

HAGERMAN NATIONAL FISH HATCHERY

ANNUAL REPORT

1996



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FISCAL YEAR 1996

Hagerman National Fish Hatchery
Station

Hagerman, Idaho
City, State

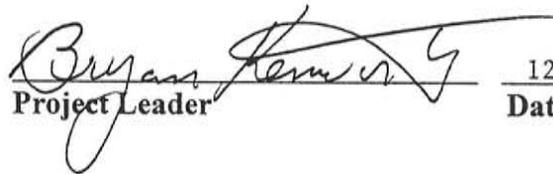

Project Leader 12/16/96
Date

TABLE OF CONTENTS

I. NARRATIVE	PAGE
INTRODUCTION	1
STATION OPERATIONS	2
Fish Culture Operations	
Steelhead Trout	2
Experiments/Studies	4
Official Visitors	5
Training	6
Other Items of Interest	7
STATION CYCLICAL MAINTENANCE/CONSTRUCTION	11
FUTURE OUTLOOK	12
II. FORMS	
Fish and Egg Distribution Summary (Form 3-102)	13
Hatchery Production Summary - Intensive Culture (Form 3-103a)	14
Five Year Hatchery Production Summary (Form 3-115)	15
Fish Health Activities Summary - National Fish Hatchery (Form 3-108)	16
Operations/ Maintenance Cost Data (Form 3-110)	17
Report of Station Personnel (Form 3-114)	20
Public Relations (Form 3-172)	22
III. APPENDIX	23

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 Compensation Plan steelhead trout 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

As part of the Lower Snake River Compensation Plan, the Hagerman NFH provides partial mitigation for summer steelhead losses due to the construction of four federal dams on the lower Snake River. Within this overall framework, 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 of hatchery production on recovery plans for anadromous species listed or proposed for listing under the Endangered Species Act (ESA).

Fish Culture Operations

Steelhead Production

Brood Year 1996

The Brood Year (BY) 1996 production goal for Hagerman NFH is 1,140,000 smolts at a target size of 4.5 fish per pound. To meet this goal, 1,403,878 eyed steelhead-trout eggs were received from IDFG's Sawtooth Fish Hatchery during late May and early June, 1996. All eggs were "A" strain steelhead trout. A total of 505,291 were Pahsimeroi stock, and 898,587 were Sawtooth stock.

Approximately 98% of both Pahsimeroi and Sawtooth eggs hatched successfully. During July, August, and September, 1,317,948 fingerlings were moved into outdoor raceways. All fish were vaccinated for ERM (*Yersinia ruckeri*) at approximately 100 fish per pound, with the exception of 26,420 Pahsimeroi fingerlings that were established as a control group in the lower deck.

Adipose-fin clipping of BY96 fish began September 30, and finished on October 16, 1996. Clipping was supervised by IDFG. Coded-wire-tagging will commence on October 28, 1996.

Brood Year 1995

The hatchery received 1,565,565 eyed, A-strain steelhead trout eggs from IDFG for BY95; one lot each of Pahsimeroi, Sawtooth and Oxbow stocks. Overall survival from egg to distribution was 95%. Feed conversion was 1.18, and the average cost per pound of gain was 24.3 cents. Fish were started on Rangen's softmoist diet. At 200 fish per pound, they were switched to Silver Cup Salmon diet. At 30 fish per pound, they were finished on the Hagerman Steelhead contract diet supplied by Nelson and Sons of Murray, UT.

Adipose-fin clipping was supervised by personnel from IDFG and completed on October 13, 1995. There were 1,494,462 ad clips counted. Clipping took 14 working days and averaged 106,747 fish per day.

A surplus of 101,812 unmarked fish, averaging 21.54 fish per pound, were trucked by IDFG to Lucky Peak Reservoir on November 6, 1995. An additional 60,078 marked fish, averaging 5.72 fish per pound, were trucked to Salmon Falls Creek Reservoir and Oakley Reservoir on April 5, 1996. All surplus fish were A-strain, Oxbow stock, steelhead trout.

Coded-wire-tagging (CWT) of BY95 smolts was supervised by IDFG personnel and completed on October 20, 1995. Three groups of Sawtooth stocks (9 raceways) were marked for acclimation and direct release studies conducted at Sawtooth SFH. Three raceways (66,987 fish) were marked for 2 weeks of acclimation and a volitional/forced release from Sawtooth SFH. Three raceways (66,805 fish) were marked for 2 weeks of acclimation at Sawtooth SFH and trucked to Torreys Hole downstream. Additionally, 3 raceways (65,501 fish) were marked for direct release below the Sawtooth SFH.

Two groups of Pahsimeroi stocks were marked for acclimation and direct release studies. Three raceways (64,888 fish) were marked for acclimation at Sawtooth SFH while 3 raceways (62,546 fish) were marked for direct release into the Little Salmon River at Warm Springs Bridge.

Additionally, one group of Oxbow stock, three raceways (63,042 fish), were marked for direct release into the Little Salmon River at Warm Springs Bridge.

A total of 389,769 BY95 fish were marked for release. No differential fin clips were utilized this year.

Passively induced tags (PIT) were inserted into 1,800 fish that had CWTs.

Periodic disease inspection by the Dworshak Fish Health Center, during BY95, did not detect any bacterial, viral, or parasitic pathogens in BY95 fish. Very low levels of Y. ruckeri were identified from fish in 3 unvaccinated raceways, though no elevated mortality was observed. Fish were disease free at distribution.

Distribution - Steelhead Trout

Distribution of BY95 steelhead trout was completed on April 29, 1996. A total of 1,329,226 smolts weighing 255,750 pounds, and averaging 5.2 fish per pound, were released. All steelhead released had adipose fins clipped. The distribution process required 54 trips, and distribution trucks logged approximately 22,000 miles.

Acclimation studies at Sawtooth SFH received 710,179 fish from March 26 through April 4, 1996. Additionally, Pahsimeroi SFH received 21,196 fish for acclimation on March 26, 1996. There were 529,266 fish released between April 8-15, 1996, in the Little Salmon River at Warm Springs Bridge and at Hazard Creek. An additional 68,585 fish were trucked direct to the Salmon River below Sawtooth SFH on April 15 and 16, 1996.

Experiments/Studies

All 70 raceways in production during BY95 were committed to an intermittent-feeding pilot study to examine the effects of feeding and fasting on growth and condition of the fish. Fish were fed a 30-day ration in a 15-day period and then fasted for 15 days. After 4 weeks, fish were not consuming all the feed provided so feeding rates were cut back to 15-day rations in a 15-day period with a 15-day fast period. This program continued for another 7 weeks. All fish were fed via demand feeders. This pilot study lasted for a total of 11 weeks. Preliminary observations indicated that fish were smaller at a fixed point in the growth cycle than at the same point in previous years. Fish remained healthy and vigorous during the feed cycle. Fish were sampled monthly for length-frequency data. Intermittent feeding was successful at reducing growth rates of steelhead without sacrificing fish condition. The study design will be expanded and re-evaluated during the BY96 production cycle.

Additionally during BY95, 11 raceways of fish were fed Hagerman contract diet, as an heat-extruded pellet (floating feed), to examine what the effects this diet would have on food conversion and water quality. Feed trials conducted at the Hagerman Fish Culture Experiment Station in 1994 showed that this diet would lower conversion rates and reduce solids in the rearing unit effluent. The 11 raceways were then compared to the 59 raceways of fish being fed the Hagerman contract diet which is formulated as a steam compacted pellet (sinking feed). Food conversion was improved from 1.24 to 1.15 and water quality was also noticeably improved. BY96 fish will be fed exclusively the Hagerman contract diet extruded feed.

Also, an experimental diet, developed by the Bozeman Technology Center (BTC), was fed to 60,000 fry for 74 days. Experimental fish and control fish were examined by the BTC for fin erosion. No gross differences in fin quality were observed, though microscopic examination did reveal less fin fraying in fish fed the experimental diet. A study proposal is being developed to repeat this project next brood year and to provide more comprehensive monitoring and evaluation.

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
Kent Ball	Idaho Department of Fish & Game, Boise, ID
Dean Rhine	Idaho Department of Fish & Game, Lewiston, ID
Frank Deshon	Idaho Department of Fish & Game, Wendell, ID
Dave Parrish	Idaho Department of Fish & Game, Jerome, ID
Bill Gorgen	Idaho Department of Fish & Game, Jerome, 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
Dan Diggs	Fish & Wildlife Service, Portland, OR
Lee Helwig	Fish & Wildlife Service, Portland, OR
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
Kathy Clemens	Fish & Wildlife Service, Ashahka, ID
Pat Bigelow	Fish & Wildlife Service, Ahsahka, ID
John Nickum	Fish & Wildlife Service, Bozeman, MT
Ron Tomasson	Fish & Wildlife Service, Portland, OR
Doteen Baker	Fish & Wildlife Service, Portland, OR
Rich Johnson	Fish & Wildlife Service, Portland, OR
Dave Wills	Fish & Wildlife Service, Vancouver, WA
Ken Neuburger	Fish & Wildlife Service, Portland, OR
Brad Senatra	Fish & Wildlife Service, Portland, OR
Tony Fast	Fish & Wildlife Service, Portland, OR
Judy Maule	Fish & Wildlife Service, Spring Creek, WA
Carl Berger	Fish & Wildlife Service, Longview, WA
Ann Gannam	Fish & Wildlife Service, Longview, WA
Brian Hickson	Fish & Wildlife Service, Longview, WA
Pete Taylor	Fish & Wildlife Service, Longview, WA
Gary Fornshell	University of Idaho, Twin Falls, ID
Ernie Brannon	University of Idaho, Moscow, ID
Ron Hardy	University of Idaho, Hagerman, ID
Mike Caston	University of Idaho, Hagerman, ID
Charlie Smith	Rangen's Inc., Buhl, ID
Jim Dubois	Department of Justice, Denver, CO
Chris Nelson	Silver Cup Inc., Murray, UT
James Ward	National Park Service, Hagerman, ID
Keith Kutchins	Shoshone/Bannock Tribes, Fort Hall, ID
Lavern Bronco	Shoshone/Bannock Tribes, Fort Hall, ID

TRAINING

The following training was accomplished by all staff members:

Conflict Resolution, 1/30/96, CareerTrack On-Site

Team Start-Up, 6/27/96, USFWS National Training Center

First Aid/CPR, 8/19/96, Magic Valley LifeLine

Other Training

Robert Burns, Assistant
Hatchery Manager

Introduction to Supervision, FWS, Denver, CO

Brian Clifford, Motor
Vehicle Operator

Small Engine Repair, College of Southern Idaho,
Twin Falls, ID
Nat'l Forest Fire School, BLM, Shoshone, ID
Aquaculture Waste Management Workshop, University
Of Idaho Co-op Extension, Hagerman, ID

Mike Jacobson, Motor
Vehicle Operator

Interpersonal Communications Skills, CareerTrack,
Twin Falls, ID

Bryan Kenworthy
Project Leader

Excelling as a First-Time Supervisor, CareerTrack,
Twin Falls, ID

Jim Kirsch
Maintenance Worker

Electrical Apprenticeship, College of Southern
Idaho, Twin Falls, ID

Bea Martindale, Fisheries
Program Assistant

Small Purchase/Simplified Acquisition, Management
Concepts, Phoenix, AZ
Stress Solution Workshop for Women, CareerTrack,
Twin Falls, ID
FFS-RDE Training, FWS, Portland, OR

Linda McCaughey, Office
Automation Clerk

New Employee Orientation, FWS, Portland, OR
Stress Solution Workshop for Women, CareerTrack.
Twin Falls, ID
FFS-RDE Training, FWS, Portland, OR

Steve Money
Maintenance Worker

VISA Training, FWS, Portland, OR

Eric Willet
Fish Culturist

Interpersonal Communications Skills, CareerTrack,
Twin Falls, ID
Nat'l Forest Fire School, BLM, Shoshone, ID

Other Items of Interest

Water Rights

During 1996, all water rights in the Snake River Basin, including the hatchery's remained in litigation in the District Court of the Fifth Judicial District of the State of Idaho, Twin Falls (more commonly known as the Snake River Basin Adjudication). Most contentious for the hatchery was the issue regarding the Len Lewis Spring and the Brailsford Ditch Association (Association). In an effort to resolve the problem, the Service, through the Department of Justice, proposed an agreement to the Association and the Idaho Department of Fish and Game for management of water in Len Lewis Spring (the agreement was not finalized by the end of FY96). In essence, the agreement would allow the hatchery to divert, out-of-priority, a portion of the spring water provided that it is returned for immediate use by the irrigators. For the hatchery to fulfill its obligation in this agreement, it will require completion of the Brailsford Ditch pump-back system. Installation of this system was begun in 1984 but was not completed due to a lack of an agreement with the Association at that time.

To increase accuracy of water flow measurements and meet requirements of the Idaho Department of Water Resources for measuring and reporting water flows, a Panametrics Sonic Transducer water meter was purchased with sensors which were installed in spring 8, spring 11, and Hatchery 2 pipelines and a Kent In-line Turbine Meter was installed on the spring 13 line that services the incubators in hatchery 1. Cost of the meters was covered by Water Resources, Region 1 Engineering; cost of the installation was covered by the Hatchery.

Personnel

Linda MaCaughey, Office Automation Clerk, resigned.

Jim Kirsch, Maintenance Worker, transferred to the Forest Service.

Steve Money, Maintenance Worker, transferred to Hagerman from Lahontan NFH.

Steve Lee, Fish Culture, was hired as a temporary during fish distribution.

Aquaculture Liaison

The hatchery manager continued to participate in this role; attending Idaho Aquaculture Association monthly meetings and the annual meeting. Issues of concern during 1996 for both commercial and conservation hatcheries were renewal of NPDES permits and the establishment of a phosphorous waste load allocation (WLA).

NPDES permits regulating point source effluents (includes fish hatcheries) in the Mid-Snake reach expired during 1995. Permits have not been renewed due to unresolved issues relevant to the Mid-Snake River Nutrient Management Plan and the implementation of a Total Maximum Daily Load (TMDL) limit for phosphorous. In this regard, the Idaho Department of Environmental Quality (DEQ) presented

a draft for individual phosphorous WLAs to fish hatcheries operating along the Mid-Snake River. The allocation, based on data collected from various hatcheries during 1991-92, requires an overall 20% reduction in phosphorous effluent concentration during the first three years and a 40% by the fifth year. DEQ expects to complete the TMDL package and submit it to EPA for approval by the end of December 1996. The Hagerman National Fish Hatchery allocation is 30.4 pounds/day during the first year, with a reduction to 22.8 pounds/day by year five. This allocation requires no significant alteration to the hatchery production program at this time. We will, however, be developing and implementing fish culture "best management practices" that will allow the hatchery to comply with the TMDL.

Inter/Intra - Agency Coordination and Cooperation

Hatchery Evaluation Team (HET) efforts focused on developing a five year plan. Two hatchery coordination meetings were held during the year.

Mike Harrison was appointed as the student intern under the cooperative agreement with the College of Southern Idaho, Fisheries Technology Program, and the Idaho Aquaculture Association.

At the hatchery's request, Idaho Power Company Biologists conducted a snorkel survey of Riley and Bickle lakes for the presence of listed snail species. No listed species were found.

Two major construction projects were initiated in 1996. Both projects entailed extensive excavation and required archeological review. The first project involved the recovery and bioremediation of petroleum-contaminated ground water caused by leaky hatchery fuel tanks which had been previously removed. It required the installation of a series of injection wells, a pump station, and a bio-filter. Nutrient enriched groundwater is circulated through the system, whereby bacteria in the bio-filter utilize the petroleum until its concentration is reduced to allowable limits. The cost of this project has been covered by the Emergency Construction Fund administered by the Regional Engineer. The second project involved installation of a new domestic water system. The new system, utilizing well water, is required to meet current standards for the Clean Water Act. The old system, using spring water, had become contaminated with coliform bacteria.

Fiscal Year 1996 marked the first full year of operation of the Hagerman Fish Culture Experiment Station by the University of Idaho under a Memorandum of Understanding (MOU). As project Officer for the MOU the hatchery manager participated in a variety of meetings with University and Station staff to coordinate implementation of the MOU.

Outreach

For National Fishing Day, the hatchery organized and sponsored a day of fishing at Oster Lake. Folks from the living Independent network Corporation (LINC), Twin Falls Idaho, had a successful day catching fish from the handicap-accessible

fishing pier. After fishing, a barbecue lunch was provided in the hatchery picnic area.

Rob Burns, Bea Martindale, Steve Money, and Bryan Kenworthy assisted the Boise Ecological Services Office, LSRCP office, Law Enforcement, and Dworshak NFH in staffing a Fish and Wildlife Service information exhibit at the week-long Western Idaho State Fair in Boise.

May 23, 1996 marked the culmination of a lot of hard work by the teachers and students of the Buhl Middle School and Buhl High School Vocational Agriculture Class. They completed work on three interpretive trails; making and installing signs and developing brochures for the trails. A dedication of the trail system was held at the hatchery picnic area. In addition to the students and teachers, in attendance were the Buhl School Board Chairman Armand Eckert, Middle School Principle, Mel Wiseman and State Senator, John Sandy.

The Service volunteer program was utilized to further outreach efforts during the year. Boy Scout Troop 108 volunteered time in removing trash from Oster Lake #1. For this effort the hatchery presented the troop with a set of Boy Scout Merit Badge Books required for Eagle Scout advancement.

Safety

Asbestos shingles were removed from the roofs of the hatchery residences and replaced with fiberglass shingles. A certified industrial hygienist was required to be on site during the work to monitor the air for any asbestos fiber releases. All sample results were below the maximum allowable level for airborne asbestos.

A station safety review and inspection for OSHA compliance, was conducted by the Regional Safety Officer.

A contractor, custom fabricated and installed an operator safety guard on the Case tractor. The guard is required during brush-hog operation.

A year long monitoring of radon gas in quarters 4,5, and 7 was completed; with quarters 7 being identified as exceeding the allowable limit. A mitigation plan is being developed to correct the situation.

Fire Safety and Prevention

All hatchery and quarters fire extinguishers were serviced by an authorized vendor. In addition, a system of monthly inspections of the extinguishers by hatchery staff and the quarters tenants has been instituted.

Basic fire fighter training has been provided to two staff members by the Shoshone District BLM.

Special Use Permits and Rights-of-Way

Permit number 74801 - Butch Morris, Hagerman Idaho. This permit allows Mr. Morris to lay a water pipeline across Service property.

Permit number 74805 - Bryan Kenworthy, Hagerman Idaho. Allows the use of pasture for one horse.

Permit number 74802 - Alfred Sandy, Hagerman Idaho. Permit terminated. The Service sold the 0.22 acre parcel of property to Mr. Alfred Sandy. This parcel was not contiguous with the hatchery property. It was enclosed on two sides by the Sandy's ranch and cutoff from the rest of the hatchery property by the 1200 East road. This transaction results in a clean boundary line south of the road.

The Service issued a right-of-way to U.S. West Communications for the purpose of placing a new phone line to the Magic Springs Fish Hatchery. It lies within an existing road right-of-way that is held by Magic Springs Fish Hatchery. The original phone line right-of-way that crossed hatchery property behind the Hagerman Lab has been abandoned.

STATION CYCLICAL MAINTENANCE/CONSTRUCTION

Cyclical Maintenance

Raceway screens purchased from Magic Valley Heli-Arc 12,489.00

Hatchery staff replaced a culvert and repaired the road that provides access to the upper springs, A landslide had blocked spring 12 resulting in extensive erosion of the roadbed and damage to the culvert. 401.00

Rehabilitation

Ten inch gate valve installed in weir on Bickle Ditch 360.00

Installation of water meters 1,342.70

Fabricated guard for brush hog 901.00

Construction

Asbestos removal and re-roofing on 4 quarters on hatchery 27,010.00

Replace hatchery water system 148,981.00

Fenced back yards at 2 quarters and Riley Creek 2,350.00

Painted quarters #4 1,450.00

Painted doors at Admin. Building and parking lot striping 1,245.00

Bioremediation of contaminated ground water (Paid for by RO, EN) 93,350.00

Equipment Acquisitions

7 ½' Harrow disc with 2-point hitch 1,071.00

John Deere mower 6,278.00

Electronic fish scale 7,092.00

Computer system 3,384.00

Computer system 2,430.00

Radial arm saw and table saw 2,962.00

Lazer jet printer 1,082.00

Fish pump 21,519.00

Century camper shell 1,325.00

Panametrics-Kent Turbine Meter (Paid for by RO, EN) 7,870.00

FUTURE OUTLOOK

PRODUCTION

Constraints imposed by the ESA on hatchery steelhead releases may affect Hagerman NFH production activities. In this regard, it will be paramount to continue a high level of interagency coordination for the hatchery's production activities and commitments.

More stringent requirements regarding discharge standards for hatchery effluent are anticipated. In 1997 the hatchery will be faced with meeting a TMDL for phosphorous. It is anticipated that a TMDL for ammonia will be implemented in the future.

WATER RIGHTS

The hatchery and the Department of Justice continue to negotiate with the Brailsford Ditch Association to resolve issues regarding the management of Len Lewis Spring. It is anticipated that a signed agreement will be in place for future production programs. For its part of the agreement the hatchery will need to complete construction of the Riley Creek pump-back system to guarantee the required water for full production in the springtime. Additional funding above the Hatchery's operations budget will be required for this construction.

SAFETY

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

OUTREACH

Future emphasis at Hagerman NFH will be required for improving visitor services, control of visitor access, and for facility security after normal working hours. Tourism is Idaho's third largest industry, therefore an increase in visitor activity is anticipated in the future. The National Park Service, Hagerman Fossil Beds Monument, located in Hagerman, predicts that 300,000 people could be expected to visit their proposed interpretive center annually if constructed. Even without the center and no advertising they report that visitor activity in 1995 doubled visitor activity in 1994.

More effort will be placed on interaction with school and civic youth groups in an effort to develop environmental awareness in the Magic Valley Communities.

HATCHERY PRODUCTION SUMMARY (Intensive Culture)

Station: Hagerman National Fish Hatchery		PERIOD COVERED: OCTOBER 1, 1995 THRU SEPTEMBER 30, 1996									
Species/ Strain and Lot Number	Fish on Hand Last Day of Period					To Date This Fiscal Year					Percent Survival
	Number	Weight	Length	D.I.	F.I.	Weight Gain	FEED Pounds	EXPENDED Costs	Conver- sion		
1	2	3	4	5	6	7	8	9	10	11	
S TT-PAW-68	0	0	0	0	0	56,856	60,032	14,051	1.06	106	
S TT-HCW-69	0	0	0	0	0	98,318	119,151	27,071	1.21	96	
S TT-SAW-70	0	0	0	0	0	84,889	104,429	23,536	1.23	96	
S TT-SAW-71	855,447	15,341	3.646	0.06	0.20	15,000	15,103	5,635	1.01	97	
S TT-PAW-72	452,146	9,020	3.778	0.03	0.12	8,833	8,475	3,188	0.96	96	
Total/Averages		1,307,593	24,361	XXXX	XXXX	XXXX	307,190	\$73,481	1.16	--	

FIVE YEAR HATCHERY PRODUCTION SUMMARY

Station:

		Fiscal Year				
		1996	1995	1994	1993	1992
I. Fish Production Data						
Intensive Culture:						
Fish Weight Gain (pounds)		263,896	254,180	345,180	321,735	316,697
Fish Numbers		1,307,593	1,520,387	1,517,194	1,894,680	1,744,945
Percent Survival		96.3	96.5	96.9	94.5	90.6
Feed Conversion		1.16	1.21	1.18	1.29	1.23
Extensive Culture:						
Fish Weight Gain (pounds)						
Fish Numbers						
Percent Survival						
Pounds per Acre						
II. Broodstock Production Data:						
Number of Females Spawmed						
Number of Eggs						
Number of Fish						
III. Management Data:						
Full-Time Equivalent		6.6	8.5	8.5	7.3	7.6
Operational Costs		438,058	545,138	527,808	454,903	618,942
Vehicle/Equipment Costs (Items over \$1,000)		47,143	40,191	47,380	47,132	6,258
Cyclical Maintenance Costs		176,565	62,094	36,449	17,029	4,000
Quarters Costs		38,022	19,665	11,655	9,935	0

FISH HEALTH ACTIVITIES SUMMARY -
NATIONAL FISH HATCHERY

Station: Hagerman, ID NFH

Fiscal Year: 1996

1 Problem/Incident/Activity	2 Species	3 Therapeutic Treatment	4 Results/Comments
Egg Disinfection	Steelhead Trout	PVP Iodine @ 100ppm For 10 minutes.	Routine Disinfection
Prophalactic Vaccination	Steelhead Trout	Yersinia Ruckerii Vaccine	Prophalactic

Chemical Summary:

Chemical: PVP Iodine	Purpose: Egg Disinfection	Total Amount Used: 5 gallons	Total Cost: \$ 75.00
<u>Y. ruckerii vaccine</u>	<u>Prophalactic</u>	<u>42 liters</u>	<u>\$ 2,480.00</u>
<u>Chlorine</u>	<u>Routine Disinfection</u>	<u>2 gallons</u>	<u>\$ 15.00</u>

Station: Hagerman, ID NFH

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 19 96

Funding Source				
Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding	
1 4710	2 4710	3 8610	4	
269,675				
2,741				
2,380				
6,891				
366				
3,503				
15,109				

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: 1996

					Funding Source				
					Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding	
					1	2	3	4	
					4710	4710	8610		
3. B. Vehicle Maintenance (continued)									
2. Non-Distribution Vehicles					1,266				
Total Mileage:					16,012				
C. Fuel for Vehicles/Equipment					9,211				
D. Supplies									
1. Fish Food					83,864				
2. Chemicals/Drugs					2,570				
3. Fertilizer									
4. Tags and Tagging Supplies									
5. Office Supplies/Custodial/Other Supplies					21,992				
E. Travel					8,786				

Station: Hagerman, ID NFH

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 19 96

Funding Source				
Operations (Fisheries)	Cyclical Maintenance (Fisheries)	Quarters Maintenance	Other Funding	
1 4710	2 4710	3 8610	4	
1,561				
16,280				
6,972				
438,058				
47,143	176,565			
		38,022		
47,143	176,565	38,022		
485,201	176,565	38,022		
				\$ 699,788

3. F. Moving Expense

G. Miscellaneous (List) Leased Truck
Outreach

- 4. Operations (Total: Lines 1, 2, 3A-G)
- 5. Vehicles/Equipment Purchased (Over \$1,000)
- 6. Cyclical Maintenance
- 7. Quarters Maintenance
- 8. Total Maintenance (Total: Lines 5, 6, and 7)
- 9. Column Totals (Total: Lines 4 and 8)

10. Total Expenditures (Add Totals of Column 1-4)

REPORT OF STATION PERSONNEL

Station:

Fiscal Year: 1996

Part I - Permanent Personnel (FTE's: 6.4)					
Name Of Employee	Functional Title	Grade	Period Worked	Remarks	
Bryan R. Kenworthy	Sup. Fisheries Biologist	GS 12	95/10/01 -96/09/30		
Robert Burns	Sup. Fisheries Biologist	GS 11	95/10/01 -96/09/30		
Beatrice Martindale	Fisheries Pgm. Asst.	GS 07	95/10/01 -96/09/30	Part time	
Michael G. Jacobson	Motor Vehicle Operator	WG 08	95/10/01 -96/09/30		
Brian Clifford	Motor Vehicle Operator	WG 08	95/10/01 -96/09/30		
Eric Willet	Fish Culturist	WG 05	95/10/01 -96/09/30		
Steve Money	Maintenance Worker	WG 08	96/06/23-96/09/30		
Part II - Temporary Personnel (FTE's: .15)					
Name Of Employee	Functional Title	Grade	Period Worked	Remarks	
Steve Lee	Fish Culturist	WG 02	96/04/17 -96/05/03		

PUBLIC RELATIONS

Station: Hagerman, ID NFH

Fiscal Year: 1996

1. Presentations:	Number of Groups	Number of People
On Site	<u>8</u>	<u>643</u>
Off Site	<u> </u>	<u> </u>
2. Number of Visitors:		
Official		<u>43</u>
Public		<u>6,169</u>
3. Other Public Relation Activities:		
Type of Activity		
National Fishing Week		<u>20</u>
Boy Scouts' Clean-up Day		<u>36</u>
		<u> </u>
		<u> </u>

Remarks: See "Future Outlook"



Hatchery Staff

Bryan Kenworthy, Steve Money, Brian Clifford, Bea Martindale, Rob Burns, Mike Jacobson,
Eric Willet (kneeling)



Replacing culvert on road to upper springs



Asbestos shingle removal at hatchery residences



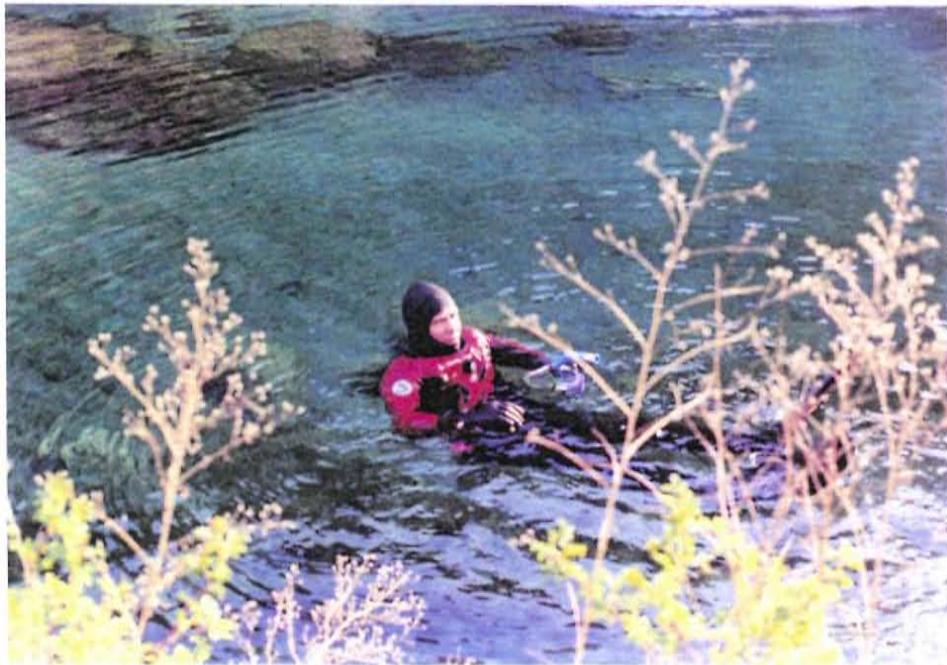
Mike Harrison, student intern - College of Southern Idaho

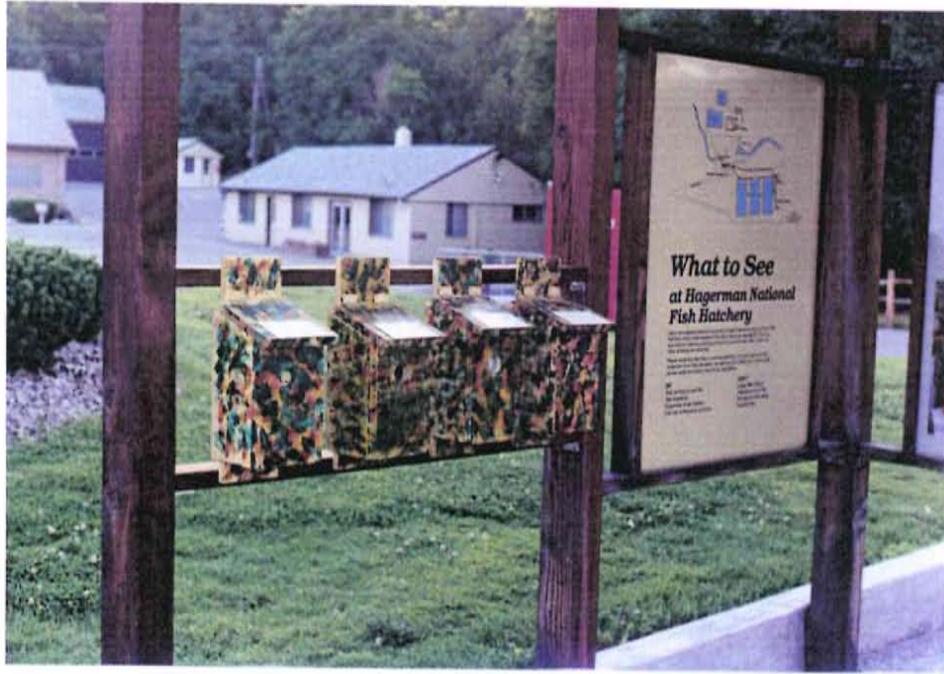


Hagerman community annual Fossil Days Parade



Snail surveys by Idaho Power Company biologists





Hatchery Nature Trail brochure boxes



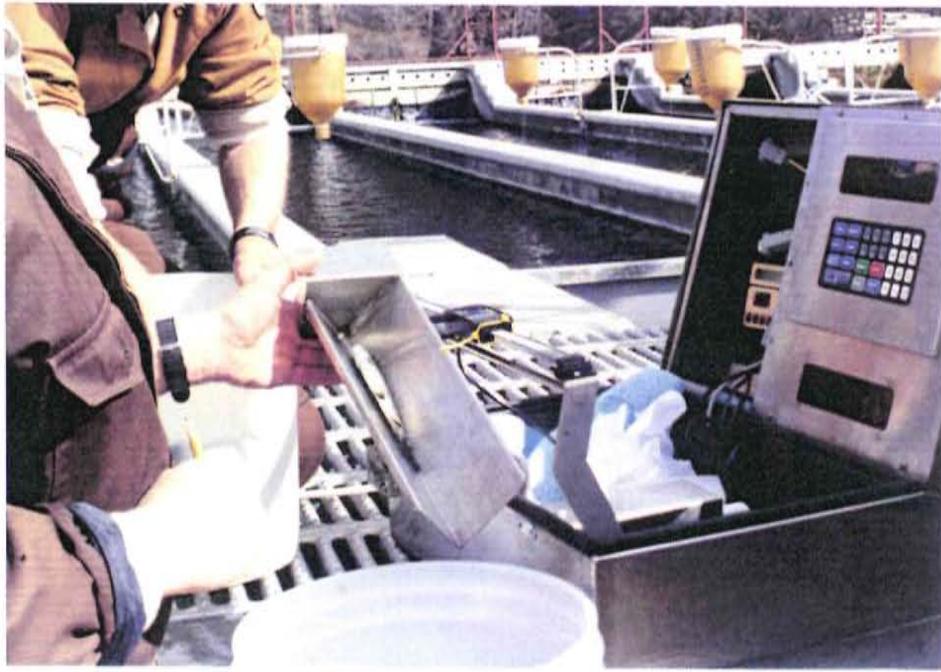
Buhl Middle School and Nature Trail Dedication



Buhl High School Vocational Agriculture Class



Buhl Vocational Agriculture Class installing foot bridges for Hatchery Nature Trail



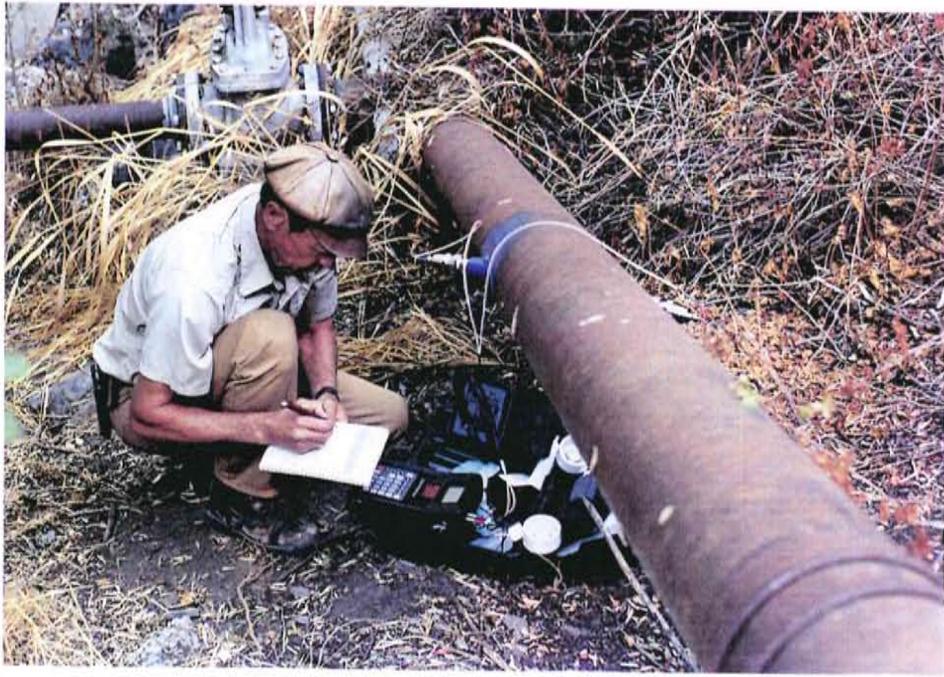
Testing new scale system for collecting fish weight and length data



Installation of injection well system for removal of fuel from contaminated ground water



Biofilter system for removal of fuel from contaminated ground water



Operation of in-line flow meter at spring #8



Installation of in-line turbine flow meter