

WASHINGTON STATE DEPARTMENT OF FISHERIES

LYONS FERRY HATCHERY  
FUNDED BY U.S.F.W.S.

Fiscal Year 1985  
ANNUAL REPORT

Reporting Period:  
October 1, 1984 - September 30, 1985



WASHINGTON STATE DEPT. OF FISHERIES

LYONS FERRY SALMON HATCHERY

QUARTERLY REPORT FROM

OCTOBER 1984 TO MARCH 31, 1985

## 1984 BROOD FALL CHINOOK

The first spawning was on November 8 and the last fish was spawned on December 5. A total of 1,567,800 eggs were taken. A additional 219,800 eggs were recieved from Kalama Falls Hatchery from the egg bank program.

Shocking and picking of the eggs started December 4 and finished December 31. A total of 338,400 dead eggs were picked off for a 21.58% egg loss.

On December 20 a total of 220,000 eyed eggs were shipped to Haggerman National Fish Hatchery. This was for their part in the egg bank program.

The first fry were ponded January 22, 1985 and the last were ponded February 19. A total of 1,222,689 eggs were hatched and 52,533 fry were lost before ponding. This was a loss of 4.29%.

The fish took off good and with the exception of some coagulated yolk the fish had no disease problems.

## 1983 BROOD FALL CHINOOK

Between October 22 and November 1, 1984 540,300 yearlings were recieved from Klickitat Hatchery. Of these 408,100 were marked with a Ad. clip and C.W.T.. These fish were put into the raceways and split into 19 raceways of 26,000 fish per pond for release in April 1985.

The fish were fed Sulmet-T for 5 days after arrivial. A Septicmia problem developed and the fish were fed a additional 10 days of Sulmet-T from December 7 to the 16. The fish continued to die and were checked again on December 20. The problem turned out to be a toxicity problem due to a reaction to the drug. By the end of the year the problem was clearing u $\frac{1}{2}$  and the fish were looking good. Then in the last part of January we started haveing problems with the fish. They were checked on February 14 and were found to have "CHILLS". The marked fish were the only ones to have "CHILLS", while the unmarked fish were heathly. The fish were checked by a Histologic examination and under a electron microscope to try and find what caused the problem. No cause was found and it still remains a mistery of what caused the "CHILLS" problem.

WASHINGTON STATE DEPT. OF FISHERIES

LYONS FERRY SALMON HATCHERY

QUARTERLY REPORT FROM

APRIL 1 TO JUNE 30, 1985

1983 BROOD FALL CHINOOK

The 1983 brood were planted April 15, 16 and 17. They were pumped to the river and were in good condition when they went out. A total of 650,300 fish were planted. Of these 334,442 were marked fish.

## 1984 BROOD FALL CHINOOK

The marking trailer came in and they started marking fish April 9, 1985. The program lasted until April 19 with a total of 237,182 fish Ad. clipped and C.W.T.. The fish from pond 1 did not handle well from marking and from April 19 to the 22 they were treated with Diquat for Bacterial gill. From May 1 to the 4 pond 15 was also treated with Diquat.

In mid April we started having problems with the fish and they were checked. They were found to have clubbed gills and mild irritation. The problem turned out to be manganese oxide in the water supply. We planted some unmarked fish early and moved the remaining fish to the lower battery of raceways, unseing the upper battery as settleing ponds. By the end of June the fish are responding and are heathly again.

On June 6, 1985 a total of 539,392 fish were planted in the Snake River. Of these 234,985 were marked with a Ad. clip and C.W.T.

## 1985 BROOD SPRING CHINOOK

On April 2 a temporary rack was put in the Tucannon River for the spring Chinook run. It washed out due to high water on April 16. A wooden rack was installed May 21 and 22. Through the end of May a total of 15 spring Chinook adults have been trapped at the Tucannon Hatchery. So far 8 of them have either died or jumped out.

**OPERATIONS REPORT**

**LYONS FERRY SALMON HATCHERY**

**AUGUST 1, 1985 THROUGH JANUARY 31, 1986**

**FUNDED BY U.S. FISH AND WILDLIFE**

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## INTRODUCTION

LYONS FERRY HATCHERY IS LOCATED ON THE SNAKE RIVER IN FRANKLIN COUNTY. IT IS 7 MILES NORTH OF STARBUCK ON HIGHWAY 261. THE HATCHERY IS 56 MILES UPSTREAM FROM THE MOUTH OF THE SNAKE RIVER AND 380 MILES FROM THE PACIFIC OCEAN.

THE HATCHERY WAS CONSTRUCTED IN 1983 AND 1984 BY THE U.S. ARMY CORPS OF ENGINEERS. IT CONSISTS OF 28 RACEWAYS, HATCHERY BUILDING, STORAGE BUILDING, VISTOR CENTER, SPAWNING BUILDING, 2 ADULT PONDS AND FISH LADDER. THE VISTOR CENTER, STORAGE BUILDING, FISH LADDER AND WATER SUPPLY, WHICH IS WELL WATER, IS SHARED WITH THE GAME DEPT. HATCHERY.

THE RELEASED FIGURES FOR 1985 WERE 650,300 YEARLING FALL CHINOOK AND 539,400 FINGERLING FALL CHINOOK.

THE FOLLOWING INFORMATION IS A REPORT SHOWING THE ENTIRE HATCHERY ACTIVITIES FROM AUGUST 1, 1985 THROUGH JANUARY 31, 1986.

## TRAPPING OPERATIONS

TRAPPING WAS DONE AT THE HATCHERY AND ICE HARBOR DAM FOR FALL CHINOOK. THE SPRING CHINOOK TRAPPING WAS DONE AT THE TUCANNON GAME DEPT. HATCHERY SATELLITE POND. DURING THE FALL CHINOOK RUN A NIGHT SECURITY GUARD IS HIRED TO PROTECT THE FISH.

ESCAPEMENT AND SPAWNING AUGUST 1, 1985 THROUGH JANUARY 31, 1986.  
A SUMMARY DESCRIPTION FOR 1985 BROOD.

TUCANNON SPRING CHINOOK

THE 1985 TRAPPING OF SPRING CHINOOK WAS 16 ADULTS AND 6 ADULTS SEINED OUT OF THE RIVER. 5 FEMALES AND 4 MALES WERE SPAWNED; 9 FEMALES AND 4 MALES DIED IN THE POND. THE YEARS PRODUCTION WAS 14,843 EGGS TAKEN.

LYONS FERRY FALL CHINOOK

THE TRAPPING OF ADULTS STARTED AUGUST 31 AT ICE HARBOR DAM. A TOTAL OF 589 ADULTS AND 90 JACKS WERE TRUCKED TO THE HATCHERY. A TOTAL OF 6 ADULTS AND 4070 JACKS WERE TRAPPED AT THE HATCHERY. 318 FEMALES AND 136 MALES WERE SPAWNED. 64 FEMALES AND 77 MALES DIED IN THE HOLDING POND. THE YEARS PRODUCTION WAS 1,414,300 EGGS TAKEN. A TOTAL OF 1,182,189 EGGS WERE RECEIVED FROM KALAMA FALLS HATCHERY.

ESCAPEMENT AND SPAWNING for 1985 Brood TUCANNON SPRING CHINOOK Stock

Week Ending	1st Arrival			Mortality			Spawned			Green/Strip/Bad/SC	Sold/Donated			Shipped		
	W	F	J	W	F	J	W	F	J		W	F	J	W	F	J
JUNE 15	13		13													
JUNE 23	2		15		2											
JULY 6					2											
JULY 27						1										
AUG. 17	1		16													
AUG. 24	6		22													
AUG. 31					1			4								
SEPT. 7					1			1								
SEPT. 21																
Report Total	22		22		3			4								
Pre-Balance																
Season total	22		22		3			4								

1 S.O.

EGG TAKE AND DISPOSITION for 1985 Brood

TUCANNON SPRING CHINOOK

Stock

Week Ending	No. Eggs Taken-est.	No. Eggs Received/From	No. Eggs Shipped/To	No. Eggs Lost	No. Eggs on Hand
AUG. 24	10,500				10,500
SEPT. 21	3,500			558	14,000
SEPT. 28				652	13,442
OCT. 26					13,633
Report Total	14,000			1,210	13,633
Pre-Balance					
Season Total	14,000			1,210	13,633

## INCUBATION SUMMARY

THE FIRST TAKE OF SPRING CHINOOK EGGS WAS ON AUGUST 24, 1985. THEY WERE SHOCKED AND PICKED OFF SEPTEMBER 23. THERE WAS A LOSS OF 558 EGGS FOR A 5.45 PER CENT LOSS.

THE SECOND TAKE WAS SPAWNED ON SEPTEMBER 18, 1985. THEY WERE SHOCKED AND PICKED OFF OCTOBER 20. THERE WAS A LOSS OF ~~652~~ EGGS FOR A 14.13 PER CENT LOSS.

THERE WAS A ACTUAL TOTAL OF 14,843 EGGS TAKEN WITH A 1210 EGG LOSS, FOR A 8.15 PER CENT EGGS LOSS. THE FEMALES AVERAGED 3,710 EGGS EACH.

ESCAPEMENT AND SPAWNING for 1985 Brood LYONS FERRY FALL CHINOOK Stock

Week Ending	Est Arrival		Upstream			Mortality			Spawned			Green/Strip/Bud/50	Sold/Donated			Shipped		
	Week	Season	M	F	J	M	F	J	M	F	J		M	F	J	M	F	J
AUG. 31	26	26																
SEPT. 7	195	221						1										
SEPT. 14	267	488						1										
SEPT. 21	121	609																
SEPT. 28	213	822				1		3										
OCT. 5	484	1306				1		3										
OCT. 12	621	1927				1		10	1									
OCT. 19	450	2377				1		16	4									
OCT. 26	567	2944						19	5									
NOV. 2	1365	4309				1		4	12									
NOV. 9	470	4779				5		2	17	1								
NOV. 16	47	4826				6		3	284	5								
NOV. 23						20		1	826	28	74							
NOV. 30						14		5	37	32	57							
DEC. 7						22			30	44	21							
DEC. 14						5			9	26	6							
Report Total						77		64	1230	136	318							
Pre-Balance																		
S. on Total						77		64	1230	136	318							

EGG TAKE AND DISPOSITION for 1985 Brood LYONS FERRY FALL CHINOOK Stock

Week Ending	No. Eggs Taken-est.	No. Eggs Received/From	No. Eggs Shipped/To	No. Eggs Lost	No. Eggs on Hand
NOV. 2	88,140				88,140
NOV. 9	202,907				291,047
NOV. 16	461,291				752,338
NOV. 23	332,189				1,084,527
NOV. 30	229,378				1,313,905
DEC. 7	88,191	158,309 KALAMA FALLS		24,100	1,536,305
DEC. 14	12,246			49,900	1,498,651
DEC. 21				36,300	1,462,351
DEC. 28				11,200	1,451,151
JAN. 4		756,000 KALAMA FALLS		12,400	2,194,751
JAN. 11				24,300	2,170,451
JAN. 25		267,880 KALAMA FALLS		3,698	2,434,633
Report Total	1,414,343	1,182,189 KALAMA		161,898	2,434,633
Pre-Balance					
Season Total	1,414,343	1,182,189 KALAMA		161,898	2,434,633

## INCUBATION SUMMARY

THE FIRST TAKE OF FALL CHINOOK EGGS WAS ON OCTOBER 31 AND THE LAST TAKE WAS ON DECEMBER 10, 1985. THERE WAS A TOTAL OF 1,414,343 EGGS TAKEN. A TOTAL OF 53,155 DEAD EGGS WERE PICKED OFF FOR A LOSS OF 3.99 PER CENT. ALSO 84,000 EGGS WERE BURIED DUE TO I.H.N. VIRUS. THESE EGGS WERE FROM THE NOVEMBER 14-21 AND 26 TAKES. THE FEMALES AVERAGED 4,652 EGGS EACH AND THE EGGS AVERAGED 1,412 PER POUND.

1,182,189 EGGS WERE RECIEVED FROM KALAMA FALLS HATCHERY. THESE WERE SPAWNED FROM THE EGG BANK PROGRAM FISH.

THE FIRST FISH WERE PONDED JANUARY 16, 1986.

FEED USAGE BY STOCK for AUGUST 1, 1985 through JANUARY 31, 1986

Stock Feed Type/Size	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	Totals
1984 FALLS	1924						1924
OMP 3/32	2007	1804	5449	6147	5834	10,720	31,961
OMP 1/8	264	2,684	302		3,472	2,128	3,250
1/8 GALLIMYCIN							5,600
1/8 TM-50							
1985 FALLS						19	19
BIO-STARTER							
1985 SPRINGS				1	11	7	19
OMP 1/32						9	9
Report Total	4,195	4,488	5,751	6148	9,317	12,883	42,782
Pre-Balance							
Season Total	4,195	4,488	5,751	6,148	9,317	12,883	42,782

DISEASES AND TREATMENTS

DATE	BROOD YEAR	SPECIES	POND NUMBER	TREATMENT	DISEASE
8/85	1984	FALL CHINOOK	15-16-17 18-19	GALLIMYCIN=50	KIDNEY DISEASE
8/85	1985	FALL CHINOOK	29	MALICHITE	FUNGUS
9/85	1984	FALL CHINOOK	15-16-17 18-19-25 26-27-30	GALLIMYCIN-50	KIDNEY DISEASE
9/85	1985	FALL CHINOOK	29	MALICHITE	FUNGUS
9/85	1985	SPRING CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS
10/85	1985	FALL CHINOOK	25-26-27 30	GALLIMYCIN-50	KIDNEY DISEASE
10/85	1985	FALL CHINOOK	29	MALICHITE	FUNGUS
10/85	1985	SPRING CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS
11/85	1985	FALL CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS
11/85	1985	SPRING CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS
12/85	1985	FALL CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS
12/85	1984	FALL CHINOOK	21-22-30	TM-50	LOW-TEMPERATURE DISEASE
1/86	1984	FALL CHINOOK	21-22-30	TM-50	LOW-TEMPERATURE DISEASE
1/86	1985	FALL CHINOOK EGGS	INCUBATION ROOM	MALICHITE	FUNGUS

SUMMARY

THE FALL CHINOOK EGG TAKE WAS ABOUT THE SAME AS LAST YEAR, BUT THE EGGS RECIEVED FROM KALAMA FALLS IS UP APPROXIMATELY FIVE TIMES WHAT IT WAS LAST YEAR. THIS IS THE FIRST YEAR FOR TAKEING THE TUCANNON SPRING CHINOOK EGGS. THE AMOUNT OF EGGS IS WAY DOWN DUE TO PROBLEMS WITH THE ADULT POND AT THE TUCANNON HATCHERY.

THERE IS STILL A PROBLEM ASSOCIATED WITH THE WATER SUPPLY. THE MANGANESE IN THE WATER IS CAUSEING A TOXICITY PROBLEM WITH THE FISH. THE ARMY CORPS OF ENGINEERS IS STUDING THE PROBLEM AND HOPEFULLY CAN COME UP WITH A SOLUTION.

6 OCTOBER 1967  
HONOLULU, HAWAII

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