

HAGERMAN NATIONAL FISH HATCHERY

Fiscal Year 2001

Summary of Operations and Expenditures

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, at that time, 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 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 resident rainbow trout to steelhead trout.

There are 102 outside raceways at the hatchery. Of these, 66 are devoted to LSRCP steelhead production and 12 are reserved for other programs which the Fish and Wildlife Service deems appropriate. During Fiscal Year 2001, rainbow trout for the Dworshak Reservoir Mitigation program were reared in these raceways. The remaining 24 raceways are not in use at this time. 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.

Co-located within the hatchery grounds is the Hagerman Fish Culture Experiment Station. This research facility is owned and operated by the University of Idaho.

STATION OPERATIONS

The LSRCP established a goal of 13,600 adult steelhead above Lower Granite Dam for the Hagerman NFH. However, within the framework of the LSRCP, specific objectives and tasks for the hatchery's steelhead production program are established through a high degree of interagency coordination. Results of this coordination affect certain aspects of the program, such as total number and strain reared, time and size at release, and location of release. The Brood Year (BY) 2001 production goal for Hagerman NFH is 1,290,000 smolts at a target size of 4.2 fish per pound (180-250mm).

The Hagerman NFH produces rainbow trout for the Dworshak Dam mitigation program as an in-kind exchange with the Idaho Department of Fish and Game (IDFG). Fish reared at Hagerman NFH are stocked into reservoirs in southern Idaho, such as Little Camas, C.J. Strike, Lucky Peak, Cascade, Anderson Ranch, Oxbow, and Hells Canyon reservoirs. While fish reared

at the Nampa State Fish Hatchery are stocked into Dworshak Reservoir. The Dworshak Reservoir Mitigation program is coordinated with the manager of the Idaho Department of Fish and Game, State Fish Hatchery, Nampa, Idaho. The program calls for stocking sub-catchable trout in the spring and catchable trout in the fall.

Fish Culture Operations

Pertinent fish rearing information for all fish species held on station during Fiscal Year 2001 is presented in Table 1.

Steelhead

Three stocks of Brood Year 2001 summer steelhead were programmed for the 2002 release year. Since the Hatchery does not have the capability to capture anadromous brood stock on site, eyed eggs are obtained from other spawning and incubation facilities. Table 2. Provides the number of eggs received by species and strain during Fiscal Year 2001.

Brood Year 2000 Steelhead Distribution

The Hagerman National Fish Hatchery released 1,229,286 steelhead smolts into the Salmon and Clearwater rivers (tributaries of the Snake River) in Idaho. Table 3. provides the number of steelhead released by strain and site.

Rainbow Trout

During the 2001 rearing season, two natural phenomenon affected the rainbow trout production program. First, the drought condition in southern Idaho precluded stocking of the smaller reservoirs during the spring release. Many of these water bodies would be drained dry during the 2001 irrigation season. Second, the September 7, 2001 wildland fire at the hatchery destroyed the vegetation in the riparian area and the water shed up-gradient of the springs that supply the hatchery. Concern that late summer thunder storms or fall rains could cause silt laden runoff to enter into the springs and harm the fish forced the early release of the rainbow trout. Table 1. provides pertinent rearing data for the rainbow trout program. Table 2. describes the number of eggs and stock information for this year's trout rearing program. Table 4. provides a summary of the rainbow trout distribution by strain and release site.

Experiments/Special Studies

Intermittent Feeding

The Hatchery Evaluation Team (HET) completed study of the Intermittent Feeding regime with

brood year 1999. The HET is compiling the data to develop the final report.

beta-Glucan

The HET initiated a study with Brood Year 2001 steelhead to test the efficacy of *beta*-glucans as a feed additive to enhance the non-specific immune response system. Research suggests that feeding *beta*-glucans as a prophylactic treatment prior to such stress events as immunization, marking, or tagging may be beneficial from a fish health standpoint. Response of the immune system will be measured by quantitative analysis of the enzyme lysozyme in the skin mucus. The HET will produce a final report on conclusion of this study.

Fiscal Operations

Personnel

After twenty years of Federal service at the Hatchery, Bea Martindale retired. Anna Ray was selected to replace Bea as the Fishery Program Assistant. Table 5. Provides a summary of staffing for the hatchery during Fiscal Year 2001.

Training

Table 6. provides a summary of training received by hatchery employees during Fiscal Year 2001.

Cost Data

A description of expenditures by cost code for the year are presented in Table 7.

Other Items of Interest

Installation of Riley Creek Pump Back System

The completion of this project ensures the Hagerman National Fish Hatchery will have the necessary water available during the spring of each year to complete steelhead smolt production. As a junior water right holder the hatchery had no guarantee that it would be able to divert water from the Len Lewis Spring during the spring irrigation season if the Brailsford Ditch Association (irrigators) called for their water. The potential loss of flow represents 20% of the hatchery's water supply. This project was implemented as part of a Court approved agreement mediated with the irrigators by the Justice Department that allows the hatchery to use water out of priority, providing that the water is immediately returned to their ditch and pipeline. The pump back system is the mechanism that meets this stipulation in the agreement.

Installation of Brailsford Ditch Pipeline

The Brailsford Ditch Association (BDA) conveys water to its member irrigators through an open ditch system. The first 1,200 feet of ditch is located within the boundary of Hatchery property. Located at the base of basalt cliffs, the ditch winds along the hillside about 100' above Riley Creek, a tributary to the Snake River. Additionally, the ditch crosses above Spring 17, one of the hatchery's water supplies. Due to the porous nature of the rock talus upon which the ditch was built in the late 1800's, a high degree of water loss occurs along the ditch. Several recent blowouts have resulted in large amounts of mud flowing into Spring 17. To correct the problem the Hatchery entered into a cost share agreement with the BDA, Bureau of Reclamation (BOR) and the Idaho Department of Fish and Game (IDFG) to pipe the ditch on Hatchery property. As part of the Federal share, BOR provided \$25,000 and the Hatchery provided \$3,000 and 1000 cu ft of gravel fill from an existing borrow pit on the hatchery grounds. For their part, IDFG and the members of the BDA provided the labor for installation of the Pipeline. Installation of the Pipeline ensures delivery of the full water right for the BDA and IDFG and ensures protection for Spring 17.

Wildland Fire

On the afternoon of September 7, 2001, a human caused fire started on the east side of Highway 30 approximately six miles south of Hagerman, Idaho. Winds gusting to 40 mph pushed the fire east across the Hagerman State Fish Hatchery, State Wildlife Management Area and the Hagerman National Fish Hatchery. Initial attack was conducted by members of four rural fire departments, hatchery staff, and BLM engine crews. At the height of the incident there were 90 firefighters, nine aircraft (3 seats, 3 helicopters, and 3 tankers) and a BLM Incident Commander assigned to the incident.

The BLM Incident Commander declared the fire contained on September 10, at 2000 hours and controlled on September 14, at 2000 hours. Named The Oster Lake Fire, it consisted of: Fish and Wildlife Service - 279.9 acres; Idaho State - 154.3 acres; and Private - 143.2 acres. No homes were lost and no injuries were reported. However, a BLM crew with a Light Engine became stuck on the Wildlife Management Area during the fire and had to abandon the truck which was destroyed by fire.

Based on recommendations made by local BLM resource biologists, brought in to assess the damage to the riparian areas around the springs and the Riley Creek watershed, the Hagerman National Fish Hatchery requested the Interagency Burned Area Emergency Response (BAER) Team on September 10. The role of the team is to prepare an Emergency Stabilization and Rehabilitation Plan (Plan) to address potential effects of the fire and fire suppression impacts to all jurisdictions affected by the fire. Primary emphasis of the Plan is to control the return of cheat grass on the dry upland habitat surrounding the hatchery and reseed the area with native grasses. Approximately \$200,000 has been authorized over a three year period for the Plan. This funding is for Federal lands only.

Hagerman National Fish Hatchery

Table 1. Hatchery Production Summary as of September 30, 2001

Station: Hagerman National Fish Hatchery		PERIOD COVERED: OCTOBER 1, 2000 THRU SEPTEMBER 30, 2001									
Species/ Strain and Lot Number	Fish on Hand Last Day of Period					F.I.	Weight Gain	FEED EXPENDED		Conversion	Percent Survival
	Number	Weight	Length	D.I.	5			6	7		
1	2	3	4	5	6	7	8	9	10	11	
RBT-ENN-84						3,204	3,604	\$879.05	1.12	n/a	
RBT-ENN-88						4,105	3,684	\$1,011.81	0.90	92.20%	
RBT-ENN-89						20,095	16,469	\$3,815.20	0.82	97.34%	
SST-CRD-00-DWO						33,573	38,224	\$9,509.24	1.14	n/a	
SST-PAW-00-ID						41,868	38,479	\$8,961.81	0.92	n/a	
SST-SAW-00-ID						176,267	170,121	\$40,348.31	0.97	n/a	
SST-CRD-01-DWO	202,624	7,736	4.690	0.05	0.15	7,648	6,212	\$2,071.55	0.81	90.86%	
SST-PAW-01-ID	220,305	6,416	4.290	0.05	0.14	6,342	5,199	\$2,251.72	0.82	99.00%	
SST-SAW-01-ID	917,724	18,824	3.810	0.07	0.15	18,483	14,917	\$6,897.34	0.81	98.19%	
Total/Averages	1,340,653	32,976	XXXX	XXXX	XXXX	311,585	296,909	\$75,746.03	0.95		

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Table 2. Eyed eggs received at Hagerman NFH during Fiscal Year 2001

Species	Stock	Lot No.	No. Eggs	% Survival to Hatch
Rainbow Trout	Arlee ¹	88 RBT-ARD-00-ENN	84,952	89.36
Rainbow Trout	Shasta ¹	89 RBT-SSD-01-ENN	<u>88,758</u>	92.17
		Total	173,710	
Steelhead	Clearwater ²	85 SST-CRD-01-DWO	202,020	97.20
Steelhead	Pahsimeroi ³	86 SST-PAW-01-ID	216,897	94.97
Steelhead	Sawtooth ⁴	87 SST-SAW-01-ID	<u>958,941</u>	98.00
		Total	1,377,858	

1. Spawmed and incubated at Ennis NFH.
2. Spawmed at Dworshak NFH and incubated at Clearwater Fish Hatchery.
3. Spawmed at Pahsimeroi Fish Hatchery and incubated at Sawtooth Fish Hatchery.
4. Spawmed and incubated at Sawtooth Fish Hatchery.

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Table 3. Steelhead Distribution During Fiscal Year 2001

Lot / Strain	Type of release	River/Site	Weight (lbs)	Number	#/lb	Length	Date(s)
87 SST-SAW-00-ID		Salmon River				in	
Sawtooth	Acclimated	Sawtooth Fish Hatch.	126,615	566,386	4.47	8.46	April 11-25
Sawtooth	Direct	Salmon River	31,440	141,446	4.50	8.44	March 30, April 25, 26, May 14
Sawtooth	Direct	Yankee Fork	32,475	137,657	4.24	8.61	May 9-11
						mm	
							214.78
							214.30
							218.60
86 SST-PAW-00-ID		Little Salmon River					
Pahsimeroi	Direct	Hazard Creek	11,865	50,556	4.26	8.59	April 6 & 9
Pahsimeroi	Direct	Stinky Springs	33,824	156,612	4.63	8.36	April 2, 4, 6, 9
85 SST-CRD-00-DWO		So Fk. Clearwater					
Clearwater	Direct	American River	17,835	90,188	5.06	8.11	April 27, 30, and May 2
Clearwater	Direct	Newsome Creek	20,590	86,441	4.20	8.63	May 2, 4, 7
Total			274,644	1,229,286			

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Table 4. Rainbow Trout Distribution During Fiscal Year 2001

Lot / Strain	Reservoir	Site	Weight (lbs)	Number	Length (in)	Date(s)
Lot 84 RBT-SSD-00-ENN	Oxbow Reservoir	McCormick Park	3,029	9,936	8.987	10/16/00
	Hells Canyon Reservoir	Homestead	3,196	10,228	9.062	10/18/00
	Anderson Ranch Reservoir	Curlew Boat Ramp	6,097	20,034	9.018	10/20 & 10/23/00
	Cascade Reservoir	Buttercup Boat Dock	6,175	20,316	9.014	10/24 & 10/25/00
	C.J. Strike Reservoir	Cottonwood Boat Ramp	3,719	12,423	8.969	10/26/00
			22,216	72,937	9.010	
Lot 88 RBT-ARD-00-ENN	C.J. Strike Reservoir	Air Force Boat Ramp	3,660	59,541	5.229	04/21/01
	C.J. Strike Reservoir	Air Force Boat Ramp	1,135	8,197	6.855	05/31/01
			4,795	67,738	n/a	
Lot 89 RBT-SSD-01-ENN	Horsethief Reservoir	Main Boat Ramp	5,523	22,590	8.285	09/13/01
	C.J. Strike Reservoir	Air Force Boat Ramp	10,996	45,194	8.271	09/14/01
	C.J. Strike Reservoir	Air Force Boat Ramp	1,815	7,134	8.395	09/17/01
	C.J. Strike Reservoir	Air Force Boat Ramp	1,784	6,832	8.468	09/18/01
			20,118	81,750	8.303	
Total			47,129	222,425		

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Table 5. Report of Station Personnel During Fiscal Year 2001.

Part I - Permanent Personnel (FTE's: 8.7)					
Name of Employee	Functional Title	Grade	Period Worked	Remarks	
Bryan Kenworthy	Project Leader Fisheries Biologist(Supvsr)	GS0482/12/07	10/01/2000 - 09/30/2001		
Jae Ahn	Asst. Hatchery Manager Fisheries Biologist (Supvsr)	GS0482/11/03	10/01/2000 - 09/30/2001		
James Brandon	Animal Caretaker	WG5048/02/02	10/11/2000 - 09/30/2001		
Brian Clifford	Motor Vehicle Operator	WG5703/08/05	10/01/2000 - 09/30/2001		
Charles Larson	Animal Caretaker	WG5048/04/01	10/01/2000 - 09/30/2001		
Beatrice Martindale	Fisheries Program Asst.	WG0303/06/08	10/01/2000 - 10/28/2000	Retired	
Steve Money	Maintenance Mechanic	WG4749/10/05	10/01/2000 - 09/30/2001		
Anna Ray	Fisheries Program Asst.	GS0303/05/01	01/28/2001 - 09/30/2001		
Wayne Talo	Fisheries Biologist	GS0482/09/04	10/01/2000 - 09/30/2001		
Eric Willet	Motor Vehicle Operator	WG5703/06/05	10/01/2000 - 09/30/2001		
Part II - Temporary Personnel (FTE's: 0.0)					

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Table 6. Personnel Training during Fiscal Year 2001

JungJae Ahn	NCTC - Computer Support for Field Stations TEC7141 A+ Certification Examination - Advanced Computer Training Fire Fighter "red card" certification refresher
R. James Brandon	New Employee Orientation 2001 Trout Disease - Health Management Short Course North West Fish Culture Conference 2000
Brian Clifford	North West Fish Culture Conference 2000
Charles Larson	New Employee Orientation 2000 Fire Fighter "red card" certification refresher
Anna M. Ray	New Employee Orientation 2001 FFS one-on-one w/Jim Ericson Simplified Acquisition (1A Warrant) Administrative Training Dworshak on-site work study
Wayne Talo	Simplified Acquisition Computer Repair & Upgrading 1 & 2
Eric Willet	Pre-Retirement Counseling (FERS) Dworshak on-site work study Fire Fighter "red card" certification refresher

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Table 7. Operation and Maintenance Data For Fiscal Year 2001.

FUNDING SOURCE			
Operations Fisheries	Non-Recurring Maint. & Cap. Equipment	Quarters Maintenance	Other Funding
1936-0300 1	1936-0300 2	8610-0000 3	4
447,259			
5,403			
3,961			
9,007			
499			
1,563			

1. Salaires. Permanent (+ Benefits)
2. Salaires. Temp./Engineering. (+Benefits)
3. Operating Costs:
 - A. Utilities
 1. Telephone
 2. Electricity
 3. Heating Oil
 - B. Vehicle Maintenance
 1. Distribution Vehicle Maint.
Total Mileage:

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Table 7. Con't

FUNDING SOURCE			
Operations Fisheries	Non-Recurring Maint. & Cap. Equipment	Quarters Maintenance	Other Funding
1936-0300 1	1936-0300 2	8610-0000 3	4 4
2,157			
4,082			
65,700			11,995 ¹
14,025			
7,182			
15,430			4,000 ²
7,893			

B. Vehicle Maintenance
2. Non-Dist. Vehicle Maint.
Total Mileage:

C. Fuel for Vehicles/Equipment

D. Supplies
1. Fish Food

2. Chemicals/Drugs

3. Production

4. Office / Custodial / Other

E. Travel / Tuition

¹Dworshak RBT Fish Food (#14220-1935-0001)

²WO-Fisheries Computer Modernization Funds (#94000-1313-ITR1)

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Table 7. Con't

FUNDING SOURCE				
Operations Fisheries	Non-Reoccurring Maint. & Cap. Equipment	Quarters Maintenance	Other Funding	
1936-0300 1	1936-0300 2	8610-0000 3	4	
1,969			16,132.64 ³	
33,019				
6,418				
625,567				32,128
8,927	23,835			
11,409		30,155		
20,336	23,835	30,155		
647,872	23,835	30,155		32,128

3. F. Fire Expense

G. Miscellaneous (List)

1. Fish Haul Contract, Tractor Lease+

2. Outreach

4. Operations (Total: Line 1, 2, 3 A-G)

5. Equipment Purchased & MMS

6. Buildings, Grounds & Supplies

7. Quarters Maintenance

8. Total Maintenance (Total: Lines 5, 6, & 7)

9. Column Totals (Total Lines 4 and 8)

10. Total Expenditures (Add Totals of Column 1-4) \$ 733,990.00

Form 3-110c (Rev. 1/89)

³Oster Lake Fire Suppression (#14230-9261-1996) & Rehabilitation (#14230-9262-1996)