercial & cost recovery) / Project Cost.
This chart shows ratios for brood years with complete adult returns.



Cumulative Benefit: Cost Ratio currently is 1.1:1 for BC1 and 1.3:1 for BC2.



Total cost estimate in this chart is through BY19. Benefit for this period is incomplete, with further adult returns (BY17-19) in 2024-26.