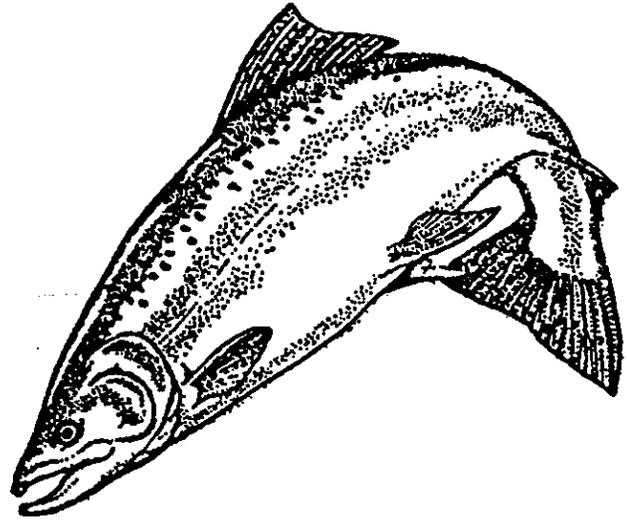
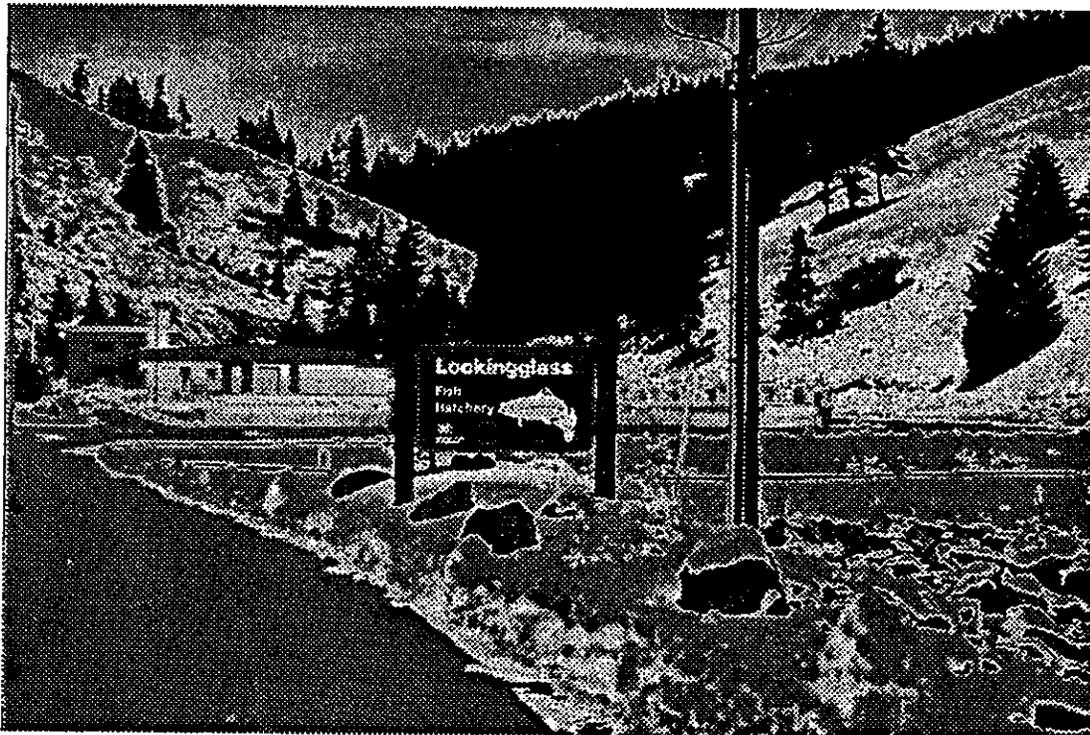


# LOOKINGGLASS FISH HATCHERY



## Operation and Maintenance Annual Report



October 1, 1990 - September 30, 1991



## LOOKINGGLASS ACTIVITY

OCTOBER 1, 1990 - SEPTEMBER 30, 1991

### INTRODUCTION NARRATIVE

#### Operations:

Lookingglass Fish Hatchery is part of the Lower Snake River Compensation Plan (LSRCP) and has been in operation since 1992. Mitigation goals are for 1,390,000 spring chinook smolts, comprised of 900,000 Rapid River stock and 490,000 Imnaha River stock. Carson stock has been used when Rapid River stock was below production levels. A satellite station located on the Imnaha River is used for acclimating smolts, collecting, holding and spawning adults.

This 1990-1991 fiscal year, hatchery production was similar to previous years. The 1989 brood production goals were met with 331,636 (8589) Rapid River stock, 504,668 (8189) Lookingglass/Carson stock and 398,910 (2989) Imnaha River stock. The 1990 brood is comprised of 262,426 (2990) Imnaha River stock and 952,293 (8590) Rapid River stock.

This year's run of Rapid River spring chinook was a little larger than expected with a total of 251 adults and 113 jacks returning to Lookingglass Hatchery. Rapid River adults were also trapped at Hells Canyon Dam, with a total of 19 adults and 43 jacks trucked to Lookingglass Hatchery by Idaho Power Company.

The Imnaha adult (2991) return was comprised of 121 wild adults, 102 unmarked jacks, 149 hatchery adults and 134 marked jacks. Based on marked to unmarked smolt release ratio, 92 of the 102 unmarked jacks are estimated to be hatchery fish, resulting in 226 hatchery jacks and 10 wild jacks collected. A total of 142 adults and 63 jacks were passed above the weir for natural spawning: 66 hatchery adults, 1 marked jack, 76 wild adults and 50 unmarked jacks.

#### Construction Projects:

Wood fences were constructed between residences by the hatchery crew. A removable addition was built on to the Imnaha spawning structure. This addition was designed and constructed by the hatchery crew.

**Engineering Projects:**

The US army Corps of Engineers awarded the bid for the chiller and generator upgrade to the Brandt Electric Company. Work started in April 1991 and will be completed in the spring of 1992. The new generator and transfer system work very well. The new chillers are being used on manual operation rather than automatic because the booster pumps to the chillers do not supply enough water for the chillers to run at a 100% capacity. These problems will be addressed in April of 1992 when the chillers are not being used.

**Personnel Changes:**

Cecil Sangston was the hatchery seasonal from March 1991 through September 1991

Phil McKee transferred to Fall River Hatchery as foreman, Fish and Wildlife Tech-1, in October 1990. Jim Schenk, Fish and Wildlife Tech-1 at Bonneville Hatchery, was promoted to fill this position.

**Present Personnel Are:**

Scott Lusted	Fish and Wildlife Manager-1
Jim Schenk	Fish and Wildlife Technician-2
Bob Lund	Fish and Wildlife Technician-1
Ron Harrod	Fish and Wildlife Technician-1

<b>STOCK</b>	<b>SPRING CHINOOK</b>	<b>Imnaha R. &amp; Tributaries</b>
	<b>Lot No.</b>	<b>2989</b>

**ADULT RETURNS**

**To Lookingglass**

Date of first return	6/05/89
Date of last return	10/13/89
No. of males, females, jacks returning	(27) (33) (0)
Date of peak returns	7/07/89
No. of males, females, jacks transported in	(59) (52) (86)
Mortality of all adult returns	3

**From Imnaha Pd.**

**To Imnaha Pd.**

Date of first return	7/10/89
Date of last return	10/13/89
No. of males, females, jacks returning	(124) (108) (153)
Date of peak returns	7/14/89
No. of males, females, jacks released to spawn naturally	(63) (56) (34)
No. of males, females, jacks transported out	(59) (52) (86)
Mortality of all adult returns	19

**Imnaha R.**

**To Lookingglass**

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
8/14/89	12,081	2
8/21/89	54,043	11
8/28/89	142,884	27
9/01/89	7,983	2
9/05/89	182,117	38
9/11/89	12,900	3
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TOTAL	412,008	83

**REARING**

Egg take	412,008	
Shock loss	10,008	
No. eyed eggs	402,000	
Fry loss	540	At Lookingglass
Eggs transferred out	160,000	To Irrigon
Fry loss	5,325	At Irrigon
Fingerling shipped in	154,675	From Irrigon
04/16/90		980 lbs. @ 157/lb.
No. ponded	241,460	At Lookingglass
Percent hatch	97.5	
Mortality to stocking	4,562	
End Season Adjustment	+7,336	
Percent mortality to date	1.2	
Total pounds of food fed	34,757	
Total gain to date	21,216	
Conversion	1.64	
Total gain for fiscal year	3,280	
Total food fed for fiscal year	9,816	

**LIBERATIONS**

Imnaha Pd.				
<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No./Lb</u>
03/22/91	Imnaha R.	267,670	13,890	19.3
04/09/91	Imnaha R.	131,239	7,326	17.9
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Total		398,909	21,216	

<b>STOCK    SPRING CHINOOK    Imnaha R. &amp; Tributaries.</b> <b>Lot No.    2990</b>
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**ADULT RETURNS**
**Imnaha Trap / Lookingglass**

Date of first return	5/04/90	
Date of last return	9/11/90	
No. of males, females, jacks returning	(185) (163) (56)	Includes 3 females from Lookingglass
Date of peak returns	7/19/90	
No. of males, females, jacks released to spawn naturally	(86) (75) (9)	Imnaha R.
Mortality of all adult returns	26	

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
8/23/90	48,107	9
8/28/90	143,338	31
9/04/90	109,057	25
9/11/90	19,317	5
9/18/90	6,793	2
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<b>TOTAL</b>	<b>326,612</b>	<b>72</b>

**REARING**

Egg take	326,612	
No. eyed eggs	272,750	
No. transferred out	92,000	To Irrigon
Shock loss	53,862	
Fry loss	1,762	
No. ponded	178,988	
Percent hatch	83.5	
Fingerling shipped in 04/15/91	90,371	From Irrigon 607 lbs. @ 148.9/lb.
Mortality to date	3,502	
Percent mortality to date	1.3	
No. on hand	262,426	
Total pounds of food fed	14,295	
Total gain to date	11,819	
Conversion	1.21	

STOCK	SPRING CHINOOK	Imnaha R. & Tributaries.
	Lot No.	2991

**ADULT RETURNS**

Imnaha Trap / Lookingglass

Date of first return 07/03/91  
 Date of last return 09/16/91  
 No. of males, females, jacks returning (162) (107) (233)  
 Date of peak returns 07/24/91  
 No. of males, females, jacks released to spawn naturally (79) (63) (51)  
 Mortality of all adult returns 7

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
08/21/91	19,340	4
08/27/91	69,579	14
09/04/91	88,420	18
09/13/91	11,045	2
09/17/91	4,822	1
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TOTAL	193,206	39

**REARING**

Egg take	193,206
No. eyed eggs	165,450
No. transferred out	0
Shock loss	27,756
Percent eye-up	83.2

<b>STOCK    Spring Chinook    Lookingglass Cr.</b> <b>Lot No.    8189</b>
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**ADULT RETURNS**

Date of first return	6/01/89	
Date of last return	10/13/89	
No. of males, females, jacks returning	(375) (401) (11)	
Date of peak returns	6/09/89	
No. of males, females, jacks released to spawn naturally	(83) (93)	To Lookingglass Cr. Wallowa R. & Catherine Cr.
No. of males females jacks transported out	(166) (279) (3)	To Wallowa Hatchery
Mortality of all adult returns	4	

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
8/17/89	12,206	3
8/21/89	5,044	1
8/22/89	5,663	2
8/29/89	11,283	3
9/05/89	25,552	7
9/11/89	4,222	1
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<b>TOTAL</b>	<b>63,970</b>	<b>17</b>

**REARING**

Egg take	63,970	
No. eyed eggs	742,336	
Eggs transferred in	47,155	From Big Canyon
Eggs transferred in	631,211	From Wallowa Hatchery
Eggs transferred out	52,500	To Oxbow Hatchery
Shock loss	147,461	
Fry loss	19,024	
Destroyed	12,000	IHN Positive From Big Canyon
Destroyed	12,000	IHN Positive From Wallowa
Percent hatch	80.1	
Ponded	523,315	
Percent mortality to stocking	3.6	
Total pounds of food fed	42,756	
Total gain to date	27,089	
Conversion	1.58	
Total gain for fiscal year	5,598	
Total food fed for fiscal year	11,269	

**LIBERATIONS**

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No./Lb</u>
04/02/91	Lookingglass Cr.	504,668	27,089	18.6
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<b>Total</b>		<b>504,668</b>	<b>27,089</b>	

STOCK    Spring Chinook    Lookingglass Cr. Lot No.    8191
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**ADULT RETURNS**

Date of first return	06/04/91		
Date of last return	08/26/91		
No. of males, females, jacks returning	(40)	(32)	(1)
Date of peak returns	06/19/91		
No. of males, females, jacks transported out	(18)	(12)	(0)
Mortality of all adult returns	1		To Wallowa Hatchery

STOCK    SPRING CHINOOK    Rapid River Lot No.    8589
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**ADULT RETURNS**

Date of first return	6/01/89		
Date of last return	10/13/89		
No. of males, females, jacks returning	(71)	(104)	(42)
Date of peak returns	6/05/89		
Mortality of all adult returns	8		

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
8/14/89	3,069	1
8/21/89	11,115	4
8/28/89	110,380	33
9/05/89	190,380	56
9/11/89	18,579	6
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TOTAL	333,570	100

**REARING**

Egg take	333,570	
No. eyed eggs	326,000	
Eggs transferred out	96,000	To Irrigon
Shock loss	7,570	
Percent hatch	97.7	
Fry loss	661	At Lookingglass
Ponded	229,339	At Lookingglass
Fry transferred in	94,095	From Irrigon
04/05/90		888 lbs. @ 106/lb.
Fry loss	1,905	At Irrigon
Mortality	4,109	
Percent mortality to date	1.3	
End season adjustment	+8,202	
Total pounds of food fed	30,765	
Total gain to date	18,399	
Conversion	1.67	
Total gain for fiscal year	3,436	
Total food fed for fiscal year	8,923	

**LIBERATIONS**

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No./Lb</u>
04/01/91	Lookingglass Cr.	236,711	11,516	20.6
04/01/91	Lookingglass Cr.	94,925	6,883	13.7
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Total		331,636	18,399	

STOCK    SPRING CHINOOK    Rapid River  
Lot No.    8590

**ADULT RETURNS**

Date of first return	5/23/90	
Date of last return	9/13/90	
No. of males, females, jacks returning	(269) (228) (6)	
Date of peak returns	5/24/90	
No. of males, females, jacks released to spawn naturally	0	
No. of males, females, jacks transported in	(10) (20) (0)	Trapped at Hells Canyon
Mortality of all adult returns	17	

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>	<u>Imnaha Trap</u>
8/21/90	2,645	1	
8/31/90	364,002	96	
9/06/90	380,410	108	
9/13/90	101,364	29	
9/20/90	15,427	5	
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TOTAL	863,848	239	

**REARING**

Egg take	863,848	
No. eyed eggs	838,875	
Eggs transferred in	184,864	From Rapid River Idaho
Shock loss	25,960	
Percent eye-up	97.5	
Fry loss	5,056	
Ponded	892,571	
Eggs transferred out	125,125	To Irrigon
10/23/90		
Fry loss	2,821	At Irrigon
Ponded	122,304	
Percent hatch	96.8	
Shipped in	122,610	From Irrigon
04/05/91		1168 lbs. @ 105.5/lb.
Mortality to date	15,193	
Percent mortality to date	1.5	
Total pounds of food fed	55,809	
Total gain to date	43,094	
Conversion	1.3	

**LIBERATIONS**

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No./Lb</u>
06/13/91	Lookingglass Cr.	17,404	287	60.6
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Total		17,404	287	

<b>STOCK</b>	<b>SPRING CHINOOK</b>	<b>Rapid River</b>
	<b>Lot No.</b>	<b>8591</b>

**ADULT RETURNS**

Date of first return	05/24/91	
Date of last return	09/16/91	
No. of males, females, jacks returning	(124) (127) (113)	Lookingglass Hatchery
No of males, females, jacks transported in	(9) (10) (43)	Hells Canyon Dam
Date of peak returns	06/12/91	
Mortality of all adult returns	19	

**SPAWNING RECORD**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
08/26/91	96,290	23
09/03/91	267,954	69
09/09/91	151,707	39
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TOTAL	515,951	131

**REARING**

Egg take	515,951	
No. eyed eggs	472,678	
Eggs transferred out	26,694	To Idaho
Shock loss	16,579	
Percent eye up	96.8	



