

2013 ANNUAL REPORT ALASKA SALMON HATCHERY

Year Ending December 15, 2013

Hatchery name/Location	Tutka Bay Lagoon Hatchery
Permit holder name/Address	Cook Inlet Aquaculture Association 40610 Kalifornsky Beach Road Kenai, AK 99611

Person to contact regarding this report	Caroline Cherry	name
	907-283-5761 Ext. 24	phone

DECLARATION AND SIGNATURE

I declare that the information given in this annual report is, to my knowledge, true, correct, and complete.

Gary Fandrei
Name of Legal Representative

11/26/2013
Date


Signature of Representative

THE FOLLOWING PARTS ARE INCLUDED IN THIS REPORTING FORM.

Part 1. REPORT OF THIS YEAR'S PERFORMANCE

Complete the following schedules of production statistics for this year, for each species/stock/brood year combination:

Schedule A: Annual Broodstock and Initial Survival Report

Schedule B: Annual Fish Culture Production Report

Schedule C: Harvest Management and Hatchery Adult Returns

Note: One Schedule C for each species/stock/project location (release site).

Part 2. PROJECTED RETURNS FOR NEXT YEAR

Complete **Schedule D**, to provide projections for each species and each release site.

Part 3. UPDATED SCHEDULES FOR PRIOR YEAR ANNUAL REPORT

Schedule F is used to update last year's Schedule C reported adult return data.

Use this form to update the information that we have on file, if known changes have occurred or numbers have been finalized since last year's report.

**SCHEDULE A-1
ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT**

Tutka Bay Lagoon Hatchery

Complete this schedule for each species/stock of eggs taken this year.

Use lines 3-6 to report fish captured and sacrificed as broodstock (fish that died during collection of eggs).

Use line 16 to report and describe captured fish that were released alive (for example, at remote egg-take locations).

1. Species	Pinks				
2. Stock (donor stock/ancestral stock)	Tutka/Tutka				
3. Viable broodstock (spawned, eggs in incubators)	60,782	females	45,055	male	105,837 total
4. Inviabile broodstock (green/over-ripe/bad)	9,061	females	11,599	male	20,660 total
5. Unspawned fish (roe recovery, excess males)	3,217				
6. Holding mortalities (raceway, pen mortalities)	14,170				
7. Adults sacrificed for broodstock (sum 3 thru 6)	143,884				
8. Average length and weight of adults used for broodstock					
	females>	cm	1.5	kg	
	males>	cm	1.5	kg	
9. Average fecundity (eggs/female)	1,317				
10. Egg-take dates:	Aug 5 - Sept 12/13				
11. Number of green eggs taken	80,044,000				
12. Number of eggs transferred out (annotate below)	-				
13. Number of eggs destroyed (annotate below)	-				
14. Number of green eggs retained in hatchery ¹	80,044,000				
15. Number remaining in hatchery at eyed stage	64,422,000		80.48%	% survival ²	
16. Describe procedures used for egg takes and evaluation of in-hatchery survivals:					

Maturation in SW. SW eggtake. Delayed fertilization.

Biomass inventory of live and dead eggs.

1. Provide explanation if greater than number of green eggs taken.

2. Provide explanation for survivals less than 90%.

**SCHEDULE A-2
ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT**

Tutka Bay Lagoon Hatchery

Complete this schedule for each species/stock of eggs taken this year.

Use lines 3-6 to report fish captured and sacrificed as broodstock (fish that died during collection of eggs).

Use line 16 to report and describe captured fish that were released alive (for example, at remote egg-take locations).

1. Species	Pink				
2. Stock (donor stock/ancestral stock)	Port Graham/Port Graham				
3. Viable broodstock (spawned, eggs in incubators)	308	females	280	male	588 total
4. Inviabile broodstock (green/over-ripe/bad)	17	females	23	male	40 total
5. Unspawned fish (roe recovery, excess males)	-				
6. Holding mortalities (raceway, pen mortalities)	10,661				
7. Adults sacrificed for broodstock (sum 3 thru 6)	11,289				
8. Average length and weight of adults used for broodstock					
	females>	cm	1.5	kg	
	males>	cm	1.5	kg	
9. Average fecundity (eggs/female)	1,211				
10. Egg-take dates:	9/11/2013				
11. Number of green eggs taken	373,000				
12. Number of eggs transferred out (annotate below)	-	0			
13. Number of eggs destroyed (annotate below)	-	0			
14. Number of green eggs retained in hatchery ¹	373,000				
15. Number remaining in hatchery at eyed stage	225,000		60.32%	% survival ²	
16. Describe procedures used for egg takes and evaluation of in-hatchery survivals:					

Broodstock were held too long in net pens. Poor broodstock management. Incident was reported to PNP Coordinator on Sept 12, 2013

Poor conditions resulted in poor egg quality.

1. Provide explanation if greater than number of green eggs taken.

2. Provide explanation for survivals less than 90%.

SCHEDULE B-1

ANNUAL FISH CULTURE PRODUCTION REPORT

Tutka Bay Lagoon Hatchery

Complete this schedule for each species/stock of eggs (or fish) cultured this year from prior brood years. Please provide explanations for any differences in numbers of green and eyed eggs from those reported last year for this species/stock (e.g. reenumeration of inventory at eyed stage, transfers, mortality, etc.).

Species: Pink Stock: Tutka/Tutka Brood Year: 2012

A. Life Stage Information

	Actual number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green eggs	5,331,000	100.0%	
2. Eyed eggs	4,781,000	89.68%	
3. Emergent fry	4,781,000	89.68%	no enumeration at emergence.
4. Fed fry	4,353,000	81.65%	Eyed egg number minus mortalities during net pen rearing
5. Smolts		0	

B. Release Information

Site	Release			Size		Return	
	Number	Date	Life stage	gm/fish	mm/fish	Expected return	Return year(s)
Tutka Bay	4,353,000	6/25-6/30,2013	Fed Fry	0.79		131,000	2014
Total:	4,353,000						

C. Marking/Tagging

Number of fish marked or tagged (by release group and method of marking)

Release				Marking/Tagging		
Release Group ¹	Release Location	Number	Dates	Otolith Mark Pattern	Tag Code	Valid Tags
SW Net Pen	Tutka Bay	4,353,000	6/25-6/30	5,3H	NA	NA

¹Report release group as fresh or salt water; from net pen or raceway; or other rearing/release/site group description.

D. Other

Report any diseases, rearing problems, or significant mortalities among these fish.

No significant issues during rearing

Fish were pumped from net pens into transport tanks located on boat. Fish were transported to below the power line (near mouth of Tutka Bay) for release.

SCHEDULE B-2 ANNUAL FISH CULTURE PRODUCTION REPORT

Tutka Bay Lagoon Hatchery

Complete this schedule for each species/stock of eggs (or fish) cultured this year from prior brood years. Please provide explanations for any differences in numbers of green and eyed eggs from those reported last year for this species/stock (e.g. reenumeration of inventory at eyed stage, transfers, mortality, etc.).

Species: Pink

Stock: Port Graham/Port Graham

Brood Year: 2012

A. Life Stage Information

	Actual number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green eggs	16,439,000	100.0%	
2. Eyed eggs	14,259,000	86.74%	
3. Emergent fry	14,259,000	86.74%	No enumeration at emergence
4. Fed fry	14,250,000	86.68%	eyed egg number minus mortalities during net pen rearing
5. Smolts		0	

B. Release Information

Site	Release			Size		Return	
	Number	Date	Life stage	gm/fish	mm/fish	Expected return	Return year(s)
Port Graham Bay	14,250,000	6/30-7/4, 2013	Fed Fry	0.75		427,500	2014
Total:	14,250,000						

C. Marking/Tagging

Number of fish marked or tagged (by release group and method of marking)

Release				Marking/Tagging		
Release Group ¹	Release Location	Number	Dates	Otolith Mark Pattern	Tag Code	Valid Tags
SW Net Pen	Port Graham Bay	14,250,000	6/30-7/4	5H3	NA	NA

¹Report release group as fresh or salt water; from net pen or raceway; or other rearing/release/site group description.

D. Other

Report any diseases, rearing problems, or significant mortalities among these fish.

No significant issues.

Fish were directly released from the net pen site.

SCHEDULE C-1 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

Complete a separate schedule for each project (location of release/return), stock (e.g. fall or summer, if applicable), and species.

Tutka Bay Lagoon Hatchery

Species:

Location of project:

A. Hatchery Escapement

1. Cost-recovery fish (line 17a & 17b): traditional harvest and roe-recovery fish	46,238
2. Adults sacrificed as broodstock (Schedule A line 7) minus roe-recovery fish (17b)	143,884
3. Escapement for hatchery watershed (as required in permit)	20,000
4. Jacks	-
5. Other ¹ (annotate in comments section)	-
6. Other ¹ (annotate in comments section)	-
7. Other ¹ (annotate in comments section)	-
8. Total hatchery escapement	210,000

B. Common Property Harvest

9. Commercial harvest ²	
a. Troll	
b. Gillnet	
c. Seine	718
d. Other (annotate in comments section)	
Total commercial harvest	718
10. Noncommercial harvest ²	
a. Sport	5,000
b. Personal Use	
c. Subsistence	
d. Other (annotate in comments section)	
Total noncommercial harvest	5,000
11. Total Common Property Harvest (sum 9 and 10)	5,700
12. Total Return (sum 8 and 11)	215,700

13. Estimated ocean survival by brood year ²	Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)	Complete Return (yes or no)
	2011	215,840	2.65	Yes

14. Average size of fish sold	<input type="text" value="1.5"/>	length-cm	<input type="text" value="1.5"/>	wt-kg
15. Date(s) of harvest	<input type="text" value="7/13 - 8/4"/>			
16. Gear type or method used	<input type="text" value="Purse Seine"/>			

17. Disposition of Hatchery Escapement

a. Traditional harvest fish		# fish sold	lbs fish		
	adults	46,238	152,586		
	jacks				
	total	46,238	152,586		
b. Roe-recovery fish	Sold	-	-	-	
	Donated				
	Disposed ³				
	total number of fish	-	-	-	
c. Carcasses		# Sold	# Donated	# Disposed ³	Total
	Spawners	-	-	143,884	143,884
	Other (annotate in comments)				
	total number of fish	-	-	143,884	143,884
	total pounds		474,817	474,817	

Comments:

A3. CIAA estimation of escapement into the creek. ADFG estimate is 10,000.

B9. Set gill net fishery. Number from ADFG Area Biologist.

B10. CIAA estimation for sport fishery based on personal observations at the lagoon.

SCHEDULE C-2 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

Complete a separate schedule for each project (location of release/return), stock (e.g. fall or summer, if applicable), and species.

Tutka Bay Lagoon Hatchery

Species:
 Location of project:

A. Hatchery Escapement

1. Cost-recovery fish (line 17a & 17b): traditional harvest and roe-recovery fish	-
2. Adults sacrificed as broodstock (Schedule A line 7) minus roe-recovery fish (17b)	-
3. Escapement for hatchery watershed (as required in permit)	-
4. Jacks	-
5. Other ¹ (annotate in comments section)	-
6. Other ¹ (annotate in comments section)	-
7. Other ¹ (annotate in comments section)	-
8. Total return to hatchery	-

B. Common Property Harvest

9. Commercial harvest ²	
a. Troll	
b. Gillnet	
c. Seine	19,415
d. Other (annotate in comments section)	
Total commercial harvest	19,415
10. Noncommercial harvest ²	
a. Sport	NA
b. Personal Use	
c. Subsistence	
d. Other (annotate in comments section)	
Total noncommercial harvest	-
11. Total Common Property Harvest (sum 9 and 10)	19,415
12. Total Return (sum 8 and 11)	19,415

13. Estimated ocean survival by brood year ²	Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)	Complete Return (yes or no)
	2011	19,415	0.65	Yes

14. Average size of fish sold	<input type="text" value="Unknown"/>	length-cm	<input type="text" value="1.5"/>	wt-kg
15. Date(s) of harvest	<input type="text" value="Purse Seine"/>			
16. Gear type or method used	<input type="text" value="Purse Seine"/>			

17. Disposition of Hatchery Escapement

a. Traditional harvest fish		# fish sold	lbs fish		
	adults				
	jacks				
	total	-	-		
b. Roe-recovery fish		# fish	lbs fish	lbs roe	
	Sold				
	Donated				
	Disposed ³				
	total number of fish	-	-	-	
c. Carcasses		# Sold	# Donated	# Disposed ³	Total
	Spawners				-
	Other (annotate in comments)				-
	total number of fish	-	-	-	-
	total pounds				-

Comments:

B9. Purse seine commercial fishery. Number from ADFG Area Biologist.

B10. Number of fish caught in sport fishery is unknown at this time. No estimation can be made since no personal observations were made.

¹. "Other": use one line per category (e.g. fish remaining in salt water, sea lion predation, etc.).

SCHEDULE D PROJECTED RETURNS FOR 2014

Please report multiple year class returns separately by brood year.

Species	Brood Year	Release Site	Total number of fish expected	Range of expected return	
				minimum	maximum
Pink	2012	Tutka Bay Lagoon	131,000	87,000	174,000
Pink	2012	Port Graham Bay	427,500	285,000	570,000

COMMENTS:

Please provide additional information on ocean-survival calculations (i.e. percentages used, etc.)

Tutka fry release = 4,353,000. Port Graham fry release = 14,250,000

Expected survival = 3% (range = 2% to 4%) for both locations and stocks.
