

# 2019 ANNUAL REPORT

## ALASKAN SALMON HATCHERY

Year ending December 15, 2019

Hatchery name/Location	<b>PORT ARMSTRONG</b>
Permit holder name/Address	Ben Contag

Person to contact	Ben Contag	name
regarding this report	(907)586-3443	phone

Schedule A - Egg-take

ID	Brood Year	Species	Ancestral Stock	Donor Stock	Egg-take Green	Eggs Retained	Eggs Survived
1	2019	CHUM	HIDDEN FALLS	PORT ARMSTRONG H	57,293,201	57,293,201	54,304,309
2	2019	PINK	SASHIN CR	PORT ARMSTRONG H	41,737,626	41,737,626	40,578,284
3	2019	COHO	SASHIN CR	PORT ARMSTRONG H	4,838,400	4,838,400	
4	2019	CHINOOK	UNUK R 101-75	PORT ARMSTRONG H			

Schedule B - Section A - Life Stage Information

ID	Brood Year	Species	Ancestral Stock	Donor Stock	Green	Eyed	Emg Fry	Fed Fry	Smolt
1	2018	CHUM	KADASHAN R	PORT ARMSTRONG H	57,029,970	54,741,081	51,072,021	37,185,005	
2	2018	PINK	SASHIN CR	PORT ARMSTRONG H	40,206,672	39,153,941	38,587,073	36,787,073	
3	2018	COHO	DEEP COVE 109-10	PORT ARMSTRONG H	4,828,800	4,828,000	4,087,335		3,685,148
4	2017	COHO	SASHIN CR	PORT ARMSTRONG H	6,097,997	5,097,633	3,881,172		3,732,285

Schedule B - Section C - Release

ID	Release ID/Tag Code	Brood Year	Species	Ancestral Stock	Donor Stock	Site	Total Released
4	045040	2017	COHO	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	1,628,774
4	045041	2017	COHO	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	1,019,479
4	045042	2017	COHO	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	1,084,005
1	I01195AKI001	2018	CHUM	KADASHAN R	PORT ARMSTRONG H	PORT ARMSTRONG109-10	16,113,591
1	I01195AKI002	2018	CHUM	KADASHAN R	PORT ARMSTRONG H	PORT ARMSTRONG109-10	21,071,414
2	I01196AKI001	2018	PINK	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	26,195,497
2	I01196AKI002	2018	PINK	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	10,591,576

Schedule C - Return

ID	Species	Ancestral Stock	Donor Stock	Project	Cost Recovery	Comm Property	Total Return
1	CHUM	HIDDEN FALLS	PORT ARMSTRONG H	PORT ARMSTRONG	116,528	18,723	187,226
2	PINK	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG	127,911	91,131	303,771
3	COHO	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG	72,558	77,994	179,165
4	CHINOOK	UNUK R 101-75	PORT ARMSTRONG H	PORT ARMSTRONG	985	50	1,049

Schedule F - Return

ID	Species	Stock	Project	Cost Recovery	Comm Property	Total Return
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## Schedule A-1

### 2019 ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT

**PORT ARMSTRONG**

Continued to

- |  |   |   |  |  |  |
|--|---|---|--|--|--|
| 1. Species   | <input style="width: 300px; height: 15px;" type="text" value="CHUM"/>             |   |  |  |  |
| 2. Donor stock   | <input style="width: 300px; height: 15px;" type="text" value="PORT ARMSTRONG H"/> |   |  |  |  |
| 3. Ancestral stock   | <input style="width: 300px; height: 15px;" type="text" value="HIDDEN FALLS"/>     |   |  |  |  |
| 4. Viable broodstock (spawned, eggs in incubators)         | <input style="width: 80px; height: 15px;" type="text" value="28,260"/>            | females   | <input style="width: 80px; height: 15px;" type="text" value="23,370"/> | males  | <input style="width: 80px; height: 15px;" type="text" value="51,630"/> total |
| 5. Inviabile broodstock (green/over-ripe/bad)              | <input style="width: 80px; height: 15px;" type="text" value="329"/>               | females   | <input style="width: 80px; height: 15px;" type="text"/>                | males  | <input style="width: 80px; height: 15px;" type="text" value="329"/> total    |
| 6. Unspawned fish (roe recovery, excess males)             | <input style="width: 80px; height: 15px;" type="text" value="75"/>                |   |  |  |  |
| 7. Holding mortalities (raceway, pen mortalities)          | <input style="width: 80px; height: 15px;" type="text" value="203"/>               |   |  |  |  |
| 8. Adults sacrificed for broodstock (sum 4 thru 7)         | <input style="width: 80px; height: 15px;" type="text" value="52,237"/>            |   |  |  |  |
| 9. Average length and weight of adults used for broodstock |   |   |  |  |  |
|  | Females   | <input style="width: 80px; height: 15px;" type="text"/> | mm   | <input style="width: 80px; height: 15px;" type="text" value="3.64"/> | kg   |
|  | Males   | <input style="width: 80px; height: 15px;" type="text"/> | mm   | <input style="width: 80px; height: 15px;" type="text" value="3.64"/> | kg   |
| 10. Average fecundity (eggs/female)                        | <input style="width: 80px; height: 15px;" type="text" value="2,027"/>             | <input type="checkbox"/> Override auto calculation      |  |  |  |
| 11. Egg-take dates (first date)                            | <input style="width: 100%; height: 15px;" type="text" value="07/27/2019"/>        |   |  |  |  |
| 12. Egg-take dates (last date)                             | <input style="width: 100%; height: 15px;" type="text" value="08/26/2019"/>        |   |  |  |  |
| 13. Number of green eggs taken                             | <input style="width: 100%; height: 15px;" type="text" value="57,293,201"/>        |   |  |  |  |

14-16. Transfers, Morts, and Culls

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input style="width: 100px; height: 15px;" type="text"/>

- |  |  |  |   |          |  |
|--|--|--|---|----------|--|
| 17. Number of green eggs retained in hatchery  | <input style="width: 80px; height: 15px;" type="text" value="57,293,201"/> |  |   |          |  |
| 18. Number remaining in hatchery at eyed stage | <input style="width: 80px; height: 15px;" type="text" value="54,304,309"/> | <input style="width: 80px; height: 15px;" type="text" value="94.783"/> | % | survival | <input type="checkbox"/> Override auto calculation |
19. Describe procedures used for egg takes and evaluation of in-hatchery survivals:

Entered By

Date Last Modified

## Schedule A-2

### 2019 ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT

**PORT ARMSTRONG**

Continued to

1. Species	PINK					
2. Donor stock	PORT ARMSTRONG H					
3. Ancestral stock	SASHIN CR					
4. Viable broodstock (spawned, eggs in incubators)	26,663	females	26,359	males	53,022	total
5. Inviabile broodstock (green/over-ripe/bad)	971	females		males	971	total
6. Unspawned fish (roe recovery, excess males)	1,660					
7. Holding mortalities (raceway, pen mortalities)	540					
8. Adults sacrificed for broodstock (sum 4 thru 7)	56,193					
9. Average length and weight of adults used for broodstock						
	Females		mm		kg	
	Males		mm		kg	
10. Average fecundity (eggs/female)	1,565	<input type="checkbox"/> Override auto calculation				
11. Egg-take dates (first date)	09/10/2019					
12. Egg-take dates (last date)	09/21/2019					
13. Number of green eggs taken	41,737,626					

14-16. Transfers, Morts, and Culls

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						

17. Number of green eggs retained in hatchery	41,737,626					
18. Number remaining in hatchery at eyed stage	40,578,284	97.222	% survival	<input type="checkbox"/> Override auto calculation		
19. Describe procedures used for egg takes and evaluation of in-hatchery survivals:						

Entered By

Date Last Modified

## Schedule A-3

### 2019 ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT

**PORT ARMSTRONG**

Continued to

1. Species	<input style="width: 300px; height: 15px;" type="text" value="COHO"/>				
2. Donor stock	<input style="width: 300px; height: 15px;" type="text" value="PORT ARMSTRONG H"/>				
3. Ancestral stock	<input style="width: 300px; height: 15px;" type="text" value="SASHIN CR"/>				
4. Viable broodstock (spawned, eggs in incubators)	<input style="width: 60px; height: 15px;" type="text" value="1,512"/>	females	<input style="width: 60px; height: 15px;" type="text" value="1,453"/>	males	<input style="width: 60px; height: 15px;" type="text" value="2,965"/> total
5. Inviabile broodstock (green/over-ripe/bad)	<input style="width: 60px; height: 15px;" type="text" value="48"/>	females	<input style="width: 60px; height: 15px;" type="text"/>	males	<input style="width: 60px; height: 15px;" type="text" value="48"/> total
6. Unspawned fish (roe recovery, excess males)	<input style="width: 300px; height: 15px;" type="text"/>				
7. Holding mortalities (raceway, pen mortalities)	<input style="width: 60px; height: 15px;" type="text" value="600"/>				
8. Adults sacrificed for broodstock (sum 4 thru 7)	<input style="width: 60px; height: 15px;" type="text" value="3,613"/>				
9. Average length and weight of adults used for broodstock					
	Females	<input style="width: 60px; height: 15px;" type="text"/>	mm	<input style="width: 60px; height: 15px;" type="text" value="4.09"/>	kg
	Males	<input style="width: 60px; height: 15px;" type="text"/>	mm	<input style="width: 60px; height: 15px;" type="text" value="4.09"/>	kg
10. Average fecundity (eggs/female)	<input style="width: 60px; height: 15px;" type="text" value="3,200"/>		<input type="checkbox"/> Override auto calculation		
11. Egg-take dates (first date)	<input style="width: 100px; height: 15px;" type="text" value="10/20/2019"/>				
12. Egg-take dates (last date)	<input style="width: 100px; height: 15px;" type="text" value="10/31/2019"/>				
13. Number of green eggs taken	<input style="width: 100px; height: 15px;" type="text" value="4,838,400"/>				

14-16. Transfers, Morts, and Culls

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input style="width: 60px; height: 15px;" type="text"/>

17. Number of green eggs retained in hatchery	<input style="width: 100px; height: 15px;" type="text" value="4,838,400"/>				
18. Number remaining in hatchery at eyed stage	<input style="width: 60px; height: 15px;" type="text"/>	<input style="width: 60px; height: 15px;" type="text"/>	% survival	<input type="checkbox"/> Override auto calculation	
19. Describe procedures used for egg takes and evaluation of in-hatchery survivals:					

Entered By

Date Last Modified

## Schedule A-4

### 2019 ANNUAL BROODSTOCK AND INITIAL SURVIVAL REPORT

**PORT ARMSTRONG**

Continued to

- 1. Species
- 2. Donor stock
- 3. Ancestral stock
- 4. Viable broodstock (spawned, eggs in incubators)  females  males  total
- 5. Inviabile broodstock (green/over-ripe/bad)  females  males  total
- 6. Unspawned fish (roe recovery, excess males)
- 7. Holding mortalities (raceway, pen mortalities)
- 8. Adults sacrificed for broodstock (sum 4 thru 7)
- 9. Average length and weight of adults used for broodstock
  - Females  mm  kg
  - Males  mm  kg
- 10. Average fecundity (eggs/female)   Override auto calculation
- 11. Egg-take dates (first date)
- 12. Egg-take dates (last date)
- 13. Number of green eggs taken

14-16. Transfers, Morts, and Culls

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input style="width: 100px; height: 15px;" type="text"/>

- 17. Number of green eggs retained in hatchery
- 18. Number remaining in hatchery at eyed stage   % survival  Override auto calculation
- 19. Describe procedures used for egg takes and evaluation of in-hatchery survivals:

No eggs were taken because AKI has discontinued rearing chinook salmon at the Port Armstrong Hatchery.

Entered By

Date Last Modified

## Schedule B-1

### 2019 ANNUAL FISH CULTURE PRODUCTION REPORT

**PORT ARMSTRONG**

Species

Donor Stock

Brood Year

Ancestral Stock

Continued from  to

**A. Life Stage Information**

	Acutal Number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green Eggs	57,029,970	100	
2. Eyed Eggs	54,741,081	95.99	
3. Emergent Fry	51,072,021	89.55	issues with small eggs during incubation
4. Fed Fry	37,185,005	65.20	a lot of drop outs especially in fish from last egg takes more than likley due to very small eggs
5. Smolts			

**B. Transfers, Morts, and Culls**

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input type="text"/>

**C. Release Information**

Release ID/ Tag Code	FTP	Ancestral Stock	Donor Stock	Site	Date Last Released	Life Stage	Total
I011195AKI001	06J-1011(1)	KADASHAN R	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/10/2019	FED FRY	16,113,591
I011195AKI002	06J-1011(1)	KADASHAN R	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/10/2019	FED FRY	21,071,414
Total Released							<input type="text" value="37,185,005"/>

**D. Other**

# Untagged Release

Annual Report: 2019, SCHEDULE B-1

Release ID Code: !01195AKI001

## General Information

Project Leader:	CONTAG	Species:	CHUM	Rearing Type:	HATCHERY
Agency:	AKI	Brood Year:	2018	Release Type:	PRODUCTION
Division/Section:		Adult Run:	SUMMER	Mark Type:	TM
Facility:	PORT ARMSTRONG	Release Group:	LARGES	Thermal Mark ID:	PORTARMSTRONG18CHUMLL
Donor Stock:	PORT ARMSTRONG H	FTP:	06J-1011(1)	Hatch Code:	6H3
Ancestral Stock:	KADASHAN R	Experimental Class:			

Experimental Narrative: 250 characters max.

## Untagged Release Information

Release Supervisor:	CONTAG	Release Stage:	FED FRY
Release Site:	PORT ARMSTRONG109-10	Unmarked Counting Method:	BOOK ESTIMATE
Anadromous Stream #:		Expected Survival:	NORMAL

Size at Release		Release Dates		Total Fish Released
Weight (g):	2.76	Began:	05/08/2019	16,113,591
Fork Length (mm):		Ended:	05/10/2019	

Comments: 250 characters max.

ADDED MARK ID BASED ON HATCH CODE ENTERED ON ONLINE RELEASE ENTRY FORM (EK 1/28/20)

# Untagged Release

Annual Report: 2019, SCHEDULE B-1

Release ID Code: 101195AKI002

## General Information

Project Leader:	CONTAG	Species:	CHUM	Rearing Type:	HATCHERY
Agency:	AKI	Brood Year:	2018	Release Type:	PRODUCTION
Division/Section:		Adult Run:	SUMMER	Mark Type:	TM
Facility:	PORT ARMSTRONG			Thermal Mark ID:	PORTARMSTRONG18CHUM
Donor Stock:	PORT ARMSTRONG H	Release Group:	REGULARS	Hatch Code:	3H4
Ancestral Stock:	KADASHAN R	FTP:	06J-1011(1)	Experimental Class:	

Experimental Narrative: 250 characters max.

## Untagged Release Information

Release Supervisor:	CONTAG	Release Stage:	FED FRY
Release Site:	PORT ARMSTRONG109-10	Unmarked Counting Method:	BOOK ESTIMATE
Anadromous Stream #:		Expected Survival:	NORMAL

Size at Release		Release Dates		Total Fish Released
Weight (g):	1.99	Began:	05/10/2019	21,071,414
Fork Length (mm):		Ended:	05/10/2019	

Comments: 250 characters max.

ADDED MARK ID BASED ON HATCH CODE ENTERED ON ONLINE RELEASE ENTRY FORM (EK 1/28/20)



## Schedule B-2

### 2019 ANNUAL FISH CULTURE PRODUCTION REPORT

**PORT ARMSTRONG**

Species

Donor Stock

Brood Year

Ancestral Stock

Continued from  to

**A. Life Stage Information**

	Actual Number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green Eggs	40,206,672	100	
2. Eyed Eggs	39,153,941	97.38	
3. Emergent Fry	38,587,073	95.97	
4. Fed Fry	36,787,073	91.49	
5. Smolts			

**B. Transfers, Morts, and Culls**

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input type="text"/>

**C. Release Information**

Release ID/ Tag Code	FTP	Ancestral Stock	Donor Stock	Site	Date Last Released	Life Stage	Total
I01196AKI002	98J-1009(2)	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/5/2019	FED FRY	10,591,576
I01196AKI001	98J-1009(2)	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/5/2019	FED FRY	26,195,497
Total Released							<input type="text" value="36,787,073"/>

**D. Other**

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# Untagged Release

Annual Report: 2019, SCHEDULE B-2

Release ID Code: !01196AKI002

## General Information

Project Leader:	CONTAG	Species:	PINK	Rearing Type:	HATCHERY
Agency:	AKI	Brood Year:	2018	Release Type:	PRODUCTION
Division/Section:		Adult Run:	SUMMER	Mark Type:	TM
Facility:	PORT ARMSTRONG	Release Group:	INSIDE BAY	Thermal Mark ID:	PORTARMSTRONG18B
Donor Stock:	PORT ARMSTRONG H	FTP:	98J-1009(2)	Hatch Code:	3H3
Ancestral Stock:	SASHIN CR			Experimental Class:	

Experimental Narrative: 250 characters max.

## Untagged Release Information

Release Supervisor:	CONTAG	Release Stage:	FED FRY
Release Site:	PORT ARMSTRONG109-10	Unmarked Counting Method:	BOOK ESTIMATE
Anadromous Stream #:		Expected Survival:	NORMAL

Size at Release		Release Dates		Total Fish Released		
Weight (g):	0.77	Began:	05/05/2019	Ended:	05/05/2019	10,591,576
Fork Length (mm):						

Comments: 250 characters max.

ADDED MARK ID BASED ON HATCH CODE ENTERED ON ONLINE RELEASE ENTRY FORM (EK 1/27/20)

# Untagged Release

Annual Report: 2019, SCHEDULE B-2

Release ID Code: !01196AKI001

## General Information

Project Leader:	CONTAG	Species:	PINK	Rearing Type:	HATCHERY
Agency:	AKI	Brood Year:	2018	Release Type:	PRODUCTION
Division/Section:		Adult Run:	SUMMER	Mark Type:	TM
Facility:	PORT ARMSTRONG	Release Group:	TOW OUTS	Thermal Mark ID:	PORTARMSTRONG18
Donor Stock:	PORT ARMSTRONG H	FTP:	98J-1009(2)	Hatch Code:	3H
Ancestral Stock:	SASHIN CR			Experimental Class:	

Experimental Narrative: 250 characters max.

## Untagged Release Information

Release Supervisor:	CONTAG	Release Stage:	FED FRY
Release Site:	PORT ARMSTRONG109-10	Unmarked Counting Method:	BOOK ESTIMATE
Anadromous Stream #:		Expected Survival:	NORMAL

Size at Release		Release Dates		Total Fish Released		
Weight (g):	0.86	Began:	05/05/2019	Ended:	05/05/2019	26,195,497
Fork Length (mm):						

Comments: 250 characters max.

ADDED MARK ID BASED ON HATCH CODE ENTERED ON ONLINE RELEASE ENTRY FORM (EK 1/27/20)

## Schedule B-3

### 2019 ANNUAL FISH CULTURE PRODUCTION REPORT

**PORT ARMSTRONG**

Species

Donor Stock

Brood Year

Ancestral Stock

Continued from  to

**A. Life Stage Information**

	Actual Number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green Eggs	4,828,800	100	
2. Eyed Eggs	4,828,000	99.98	356,315 BKD positive eggs were destroyed and 282,553 extra eggs were discarded.
3. Emergent Fry	4,087,335	84.64	
4. Fed Fry			
5. Smolts	3,685,148	76.32	74,136 fish were lost due to hole in net and 258,450 fish lost due to hole in raceway.

**B. Transfers, Morts, and Culls**

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Total Transfers, Morts, and Culls						<input type="text"/>

**C. Release Information**

Release ID/ Tag Code	FTP	Ancestral Stock	Donor Stock	Site	Date Last Released	Life Stage	Total
Total Released							<input type="text"/>

**D. Other**

## Schedule B-4

### 2019 ANNUAL FISH CULTURE PRODUCTION REPORT

**PORT ARMSTRONG**

Species

Donor Stock

Brood Year

Ancestral Stock

Continued from  to

**A. Life Stage Information**

	Actual Number	% cum survival	Annotate transfers between hatcheries, significant mortalities, or provide other descriptive comments.
1. Green Eggs	6,097,997	100	
2. Eyed Eggs	5,097,633	83.60	
3. Emergent Fry	3,881,172	63.65	918,000 eyed eggs transferred to Hlidden Falls Hatchery (see transfer below).
4. Fed Fry			
5. Smolts	3,732,285	61.21	

**B. Transfers, Morts, and Culls**

Transfer Type	Date	Life Stage	FTP	Direction	Site/Discard Cause	Total
Transferred	1/26/2018	EYED EGG		TO	HIDDEN FALLS H	918,000
Total Transfers, Morts, and Culls						-918,000

**C. Release Information**

Release ID/ Tag Code	FTP	Ancestral Stock	Donor Stock	Site	Date Last Released	Life Stage	Total
045042	98J-1010(3)	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/23/2019	SMOLT	1,084,005
045041	98J-1010(3)	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/17/2019	SMOLT	1,019,479
045040	98J-1010(3)	SASHIN CR	PORT ARMSTRONG H	PORT ARMSTRONG109-10	5/16/2019	SMOLT	1,628,774
Total Released							3,732,258

**D. Other**

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**Tagged Release**

Annual Report: **2019, SCHEDULE B-4**

Tag Code:  Beg. Seq.:  End. Seq.:

**General Information**

Project Leader:	<input type="text" value="CONTAG"/>	Species:	<input type="text" value="COHO"/>	Rearing Type:	<input type="text" value="HATCHERY"/>
Agency:	<input type="text" value="AKI"/>	Adult Run:	<input type="text" value="FALL"/>	Release Type:	<input type="text" value="PRODUCTION"/>
Division/Section:	<input type="text"/>	Brood Year:	<input type="text" value="2017"/>	Mark Type Code:	<input type="text" value="AD"/>
Facility:	<input type="text" value="PORT ARMSTRONG"/>	Release Group:	<input type="text" value="FWOW"/>	Thermal Mark ID:	<input type="text"/>
Donor Stock:	<input type="text" value="PORT ARMSTRONG H"/>	FTP:	<input type="text" value="98J-1010(3)"/>	Hatch Code:	<input type="text"/>
Ancestral Stock:	<input type="text" value="SASHIN CR"/>	Experimental Class:	<input type="text"/>		

Experimental Narrative: 250 characters max.

Statistical Replicates:

**Tagging Information**

Tagging Supervisor:  Size of Tagged Fish:  grams # Naturally Missing Ad Fins:

Total Number Injected:	<input type="text" value="22,914"/>	Total Overnight Morts:	<input type="text" value="10"/>	Total Adjusted Tagged:	<input type="text" value="22,904"/>
Average Tag Retention:	<input type="text" value="99.8%"/>	Total Retention Sample:	<input type="text"/>	Total Valid Tagged:	<input type="text" value="22,858"/>

**Release Information**

Release Supervisor:	<input type="text" value="CONTAG"/>	Release Stage:	<input type="text" value="SMOLT"/>
Release Site:	<input type="text" value="PORT ARMSTRONG109-10"/>	Unmarked Counting Method:	<input type="text" value="BOOK ESTIMATE"/>
Anadromous Stream #:	<input type="text"/>	Expected Survival:	<input type="text" value="NORMAL"/>
Time of Release (24-hour clock):	<input type="text"/>	Release Strategy:	<input type="text" value="FORCED"/>

Release Dates		Date of Final Tag	Tag Retention	% Tag	Size at Release	
Began	Ended	Retention Test	Sample Ratio	Retention	Weight	Fork Length
<input type="text" value="5/19/2019"/>	<input type="text" value="5/23/2019"/>	<input type="text" value="3/20/2019"/>	<input type="text" value="224 / 230"/>	<input type="text" value="97.4%"/>	<input type="text" value="28.33"/>	<input type="text"/>
Total Injected	Overnight Morts	Morts After Tagging	Surviving Tagged Fish	Best Estimator of Tag Retention		
<input type="text" value="22,914"/>	<input type="text" value="10"/>	<input type="text" value="27"/>	<input type="text" value="22,877"/>	<input type="text" value="97.4%"/>		
Marked Fish Having Tags	Marked Fish That Shed Tags	Fish Released NOT Marked but Represented	Failed Marks	Total Unmarked Fish Released	Total Fish Released	Tag Ratio
<input type="text" value="22,282"/>	<input type="text" value="595"/>	<input type="text" value="1,061,128"/>	<input type="text" value="0"/>	<input type="text" value="1,061,128"/>	<input type="text" value="1,084,005"/>	<input type="text" value="48.649"/>

Comments: 250 characters max.

**Tagged Release**

Annual Report: **2019, SCHEDULE B-4**

Tag Code:  Beg. Seq.:  End. Seq.:

**General Information**

Project Leader:	<input type="text" value="CONTAG"/>	Species:	<input type="text" value="COHO"/>	Rearing Type:	<input type="text" value="HATCHERY"/>
Agency:	<input type="text" value="AKI"/>	Adult Run:	<input type="text" value="FALL"/>	Release Type:	<input type="text" value="PRODUCTION"/>
Division/Section:	<input type="text"/>	Brood Year:	<input type="text" value="2017"/>	Mark Type Code:	<input type="text" value="AD"/>
Facility:	<input type="text" value="PORT ARMSTRONG"/>	Release Group:	<input type="text" value="FALL ENTRY"/>	Thermal Mark ID:	<input type="text"/>
Donor Stock:	<input type="text" value="PORT ARMSTRONG H"/>	FTP:	<input type="text" value="98J-1010(3)"/>	Hatch Code:	<input type="text"/>
Ancestral Stock:	<input type="text" value="SASHIN CR"/>	Experimental Class:	<input type="text"/>		

Experimental Narrative: 250 characters max.

Statistical Replicates:

**Tagging Information**

Tagging Supervisor:  Size of Tagged Fish:  grams # Naturally Missing Ad Fins:

Total Number Injected:	<input type="text" value="22,659"/>	Total Overnight Morts:	<input type="text" value="0"/>	Total Adjusted Tagged:	<input type="text" value="22,659"/>
Average Tag Retention:	<input type="text" value="99.6%"/>	Total Retention Sample:	<input type="text"/>	Total Valid Tagged:	<input type="text" value="22,568"/>

**Release Information**

Release Supervisor:	<input type="text" value="CONTAG"/>	Release Stage:	<input type="text" value="SMOLT"/>
Release Site:	<input type="text" value="PORT ARMSTRONG109-10"/>	Unmarked Counting Method:	<input type="text" value="BOOK ESTIMATE"/>
Anadromous Stream #:	<input type="text"/>	Expected Survival:	<input type="text" value="NORMAL"/>
Time of Release (24-hour clock):	<input type="text" value="1300"/>	Release Strategy:	<input type="text" value="FORCED"/>

Release Dates		Date of Final Tag	Tag Retention	% Tag	Size at Release	
Began	Ended	Retention Test	Sample Ratio	Retention	Weight	Fork Length
<input type="text" value="5/17/2019"/>	<input type="text" value="5/17/2019"/>	<input type="text" value="3/20/2019"/>	<input type="text" value="508 / 522"/>	<input type="text" value="97.3%"/>	<input type="text" value="31"/>	<input type="text"/>

Total Injected	Overnight Morts	Morts After Tagging	Surviving Tagged Fish	Best Estimator of Tag Retention
<input type="text" value="22,659"/>	<input type="text" value="0"/>	<input type="text" value="798"/>	<input type="text" value="21,861"/>	<input type="text" value="97.3%"/>

Marked Fish Having Tags	Marked Fish That Shed Tags	Fish Released NOT Marked but Represented	Failed Marks	Total Unmarked Fish Released	Total Fish Released	Tag Ratio
<input type="text" value="21,271"/>	<input type="text" value="590"/>	<input type="text" value="997,618"/>	<input type="text" value="0"/>	<input type="text" value="997,618"/>	<input type="text" value="1,019,479"/>	<input type="text" value="47.928"/>

Comments: 250 characters max.

**Tagged Release**

Annual Report: **2019, SCHEDULE B-4**

Tag Code:  Beg. Seq.:  End. Seq.:

**General Information**

Project Leader:	<input type="text" value="CONTAG"/>	Species:	<input type="text" value="COHO"/>	Rearing Type:	<input type="text" value="HATCHERY"/>
Agency:	<input type="text" value="AKI"/>	Adult Run:	<input type="text" value="FALL"/>	Release Type:	<input type="text" value="PRODUCTION"/>
Division/Section:	<input type="text"/>	Brood Year:	<input type="text" value="2017"/>	Mark Type Code:	<input type="text" value="AD"/>
Facility:	<input type="text" value="PORT ARMSTRONG"/>	Release Group:	<input type="text" value="SUMMER ENTRY TO SW"/>	Thermal Mark ID:	<input type="text"/>
Donor Stock:	<input type="text" value="PORT ARMSTRONG H"/>	FTP:	<input type="text" value="98J-1010(3)"/>	Hatch Code:	<input type="text"/>
Ancestral Stock:	<input type="text" value="SASHIN CR"/>	Experimental Class:	<input type="text"/>		

Experimental Narrative: 250 characters max.

Statistical Replicates:

**Tagging Information**

Tagging Supervisor:  Size of Tagged Fish:  grams # Naturally Missing Ad Fins:

Total Number Injected:	<input type="text" value="22,473"/>	Total Overnight Morts:	<input type="text" value="25"/>	Total Adjusted Tagged:	<input type="text" value="22,448"/>
Average Tag Retention:	<input type="text" value="99.2%"/>	Total Retention Sample:	<input type="text"/>	Total Valid Tagged:	<input type="text" value="22,268"/>

**Release Information**

Release Supervisor:	<input type="text" value="CONTAG"/>	Release Stage:	<input type="text" value="SMOLT"/>
Release Site:	<input type="text" value="PORT ARMSTRONG109-10"/>	Unmarked Counting Method:	<input type="text" value="BOOK ESTIMATE"/>
Anadromous Stream #:	<input type="text"/>	Expected Survival:	<input type="text" value="NORMAL"/>
Time of Release (24-hour clock):	<input type="text" value="1300"/>	Release Strategy:	<input type="text" value="FORCED"/>

Release Dates		Date of Final Tag	Tag Retention	% Tag	Size at Release	
Began	Ended	Retention Test	Sample Ratio	Retention	Weight	Fork Length
<input type="text" value="5/14/2019"/>	<input type="text" value="5/16/2019"/>	<input type="text" value="3/20/2019"/>	<input type="text" value="350 / 358"/>	<input type="text" value="97.8%"/>	<input type="text" value="31.16"/>	<input type="text"/>

Total	Overnight	Morts After	Surviving	Best Estimator of
Injected	Morts	Tagging	Tagged Fish	Tag Retention
<input type="text" value="22,473"/>	<input type="text" value="25"/>	<input type="text" value="92"/>	<input type="text" value="22,356"/>	<input type="text" value="97.8%"/>

Marked Fish	Marked Fish	Fish Released NOT	Failed	Total Unmarked	Total Fish	Tag
Having Tags	That Shed Tags	Marked but Represented	Marks	Fish Released	Released	Ratio
<input type="text" value="21,864"/>	<input type="text" value="492"/>	<input type="text" value="1,606,418"/>	<input type="text" value="0"/>	<input type="text" value="1,606,418"/>	<input type="text" value="1,628,774"/>	<input type="text" value="74.496"/>

Comments: 250 characters max.



## Schedule C-1

### 2019 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

PORT ARMSTRONG

Species **CHUM**

Donor Stock **PORT ARMSTRONG H**

Project **PORT ARMSTRONG**

Ancestral Stock **HIDDEN FALLS**

**A. Hatchery Escapement**

1. Cost-recovery (line 12a & 12b): traditional harvest and roe-recovery fish	116,528	
2. Adults sacrificed as broodstock (Schedule A line 8) minus roe-recovery fish (12b)	51,975	
3. Escapement for hatchery watershed (as required in permit)		
4. Jacks		
5. Other (annotate for each Other escapement return)	Other escapement	Other escapement comment
<b>6. Total hatchery escapement</b>	<b>168,503</b>	

**Other Comments**

**B. Common Property Harvest**

7. Commercial Harvest		
a. Troll	18,723	
b. Gillnet		
c. Seine		
d. Other (annotate for each Other commercial return)	Other commercial	Other commercial comment
<b>Total Commercial Harvest</b>	<b>18,723</b>	

8. Noncommercial Harvest		
a. Sport		
b. Personal Use		
c. Subsistence		
d. Other (annotate for each Other noncommercial return)	Other noncommercial	Other noncommercial comment
<b>Total Noncommercial Harvest</b>		

9. Total Common Property Harvest (sum 7 and 8)		18,723
10. Total Return (sum 6 and 9)		187,226

11. Estimated ocean survival by brood year	Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)	Complete Return (yes or no)

**Total Ocean Survival**

**Harvest Comments**

A contribution of 10% of the overall Port Armstrong Hatchery chum run to the troll fleet is an annual estimate.

**12. Disposition of Hatchery Escapement**

a. Traditional harvest fish		# fish sold	lbs fish		
	adults	116,266	887,112		
	jacks				
	total	116,266	887,112		
b. Roe-recovery fish		# fish	lbs fish	lbs roe	
	Sold	262		262	
	Donated				
	Disposed				
	total number of fish	262		262	
c. Carcasses		# Sold	# Donated	# Disposed	Total
	Spawners	51,571			51,571
	Other (annotate in comments)				
	total number of fish	51,571			51,571
	total pounds				

**Disposition Comments**

Chum carcasses were sold to processors.

## Schedule C-2

### 2019 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

PORT ARMSTRONG

Species PINK

Donor Stock PORT ARMSTRONG H

Project PORT ARMSTRONG

Ancestral Stock SASHIN CR

**A. Hatchery Escapement**

1. Cost-recovery (line 12a & 12b): traditional harvest and roe-recovery fish	127,911	
2. Adults sacrificed as broodstock (Schedule A line 8) minus roe-recovery fish (12b)	54,729	
3. Escapement for hatchery watershed (as required in permit)		
4. Jacks		
5. Other (annotate for each Other escapement return)		
Other escapement	30,000	Other escapement comment
		Estimated loss to sea lions and dying in the SHA.
<b>6. Total hatchery escapement</b>	<b>212,640</b>	

**Other Comments**

**B. Common Property Harvest**

7. Commercial Harvest		
a. Troll		
b. Gillnet		
c. Seine	91,131	
d. Other (annotate for each Other commercial return)		
Other commercial		Other commercial comment

**Total Commercial Harvest**

91,131

8. Noncommercial Harvest		
a. Sport		
b. Personal Use		
c. Subsistence		
d. Other (annotate for each Other noncommercial return)		
Other noncommercial		Other noncommercial comment

**Total Noncommercial Harvest**

9. Total Common Property Harvest (sum 7 and 8)		91,131
10. Total Return (sum 6 and 9)		303,771

11. Estimated ocean survival by brood year			
	Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)
	2017	303,771	0.004
			Complete Return (yes or no)
			Yes

**Total Ocean Survival**

303,771

**Harvest Comments**

AKI has routinely used an estimate provided by the Petersburg Area Biologist that, on the average, 46% of the Port Armstrong returning pinks are harvested by the commercial seine fleet, primarily in Areas 104 and 109B. Since this year of weak pink returns in the area saw reduced common property openings, 30% was used in the common property seine harvest estimate instead.

**12. Disposition of Hatchery Escapement**

		# fish sold	lbs fish		
a. Traditional harvest fish	adults	126,447	436,243		
	jacks				
	<b>total</b>	<b>126,447</b>	<b>436,243</b>		
		# fish	lbs fish	lbs roe	
b. Roe-recovery fish	Sold	1,464		732	
	Donated				
	Disposed				
	<b>total number of fish</b>	<b>1,464</b>			<b>732</b>
		# Sold	# Donated	# Disposed	Total
c. Carcasses	Spawners	50,608			50,608
	Other (annotate in comments)				
	<b>total number of fish</b>	<b>50,608</b>			<b>50,608</b>
	<b>total pounds</b>				

**Disposition Comments**

Pink carcasses were sold to processors.

## Schedule C-3

### 2019 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

PORT ARMSTRONG

Species COHO

Donor Stock PORT ARMSTRONG H

Project PORT ARMSTRONG

Ancestral Stock SASHIN CR

**A. Hatchery Escapement**

1. Cost-recovery (line 12a & 12b): traditional harvest and roe-recovery fish	72,558	
2. Adults sacrificed as broodstock (Schedule A line 8) minus roe-recovery fish (12b)	3,613	
3. Escapement for hatchery watershed (as required in permit)		
4. Jacks		
5. Other (annotate for each Other escapement return)		
Other escapement	25,000	Other escapement comment
		Sea lion predation and other losses in the SHA.
<b>6. Total hatchery escapement</b>	<b>101,171</b>	

**Other Comments**

Estimated sea lion predation was nearly 25,000, primarily due to sea lions taking returning cohos inside and at the mouth of Port Armstrong. This year the sea lion predation was lighter than usual, since the local sea lion population remained at Mist Cove until that run ended and showed up Port Armstrong for the last two weeks of its coho return.

**B. Common Property Harvest**

7. Commercial Harvest		
a. Troll	75,782	
b. Gillnet		
c. Seine	658	
d. Other (annotate for each Other commercial return)		
Other commercial		Other commercial comment
<b>Total Commercial Harvest</b>	<b>76,440</b>	
8. Noncommercial Harvest		
a. Sport	1,554	
b. Personal Use		
c. Subsistence		
d. Other (annotate for each Other noncommercial return)		
Other noncommercial		Other noncommercial comment
<b>Total Noncommercial Harvest</b>	<b>1,554</b>	
9. Total Common Property Harvest (sum 7 and 8)		77,994
10. Total Return (sum 6 and 9)		179,165

11. Estimated ocean survival by brood year

Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)	Complete Return (yes or no)
2016	179,165	0.045	Yes

**Total Ocean Survival**

179,165

**Harvest Comments**

State of Alaska coded wire tag reports.

**12. Disposition of Hatchery Escapement**

	# fish sold	lbs fish	
a. Traditional harvest fish			
adults	72,558	580,467	
jacks			
total	72,558	580,467	
b. Roe-recovery fish			
	# fish	lbs fish	lbs roe
Sold			
Dontated			
Disposed			
total number of fish			
c. Carcasses			
	# Sold	# Donated	# Disposed
Spawners			300
Other (annotate in comments)			
total number of fish			300
total pounds			

**Disposition Comments**

Disposed of in the Port Armstrong Carcass Disposal Zone approved by Alaska DEC.

## Schedule C-4

### 2019 HARVEST MANAGEMENT AND HATCHERY ADULT RETURNS

PORT ARMSTRONG

Species

Donor Stock

Project

Ancestral Stock

**A. Hatchery Escapement**

1. Cost-recovery (line 12a & 12b): traditional harvest and roe-recovery fish	985	
2. Adults sacrificed as broodstock (Schedule A line 8) minus roe-recovery fish (12b)		
3. Escapement for hatchery watershed (as required in permit)		
4. Jacks	14	
5. Other (annotate for each Other escapement return)	Other escapement	Other escapement comment
<b>6. Total hatchery escapement</b>	<b>999</b>	

**Other Comments**

**B. Common Property Harvest**

7. Commercial Harvest		
a. Troll	40	
b. Gillnet	10	
c. Seine		
d. Other (annotate for each Other commercial return)	Other commercial	Other commercial comment
<b>Total Commercial Harvest</b>	<b>50</b>	
8. Noncommercial Harvest		
a. Sport		
b. Personal Use		
c. Subsistence		
d. Other (annotate for each Other noncommercial return)	Other noncommercial	Other noncommercial comment
<b>Total Noncommercial Harvest</b>		
9. Total Common Property Harvest (sum 7 and 8)		50
10. Total Return (sum 6 and 9)		1,049

11. Estimated ocean survival by brood year

Brood Year	Total # in Run, Current Year	Cumulative Ocean Survival (%)	Complete Return (yes or no)

**Total Ocean Survival**

**Harvest Comments**

**12. Disposition of Hatchery Escapement**

a. Traditional harvest fish		# fish sold	lbs fish		
	adults	985	13,385		
	jacks				
	total	985	13,385		
b. Roe-recovery fish		# fish	lbs fish	lbs roe	
	Sold				
	Donated				
	Disposed				
	total number of fish				
c. Carcasses		# Sold	# Donated	# Disposed	Total
	Spawners				
	Other (annotate in comments)				
	total number of fish				
	total pounds				

**Disposition Comments**

**Schedule D-1**  
**PROJECTED RETURNS FOR 2020**

**PORT ARMSTRONG**

Run	Species	First Brood Year	Last Brood Year	Release Site	Total number of fish expected	Range of expected return	
						minimum	maximum
SUMMER	CHINOOK	2015		PORT ARMSTRONG H	250	125	500
<b>CHINOOK PORT ARMSTRONG H</b>					<b>250</b>	<b>125</b>	<b>500</b>
SUMMER	CHUM	2014	2017	PORT ARMSTRONG H	557,775	278,888	1,115,550
<b>CHUM</b>					<b>557,775</b>	<b>278,888</b>	<b>1,115,550</b>
FALL	COHO	2017		PORT ARMSTRONG109-10	113,589	56,795	227,178
<b>COHO</b>					<b>113,589</b>	<b>56,795</b>	<b>227,178</b>
SUMMER	PINK	2018		PORT ARMSTRONG H	105,916	52,958	211,832
SUMMER	PINK	2018		PORT ARMSTRONG109-10	261,955	130,977	523,910
<b>PINK</b>					<b>367,871</b>	<b>183,935</b>	<b>735,742</b>

**COMMENTS:**

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

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