2018 ANNUAL MANAGEMENT PLAN

MAIN BAY HATCHERY

Prince William Sound Aquaculture Corporation

This plan remains in effect until superseded by a new annual management plan (AMP) in the following year. Prince William Sound Aquaculture Corporation (PWSAC) will notify the Alaska Department of Fish and Game (ADF&G) private nonprofit (PNP) coordinator in a timely manner of any departure from the AMP. That notification will be in the form of a request to amend the AMP. No variation or deviation will be implemented until an AMP amendment has been approved or waived by both the department and PWSAC. This policy applies to all hatchery operations covered under the AMP.

I. OPERATIONAL PLAN

1.1 Egg-take Goals by Species

Main Bay Hatchery/Coghill stock sockeye salmon: The egg-take goal is 12.4 million green eggs. Broodstock requirements are approximately 5,360 females and 3,580 males, assuming:

(a) Average fecundity of 3,200 eggs/female
(b) 3/2 female to male ratio
(c) 15% holding mortality and culling of injured adults*
(d) 15% green/over-mature spawners

*ADF&G Sockeye Salmon Culture Protocol require culling of broodstock with any sign of external scarring to reduce risk of infectious hematopoietic necrosis virus (IHNV) transmission.

1.2 Broodstock

PWSAC intends to adhere to the broodstock acquisition schedule for Main Bay Hatchery (MBH) sockeye salmon stocks. The brood collection window for the MBH/Coghill stock is June 15 through July 20 and is based on the approximate run timing of the donor stock. The adult return summary includes the projected total return, hatchery escapement schedule, and fish available for common property fishery harvest (Table 3).

To ensure that run timing is proportionally represented in the broodstock, a hatchery escapement schedule that includes the broodstock acquisition schedule will be implemented based on run-timing percentages by date in the AMP tables to establish a hatchery escapement goal by week. At hatcheries with barrier nets, these goals will be measured according to the number of fish estimated upstream of the barrier net. At hatcheries without barrier nets, the goal will be measured as an estimate of the fish in front of the hatchery. It is recognized and accepted that barrier nets are semi-permeable to fish and the number there is an estimate.

If in-season catch data indicate the return is earlier or later than the historic run curve would suggest, then PWSAC may alter the hatchery escapement schedule according to a mutually-agreed upon amendment to match the actual return.

Broodstock fish will be collected by volitional entry through the fishway leading to the brood holding pond.

1.3 Egg-Take Schedule and Data Reporting

Ultimately, the egg-take schedule depends upon broodstock recruitment and the maturation rate of the broodstock in salt and fresh water. The table below summarizes an anticipated egg-take schedule based on the average historical egg-take percent completion 1998–2017. All data associated with egg-take and broodstock collection will be provided to the department by November 1 each year. Data will be provided in electronic format (Excel file) and include all the categories presented in the template attached as Table 6. Data to be collected specifically includes the numbers of green and overripe females from the broodstock and associated cost recovery.

Anticipated Egg-take Schedule based on egg takes of previous 5 years

Percent Complete	Sockeye Salmon
25%	August 5
50%	August 10
75%	August 15
100%	August 20

A complete listing of all PWSAC hatchery egg-take schedules is shown in Table 4. PWSAC egg-take goals are shown in Table 2.

1.4 Egg-take Transport and Broodstock Carcass Disposal Plans

No eggs will be transported off-station.

Broodstock carcasses will be disposed of in accordance with Alaska Department of Environmental Conservation requirements. Broodstock carcass disposals will be logged on the carcass disposal form and reported to the department within 30 days after the egg-take and disposals are completed.

1.5 Incubation Plans

The incubation layout at MBH consists of 35 "Kitoi" incubators. All incubators are horizontally and vertically isolated to reduce the risk of production loss due to IHN virus.

Hatchery Production Summary

Species	Green Eggs	Eyed Eggs	Fry/Smolt Released
Sockeye Salmon	12,400,000	11,900,000	11,080,000

The above table was generated with the following assumptions:

1) 96% survival from green to eyed stage
2) 99% survival from eyed stage to emergent fry
3) 95% survival from emergent fry to fed fry
4) 99% survival from fed fry to smolt release

All eggs will be incubated at MBH during 2018. During the fall incubation period, 100% of sockeye salmon production will be thermally otolith-marked at the eyed stage.

1.6 Rearing and Release Plans

Isolation will be maintained during rearing in fresh water. Sockeye salmon fry will emerge nonvolitionally from incubators into a 2.6 m^3 start tank, remaining isolated from the others during initial start-up rearing. After they have reached a size of approximately 0.4 grams/fish, fingerlings from three start tanks are combined in 84 m^3 freshwater raceways. Maximum freshwater densities for sockeye salmon fry in the start tanks and raceways are 55 kg/m^3 and 70 kg/m^3, respectively.

Size at release seems to be positively correlated with marine survival. Since saltwater temperatures are warmer than fresh water, and more rearing space is available, smolt can be reared to a significantly greater size by utilizing saltwater pens for eight weeks or longer. Approximately 60% of the brood year 2016 (BY16) smolt will be reared for 12 weeks in saltwater net pens.

The smolt are transferred through a six-inch pipeline to net pens anchored in Main Bay. The saltwater net pen rearing complex consists of six, 12.2m x 12.2m x 6.1m rearing pens. The maximum density will be 14 kg/m^3. The saltwater rearing complex is located away from any hatchery effluent waters to reduce the risk of IHNV transmission. See Table 5 for PWSAC's 2018 estimated releases.

MBH/Coghill stock: Approximately 10.5 million BY16 fry are currently being reared in 10 raceways. Approximately 60% of these fry will be transferred to six saltwater net pens in March and will be released in May 2018 at a target size of 12 grams. The remaining 40% will be split evenly into eight raceways in March and will be released directly into saltwater in May 2018 at a target size of 10 grams.

MBH/Coghill stock: Approximately 11.8million BY17 fry will begin feeding in the start tanks in late March 2018. At a target size of 0.4 grams, they will be transferred to 10 raceways mid-June and remain there until the spring of 2019.

1.7 Fry Transport Methods

MBH will collect 12.4 million MBH/Coghill stock sockeye salmon eggs annually to ensure that 11.08 million fry are produced for 10 raceway rearing units. The production of extra fish is necessary to mitigate production loss in the event that emergent fry are lost due to disease (IHNV or *Pseudomonas* sp.). The potential production range of these extra fry is 0 to 1.2 million, dependent upon the intensity of the disease epizootic.

1.8 Permitted Capacity

Main Bay Hatchery was issued PNP Hatchery Permit #31 in 2001. It is currently permitted to incubate 12.4 million sockeye salmon eggs.

Fish Transport Permit Summary

FTP Number	Expiration Date	Purpose
SOCKEYE SALMON		
96A-0042	4/30/26	Allows egg take, incubation, rearing, and resultant release of 12.4 million Coghill stock sockeye salmon eggs at MBH.

II. DONOR STOCK MANAGEMENT – N/A

III. HATCHERY RETURN MANAGEMENT

PWSAC operates five facilities: Armin F. Koernig Hatchery (AFK), Cannery Creek Hatchery (CCH), Gulkana Hatchery (GH), MBH, and Wally Noerenberg Hatchery (WNH). The corporation generates revenues for annual operations from a 2% salmon enhancement tax and from the sale of hatchery produced salmon returning to the facilities.

In 1997, the PWSAC Board of Directors (BOD) elected to have corporate cost recovery based upon revenue goals specific to the seine and gillnet salmon fisheries rather than a goal of harvesting a fixed percentage of the returning adults. This results in each gear group paying for enhanced production from which they benefit. PWSAC calculates these revenue goals by allocating production costs between the seine-caught and gillnet-caught salmon fisheries.

On March 2, 2018, the PWSAC BOD approved the annual corporate budget for Fiscal Year 2019 detailing potential sources of revenue and expenditures. The pink and WNH chum salmon cost-recovery revenue goals are $6,304,696 and $3,547,905, respectively. Additional revenue may be generated through PWSAC's raceway fish sales during its egg-take full utilization program.

PWSAC uses preseason assumptions for the number of returning fish, price per pound, and average adult weight to calculate the total projected value of the returning hatchery-produced salmon. Based on these assumptions, PWSAC estimates that approximately 31% of the total value of the run will be required to meet the revenue goal that in the Fiscal Year 2019 financial plan.

Pink Salmon Returns: The AFK, CCH, and WNH pink salmon runs will be managed collectively through openings and closures of hatchery subdistricts. Managing the enhanced pink salmon runs in aggregate may result in site-specific common property fishery (CPF) contribution rates being above or below the approximate target of an 80% CPF pink salmon harvest.

WNH Chum and MBH Sockeye Salmon Runs: The WNH chum salmon and MBH sockeye salmon runs will be managed collectively through openings and closures of respective hatchery subdistricts. The collective management will be managed initially for the WNH chum salmon revenue goal. If inseason, PWSAC, in consultation with the department, determines that the WNH chum salmon corporate escapement may not be met, cost-recovery harvest at MBH may be conducted to achieve the balance of the revenue goal. Managing runs in aggregate may result in site-specific CPF contribution rates being above or below the approximate targets of 79% and 99% for the WNH chum and MBH sockeye salmon harvest, respectively.

The AFK Hatchery and Port Chalmers remote-release chum salmon runs are expected to have a 100% CPF harvest.

Reduction of CPF opportunity in hatchery subdistricts may be necessary to ensure corporate escapement objectives are met. PWSAC will work closely with local ADF&G management biologists to achieve the seine and gillnet fisheries revenue goals as rapidly as possible to allow for an orderly and consistent CPF.

3.1 Hatchery Fish Migration Routes and Timing

The MBH/Coghill stock sockeye salmon are present in Area E fisheries from mid-June to late July. Data from the coded-wire-tag program and otolith mark-recovery sampling indicate that sockeye salmon returning to MBH are caught in the Copper River, Eastern, Northern, Southwestern, and Coghill districts. Sockeye salmon returning to MBH are assumed to enter Prince William Sound through the Southwestern District and Montague Strait. A portion of the run may also enter through Hinchinbrook Entrance. Sockeye salmon will traverse the Crafton Island Subdistrict (Figure 1) and home towards Main Bay from both northerly and southerly directions. Identification of migration routes of returning Main Bay sockeye salmon will improve as data is recovered from future returns.

3.2 Special Harvest Area

The MBH Special Harvest Area (SHA) is located within the Main Bay Subdistrict. The boundaries of the SHA are illustrated in Figure 2. The SHA encompasses the alternating gear zone (AGZ) and approximately half of the existing terminal harvest area (THA) of the Main Bay Subdistrict (5 AAC 24.367). The SHA is used by the hatchery operator to harvest broodstock and fish for cost recovery. The THA is normally closed to commercial and subsistence fishing and provides a buffer between the hatchery SHA and open waters of the Main Bay Subdistrict.

Harvest of salmon in the SHA by sport anglers and personal use fishermen is managed by the ADF&G Division of Sport Fish in accordance with regulations as provided in 5 AAC 47 – 5 AAC 75. Emergency orders may be issued to liberalize or restrict sport fisheries based on achievement of broodstock goals.

The SHA is defined as the waters of Main Bay west of a line from 60°31.61′N lat, 148°05.02′W long to 60°31.85′N lat, 148°05.42′W long. The AGZ is defined as the waters of Main Bay south of a line from 60°31.43′N lat, 148°05.67′W long to 60°31.36′N lat, 148°05.52′W long. The THA is defined as the waters of Main Bay west of a line from 60°32.26′N lat, 148°04.85′W long to 60°31.88′N lat, 148°04.03′W long. All latitude and longitude coordinates are based on the North American Datum of 1983.

3.3 Hatchery Returns

3.3.1 On-Station Returns

MBH/Coghill stock sockeye salmon: The anticipated 2018 adult run of MBH/Coghill stock to MBH is763,000 fish, assuming a 7.56% marine survival (Table 6). Assuming a broodstock goal of 8,940 and approximately zero sold for cost recovery, the hatchery harvest will be approximately 1% of the return.

Sockeye Salmon Projected Run Summary

Total Run	Broodstock	Cost Recovery	Hatchery Harvest	CPF Harvest
763,000	8,940	-0-	8,940	754,060
% of Total	**1%**	**0%**	**1%**	**99%**

Sockeye Salmon Projected Run, Age-Composition Summary

BY	Fry Released	Anticipated Marine Survival	Anticipated Total BY Return	Return Age	2018 Projected Run	% of Total
2013	10,730,000	0.58%	158,901	Age-5	62,000	8.1%
2014	10,040,000	6.98%	1,182,717	Age-4	701,000	991.9%
				Total	**763,000**	**100%**

Historical average return age composition: 40% age-5 and 60% age-4.

3.4 Separation of Hatchery Escapement

Fish available for brood are kept separate from sales fish by means of a barrier net located in the SHA near MBH. Fish available for brood pass volitionally behind the barrier net to mature. The AGZ is closed to the commercial CPF by regulation to protect the barrier net (5 ACC 24.367(c)(5)).

3.5 Special Management Strategies

Effective management of mixed-stock fisheries is difficult. It is the intent of ADF&G to provide the stated PWSAC corporate escapement goals by species. Achieving the target revenue goal will depend upon the timing and magnitude of the PWSAC salmon returns, average fish size, and price per pound PWSAC receives. It will also depend upon precise inseason assessment of both wild and hatchery run strengths. Depending upon the precision of inseason run assessment, actual percentages of PWSAC total returns, by species, which are provided for corporate escapement, may fall above or below the stated goals. If precise and timely stock identification data are available, ADF&G will use them to manage fisheries inseason for an allocation of PWSAC-produced pink, chum, and sockeye salmon between the CPF and PWSAC. Pink salmon will be managed for PWSAC corporate escapement after July 20. Sockeye and chum salmon will be managed for PWSAC corporate escapement by stock.

PWSAC will submit written management recommendations to the department with clear justifications as to how the recommendations support achieving cost recovery and/or broodstock collection goals. Each recommendation, in the form of a brief email, will include, but not be limited to, current cost-recovery harvest data, THA and SHA estimates, actual and anticipated run entry, and actual and anticipated cost-recovery progress. Each recommendation will also include a summary of actual and anticipated hatchery escapement and broodstock collection progress as it relates to the weekly goals established in this AMP. For this reporting, hatchery escapement will be defined as fish in the SHA both upstream and downstream of the barrier net, as appropriate. Fish in the raceways or brood holding ponds will be defined as broodstock.

To ensure accurate and clear reporting, the AMP Adult Return Summary table from the AMP for each hatchery and species will be submitted to the department when requested, as well as with written management recommendations.

It will be the responsibility of PWSAC staff, with written consent of the PWSAC Executive Committee to advise ADF&G of any desired inseason adjustments to the preseason corporate escapement goals and/or significant changes to the preseason management strategy. Recognizing the imprecision of assessing wild and hatchery contribution estimates inseason in the absence of a stock identification program, ADF&G will assess PWSAC requests based upon the best available information. If, based on the assessment of ADF&G, the total hatchery return is less than or greater than the original PWSAC forecasted return, then ADF&G will adjust openings, as necessary, to best provide for wild-stock and corporate escapement needs. Total hatchery and wild stock returns will be estimated after a thorough postseason analysis of all available data. Postseason estimates may not coincide with ADF&G's or PWSAC's inseason estimates.

During periods when the Main Bay Subdistrict closure is in effect, ADF&G may allow the hatchery operator to harvest fish in Main Bay outside the SHA boundaries (Figure 1) to maintain fish quality. When the Main Bay Subdistrict is open to the CPF, the SHA will not be expanded.

MBH/Coghill stock: Beginning in early June, the Eshamy District will be managed for returning MBH/Coghill stock sockeye salmon. The return of MBH/Coghill stock sockeye salmon will likely be available for common property harvesting during scheduled openings from early June through July 20. Fishing periods in the Main Bay Subdistrict will be based solely upon returns to MBH. It is the department's intent to open all gillnet districts concurrently, where possible, to more evenly distribute gillnet effort. When the Eshamy District is open to the CPF, both the Main Bay and Crafton Island subdistricts will open, when possible. The department recognizes that the interception rate of Coghill Lake-bound sockeye salmon is higher in the Coghill District than in the Eshamy District, but that the management of the two districts is linked. Fishing time in the two districts will be balanced to allow adequate Coghill Lake sockeye salmon escapement.

3.6 Sport Fish Harvest

Sport fisheries will be managed in accordance with regulations as provided in 5 AAC 47–5 AAC 75. Emergency orders may be issued to liberalize or restrict sport fisheries based on achievement of broodstock goals. A sport fishery targets sockeye salmon returning to Main Bay. Conflicts between user groups have occurred during broodstock collection and cost-recovery operations, and sport tackle and boats/motors has impacted the barrier net. Injured fish resulting from attempted snagging must be culled from broodstock to comply with ADF&G Sockeye Salmon Culture Protocol. In an effort to protect MBH broodstock and the integrity of the barrier net, the Alaska Board of Fisheries designated that in Main Bay, sport fishing from a vessel that is within 60 feet of the hatchery barrier net or from a vessel that is anywhere inside the barrier net is prohibited (5 AAC 55.023(10)).

3.7 Subsistence Harvest

The MBH facility is within the Prince William Sound general subsistence area. Alaska residents may harvest fish for subsistence use using the legal gear type for the Eshamy District.3.8
Avoidance of Nontarget Species

Numerical abundance of stocks of fish other than MBH stocks of salmon are insignificant in the Main Bay Subdistrict and SHA. No particular problems are expected to occur.

IV. EVALUATION STUDIES

4.1 Otolith Marking

PWSAC established a thermal-marking system at MBH in 1999. During the fall incubation period (October–December 2018), 100% of sockeye salmon production will be marked at the eyed-egg stage. The table below summarizes the 2018 thermal otolith mark assignment by the ADF&G Mark, Tag, and Age Lab (MTAL). Voucher samples are collected and submitted along with data as per the ADF&G MTAL sampling protocol.

Species	Number of Eyed Eggs	Thermal Otolith Mark	Intended Release Location
Sockeye Salmon	2,380,000	2,2H3	MBH, Main Bay
Sockeye Salmon	2,380,000	2,2H2,2	MBH, Main Bay
Sockeye Salmon	2,380,000	2,2H5	MBH, Main Bay
Sockeye Salmon	2,380,000	2,2H3,3	MBH, Main Bay
Sockeye Salmon	2,380,000	2,2H	MBH, Main Bay

4.2 Otolith Recovery in Returning Adults

Recovery of otoliths from returning adult sockeye salmon will occur this year. Recovery efforts will be directed at the CPF and cost recovery, and will be performed by field personnel at processing locations.

Otolith mark data will be used by ADF&G and PWSAC to measure fishery contribution and marine survival of salmon. ADF&G will provide PWSAC the preliminary otolith mark-recovery data from fishery samples by December 1 each year, and any additional otolith data from straying studies and other projects by April 1 each year. Similarly, PWSAC will provide ADF&G the independently-collected otolith mark–recovery data by April 1 each year. These data are to be the individual specimen otolith mark results.

V. ATTACHMENTS

VI. APPROVAL

Recommendation for Approval: Main Bay Hatchery Annual Management Plan, 2018

Approved via email on 4/24/2018
Casey Campbell, PWSAC, General Manager

Approved via email on 4/30/2018
Jay Baumer, Area Management Biologist, Division of Sport Fish

Approved via email on 4/26/2018
Jeremy Botz, Area Management Biologist, Division of Commercial Fisheries

Approved via email on 5/1/2018
Tom Vania, Regional Supervisor, Division of Sport Fish

Approved via email on 5/1/2018
Bert Lewis, Regional Supervisor, Division of Commercial Fisheries

Approved via email on 5/1/2018
Ethan Ford, Regional Resource Development Biologist,
Division of Commercial Fisheries

The 2018 Main Bay Hatchery Annual Management Plan is hereby recommended for approval by the Prince William Sound Regional Planning Team (RPT):

Approved via email on 5/10/2018
Thomas Sheridan, Prince William Sound RPT Chair

Approved via email on 5/10/2018
Lorraine Vercessi, PNP Hatchery Program Coordinator, Div. of Commercial Fisheries

The 2018 Main Bay Hatchery Annual Management Plan is hereby approved:

Approved via email on 5/17/2018
Tom Taube, Deputy Director, Division of Sport Fish

Approved via email on 5/16/2018
Peter Bangs, Assistant Director, Division of Commercial Fisheries

Figure 1. Main Bay Hatchery fishery management areas.

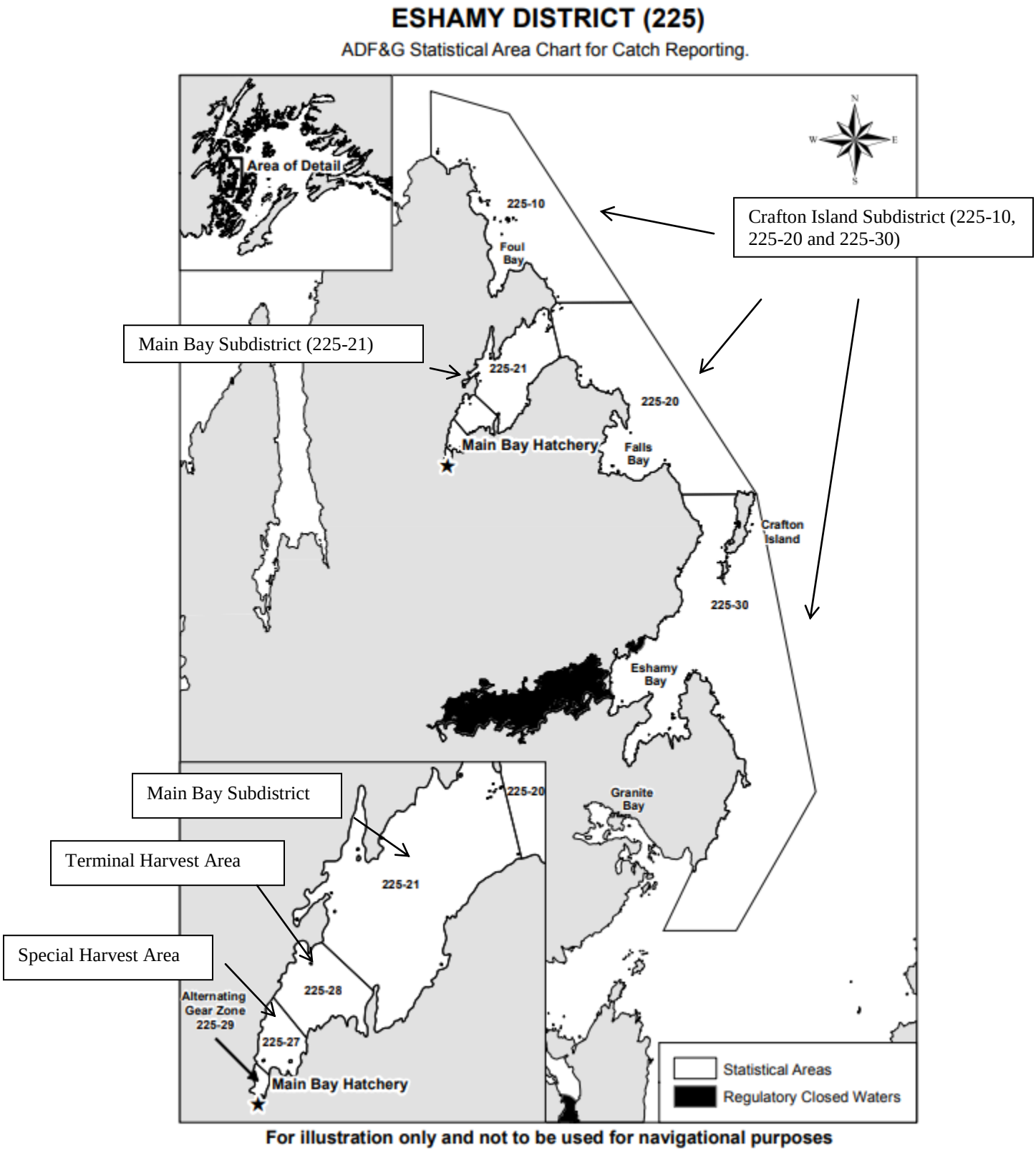

Table 1:
PRINCE WILLIAM SOUND AQUACULTURE CORPORATION
2017 HATCHERY RETURN FORECAST

SITE/ LOCATION	SPECIES	RUN TIME	ADULT RETURN ESTIMATE LOW	POINT	HIGH	EST. MARINE SURVIVAL
MBH	COGHILL SOCKEYE	JUN 15 - AUG 01	687,000	763,000	839,000	7.56%
						GH - Fry to Adult Survival
GH	CROSSWIND LAKE SOCKEYE		43,000	56,000	70,000	0.56%
	PAXSON LAKE - GI SOCKEYE		18,700	24,600	30,500	0.53%
	PAXSON LAKE SOCKEYE		4,200	5,100	5,900	0.38%
	SUMMIT LAKE SOCKEYE		3,600	5,100	6,500	0.09%
RETURNS TO REMOTE RELEASE LOCATIONS						
PORT CHALMERS	CHUM	JUN 1 - JUL 27	110,000	150,000	180,000	0.34%
CORDOVA	COHO	AUG 01 - SEP 20	2,900	5,500	8,300	7.34%
WHITTIER	COHO	AUG 01 - SEP 20	2,900	5,500	8,300	7.34%
CHENEGA	COHO	AUG 01 - SEP 20	1,900	3,700	5,500	7.34%
CHENEGA	CHINOOK	MAY 25 - JULY 10	510	660	820	1.49%
TOTAL PWSAC RETURNS						
	PINK		6,300,000	15,400,000	33,800,000	3.68%
	CHUM		3,180,000	3,720,000	4,240,000	1.95%
	COHO		53,700	101,700	153,100	7.34%
	CHINOOK		510	660	820	0.00%
	MBH - SOCKEYE - PWS		687,000	763,000	839,000	7.56%
	GH - SOCKEYE - COPPER RIVER		69,500	90,800	112,900	0.39%

TABLE 2. 2018 Planned Egg Takes

le 2.

PRINCE WILLIAM SOUND AQUACULTURE CORPORATION

2018 EGG-TAKE GOALS

SPECIES	HATCHERY	ORGINAL DONOR STOCK	EGG-TAKE LOCATION	EGG-TAKE GOAL
CHUM	WALLY NOERENBERG	WELLS RIVER	WNH	153,000,000
SOCKEYE	MAIN BAY	COGHILL LAKE	MBH	12,400,000
	GULKANA I	GULKANA RIVER	GHI	35,000,000
	GULKANA II	GULKANA RIVER	GHII	1,750,000
			TOTAL	49,150,000
PINK	ARMIN F. KOERNIG	LARSEN, EWAN, GALENA	AFK	190,000,000
	CANNERY CREEK	CANNERY CREEK	CCH	187,000,000
	WALLY NOERENBERG	LARSEN, EWAN, GALENA	WNH	148,000,000
			TOTAL	525,000,000
COHO	WALLY NOERENBERG	MILE 18, COPPER RIVER	WNH	4,000,000
			TOTAL PWSAC	731,150,000

TABLE 3. 2018 MBH/Coghill Stock Adult Return Summary.

	PROJECTED
RETURN:	763,000
BROODSTK:	8,940
FISH SALES:	0
HAT. TOTAL:	8,940
CPF TOTAL:	754,060
% EXPLOIT.:	98.8% **CPF**
	1.2% **PWSAC**

ADULT RETURN SUMMARY

HATCHERY: **MBH / Coghill Stock**
SPECIES: **Sockeye**
YEAR: **2018**

	RUN-TIMING PERCENTAGES				SHA HATCHERY ESCAPEMENT ESTIMATES				HATCHERY ESCAPEMENT SCHEDULE													
									BROODSTOCK				FISH SALES				C.P.F. HARVEST				TOTAL RETURN			
Date	Projected % Cum.	Projected % Female	Actual % Cum.	Actual % Female	Fishway Estimate	INSIDE Barrier Seine Estimate	HEEZ Estimate	OUTSIDE HEEZ Estimate	Proj. Cum.	Proj. Daily	Act. Cum.	Act. Daily	Proj. Cum.	Proj. Daily	Act. Cum.	Act. Daily	Proj. Cum.	Proj. Daily	Act. Cum.	Act. Daily	Proj. Cum.	Proj. Daily	Act. Cum.	Act. Daily
5-Jun	0.4%								37	37	0		0	0	0		3,106	3,106	0		3,142	3,142	0	0
6-Jun	0.6%								52	15	0		0	0	0		4,394	1,288	0		4,446	1,304	0	0
7-Jun	0.9%								83	31	0		0	0	0		6,971	2,577	0		7,054	2,607	0	0
8-Jun	1.4%								128	46	0		0	0	0		10,836	3,865	0		10,965	3,911	0	0
9-Jun	1.8%								159	31	0		0	0	0		13,413	2,577	0		13,572	2,607	0	0
10-Jun	2.4%								213	54	0		0	0	0		17,971	4,558	0		18,184	4,612	0	0
11-Jun	3.3%								291	78	0		0	0	0		24,511	6,540	0		24,801	6,617	0	0
12-Jun	4.1%								368	78	0		0	0	0		31,051	6,540	0		31,419	6,617	0	0
13-Jun	5.1%								460	92	0		0	0	0		38,815	7,764	0		39,275	7,856	0	0
14-Jun	6.3%								567	107	0		0	0	0		47,803	8,988	0		48,370	9,095	0	0
15-Jun	8.1%								727	160	0		0	0	0		61,286	13,483	0		62,012	13,643	0	0
16-Jun	9.3%								833	107	0		0	0	0		70,274	8,988	0		71,107	9,095	0	0
17-Jun	11.6%								1,034	201	0		0	0	0		87,226	16,952	0		88,261	17,153	0	0
18-Jun	14.9%								1,330	295	0		0	0	0		112,142	24,916	0		113,472	25,211	0	0
19-Jun	18.2%								1,625	295	0		0	0	0		137,058	24,916	0		138,683	25,211	0	0
20-Jun	21.5%								1,923	298	0		0	0	0		162,181	25,122	0		164,104	25,420	0	0
21-Jun	24.9%								2,223	300	0		0	0	0		187,510	25,329	0		189,733	25,629	0	0
22-Jun	29.9%								2,674	450	0		0	0	0		225,503	37,993	0		228,176	38,444	0	0
23-Jun	33.3%								2,974	300	0		0	0	0		250,831	25,329	0		253,805	25,629	0	0
24-Jun	37.1%								3,316	342	0		0	0	0		279,712	28,880	0		283,028	29,223	0	0
25-Jun	41.4%								3,701	385	0		0	0	0		312,143	32,432	0		315,844	32,816	0	0
26-Jun	45.7%								4,085	385	0		0	0	0		344,575	32,432	0		348,660	32,816	0	0
27-Jun	49.9%								4,458	372	0		0	0	0		375,985	31,410	0		380,443	31,783	0	0
28-Jun	53.9%								4,818	360	0		0	0	0		406,374	30,389	0		411,192	30,750	0	0
29-Jun	59.9%								5,358	540	0		0	0	0		451,958	45,584	0		457,317	46,124	0	0
30-Jun	64.0%								5,719	360	0		0	0	0		482,348	30,389	0		488,066	30,750	0	0
1-Jul	68.2%								6,099	381	0		0	0	0		514,469	32,121	0		520,568	32,502	0	0
2-Jul	72.7%								6,501	401	0		0	0	0		548,321	33,853	0		554,822	34,254	0	0
3-Jul	77.2%								6,902	401	0		0	0	0		582,174	33,853	0		589,076	34,254	0	0
4-Jul	80.6%								7,201	299	0		0	0	0		607,402	25,227	0		614,603	25,526	0	0
5-Jul	82.8%								7,398	197	0		0	0	0		624,004	16,602	0		631,402	16,799	0	0
6-Jul	86.1%								7,693	295	0		0	0	0		648,907	24,903	0		656,600	25,198	0	0
7-Jul	88.3%								7,890	197	0		0	0	0		665,509	16,602	0		673,399	16,799	0	0
8-Jul	90.2%								8,061	171	0		0	0	0		679,903	14,394	0		687,964	14,565	0	0
9-Jul	91.8%								8,205	144	0		0	0	0		692,090	12,187	0		700,295	12,331	0	0
10-Jul	93.4%								8,350	144	0		0	0	0		704,277	12,187	0		712,626	12,331	0	0
11-Jul	94.5%								8,451	101	0		0	0	0		712,835	8,559	0		721,286	8,660	0	0
12-Jul	95.2%								8,510	58	0		0	0	0		717,766	4,931	0		726,276	4,989	0	0
13-Jul	96.2%								8,597	88	0		0	0	0		725,162	7,396	0		733,759	7,484	0	0
14-Jul	96.8%								8,656	58	0		0	0	0		730,093	4,931	0		738,748	4,989	0	0
15-Jul	97.4%								8,709	53	0		0	0	0		734,593	4,501	0		743,303	4,554	0	0
16-Jul	98.0%								8,757	48	0		0	0	0		738,685	4,071	0		747,422	4,119	0	0
17-Jul	98.5%								8,806	48	0		0	0	0		742,736	4,071	0		751,542	4,119	0	0
18-Jul	98.9%								8,841	35	0		0	0	0		745,714	2,978	0		754,555	3,013	0	0
19-Jul	99.1%								8,863	22	0		0	0	0		747,598	1,884	0		756,462	1,907	0	0
20-Jul	99.4%								8,886	22	0		0	0	0		749,483	1,884	0		758,368	1,907	0	0
21-Jul	99.5%								8,897	11	0		0	0	0		750,425	942	0		759,322	953	0	0
22-Jul	99.6%								8,904	7	0		0	0	0		751,031	606	0		759,935	613	0	0
23-Jul	99.8%								8,918	14	0		0	0	0		752,242	1,212	0		761,161	1,226	0	0
24-Jul	99.9%								8,933	14	0		0	0	0		753,454	1,212	0		762,387	1,226	0	0
25-Jul	100.0%								8,940	7	0		0	0	0		754,060	606	0		763,000	613	0	0
26-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
27-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
28-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
29-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
30-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
31-Jul	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
1-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
2-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
3-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
4-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
5-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
6-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0
7-Aug	100.0%								8,940	0	0		0	0	0		754,060	0	0		763,000	0	0	0

TABLE 4. 2018 PWSAC Hatchery Egg Take Schedules

TABLE 4

PRINCE WILLIAM SOUND AQUACULTURE CORPORATION

2017 EGG-TAKE SCHEDULE

SITE	SPECIES	DATE
AFK	PINK	24-Aug – 15-Sep
CCH	PINK	24-Aug – 17-Sep
GH I	SOCKEYE	15-Aug – 15-Oct
GH II	SOCKEYE	25-Jul – 10-Aug
MBH	SOCKEYE	
MBH-COGHILL		01-Aug – 20-Aug
WNH	CHUM	01-Jul – 01-Aug
	PINK	24-Aug – 15-Sep
	COHO	19-Oct – 11-Nov

TABLE 5. 2018 PWSAC Estimated Salmon Releases

Table 5.

PRINCE WILLIAM SOUND AQUACULTURE CORPORATION

2018 ANTICIPATED SALMON RELEASES

SPECIES	HATCHERY	ORGINAL DONOR STOCK	BROOD YEAR	RELEASE LOCATION	ESTIMATED FRY/ SMOLT RELEASE
CHUM	WALLY NOERENBERG	WELLS RIVER	2017	WNH	73,000,000
			2017	PORT CHALMERS	40,400,000
			2017	AFK	19,000,000
				TOTAL	132,400,000
SOCKEYE	MAIN BAY	COGHILL LAKE	2016	MBH	10,000,000
	GULKANA I	GULKANA RIVER	2016	PAXSON LAKE	2,970,000
		GULKANA RIVER	2016	SUMMIT LAKE	0
		GULKANA RIVER	2016	CROSSWIND LAKE	10,000,000
	GULKANA II	GULKANA RIVER	2016	PAXSON LAKE	1,310,000
				TOTAL	24,280,000
PINK	ARMIN F. KOERNIG	LARSEN, EWAN, GALENA	2017	AFK	173,800,000
	CANNERY CREEK	CANNERY CREEK	2017	CCH	163,000,000
	WALLY NOERENBERG	LARSEN, EWAN, GALENA	2017	WNH	134,000,000
				TOTAL	470,800,000
COHO	WALLY NOERENBERG	CORBIN CREEK	2016	WNH	2,630,000
		CORBIN CREEK	2016	CORDOVA	0
		CORBIN CREEK	2016	WHITTIER	100,000
		CORBIN CREEK	2016	CHENEGA	50,000
				TOTAL	2,780,000
CHINOOK	WALLY NOERENBERG	SHIP CREEK	2016	CHENEGA	49,000
				GRAND TOTAL	630,309,000