

HAGERMAN NATIONAL FISH HATCHERY

ANNUAL REPORT

1998



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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 (LSRCP) 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 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 resident 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 (IDFG) to annually rear 340,000 pounds of summer steelhead trout at 4 to 5 fish per pound (8 inches) at Hagerman NFH. 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 raceways at the hatchery. Of these, 66 are devoted to LSRCP steelhead production and 36 are reserved for other programs which the Fish and Wildlife Service deems appropriate. 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 degrees Fahrenheit with a flow rate of approximately 30,000 gallons per minute. Water rights, under Idaho law, are both statutory and constitutional. A total of 17 spring sources are identified on the Fish and Wildlife Service property.

Co-located on the hatchery grounds is the Hagerman Fish Culture Experiment Station. This research facility is operated by the University of Idaho under a Memorandum of Understanding which is administered by the Hagerman NFH Project Leader.

STATION OPERATIONS

Within the framework of the LSRCP, specific goals and objectives for the hatchery's steelhead production are established through a high degree of interagency coordination. An adult return goal of 13,600 fish above Lower Granite Dam has been established for the Hagerman NFH program.

A variety of basin-wide efforts have been implemented to coordinate anadromous hatchery production programs. These activities will continue to affect certain aspects of the steelhead production program, such as total number and strain reared, time and size at release, and location of release. This will be particularly important as it relates to affects on hatchery production through implementation of recovery plans for anadromous species listed or proposed for listing under the Endangered Species Act (ESA).

Fish Culture Operations

Steelhead Production

Brood Year 1998

The Brood Year (BY) 1998 production goal for Hagerman NFH is 1,150,000 smolts at a target size of 4.5 fish per pound (170-220mm). To meet this goal, approximately 1,355,000 eyed steelhead trout eggs were received from IDFG's Oxbow State Fish Hatchery and from Sawtooth FH during late May and early June. All eggs were "A" strain steelhead trout, with 803,000 eyed Sawtooth eggs and 552,000 eyed Oxbow eggs.

Approximately 98% of both Oxbow and Sawtooth eggs hatched successfully. During July, August, and September, 1,250,000 fingerlings were transferred into outdoor raceways. All fish were vaccinated for ERM (Yersinia ruckeri) at 100-120 fish per pound.

No diseases were identified in BY98 fingerlings and no chemical treatments provided. Adipose fin clipping of BY98 fish began September 23, and was completed on October 7, 1998. Approximately 712,340 Sawtooth and 410,640 Oxbow fish were fin clipped for BY98.

Brood Year 1997

The hatchery received 1,358,000 eyed, A-strain, steelhead trout eggs from IDFG for BY97. Eggs received were of Pahsimeroi and Sawtooth stock. Fish were started on Rangen's soft moist diet. Fingerlings were switched to Silver Cup Salmon diet at 200 fish per pound. At 30 fish per pound, they were fed the Hagerman Steelhead contract diet, presented as an extruded-floating pellet, and supplied by Nelson and Sons of Murray, UT. Feed conversion was 1.2, and the

average cost per pound of gain was 26.8 cents. Overall survival from egg to distribution ranged from 89-92%.

Adipose fin clipping was supervised by personnel from IDFG and completed on October 16, 1997. There were 1,123,920 fish clipped. Clipping took 12 working days and averaged 93,660 fish per day.

Coded-wire tagging (CWT) of BY97 smolts was supervised by IDFG personnel and completed on November 15, 1997. Four groups of Sawtooth fish (12 raceways) were marked for acclimation, direct release, and intermittent feeding studies (251,479 fish). Additionally, one group of Pahsimeroi fish (31,253) was marked to evaluate direct release into the Little Salmon River.

A total of 282,732 fish were marked and released during acclimation and contribution studies in April 1998. No hatchery fish had ventral clips this year.

Passive integrated transponder (PIT) tags were inserted into 2,700 fish that also had CWTs.

Periodic disease inspection by the Dworshak Fish Health Center detected no pathogens in the BY 97 fish. However, about 30 days prior to distribution, during routine sampling procedures, several raceways of Sawtooth stock exhibited a sensitivity to crowding and handling. These fish had been started on an experimental diet to control fin erosion (see Special Studies below). The IDFG requested that these fish not be stocked in the anadromous program. This group of fish were held on station until June, then shipped to local reservoirs as resident trout (see Rainbow Trout Distribution and Special Studies below).

Steelhead Distribution

Distribution of BY97 steelhead trout was completed on April 29, 1998. A total of 1,032,407 smolts weighing 233,292 pounds, and averaging 4.5 fish per pound, were released. All steelhead released had adipose fins clipped. The distribution process required 23 working days, 47 trips, and distribution trucks logged approximately 22,400 miles.

Acclimation studies at Sawtooth FH received 623,583 fish from March 31 through April 9, 1998. There were 254,483 fish released between April 13-22, 1998, in the Little Salmon River at the Stinky Springs release site. An additional 61,354 fish were trucked directly to the Salmon River at the Sawtooth FH weir and released on April 24, 1998. Drivers then returned to the Little Salmon River with an additional 92,987 fish from April 27-29, 1998.

Rainbow Trout Production

Brood Year 1997

During 1997, Hagerman NFH produced rainbow trout for the Dworshak Reservoir mitigation program. This is an in-kind exchange program whereby fish reared at Hagerman NFH are stocked into reservoirs in southern Idaho, while fish reared at Nampa State Fish Hatchery are stocked into Dworshak Reservoir.

Approximately 167,500 rainbow trout eggs, of the Arlee strain, were received from Ennis NFH on November 13, 1997. Survival to distribution was approximately 63%. Overall food conversion was 1.16 and the cost per pound was 28.6 cents.

Brood Year 1998

Approximately 43,000 Hayspur rainbow trout eggs were received from Hayspur State Fish Hatchery on March 16, 1998. Survival to distribution was 72%. Overall food conversion was 1.01 and the cost per pound was 29.0 cents.

Rainbow Trout Distribution

Brood Year 1997

A total of 64,521 rainbow trout, weighing 11,245 pounds, were stocked into Camas Reservoir on May 21 and 22, 1998. An additional 35,207 fish, weighing 12,100 pounds, were stocked into Oxbow and Hell's Canyon reservoirs during the month of July. A total of 99,728 rainbow trout, weighing 23,345 pounds, and averaging 4.27 fish per pound, were produced for the BY97 program. An additional 43,732 A-strain steelhead (Sawtooth stock) were released as resident trout into Roseworth, Thorn Creek, and Lucky Peak reservoirs. Total resident fish release was 143,460 catchable rainbow trout.

Brood Year 1998

Approximately 31,000 rainbow trout, weighing 6,165 pounds, were stocked into Camas Reservoir on October 8 and 9, 1998. These fish averaged 5.05 fish per pound. This production will be reported for FY99 distribution.

Experiments/Special Studies

Intermittent Feeding

During BY97 rearing, 66 raceways were in the second year of an on-going study to examine the effects of intermittent feeding on growth and condition of steelhead. For 12 weeks, fish were fed a 30-day ration in a 15-day period, and then fasted for 15 days. All fish were fed via demand feeders. To continue the evaluation of this feeding program, 3 treatment raceways (60,000 fish) and 3 control

raceways (60,000 fish) were established on the upper deck. Treatment fish were fed via the intermittent feeding protocol, while control fish were fed continuously via the hatchery constant method. Fish were sampled monthly for length and weight. Condition factors, weight gain, food conversion ratios, and dorsal fin indexes were also monitored. Intermittent feeding was successful at reducing growth rates of steelhead without sacrificing fish condition. The study will be extended through the BY98 production cycle. A more in-depth report of the study is being compiled by the Hagerman NFH, Hatchery Evaluation Team (HET).

Fin Erosion diet (Wild Fish Diet)

For BY97, approximately 50,510 steelhead fingerlings (Sawtooth Stock) were started on an experimental diet, developed by Dr. Rick Barrows at the Bozeman Fish Culture Technology Center. The study was designed to evaluate the effect of the diet on dorsal fin condition. After several weeks of rearing the experiment was canceled due to high mortality in the treatment group. No pathogens were isolated from the fish at that time. However, an examination of the fish by John Morrison at the Olympia Fish Health Center showed bone malformation at a point where the vertebrae connects with the skull. It is speculated that an imbalance of magnesium and phosphorous in the diet caused the problem. The fish were placed back on a commercial diet in October. Although the fish appeared healthy, continued to grow as projected and the mortality rate remained low, they were not as easily handled as other groups of fish typically held on station. The IDFG requested that these fish not be released in the anadromous program but released into the resident program as reported above.

In the spring of 1998, Dr. Barrows reformulated the diet and it was fed to approximately 40,000 surplus Oxbow stock steelhead fry (BY98). The experiment was terminated after 103 days since there was no beneficial effect observed regarding the prevalence of fin erosion. These steelhead have been subsequently dedicated to the resident (rainbow trout) program and will be stocked into local reservoirs during in the spring of 1999.

Other Items of Interest

Water Rights

The Snake River Basin Adjudication process continued during FY 1998. The hatchery installed a Parshall flume to measure flow in the Spring #11 overflow ditch that services the Hagerman Fish Culture Experiment Station operated by the University of Idaho (UI).

Personnel

William Hopkins started work as a Temporary Fish Culturist on January 5, 1998.

Aquaculture Liaison/Hagerman Lab

During FY1998, Region 1 Fisheries decided to entertain the UI's proposal to expand their activities at the Hagerman Fish Culture Experiment Station (formally Tunison Lab of Fish Nutrition). Division of Realty staff drafted legislation to affect the transfer to UI of the real and personal property associated with the lab. President William Clinton signed the Bill into law in early October. The official transfer of the facility will occur in mid FY 1999.

Inter/Intra - Agency Coordination and Cooperation

Hatchery Evaluation Team (HET) The main focus of the HET has been to coordinate efforts directed at evaluation of the "wild fish" diet developed by Bozeman Fish Technology Center and the intermittent feeding program. IDFG continues to participate in this effort

Two hatchery coordination meetings were held during the year.

Samara Showalter was appointed as the student intern under a Cooperative Agreement with the College of Southern Idaho and the Idaho Aquaculture Association.

The Hatchery initiated a multi party agreement with the Brailsford Ditch Association (BDA), IDFG and the Bureau of Reclamation (BOR) to construct a pipeline in that portion of the Brailsford Ditch that crosses hatchery property. In recent years seepage from the ditch has caused several failures in the ditch wall. The most recent failure resulted in large amounts of mud flowing into the Spring 17 hatchery water supply. The hatchery is not providing any direct funding for the project but, will provide fill material from its materials pit for bedding the pipe. The BOR is providing funding to the Brailsford Ditch Association in the Amount of \$25,000.00 under its Water Conservation Program.

The hatchery initiated a cooperative agreement with the UI Aquaculture Institute, to develop and install an information kiosk at the hatchery's visitor center. The kiosk will have an interactive computer to be used by the visitors who may select from a variety of options in a local web page that describes the hatchery program and work done by the UI at the Hagerman Fish Culture Experiment Station. Ms. Susan Sawyer, I&E Specialist-Dworshak NFH, is assisting the hatchery in developing its portion of the program.

Outreach/Volunteers

Hagerman Fossil Days celebration - entered fish transport truck into the parade.

National Fishing Day - sponsored a morning of fishing at the handicapped access fishing pier for folks from the Living Independent Network Corporation, Twin Falls, Idaho.

The Buhl and Hagerman school districts conducted their annual day-long outdoor learning activities on the hatchery grounds.

The hatchery welcomed Art and Sandy Taylor and Art Brousseau and Claire Akeret as Volunteer Hatchery Hosts. The volunteers resided at the RV-pads on station.

During July the hatchery hosted the Snake River Council Boy Scouts of America, Northside District, Cub Scout Fishing Derby at Oster Lake #1. A special thanks is extended to Mr. Joe Chapman, Manager of the Hagerman State Fish Hatchery, for stocking the lake in preparation for the activity.

Safety/Health/Security

Wild land fire awareness continues to be an important issue for the station. In an effort to reduce its potential the hatchery blocked off-road access to the sage brush areas along Riley Creek. A new parking area was created to facilitate fishing access. The hatchery continued its participation in the Cooperative Agreement with the Bureau of Land Management, Southern Idaho Dispatch Center, Shoshone, Idaho. This program provides for staff training and access to fire fighting equipment. In addition, a station Wild Land Fire Plan was finalized, and an interagency Cooperative Agreement was implemented with the Hagerman Rural Fire District.

The Regional Environmental Audit Team conducted audits of the hatchery and the Hagerman Fish Culture Experiment Station. A number of hazardous materials were identified for disposal by the team. Disposal will occur during FY1999.

Regional Engineering and Safety staff conducted a status review of Hatchery #1. A significant number of structural problems identified in the review led to scheduling it for replacement in FY2000. Friable asbestos in the attic, identified in the review was removed by a qualified vendor.

The hatchery established a Cooperative Agreement with the Federal Protective Service, (GSA) for the installation and monitoring of a station security system. This action was in response to several burglaries on the property. In addition the hatchery installed a security gate on the entrance road.

The Idaho Department of Water Resources approved the new domestic water system. Persistent problems with coliform bacteria at the residences delayed approval and required installation of new plumbing in the houses to alleviate the problem.

Electric power disconnects were installed outside each of the hatchery residences.

Official Visitors

Joe Chapman	Idaho Department of Fish & Game, Hagerman, ID
Jerry Chapman	Idaho Department of Fish & Game, Wendell, ID
Tom Rogers	Idaho Department of Fish & Game, Boise, ID
Dave May	Idaho Department of Fish & Game, Filer, ID
Dean Rhine	Idaho Department of Fish & Game, Lewiston, ID
Rodney Duke	Idaho Department of Fish & Game, Lewiston, ID
Mike Graham	Idaho Department of Fish & Game, Filer, ID
Bob Moore	Idaho Department of Fish & Game, Filer, ID
Brent Snider	Idaho Department of Fish & Game, Stanley, ID
Todd Garlie	Idaho Department of Fish & Game, Challis, ID
Doug Ingman	Idaho Department of Fish & Game, Challis, ID
Sharon Keifer	Idaho Department of Fish & Game, Boise, ID
Bill Miller	Fish & Wildlife Service, Ahsahka, ID
Carla Burnside	Fish & Wildlife Service, Malheur NWR, OR
Ed Crateau	Fish & Wildlife Service, Boise, ID
Ken Peters	Fish & Wildlife Service, Ahsahka, ID
Randy Schmeller	Fish & Wildlife Service, Portland, OR
Pat Bigelow	Fish & Wildlife Service, Ahsahka, ID
Dr. Rick Barrows	Fish & Wildlife Service, Bozeman, MT
Kathy Clemens	Fish & Wildlife Service, Ahsahka, ID
Judith Maule	Fish & Wildlife Service, Portland, OR
Charlie Smith	Rangen's Inc., Buhl, ID
Doug Ramsey	Rangen's Inc., Buhl, ID
Chris Nelson	Silver Cup Inc., Murray, UT
James Ward	National Park Service, Hagerman, ID
Lionel Boyer	Shoshone /Bannock Tribes, Fort Hall, ID
Rob Sharpnack	Idaho Department of Water Quality, Twin Falls, ID
Nick Cizmitch	Idaho Department of Water Quality, Twin Falls, ID
Bill Shake	Fish & Wildlife Service, Portland, OR
Chuck Dunn	Fish & Wildlife Service, Portland, OR
Scott Wise	Fish & Wildlife Service, Portland, OR
Christine Mullaney	Fish & Wildlife Service, Portland, OR
Susan Sawyer	Fish & Wildlife Service, Ahsahka, ID
Marilyn Blair	Fish & Wildlife Service, Ahsahka, ID
Tim Mayer	Fish & Wildlife Service, Portland, OR
Mike Fallon	Alaska Department of Fish & Game
Greg Pratschner	Fish & Wildlife Service, Leavenworth, WA
Bill Thorson	Fish & Wildlife Service, Carson, WA
Julie Collins	Fish & Wildlife Service, Leavenworth, WA
Rebecca Franco	Fish & Wildlife Service, Leavenworth, WA
Speros Doulos	Fish & Wildlife Service, Cook, WA
Jim Rockowski	Fish & Wildlife Service, Cook, WA
Bryan Charlton	Fish & Wildlife Service, Cook, WA
Rusty Eschler	Fish & Wildlife Service, Cook, WA
Paul Hayduk	Fish & Wildlife Service, Cook, WA
Dr. Greg McDonald	Park Service, Hagerman, ID

Official Visitors (Contd.)

Virgil Moore	Idaho Department of Fish & Game, Boise, ID
Rich Holman	Idaho Department of Fish & Game, Jerome, ID
Carl Nellis	Idaho Department of Fish & Game, Jerome, ID
Bill Gorgon	Idaho Department of Fish & Game, Jerome, ID
Marcus Goshen	Federal Drug Administration, Seattle, WA
Gary Wilson	Fish & Wildlife Service, Portland, OR
Ron Hardy	University of Idaho, Hagerman, ID
Mike Casten	University of Idaho, Hagerman, ID

TRAINING

Jae Ahn, Fishery Biologist	Sex, Drugs & OSHA, Magic Valley Regional Medical Center, Twin Falls, ID
	Excelling as a First-Time Supervisor, CareerTrack, Twin Falls, ID
	Basic Firefighter Training, BLM, Shoshone, ID
	Recertification Training for Medic First Aid & CPR, Magic Valley Regional Medical Center, Twin Falls, ID
	EEO Workforce Diversity Training, Boise, ID
Robert Burns, Assistant Manager	Pre-Retirement Planning, Graduate School, USDA, Boise, ID
	How to Handle People With Tact & Skill, CareerTrack, Twin Falls, ID
	OSHA #600 Course, University of California, San Diego, CA
	Fish Genetics, USFWS, National Conservation Training Center, Boise, ID
	Northwest Fish Culture Conference, Lincoln City, OR
	Recertification Training for Medic First Aid & CPR, Magic Valley Regional Medical Center, Twin Falls, ID
	EEO Workforce Diversity Training, Boise, ID

TRAINING (contd)

Brian Clifford, Motor,
Vehicle Operator

EEO Workforce Diversity Training, Boise, ID

Northwest Fish Culture Conference, Lincoln City,
OR

Recertification Training for Medic First Aid &
CPR, Magic Valley Regional Medical Center, Twin
Falls, ID

Refresher Basic Fire Fighter Course, BLM,
Shoshone, ID

William Hopkins,
Animal Caretaker

Recertification Training for Medic First Aid &
CPR, Magic Valley Regional Medical Center, Twin
Falls, ID

Bryan Kenworthy,
Project Leader

Administrative Training, USFWS, Portland, OR

Recertification Training for Medic First Aid &
CPR, Magic Valley Regional Medical Center, Twin
Falls, ID

EEO Workforce Diversity Training, Boise, ID

Natural Rearing Systems Workshop, National Marine
Fisheries Service, Port Ludlow, WA

Bea Martindale, Fisheries
Program Assistant

Paradox Budget Training, USFWS, Boise, ID

Recertification Training for Medic First Aid &
CPR, Magic Valley Regional Medical Center, Twin
Falls, ID

EEO Workforce Diversity Training, Boise, ID

Administrative Training, Portland, OR

Steve Money,
Maintenance Mechanic

RCRA Waste Management Regulations Course,
Environmental Facility Compliance Group, RO,
Portland, OR

TRAINING (contd)

Recertification Training for Medic First Aid & CPR, Magic Valley Regional Medical Center, Twin Falls, ID

EEO Workforce Diversity Training, Boise, ID

Refresher Basic Fire Fighter Course, BLM, Shoshone, ID

Eric Willet, Motor Vehicle Operator

Recertification Training for Medic First Aid & CPR, Magic Valley Regional Medical Center, Twin Falls, ID

EEO Workforce Diversity Training, Boise, ID

Refresher Basic Fire Fighter Course, BLM, Shoshone, ID

STATION CYCLICAL MAINTENANCE/CONSTRUCTION

Cyclical Maintenance

Asbestos Removal in Hatchery #1	2,806.00
Oster Lakes pump retrofit	7,256.00
Domestic Water System rehabilitation	10,857.00
Installed Parshall flume at Spring #11	3,731.00
Environmental Audit chemical disposal	18,000.00

Rehabilitation

Fish transport life support system	9,403.00
Distribution fish pumps	645.00
Repair & replace probe on O2 meter	350.00
New window screens at quarters	1,140.00
Installed 124 amp meters and disconcerts at quarters	1,900.00
Restoration of bathroom at quarters #5	1,450.00
Installed new doors at quarters #6	825.00

Equipment Acquisition

Security Gate	17,855.00
Electric ranges for quarters	2,289.00
Security system installed	7,540.00
ADP equipment & software	5,781.00
Vehicle purchase	26,000.00
Microwave oven	482.00
Water softners for quarters	3,180.00
Welder/Generator	2,400.00

FUTURE OUTLOOK

PRODUCTION

Continued emphasis will be placed on steelhead smolt quality.

Constraints imposed by the ESA on hatchery steelhead releases for the Snake River basin will continue to affect Hagerman NFH production activities.

More stringent requirements regarding discharge standards for hatchery effluent are anticipated upon renewal of the NPDES permits.

SAFETY

Continued emphasis will be placed on safe driving, fire prevention and protection, facility security, and OSHA compliance.

OUTREACH

Tourism is Idaho's third largest industry; an increase in visitor activity is anticipated in the future. Emphasis will be required for improving visitor services and control of visitor access. Other efforts will be directed toward local area school and civic youth groups as a means to develop environmental awareness. And, the hatchery will continue to operate a volunteer hatchery host program during the peak summer tourist season.

HATCHERY PRODUCTION SUMMARY (Intensive Culture)

Station: Hagerman National Fish Hatchery		PERIOD COVERED: OCTOBER 1, 1997 THRU SEPTEMBER 30, 1998										
Species/ Strain and Lot Number	Fish on Hand Last Day of Period					To Date This Fiscal Year						
	Number	Weight	Length	D.I.	F.I.	Weight Gain	FEED Pounds	EXPENDED Costs	Conver- sion	Percent Survival		
1	2	3	4	5	6	7	8	9	10	11		
STT-PAW-74	0	0	0.000	0.00	0.00	79,025	78,883	\$22,222.00	1.00	96		
STT-SAW-75	0	0	0.000	0.00	0.00	166,592	167,890	\$47,771.00	1.00	97		
RBT-ARD-76	0	0	0.000	0.00	0.00	23,306	22,279	\$6,673.00	0.96	85		
RBT-HAY-77	33,100	4,954	6.780	0.14	0.40	4,937	5,002	\$1,662.00	1.01	86		
STT-HCW-78	517,050	11,660	4.200	0.09	0.37	11,657	11,219	\$4,556.00	0.96	95		
STT-SAW-79	751,870	9,471	3.240	0.05	0.16	9,119	9,620	\$4,150.00	1.06	95		
Total/Averages	1,302,020	26,085	XXXX	XXXX	XXXX	294,636	294,893	\$87,034.00	1.00	--		

FIVE YEAR HATCHERY PRODUCTION SUMMARY

Station: Hagerman, ID NFH

	Fiscal Year				
	1998	1997	1996	1995	1994
I. Fish Production Data					
Intensive Culture:					
Fish Weight Gain (pounds)	294,636	275,786	263,896	254,180	345,180
Fish Numbers	1,302,020	1,118,830	1,307,593	1,520,387	1,517,194
Percent Survival	92.3	69.0	96.9	96.5	96.9
Feed Conversion	1.00	1.10	1.16	1.21	1.18
Extensive Culture:					
Fish Weight Gain (pounds)					
Fish Numbers					
Percent Survival					
Pounds per Acre					
II. Broodstock Production Data:					
Number of Females Spawned					
Number of Eggs					
Number of Fish					
III. Management Data:					
Full-Time Equivalents	7.6	7.2	6.6	8.5	8.5
Operational Costs	504,796	460,401	438,058	545,138	527,808
Vehicle/Equipment Costs (Items over \$1,000)	39,650		47,143	40,191	47,380
Cyclical Maintenance Costs	40,745	76,563	176,565	62,094	36,449
Quarters Costs	22,966	11,957	38,022	19,665	11,655

FISH HEALTH ACTIVITIES SUMMARY -
NATIONAL FISH HATCHERY

Station: Hagerman, ID NFH

Fiscal Year: 1998

Problem/Incident/Activity 1	Species 2	Therapeutic Treatment 3	Results/Comments 4
Egg Disinfection	Steelhead Trout	PVP Iodine @ 100 ppm	Routine Disinfection
	& Rainbow Trout	for 10 minutes	
Prophylactic Vaccination	Steelhead Trout	Yersinia ruckerii	Prophylactic
		vaccine	

Chemical Summary:

Chemical: PVP Iodine	Purpose: Egg Disinfection	Total Amount Used: 5 gallons	Total Cost: \$ 75.00
Y. ruckerii vaccine	Prophylactic	62\liters	2,400.00
Chlorine	Routine Disinfection	2 gallons	15.00

OPERATIONS/MAINTENANCE COST DATA

1. Station: Hagerman, ID NFH

Fiscal Year: 1998

	Funding Source			
	Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding
1 4710	1 4710	2 4710	3 8610	14220 4 1935
311,180				
14,204				
2,734				
7,722				
1,109				
13,392				
8,778				

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:

Station: Hagerman, ID NFH

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 1998

	Funding Source			
	Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding
1. 4710		2 4710	3 8610	14220 4 1935
2.251				
15,995				
3.078				
70,518				10,000
2,240				
35,586				
10,081				

3. B. Vehicle Maintenance (continued)

2. Non-Distribution Vehicles

Total Mileage:

C. Fuel for Vehicles/Equipment

D. Supplies

1. Fish Food

2. Chemicals/Drugs

3. Fertilizer

4. Tags and Tagging Supplies

5. Office Supplies/Custodia/Other Supplies

E. Travel

OPERATIONS/MAINTENANCE COST DATA

1. Station: Hagerman, ID NFH

Fiscal Year: 1998

	Funding Source			
	Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding
3. F. Moving Expense	1 4710	2 4710	3 8610	14220 4 1935
	1,196			
6. Miscellaneous (List) Fire Dist Coop	5,000			
Fish Haul Contract & Tractor Lease	16,276			
CSI & Outreach	8,299			
4. Operations (Total: Lines 1, 2, 3A-G)	504,796			
5. Vehicles/Equipment Purchased (Over \$1,000)	39,650			
6. Cyclical Maintenance		40,745		
7. Quarters Maintenance			22,966	
8. Total Maintenance (Total: Lines 5, 6, and 7)	39,650	40,745	22,966	
9. Column Totals (Total: Lines 4 and 8)	544,446	40,745	22,966	10,000
10. Total Expenditures (Add Totals of Column 1-4)	\$ 618,157			

REPORT OF STATION PERSONNEL

FISCAL YEAR: 1998

STATION: Hagerman, ID National Fish Hatchery

Part I - Permanent Personnel (FTS's: 6.8)					
Name of Employee	Functional Title	Grade	Period Worked	Remarks	
Bryan Kenworthy	Sup Fisheries Biologist	GS 12	97/10/01 - 98/09/30		
Robert Burns	Sup Fisheries Biologist	GS 11	97/10/01 - 98/09/30		
Jung J Ahn	Fisheries Biologist	GS 09	97/10/01 - 98/09/30		
Beatrice Martindale	Fisheries Program Asst	GS 06	97/10/01 - 98/09/30	Part-time	
Brian Clifford	Motor Vehicle Operator	WG 08	97/10/01 - 98/09/30		
Eric Willet	Fish Culturist	WG 06	97/10/01 - 98/09/30		
Steve Money	Maintenance Mechanic	WG 10	97/10/01 - 98/09/30		
Part II - Temporary Personnel (FTE's: .8)					
William Hopkins	Animal Caretaker	WG 02	98/01/04 - 98/09/30		

PUBLIC RELATIONS

Station: Hagerman, ID NFH

Fiscal Year: 1998

1. Presentations:	Number of Groups	Number of People
On Site	10	462
Off Site		
2. Number of Visitors:		
Official		54
Public		3,986
3. Other Public Relation Activities:		
Type of Activity		
Free Fishing Day		12
Hagerman Fossil Days Parade		

Remarks:

The number of public visitors is compiled from our Visitor Register and does not reflect the actual number.



Hatchery Staff

Bryan Kenworthy, Bea Martindale, Rob Burns, Steve Money, Brian Clifford, Eric Willet, and Jae Ahn



Volunteers Sandy and Art Taylor



Samara Showalter
Student Intern - College of Southern Idaho



Removal of friable asbestos from attic of Hatchery #1



Bridge for access to settling basins to facilitate cleaning operations



New Parshall flume installed for Spring #11



Failure of Brailsford Ditch above Spring#17



Parking for Riley Creek access



Hatchery security gate