

## INTRODUCTION

The Hagerman National Fish Hatchery (NFH) is located along the Snake River, about 30 miles west of Twin Falls, Idaho at a point three miles south and two miles east of Hagerman, Idaho. The hatchery was authorized by 46 Stat, 371 on May 21, 1930 and was established in 1932. Construction of the physical facilities commenced in 1932 and fish production began in 1933. The primary goal of the hatchery was the production of rainbow trout for stocking in Idaho, eastern Oregon and northern Nevada.

In the late 1970's the hatchery became part of the Lower Snake River Fish and Wildlife Compensation Plan; which was authorized by the Water Resources Development Act of 1976, Public Law 94-587. This plan was designed to mitigate for fish and wildlife losses caused by the construction of four dams on the lower Snake River. For its part in the Compensation Plan, the hatchery's primary production goal was changed from rainbow trout to steelhead trout. The U. S. Fish and Wildlife Service entered into an agreement with the U. S. Army Corps of Engineers and Idaho Department of Fish and Game to annually rear 340,000 pounds of summer steelhead trout at 4 to 5 fish per pound (8 inches) at Hagerman National Fish Hatchery. To implement the new production goals, the hatchery was rebuilt and expanded, at a cost of \$7.0 million, by the Corps of Engineers from June 1982 through April 1984.

There are 102 outside raceway rearing units at the hatchery. Of these, 66 are devoted to Compensation Plan steelhead trout rearing and 36 are reserved for other programs which the Fish and Wildlife Service might want to pursue. In recent years these raceways have been utilized for rainbow trout and steelhead trout rearing to augment the Dworshak National Fish Hatchery's program. Other major facilities include two hatchery-rearing buildings with a total of 66 rearing tanks, an administration-visitor facility building, a combination shop-four stall garage, four residences, an oil-paint storage building, and two general storage buildings.

The hatchery's water supply is spring-fed at a constant 59° with a flow rate of approximately 30,000 gallons per minute. Water rights, under Idaho law, are both statutory and constitutional. Water rights for the hatchery are now in the process of adjudication by virtue of the court-ordered Snake River Water Rights Adjudication process; covering the entire Snake River basin in Idaho. A total of 17 spring sources are identified on the Fish and Wildlife Service property; several of which are controlled by the adjacent Tunison Field Station of Fishery Nutrition Research.

ANNUAL REPORT

FISCAL YEAR 1991

National Fish Hatchery  
Station

Hagerman, Idaho  
City, State

Dave Buehn

Project Leader

12/13/91

Date

Thomas J. Sheldrake

Associate Manager/  
Deputy Assistant Regional Director

12-31-91

Date

Thomas J. Sheldrake

Assistant Regional Director

12/31/91

Date

Acting

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National Fishing Week Activities. A cooperative effort with Idaho Department of Fish & Game.

#### STATION OPERATIONS

Item II of the Fish and Wildlife Service's Statement of Responsibilities and Roles is "to seek and provide for mitigation of fishery resources adversely impacted by federal water development projects". Hagerman NFH's three production programs for Fiscal Year 1991, steelhead trout for the Lower Snake River Compensation Plan, steelhead trout for fingerling return to Dworshak NFH, and rainbow trout for Dworshak Reservoir, are in compliance with these responsibilities.

#### Fish Culture Operations - Steelhead Trout

The steelhead production goal for Hagerman NFH is 340,000 pounds of smolts between 4 to 5 fish per pound. Hagerman NFH has an agreement with Dworshak NFH for the production of steelhead fingerlings around 30 fish per pound. This added production is to counter the IHN virus mortalities that occur at Dworshak NFH during the early stages of fish rearing. All costs for the added production are reimbursed to Hagerman NFH by Dworshak NFH. In the past year Dworshak has completed a new intake water line from Dworshak Reservoir. With this new water source the steelhead fingerling program will be transferred back to Dworshak NFH.

A total of 425,230 Broodyear '90 fish (12,630 lbs) were excessed in October 1990. Of these 304,907 (7,695 lbs) (39.62 fish/lb) "A" strain were distributed to the Salmon River above the Sawtooth SFH and 120,323 (4,935 lbs) (24.38 fish/lb) "B" strain were distributed to the Little Salmon River at Hazard Creek. Distribution of these excess fish required 5 trips with a total of 1,853 miles; mortalities during hauling totaled 220.

Survival of BY90 from eyed-eggs to distribution was 81.4% and 84.4% for "A" and "B" strain steelhead, respectively. An estimated 79,000-94,000 steelhead were lost to bird predation.



Black crown night herons preying on hatchery rainbow trout.

Broodyear 1991 steelhead eggs were received from April through June 1991. Eggs received included 993,936 "A" strain steelhead from ID F&G Sawtooth and Pahsimeroi SFH, and 1,477,148 "B" strain steelhead from Dworshak NFH. A total of 527,074 "B" strain at 40.36 fish/lb and 13,060 lbs were returned to Dworshak NFH in August 1991. Distribution to Dworshak NFH required 5 trips with a total of 3,790 miles. Mortalities during hauling equaled 95.

Survival from eyed-eggs to distribution for "B" strain steelhead returned to Dworshak NFH was 77.0% Survival from eyed-eggs to September 30, 1991 for "A" strain and remaining "B" strain steelhead was 92.6% and 84.0%, respectively.

Feed conversion for all steelhead lots in FY91 was 1.29 at a feed cost/lb weight gain of \$0.3323. Average cost/lb of steelhead feed was \$0.2398.

### Distribution - Steelhead Trout

Distribution of steelhead smolts (BY90) occurred between April 3 and April 29, 1991. Distribution went well with the release of 1,436,909 smolts at 4.41 fish/lb and a total weight of 325,550 lbs. (95.75% of production goal by weight). Of this, 979,799 were "A" strain steelhead at 4.42 fish/lb with a total weight of 221,880 lbs and 457,110 were "B" strain steelhead at 4.41 fish/lb with a total weight of 103,670 lbs. "A" strain smolts were released to the Salmon River at Sawtooth SFH. "B" strain smolts were released to the Little Salmon River at Hazard Creek. Distribution required 51 trips with a total mileage of 18,319 miles. Mortalities during hauling equaled 1,893.

### Fish Culture Operations - Rainbow Trout

In FY91 Hagerman NFH had an agreement with Dworshak NFH to produce 100,000 Arlee strain and 100,000 Shasta strain rainbow trout, 15 fish/lb, 5 inches in length for release to Dworshak Reservoir, Idaho. This agreement has since been cancelled. The rainbow trout program for FY92 will be at Kooskia NFH. Hagerman NFH will produce 100,000 Eagle Lake strain rainbow trout for the Duck Valley Indian Reservation in FY92.

In FY91, eggs were received from Ennis NFH, Montana. A total of 303,647 eyed-eggs were received in December 1990 and January 1991. Of these, 154,421 were Arlee strain and 149,226 were Shasta strain rainbow trout. In samples taken January 28, 1991, both the Arlee and Shasta strains were found to have a weak strain of IHN. It was then decided that these fish should not go to Dworshak Reservoir because of the IHN. ID F&G subsequently designated release sites at C. J. Strike Reservoir.

Survival rate from eyed-egg to distribution was 45.1% and 58.5% for Arlee and Shasta strains respectively. An estimated 40,000-50,000 fish were lost to bird predation.

Feed conversion for both Arlee and Shasta strains was 1.42 at a feed cost per pound weight gain of \$0.3641. Average cost/lb of trout feed was \$0.2565.

### Distribution - Rainbow Trout

A total of 156,814 rainbow trout were distributed in May 1991. Of these 69,574 were Arlee strain (7,565 lbs)(9.20 fish/lb) and 87,240 were Shasta strain (8,530 lbs)(10.22 fish/lb). The rainbow trout averaged 5.90 inches in length. These fish were released into C. J. Strike Reservoir, Idaho. The Arlee strain and 10% of the Shasta strain were released at the Cottonwood Campground, south shore of the reservoir in the Bruneau Arm. The remaining 90% of the Shasta strain were released at the ramp upstream from Crane Falls Lake on the south side of the reservoir. Distribution required 4 trips with a total mileage of 550. Mortalities during hauling totaled 48 fish.

### Experiments/Studies - Dorsal Fin Erosion

A study was conducted at the Tunison Laboratory of Fish Nutrition to evaluate and quantify the effects of fish density, feeding rate, feeding methods and temperature on steelhead trout dorsal fin erosion. Hagerman NFH and Bozeman Fish Technology Center cooperated in this study. The rearing portion of the study began in June 1990 and ended in December 1990. Part of the data has been analyzed and was presented at the 1991 Northwest Fish Culture Conference in Redding, California by Dr. Winfree. The entire study will be published at a later date.

The Dorsal Fin Index (%) is quantified by  $DFI(\%) = (\text{dorsal fin length} \times 100) / \text{total fish length}$  (Kindschi, G.A. 1987). Measurements taken on wild steelhead indicate an approximate range of 10.0 to 12.0. Hagerman NFH reared steelhead smolts have an approximate DFI range of 2.0 to 4.0.

A portion of the study conducted at the Tunison Laboratory dealt with fish reared at 100 mm, fed at a hatchery constant of 9.0 and under these conditions: Isolated fish reared at 15°C; fish reared at 10°C and a density index of .2; fish reared at 15°C and a density index of .02; fish reared at 15°C and a density index of .2; fish fed and fasted for two week intervals at 15°C and a density index of .2. The results of these rearing conditions are compared to wild steelhead, Burrow's Pond-reared fish at Dworshak NFH and tank/raceway reared fish at Hagerman NFH. See Appendix 1 (graph)

The study indicates that the dorsal fin index can be improved by rearing steelhead at a very low density index or at a reduced water temperature. Unfortunately neither condition is practical for Hagerman NFH. It remains to be seen if fin quality of hatchery reared steelhead will ever compare favorably to wild steelhead.

### Experiments/Studies - Large vs. Normal Smolt Size

This is the second year of a continuing study designed by Idaho Fish and Game Department. The purpose of this study is to determine whether large steelhead smolts (2.75/lb or 9.9 inches) have a higher return rate as adults than normal production smolts (4.50/lb or 8.4 inches). "A" strain steelhead from the same egg take were split into two groups. Five raceways of test fish at 12,200 per raceway and three raceways in the control group at 17,550 per raceway. The number of fish in each raceway were adjusted to insure that all raceways will have similar density indexes and load factors at the time of release (mid April 1992). The feeding level is adjusted biweekly to produce the desired size smolt at release. The scheduled release site is below the Sawtooth State Fish Hatchery on the Salmon River near Stanley, Idaho. 60,000 fish from the large smolt group and 52,000 fish from the normal smolt group were coded wire tagged for the comparison.

This study will continue for one more year class and it will be several years before the results can be tabulated.

### Experiments/Studies - Intranuclear Microsporidium

Hagerman NFH is cooperating with Beth MacConnell of the Bozeman Fish Technology Center on a study related to the intranuclear microsporidium Enterocytozoon salmonis. Enterocytozoon salmonis is a spore-forming parasite that is found within the nuclei of white blood cells located in the kidney, liver and lower intestine of steelhead trout at Hagerman NFH. The parasites have also been found in the nuclei of liver cells and white blood cells from blood samples.

A chronic low grade mortality has been associated with this parasite during December 1989 - March 1990 & December 1990 - March 1991. Hemorrhage and inflammation of pyloric caeca and extreme swelling of the posterior intestine are the most indicative signs of infection.

Enterocytozoon salmonis was first found in chinook salmon reared in net-pens in Puget Sound in 1983. The parasites found at Hagerman NFH in March 1989 are the first report of Enterocytozoon salmonis in steelhead trout. It has since been found in rainbow trout and golden trout in California and also in steelhead in Washington, California and British Columbia.

Enterocytozoon salmonis is important as a fish pathogen but it may also be important as a medical research tool for humans. Enterocytozoon bienersi is the only other species in this genus and it is found in patients with AIDS.

It has been observed that "B" strain steelhead appear to be more susceptible and sensitive to infection with the parasite. Few parasitized cells could be found in "A" strain steelhead. It is interesting to note that IHN destroys kidney cells while Enterocytozoon salmonis causes a proliferation of kidney cells.

### Training

Hagerman NFH actively participated in the Region One Fishery Employee Development Program. Fiscal Year 1991 participants were Edward Stege and Ginger Phalen. Additional training received by hatchery staff included:

Dave Bruhn Manager	Water Treatment Process for Hatcheries	6/4-9/91	Bozeman, MT
	Water Rights & Law Training	5/29-30/91	Portland, OR
	The Advocacy Role of Managers	2/5-7/91	Corpus Cristi, TX
Jim Kirsch Maintenance Worker	Water & Waste Water Operators School	9/23-26/91	Bozeman, MT

Bea Martindale Fisheries Pgm. Asst.	Lotus 1-2-3, Level I	2/19- 3/19/91	Wendell, ID
	Administrative Workshop	4/14-19/91	Portland, OR
S. D. Martindale Motor Vehicle Oper.	Pre-Retirement Counseling	5/22-24/91	Boise, ID
Ginger Phalen Fishery Biologist	Spawning Procedures	9/15-26/91	Underwood, WA
Tom Shaw Asst. Manager	Water Treatment Process for Hatcheries	6/4-9/91	Bozeman, MT
	Water Rights and Law	5/29-30/91	Portland, OR
Ed Stege Fishery Biologist	Lotus 1-2-3, Level II	11/20- 12/18/90	Twin Falls, ID
	dBase III, Level II	4/4-5/2/91	Twin Falls, ID

#### Official Visitors

Official visitors to the station included:

Bud

Ainsworth, Idaho Dept. of Fish and Game, Filer, ID  
 Rick Alsager, Idaho Dept. of Fish and Game, Stanley, ID  
 Dave Cannamela, Idaho Dept. of Fish and Game, Eagle, ID  
 Kathy Clemens, U. S. Fish and Wildlife Service, Ahsahka, ID  
 Dan Diggs, U. S. Fish and Wildlife Service, Portland, OR  
 Tom Frew, Idaho Dept. of Fish and Game, Hagerman, ID  
 Dan Herring, U. S. Fish and Wildlife Service, Boise, ID  
 Bill Hutchinson, Idaho Dept. of Fish and Game, Boise, ID  
 Jerry Mowrey, Idaho Dept. of Fish and Game, Wendell, ID  
 Ralph Roseberg, U. S. Fish and Wildlife Service, Ahsahka, ID  
 Scott Spaulding, Sho-Ban Tribes, Fort Hall, ID  
 Dave Statler, Nez Perce Tribe, Lapwai, ID  
 Dr. Bob Winfree, U. S. Fish & Wildlife Service, Hagerman, ID  
 Steve Yundt, Idaho Dept. of Fish and Game, Boise, ID  
 Rich Snider, Clear Springs Trout Company, Buhl, ID  
 Wayne Olson, U. S. Fish and Wildlife Service, Ahsahka, ID  
 Tom Sheldrake, U. S. Fish and Wildlife Service, Portland, OR  
 Joe Lientz, U. S. Fish and Wildlife Service, Ahsahka, ID  
 Alan Palisoul, U. S. Fish and Wildlife Service, Washington, D. C.  
 Jane Lyder, U. S. Fish and Wildlife Service, Washington, D. C.  
 Jerry Grover, U. S. Fish and Wildlife Service, Portland, OR  
 Ed Crateau, U. S. Fish and Wildlife Service, Boise, ID

## FUTURE OUTLOOK

The rearing of rainbow trout at Hagerman NFH in recent years, has been to replace lost production at Dworshak NFH due to IHN virus problems. The Fiscal Year 1992 rainbow rearing has been relocated to the Kooskia, ID NFH as a result of spring chinook salmon egg shortfalls; leaving Kooskia with excess rearing capacity. The Idaho Fishery Resource Office has requested that Hagerman NFH rear 100,000 advanced fingerling rainbow trout for release into two reservoirs at the Duck Valley Indian Reservation on the Idaho-Nevada border. Future rainbow trout programs will be uncertain; possibly Dworshak Reservoir again or the Duck Valley program may continue.

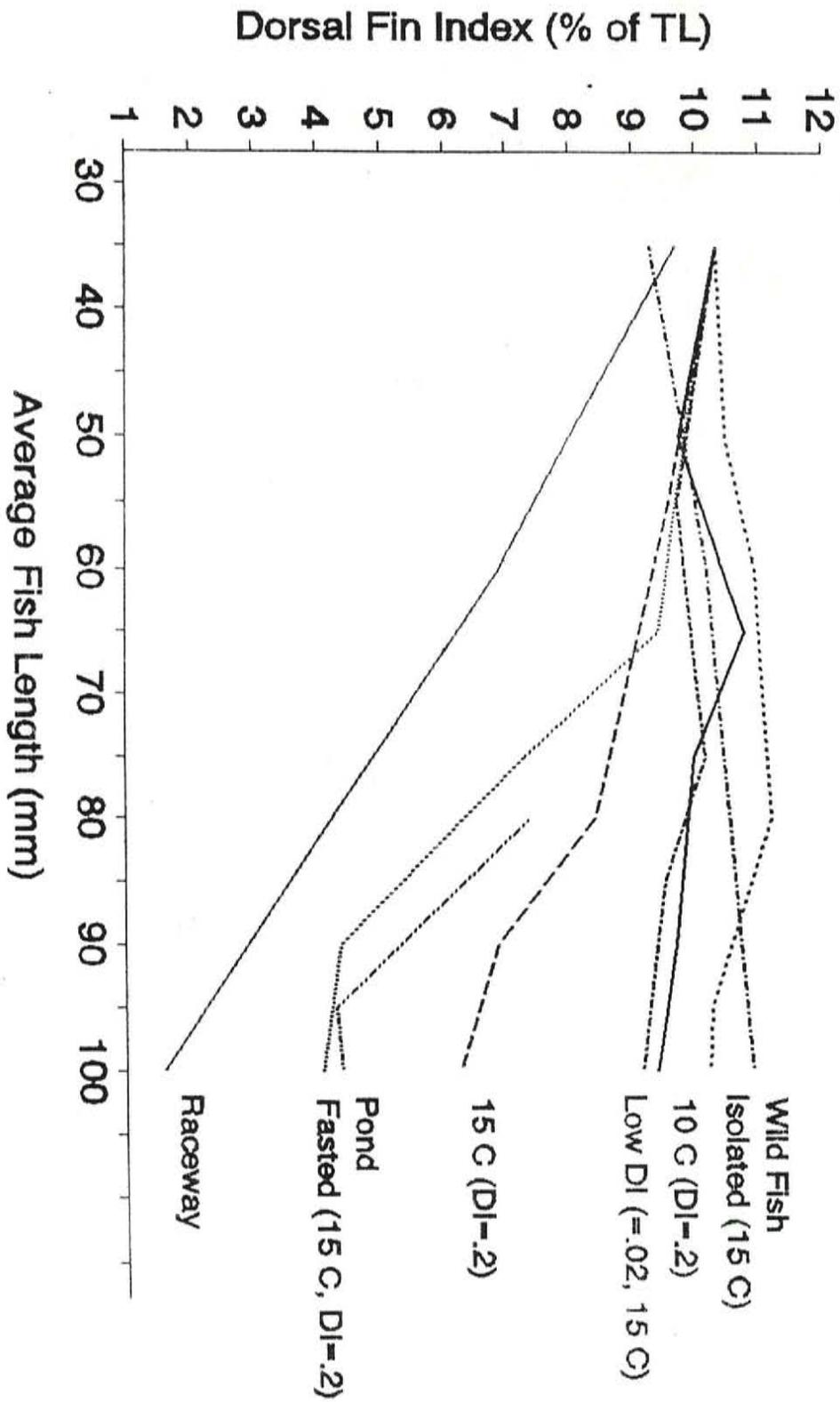
The Corps of Engineers recently provided Dworshak NFH with Dworshak Reservoir water capability; anticipating a reduction or elimination of IHN virus in incubation/early rearing facilities. Hagerman NFH, in the past three years, has augmented Dworshak NFH fingerling steelhead numbers through hatching and early rearing at Hagerman. This program has been eliminated for Fiscal Year 1992, and likely, for the future as well.

Bird depredation, primarily black crown night herons, continues to be a problem at Hagerman NFH. The Engineering office in Portland, OR accomplished a bird enclosure design in Fiscal Year 1991. The estimated cost, \$290,000, was considered excessive and the engineers were requested to redesign the system to be more cost effective. Hopefully, this project will commence in Fiscal Year 1992.

## REVIEW OF FISH RELEASES COMPARED WITH GOALS OF THE COLUMBIA RIVER FISH MANAGEMENT PLAN

The Columbia River Fish Management Plan, dated November 9, 1987, includes fish release goals for Hagerman NFH: (1) 500,000 steelhead "A" smolts at Sawtooth hatchery; (2) 93,500 smolts to the Little Salmon River; (3) 500,000 "B" smolts at the East Fork Salmon River trap; and (4) 93,500 "B" smolts to the Little Salmon River.

Actual releases, as listed in the Fish Culture Operations section of this document, deviated considerably from the Columbia River Plan. The annual steelhead program fluctuates due to egg availability and program adjustments. Until such time as adequate eggs are annually available from the Salmon River adults returns, it is anticipated that Hagerman's steelhead production will not match the goals of the Columbia River Plan.



Comparison of Dorsal Fin Index (%) Under Eight Rearing Conditions



HATCHERY PRODUCTION SUMMARY (Intensive Culture)

1 of 2

Station: Hagerman, ID NFH		Period Covered: October 1, 1990 through September 30, 1991									
Species/Strain and Lot Number	Fish on Hand Last Day of Period					Weight Gain	Feed Expended		Conversion	Percent Survival	
	Number	Weight	Length	D.I.	F.I.		Pounds	Costs			
1	2	3	4	5	6	7	8	9	10	11	
STT/B											
STT-CRW-90-DWO-1 (42)	0	0	0	0	0	18,870	29,431	6,706.19	1.56	87.2	
STT/B											
STT-CRW-90-DWO-2 (43)	0	0	0	0	0	22,286	34,559	7,874.90	1.55	80.1	
STT/B											
STT-CRW-90-DWO-3 (44)	0	0	0	0	0	44,671	70,277	16,023.22	1.57	86.2	
STT/A											
STT-SAW-90-ID-1 (45)	0	0	0	0	0	78,063	108,985	24,915.17	1.40	87.6	
STT/A											
STT-SAW-90-ID-2 (46)	0	0	0	0	0	116,750	163,717	37,637.50	1.40	87.1	
RBT/ARLEE											
RBT-ARD-90-ENN (47)	0	0	0	0	0	7,531	10,962	2,818.24	1.46	63.1	
RBT/SHASTA											
RBT-SSD-90-ENN (48)	0	0	0	0	0	8,499	11,783	3,018.12	1.39	82.8	
STT/B											
STT-CRW-91-DWO-1 (49)	143,028	6,012	4.843	.14	.44	14,736	15,285	4,757.08	1.04	94.0	
STT/A											
STT-PAW-91-ID-1 (50)	252,924	7,173	4.248	.06	.18	7,087	7,280	2,306.38	1.03	94.6	
STT/B											
STT-CRW-91-DWO-2 (51)	522,549	14,432	4.210	.09	.28	18,189	20,224	6,395.37	1.11	94.1	
Totals/Averages											





OPERATIONS/MAINTENANCE COST DATA

Station: Hagerman, ID NFH

Fiscal Year: 19 91

Funding Source			
Operations (Fisheries) (4710) 1	Cyclical Maintenance (Fisheries) 2	Quarters Maintenance (8610) 3	Other Funding 4
274,353			
6,650			
2,545			
7,563			
212			
0			
0			

1. Salaries, Permanent (Including Benefits):

2. Salaries, Temporary (Including Benefits):

3. Operating Costs:

A. Utilities

1. Telephone

2. Electricity

3. Heating Oil

4. Natural Gas

5. Other

B. Vehicle Maintenance

1. Distribution Vehicles

Total Mileage: 24,945

Station: Hagerman, ID NFH

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 19 91

	Funding Source			
	Operations (Fisheries) (4710) 1	Cyclical Maintenance (Fisheries) 2	Quarters Maintenance (8610) 3	Other Funding 4
2,022				
5,816				
120,420				
492				
0				
0				
33,038				
10,574				

3. B. Vehicle Maintenance (continued)

2. Non-Distribution Vehicles

Total Mileage: 24,442

C. Fuel for Vehicles/Equipment

D. Supplies

1. Fish Food

2. Chemicals/Drugs

3. Fertilizer

4. Tags and Tagging Supplies

5. Office Supplies/Custodial/Other Supplies

E. Travel

Station: Hagerman, ID NFH

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 1991

	Funding Source			
	Operations (Fisheries) (4710) 1	Cyclical Maintenance (Fisheries) 2	Quarters Maintenance (8610) 3	Other Funding 4
3. F. Moving Expense	0			
G. Miscellaneous (List)				
Lease Vehicles	8,778			
4. Operations (Total: Lines 1, 2, 3A-G)	472,463			
5. Vehicles/Equipment Purchased (Over \$1,000)	23,655			
6. Cyclical Maintenance				
7. Quarters Maintenance			9,725	
8. Total Maintenance (Total: Lines 5, 6, and 7)	23,655		9,725	
9. Column Totals (Total: Lines 4 and 8)	496,118		9,725	
10. Total Expenditures (Add Totals of Column 1-4)	\$ 505,843			

**REPORT OF STATION PERSONNEL**

Station: Hagerman, ID NFH

Fiscal Year: 1991

**Part I - Permanent Personnel (FTE's: 7.6)**

Name Of Employee	Functional Title	Grade	Period Worked	Remarks
David S. Bruhn	Supervisory Fishery Biologist	GS 12	90/10/1 - 91/9/30	
Harry T. Shaw	Supervisory Fishery Biologist	GS 11	90/10/1 - 91/9/30	
Virginia G. Phalen	Fishery Biologist (Mgmt)	GS 5	91/7/28 - 91/9/30	
Beatrice M. Martindale	Fisheries Program Asst.	GS 6	90/10/1 - 91/9/30	
M. J. Kirsch, Jr.	Maintenance Worker	WG 8	90/10/1 - 91/9/30	
Michael Jacobson	Motor Vehicle Operator	WG 8	90/10/1 - 91/9/30	
Samuel D. Martindale	Motor Vehicle Operator	WG 8	90/10/1 - 91/9/30	

**Part II - Temporary Personnel (FTE's: 0.4)**

Name Of Employee	Functional Title	Grade	Period Worked	Remarks
Carey Koepplin	Fish Culturist	WG 2	91/9/20 - 91/9/30	
Buddy L. Compher	Fish Culturist	WG 2	90/10/1 - 91/4/21	
Wade Guthrie	Motor Vehicle Operator	WG 8	91/4/3 - 91/4/27	



FIVE YEAR HATCHERY PRODUCTION SUMMARY

Station:

		Fiscal Year				
		1991	1990	1989	1988	1987
<b>I. Fish Production Data</b>						
Intensive Culture:						
Fish Weight Gain (pounds)		349,782	404,599	383,733	375,297	371,107
Fish Numbers		1,586,078	2,151,246	1,743,604	1,976,914	2,087,180
Percent Survival		90.2	92.2	94.1	94.7	94.1
Feed Conversion		1.39	1.27	1.33	1.22	1.15
Extensive Culture:						
Fish Weight Gain (pounds)						
Fish Numbers						
Percent Survival						
Pounds per Acre						
<b>II. Broodstock Production Data:</b>						
Number of Females Spawned						
Number of Eggs						
Number of Fish						
<b>III. Management Data:</b>						
Full-Time Equivalent		8.0	8.0	8.3	8.6	8.9
Operational Costs		472,463	494,324	493,335	449,250	506,540
Vehicle/Equipment Costs (Items over \$1,000)		23,655	0	14,037	14,235	29,948
Cyclical Maintenance Costs		0	37,394	12,475	55,100	36,123
Quarters Costs		9,725	7,120	6,268	6,851	7,100

PUBLIC RELATIONS

Station: Hagerman, ID NFH

Fiscal Year: 1991

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1. Presentations:	Number of Groups	Number of People
On Site	<u>10</u>	<u>369</u>
Off Site	<u>1</u>	<u>400</u>
2. Number of Visitors:		
Official		<u>22</u>
Public		<u>6,000</u>
3. Other Public Relation Activities:		
Type of Activity		
<u>National Fishing Week Booth in</u>		<u>300</u>
<u>coordination with Idaho Department of</u>		
<u>Fish and Game.</u>		

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Remarks: