

**2023 ANNUAL MANAGEMENT PLAN**  
**GUNNUK CREEK HATCHERY**  
NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION

This Annual Management Plan (AMP) plan is prepared to fulfill the requirements of 5 AAC 40.840. This plan must organize and guide the hatchery's operations, for each calendar year, regarding production goals, broodstock development, and harvest management of hatchery returns. Egg take through release details are included in planning for succeeding calendar years. In season assessments and project alterations by Northern Southeast Regional Aquaculture Association (NSRAA) or Alaska Department of Fish and Game (ADF&G) may result in changes to this AMP in order to reach or maintain program objectives. NSRAA will notify the ADF&G private nonprofit (PNP) hatchery program coordinator in a timely manner of any departure from the AMP. The ADF&G PNP coordinator will advise as to whether an amendment, exception report, or other action is warranted. No variation or deviation will be implemented until an AMP amendment has been approved or waived by both the department and NSRAA. This policy applies to all hatchery operations covered under the AMP.

## **1.0 EXECUTIVE SUMMARY**

### *1.1 Background*

Gunnuk Creek Hatchery (GCH) is a private nonprofit facility, previously owned and operated by Kake Nonprofit Fisheries Corporation (KNFC) and currently owned by the Northern Southeast Regional Aquaculture Association (NSRAA). The hatchery is located in the city of Kake, on the northwest tip of Kupreanof Island. Gunnuk Creek (109-42-004) supplies the hatchery water via one 10" high-density polyethylene (HDPE) pipeline. Up to 5.0 cubic feet per second of water is available. In 2021, the Inside Passage Electric Cooperative completed the Gunnuk Creek Hydro Electric project. A 54" penstock supplies water to the new turbine building neighboring the Gunnuk Creek Hatchery facility. In addition to NSRAA's 10" penstock, the facility now has an 18" HDPE tap from the 54" tied into the facilities supply system.

### *1.2 New This Year (production, harvest management, culture techniques, etc.)*

In 2022, NSRAA collected approximately 14 million chum eggs from GCH returns. Gunnuk Creek obtained an FTP (22J-1012) to allow returns of Kadashan stock chum to Medvejie Creek Hatchery (MCH) to be used as a backup source for GCH. Medvejie collected the remaining 6 million eggs to reach the 20 million broodstock program goal for GCH and transferred to the facility as eyed eggs.

The GCH return in 2023 will be comprised of 3–6 year old chum. The forecast is meager at 26,000 adults. NSRAA expects to utilize all returning adults for broodstock.

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1.3 *New permits or permit amendments needed this year*

All fish transport permits (FTP) are current for 2023. No new programs are anticipated at this time.

1.4 *Expected Returns*

Species	Release Location	Common Property Harvest	Other <sup>1</sup>	Total Return
Chum salmon	Southeast Cove SHA	178,000	392,000	<b>570,000</b>
Chum salmon	Gunnuk Creek SHA	0	26,000	<b>26,000</b>
Chinook salmon	Gunnuk Creek SHA <sup>2</sup>	200	200	400

<sup>1</sup> Includes cost recovery, broodstock, escapement, etc.

<sup>2</sup> The production summary and egg take for Chinook salmon returns to the GCH Special Harvest Area are in the HFH AMP.

1.5 *Production Summary*

Program Name	Release Date	Life Stage	Planned Release Number
Gunnuk Creek chum salmon	May 2023	Fed fry	12,000,000
Southeast Cove chum salmon	May 2023	Fed fry	40,500,000

1.6 *Egg takes*

NSRAA plans to conduct an egg take at GCH in 2023 on returns of 3-6 year old chum.

Species	Ancestral Stock(s)	Egg-take Site	Current Year Goal	Permitted Maximum
Chum salmon	Kadashan R	GCH	20,000,000 <sup>1</sup>	65,000,000

<sup>1</sup> Alternate egg sources will be used if needed to meet maximum permitted capacity.

See Hidden Falls Hatchery (HFH) AMP for details on eggs taken at Hidden Falls and transferred to Southeast Cove or GCH.

Species	Ancestral Stock(s)	Egg-take Site	Current Year Goal	Permitted Maximum
Chum salmon	Kadashan R	HFH+MCH	45,000,000 <sup>1</sup>	65,000,000

<sup>1</sup> Alternate egg sources will be used if needed to meet maximum permitted capacity.

1.7 *Current permitting*

In 2018, NSRAA was issued PNP Hatchery Permit #50 to operate the GCH. The permitted capacity of GCH is 65 million green chum salmon eggs, 20 million green pink salmon eggs, and 500,000 green coho salmon eggs. Gunnuk Creek Hatchery may take additional

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chum salmon eggs for transport to Port Armstrong Hatchery or HFH, if requested. There are no plans for coho or pink salmon production at this time.

HFH is permitted to release up to 200,000 Chinook salmon smolt from the Gunnuk Creek net pens and 700,000 at Southeast Cove. See the HFH AMP for details about the Chinook program.

FTPs listed below are issued to Hidden Falls Hatchery:

<b>FTP #</b>	<b>Ancestral Stock</b>	<b>Egg take, transport, or release</b>	<b>Transport from To</b>	<b>Maximal #, life stage</b>	<b>Expires</b>
Chum Salmon					
17J-1019	Kadashan R	Transport, Release	HFH to GCH	20,000,000 fry	12/31/32
12J-1022	Kadashan R	Transport, Release	HFH to SEC	55,000,000 fry	12/31/32
16J-1004	Kadashan R	Egg take, Transport	GCH SHA to HFH	55,000,000 eggs	12/31/25
20J-1026	Kadashan R	Transport	GCH SHA to HFH	55,000 adult	12/31/25
16J-1005	Kadashan R	Transport, Egg take	SEC SHA to HFH	55,000 adult	12/31/25
20J-1034	Kadashan R	Egg take, transport	GCH to HFH	101,000,000 eggs	12/31/30

SEC = Southeast Cove.

FTPs listed below are issued to Gunnuk Creek Hatchery:

<b>FTP #</b>	<b>Ancestral Stock</b>	<b>Egg take, transport, or release</b>	<b>Transport from To</b>	<b>Maximal #, life stage</b>	<b>Expires</b>
Chum Salmon					
19J-1020	Kadashan R	Egg take, Transport	HFH to GCH	65,000,000 eggs	12/31/29
20J-1005	Kadashan R	All	GCH	65,000,000 eggs 20,000,000 fry	12/31/29
20J-1006	Kadashan R	Transport, Release	GCH to SE Cove	55,000,000 fry	12/31/29
22J-1012	Kadashan R	Egg take, Transport	MCH to GCH	65,000,000 eggs	12/31/32

## 2.0 SUMMER RUN CHUM SALMON PRODUCTION

### 2.1 *This Year's Planned Egg Takes*

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<b>Program Name</b>	<b>Ancestral Stock(s)</b>	<b>Egg-take Site, Stat Area</b>	<b>Primary or Alternate Source?</b>	<b>Current Year Egg Goal</b>	<b>Permitted Maximum</b>
Gunnuk Creek chum salmon	Kadashan R	GCH	P	20,000,000 <sup>1</sup>	65,000,000
Southeast Cove chum salmon	Kadashan R	HFH	P	22,500,000 <sup>1</sup>	55,000,000
Southeast Cove chum salmon	Kadashan R	MCH	P	22,500,000 <sup>1</sup>	55,000,000
Species/Run Totals				65,000,000	65,000,000

<sup>1</sup> Alternate egg sources will be used if needed to meet maximum permitted capacity of 65 million green eggs.

## 2.2 *Broodstock capture method*

Broodstock will volitionally enter Gunnuk Creek and make their way upstream to the facility location. There is an adjustable bar picket weir installed just upstream of the terminus of the fish ladder. Fish are held in raceways above the ladder until ready for spawning.

## 2.3 *Spawning*

Broodstock will be collected from the adult holding raceways, and eggs and sperm removed in an adjacent covered spawning area. Fertilization occurs in the spawning area; eggs are transported by elevator to the incubation room on the main hatchery level. There they are rinsed and then water-hardened in bulk R-48 type incubators. Broodstock carcasses are likely to be sold and will be iced and loaded on tenders. Attempts will be made to donate unsold carcasses prior to grinding or disposing of whole broodstock carcasses at ADEC approved disposal locations.

## 2.4 *Egg-take schedule*

Egg take will occur in late July through mid-August.

## 2.5 *Carcass disposal*

Carcass disposal is according to the DEC-approved plan. Broodstock carcass priority will be to sell to a processor, donate to local community, grind for discharge, whole carcass discharge, or, if multiple mechanical failures preclude accessing the marine disposal sites and the carcasses cannot be temporarily stored until mechanical failures are corrected to allow the third and fourth options, landfill disposal as last option. The likelihood of disposing of carcasses in the landfill is very low.

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2.6 *Planned releases this calendar year of previous brood years' production*

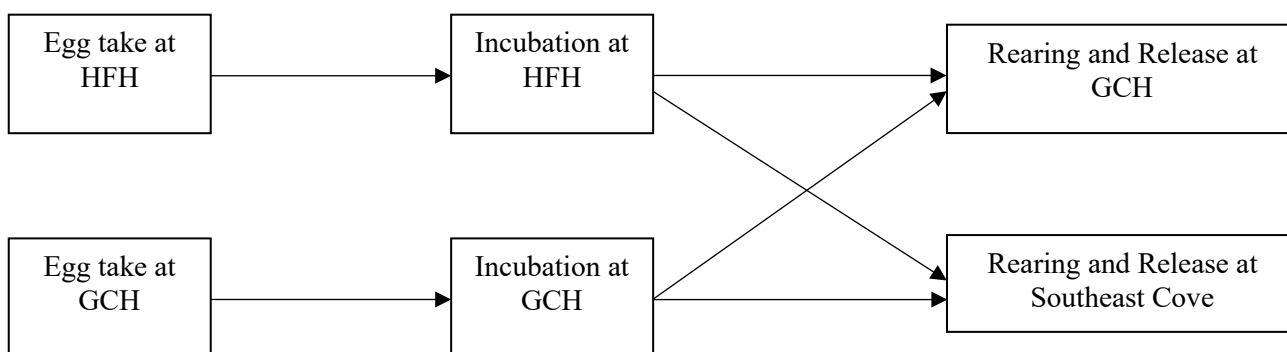
<b>Program Name</b>	<b>Brood Year</b>	<b>Release Date</b>	<b>Number to Release<sup>1</sup></b>	<b>Life Stage</b>	<b>Type of Mark, % Marked</b>
Gunnuk Creek SHA chum salmon	2022	May 2023	12,000,000	Fed fry	Otolith thermal- marked, 100%
Southeast Cove SHA chum salmon	2022	May 2023	40,500,000	Fed fry	Otolith thermal- marked 100%

<sup>1</sup> See chum salmon production table for more detail.

2.7 *Previous brood years that will remain in culture during the entire calendar year*

None.

2.8 *Standard operational diagram*



2.9 *Program details*

The purpose of the program is to provide chum salmon to the common property fishery in Frederick Sound and Chatham Strait, as well as broodstock and cost recovery for GCH.

The chum salmon program at GCH started in 1977. GCH has two chum salmon release sites, one at the hatchery, and one remote release site at Southeast Cove. All chum salmon production will be split 50/50 with a target size of 2 grams and 4 grams with releases occurring in late May to early June.

**3.0 HARVEST MANAGEMENT**

3.1 *Special Harvest Areas*

Southeast Cove terminal harvest area (THA): Described in 5 AAC 33.387, *District 9: Southeast Cove Terminal Harvest Area Management Plan*. (Statistical Area 109-41)

Gunnuk Creek SHA: Described in 5 AAC 40.071, *District 9: Gunnuk Creek Special Harvest Area*. (Statistical area 109-40)

3.2 *Projected returns to special harvest area this year*

Species	Program	Projected Common Property Harvest	Other <sup>1</sup>	Total Projected Return, Current Year
Chum salmon	Southeast Cove SHA	178,000	392,000	570,000
Chum salmon	Gunnuk Creek SHA	0	26,000	26,000
Chinook salmon <sup>2</sup>	Gunnuk Creek SHA	200	200	400

<sup>1</sup> Includes cost recovery, broodstock, and escapement, etc.

<sup>2</sup> HFH production.

3.3 *Common property fisheries management*

**Commercial fisheries:** In February 2012, the Alaska Board of Fisheries supported establishing Southeast Cove SHA as a THA.

Weekly openings may occur from the third Sunday of June through the first Saturday in August. After the first Saturday in August, only cost recovery may occur in a very limited area due to run timing of local pink salmon stocks.

At its spring 2022 Board of Directors meeting, NSRAA passed a motion to allow gillnetting in the Southeast Cove THA on Tuesdays and Wednesdays for the 2022 season with direction for rotation as follows: seine Sunday and Thursday; gillnet Tuesday and Wednesday; troll Monday, Friday and Saturday. The NSRAA board passed a motion at its spring 2023 Board of Directors meeting to mirror the schedule from the 2022 season. The NSRAA board also passed a motion directing the cost-recovery revenue needs to be split 50/50 between SE Cove and Crawfish Inlet.

In 2023 the following harvest management strategy will be implemented following cost-recovery harvest completion:

**Seine:**

- Will open on Sundays and Thursday June 18 through August 1.

**Gillnet:**

- Will open on Tuesdays and Wednesdays June 20 through August 1.

**Troll:**

- Will open on Mondays, Fridays, and Saturdays June 19 through August 1.

**Sport fisheries:** With the expected return of approximately 400 adult Chinook salmon to

GCH and no plans to collect broodstock in this location, the sport fishery will open to the harvest of Chinook salmon within the boundaries of the Gunnuk Creek SHA between June 1-June 14. This area has been included in the marine waters closed to retention of Chinook salmon from April 1-June 14 as part of the regional actions to protect Southeast Alaska wildstock Chinook salmon. This action will allow sport fishing opportunity for these hatchery-produced Chinook salmon in a limited area during the expected timing of their return. The regional Chinook salmon regulations will apply in the Gunnuk Creek SHA between June 1 and June 14 and continue to apply once this area opens to the retention of Chinook salmon after June 14 through the remainder of the year. Returning chum salmon to Southeast Cove and Gunnuk Creek are not expected to attract additional sport fishing effort. The regional bag and possession limits for chum salmon will continue to apply in these areas. The department may use emergency order authority to address issues as they arise in-season.

Additionally, under regional actions to conserve wild Southeast Alaska Chinook salmon stocks, commercial troll THA initial openings are delayed until June 1. Correspondingly, the Gunnuk Creek THA will open to provide continuous troll opportunity between June 1–30, unless closed by emergency order.

#### 3.4 *Cost-recovery harvest management*

Chum salmon: A meager number of chum salmon are forecasted to return to Gunnuk Creek SHA in 2023. It is expected there will be no surplus return to broodstock needs. No commercial openings are anticipated to occur in the Gunnuk Creek SHA.

The SE Cove THA will be limited to cost recovery harvest after August 1 to minimize pink salmon interception during pink salmon management for the area. NSRAA intends to collect half of its cost-recovery revenue needs from the SE Cove THA. Cost recovery operations will be conducted before opening the SE Cove THA to common property fishing. Once the goal is met, the THA will open to common property fishing.

**4.0 APPROVAL**

Recommendation for Approval: Gunnuk Creek Hatchery Annual Management Plan, 2023

Adam Olson, NSRAA 4/25/2023

Jeff Rice, Area Management Biologist, Division of Sport Fish 5/3/2023

Paul Salomone, Area Management Biologist, Division of Commercial Fisheries 4/25/2023

Matt Catterson for Judy Lum, Regional Supervisor, Division of Sport Fish 5/2/2023

Lowell Fair, Regional Supervisor, Division of Commercial Fisheries 4/28/2023

Lorraine Vercessi, PNP Hatchery Program Coordinator, Div. of Commercial Fisheries 5/18/2023

**Approval:**

The 2023 Gunnuk Creek Hatchery Annual Management Plan is hereby approved:

Tom Taube, Deputy Director, Division of Sport Fish 5/22/2023

Forrest Bowers, Operations Manager, Division of Commercial Fisheries 5/25/2023



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**Appendix 1.– Historical Production Tables.**

BY	Eggs Collected	Releases		Return Year	Cost Recovery		Common Property		Hatchery return
		Southeast Cove SHA	Kake SHA		Kake SHA	Southeast Cove	Kake SHA	Southeast Cove	
1978	10,000		3,000						
1979	16,000		1,000						
1980	129,000		0						
1981	0		0						
1982	831,000		608,000						
1983	1,070,000		55,000						
1984	2,000,000		1,982,000		2,851		900		5,322
1985	8,400,000		8,110,000		19,638		2,518		46,721
1986	10,930,000		10,825,000		29,033		912		49,270
1987	10,856,000		10,752,000		37,111		1,536		58,825
1988	10,216,000		9,880,000		41,245		18,233		95,395
1989	12,008,000		5,644,000		9,755		18,337		48,012
1990	14,305,000		7,054,000		10,467		14,610		72,471
1991	14,256,000		13,119,000		30,031		2,085		65,619
1992	16,495,000		15,073,000		291,041		40,203		557,828
1993	16,292,000		13,981,000		241,768		43,056		365,983
1994	21,046,000	8,198,485	6,260,447		98,407		73,858		369,637
1995	43,932,000	28,914,600	6,744,470		251,153		128,194		512,968
1996	51,742,000	36,244,635	6,177,285		519,795		168,737		835,524
1997	66,739,700	47,528,221	6,360,760		323,395		41,390		364,839
1998	54,237,000	36,156,200	6,522,900		203,449		0		203,449
1999	70,614,000	54,526,806	6,395,219	1999	70,538	229,210	10,581	34,382	344,711
2000	71,560,000	36,941,430	6,476,062	2000	186,544	429,053	62,675	122,650	800,922
2001	54,250,920	34,951,864	6,476,062	2001	84,383	228,615	9,896	25,956	348,850
2002	44,655,000	31,841,655	6,556,146	2002	58,948	243,830	25,600	104,323	432,701
2003	75,783,000	45,234,731	6,562,396	2003	105,414	1,219,839	11,813	135,538	1,472,604
2004	36,208,000	23,469,265	6,710,670	2004	54,708	596,561	21,883	197,861	871,013
2005	24,814,468	0	5,086,391	2005	42,283	79,025	16,952	0	138,260
2006	45,884,872	26,802,293	8,876,563	2006	76,895	145,375	32,332	62,556	317,158
2007	24,740,082	9,717,483	8,651,228	2007	31,364	25,523	13,161	10,769	80,817
2008	7,607,960	1,000,000	6,112,117	2008	6,942	2,579	1,041	387	10,949
2009	55,000,000	46,395,837	8,000,000	2009	8,492	2,092	3,385	837	14,806
2010	17,309,590	9,000,000	6,000,000	2010	3,000	200	19,479	22,000	44,679
2011	30,000,000	22,000,000	8,000,000	2011	209	7,120	61,463	18,512	18,783
2012	55,151,585	18,446,625	7,289,595	2012	100	22,000	33,001	32,345	67,441

Notes:

- 1978–1998 numbers from 2004 AMP; some return data missing thru 1988.
- 1980 - Eggs destroyed in 1980 due to septicemia brought on by ammonia toxicity.
- 1981 - Hatchery built.
- 1976–1979 - Operated under a scientific-educational permit with Kake School district. Few eggs and few records kept.
- 1984–1987, 2001, 2009, 2010 - Received some eyed eggs from Hidden Falls Hatchery and/or Port Armstrong Hatchery.
- 1999 - Present production numbers from web page. Web page reports returns by return year and does not break down to brood year.
- 2000 - Old dam failure.
- 2001–2006 - Hatchery on temporary pipeline intake.
- 2006–2007 - New Gunnuk Dam construction.
- 2008 - Hatchery online in new dam.
- 2010 - Very hot drought conditions affected return (creek very dry).

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**Appendix 1 (continued).**

Pink salmon production Gunnuk Creek Hatchery (KNFC)

BY	Eggs Collected	Releases	Returns from Annual Report			% OS
		Kake SHA	Estimated CPH	Hatchery	Total BY Returns	
1976 <sup>a</sup>	0	0				
1977	30,000	5,000				
1978	0	0				
1979	0	0				
1980 <sup>b</sup>	16,000	0				
1981	0	0				
1982	1,018,000	270,000				
1983	1,044,000	103,000			1,000	1.0%
1984	0	0				0.0%
1985	3,300,000	3,066,000	6,000	17,830	56,000	1.8%
1986	3,076,000	2,874,000	10,000	28,235	43,330	1.5%
1987	4,498,000	4,160,000	6,000	33,293	58,041	1.4%
1988	4,486,000	4,193,000	45,000	68,400	194,655	4.6%
1989	5,992,000	3,883,000	64,900	52,654	155,090	4.0%
1990	7,170,000	6,422,000	91,840	32,169	150,855	2.3%
1991	5,981,000	5,597,000	14,000	4,900	40,310	0.7%
1992	6,029,000	5,486,000	139,415	65,590	268,825	4.9%
1993	2,267,000	1,996,000	16,900	940	33,800	1.7%
1994 <sup>c</sup>	Program discontinued					
2007 <sup>d</sup>	5,989,628	341,245	17,991	27,729	45,720	13.4%
2008	1,819,738	1,637,764	17,797	97,859	115,656	7.1%
2009	9,575,429	9,000,000	195,673	49,327	245,000	2.7%
2010	20,239,999	18,239,275	101,241	94,901	196,142	1.1%
2011	17,003,254	15,836,693				
2012	19,987,327	18,000,000				

<sup>a</sup> 1976–1999 operated as Science and Educational facility with the Kake School district. Few eggs collected and few records kept.

<sup>b</sup> All alevins were destroyed on demand of ADF&G due to bacterial septicemia brought on by ammonia toxicity.

<sup>c</sup> All data from 1976–1994 came from 2004 AMP.

<sup>d</sup> Bulk of fish released in the Southeast Cove SHA.

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**Appendix 1 (continued).**  
**Coho salmon production**

Brood Year	Eggs Collected	Releases		Returns from Annual Report			Percent Ocean Survival
		Traditional Rearing	Zero-Check	Estimated Common Property	Hatchery	Total Returns by Brood Year	
1994	50,000	35,000	0	482		964	2.75%
1995	40,000	35,000	0	653		1,306	3.73%
1996	0	0	0	0		0	0.00%
1997	0	0	0	0		0	0.00%
1998	15,000	13,000	0	170		340	2.62%
1999	47,000	33,000	0	420		840	2.55%
2000	0	0	0	0		0	0.00%
2001	72,920	0	59,573	745		745	1.25%
2002	0	0	0	0		0	0.00%
2003	0	0	0	0		0	0.00%
2004	0	0	0	0		0	0.00%
2005	25,000	4,143	8,000	25	64	89	0.73%
2006	28,759	1,025	18,232	100	101	201	1.04%
2007	25,000	8,803	9,180	238	250	488	2.71%
2008	50,000	35,978	0	2,274	2,561	4,835	10.52%
2009	135,000	98,272	0	4,906	2,563	7,469	7.60%
2010	260,665	91,385	25,000				
2011	507,736	456,962					
Average (BY05 to present)							4.76%

BY94–00 data from 2004 AMP.

1994–2004 all fry releases for USFS projects at Portage Bay Creek and Duncan Creek.

BY05–current have been smolt releases at GCH.

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### Appendix 2.- NSRAA Production Tables

Appendix 2a. Chum Salmon Release and Survival Data for Gunnuk Creek and SE Cove releases.

Brood Year	Egg Source	Release Site	Number Fry Released	Size (g)	Size (g) Weighted Avg.	Release Dates	% Marine Survival	Total Return
<b>SOUTHEAST COVE</b>								
2012	HF	SE COVE	8,712,136	4.01	4.01	6/8/2013	2.16%	188,249
2013	HF	SE COVE	9,142,373	3.89	3.89	6/7/2014	0.35%	32,412
2014	HF	SE COVE	17,478,583	4.15	4.15	5/30/2015	0.45%	79,444
2015	HF	SE COVE	42,758,270	2.3-4.1	2.87	5/8-13, 5/23-27/16 <sup>4</sup>	2.59%	1,107,287
2016	HF	SE COVE	46,749,525	2.0-4.2	2.87	5/8, 10, 11, 14, 15, 17, 19, 21, 29-31, 6/1, 3, 4/17	0.20%	92,400
2017	HF	SE COVE	43,109,082	2.1-4.1	2.83	5/18, 19, 20, 21, 23, 24, 26, 6/8, 9 10/18	0.17%	72,097 <sup>1</sup>
2018	HF	SE COVE	36,644,291	2.3-4.3	3.34	5/19, 21, 22, 23, 25-30/19	0.36%	130,841 <sup>1</sup>
2019	HF	SE COVE	40,951,776	2.12-4.09	3.10	5/19/20, 5/25,26,27,28,30,31,6/2/20	0.16%	64,073 <sup>1</sup>
2020	HF	SE COVE	35,357,207	2.01-3.44	3.06	5/27-29/21, 6/8-10/21		
2021	HF	SE COVE	36,087,907	2.0-4.12	3.08	5/6-18/22, 5/29-6/5/22		
<b>GUNNUK CREEK</b>								
2017	HF	GUNNUK GREEK	8,866,586	4.39	4.39	5/30, 31, 6/1, 2/18	0.57%	50,798 <sup>1</sup>
2018	HF	GUNNUK GREEK	15,857,078	2.5-4.2	3.40	5/17, 25, 29-30/19	0.13%	20,175 <sup>1</sup>
2019	HF	GUNNUK GREEK	16,142,492	2.3-4.24	3.27	5/7-9, 6/3/20	0.01%	1,236 <sup>1</sup>
2020	HF	GUNNUK GREEK	17,566,539	2.3-4.44	3.33	5/10/2021, 6/1/21		
2021	GCH+HF	GUNNUK GREEK	16,747,099	1.98-4.84	3.27	5/6-20/22, 5/29-6/5/22		

<sup>1</sup> Incomplete Returns.

Appendix 2b. Chum Salmon Release Data for Gunnuk Creek and SE Cove.

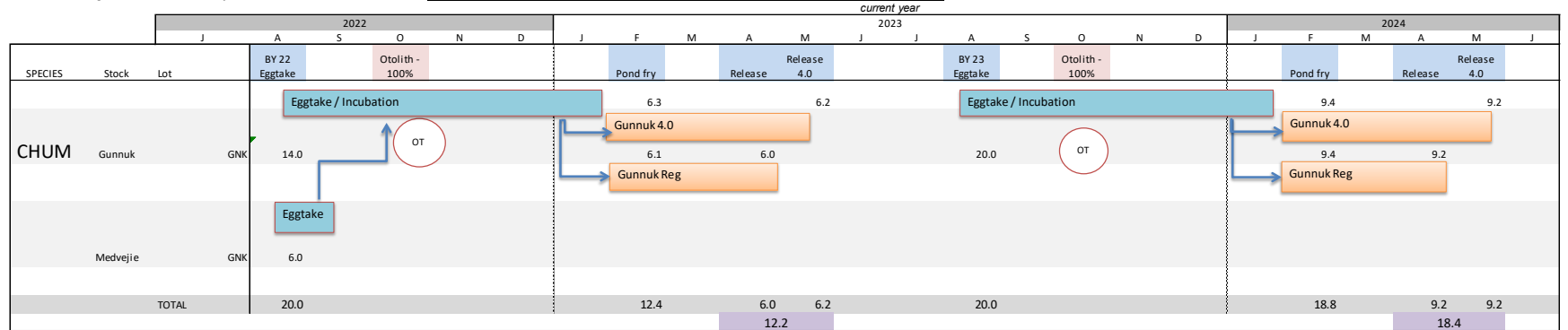
BY	Southeast Cove		Total Fed Fry	Release Biomass (kg)
	Fed Fry Regular	Fed Fry Late - Large		
2012		8,712,136	8,712,136	34,936
2013		9,142,373	9,142,373	35,564
2014		17,478,583	17,478,583	72,536
2015	29,441,527	13,316,743	42,758,270	122,826
2016	29,183,809	17,565,716	46,749,525	134,014
2017	27,367,140	15,741,942	43,109,082	121,897
2018	17,074,771	19,569,520	36,644,291	122,567
2019	20,068,712	20,883,064	40,951,776	127,958
2020	9,198,802	26,158,405	35,357,207	107,441
2021	17,710,505	18,377,402	36,087,907	111,151
BY	Gunnuk Creek		Total Fed Fry	Release Biomass (kg)
	Fed Fry Regular	Fed Fry Late - Large		
2017		8,866,586	8,866,586	38,924
2018	7,071,823	8,785,255	15,857,078	53,943
2019	6,475,719	9,666,773	16,142,492	55,881
2020	8,344,163	9,222,376	17,566,539	59,554
2021	8,484,195	8,262,904	16,747,099	54,763

# 2023 Gunnuk Creek Hatchery Annual Management Plan

## Appendix 3.- Production Timeline

### PRODUCTION SUMMARY Organization or Hatchery

NSRAA: GUNNUK CREEK HATCHERY



GUNNUK CREEK CHUM BY 22  
100.0% 94.0% 98.0%  
94.0% 92.1%

GUNNUK CREEK CHUM BY 23  
100.0% 94.0% 98.0%  
94.0% 92.1%

Millions

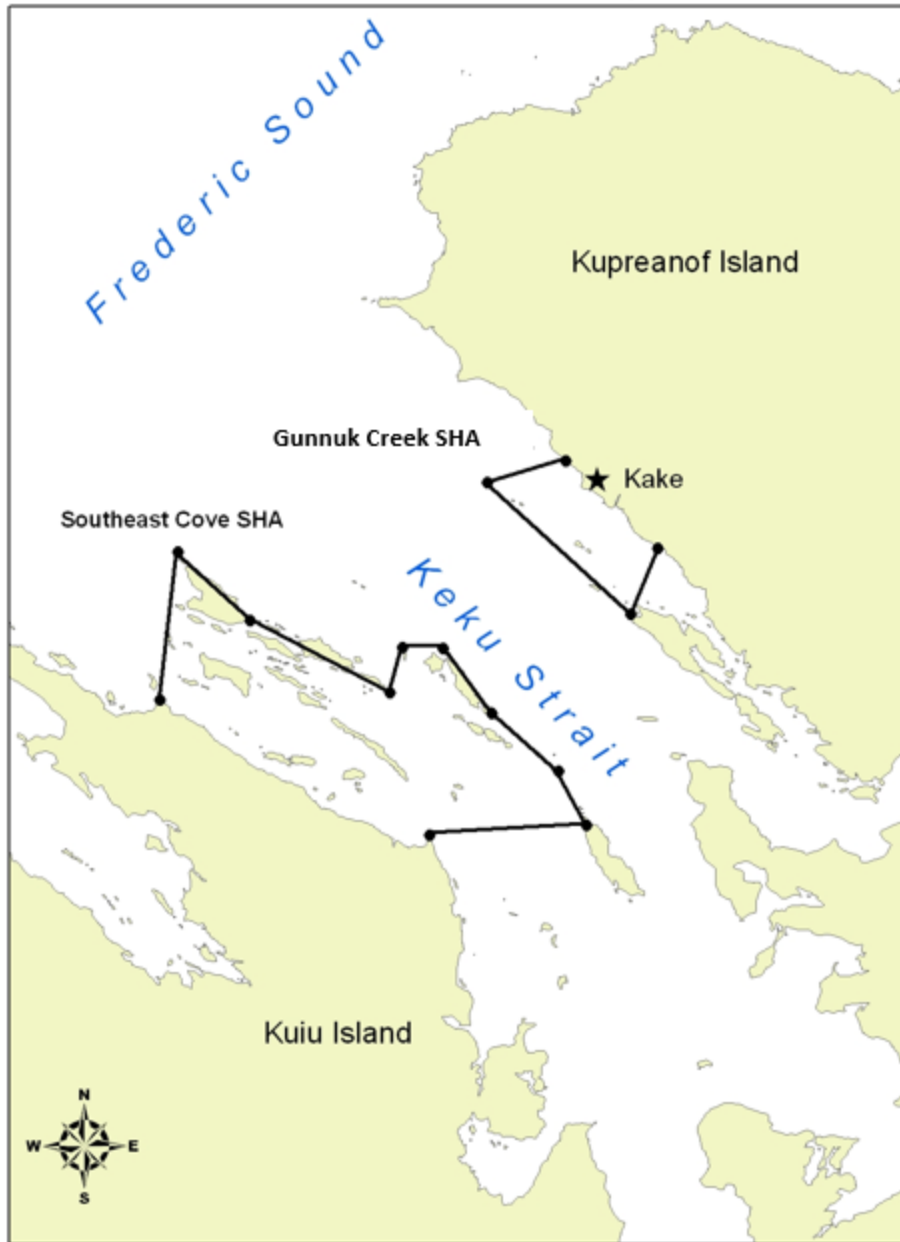
STOCK	REL SITE	AGENCY	GROUP	GREEN EGGS	FRY	REL GOAL
Gunnuk	GNK	NSRAA	REG	10.0	6.1	6.0
Gunnuk	GNK	NSRAA	REG	4.0	2.1	2.1
MCH	GNK	NSRAA	REG	4.0	4.2	4.1
Total				20.0	12.4	12.2

Millions

STOCK	REL SITE	AGENCY	GROUP	GREEN EGGS	FRY	REL GOAL
GUNNUK	GNK	NSRAA	REG	4.0	10.0	9.4
HF	GNK	NSRAA	REG	10.0	9.4	9.2
Total				20.0	18.8	18.4

**Codes:**  
 ET Egg take number & site  
 T Tagging number  
 R Release number & site  
 "to \_\_\_" transfers  
 OT Otolith permit held by Sheldon Jackson College Hatchery  
 SJ permit held by Sheldon Jackson College Hatchery  
 BC Bear Cove  
 DI Deep Inlet  
 LL4.0 or 4.0 Late Large (4.0 g target size)

## Gunnuk Creek Hatchery SHAs



**Figure 1—Location of Gunnuk Creek Hatchery Special Harvest Area (SHA) and Southeast Cove SHA, in Southeast Alaska.**