IDAHO
DEPARTMENT OF FISH &GAME

Jerry M. Conley, Director

American Falls Hatchery

Annual Report

October 1, 1980 - September 30, 1981

by

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Fish Hatchery Superintendent II

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ABSTRACT

On October 1, 1980, American Falls Hatchery had on hand rainbow trout: 148,761 3-6 inch fish, 277,808 - 6+ fish, and 1,100 brood fish.

On October 1, 1981, the hatchery had on hand 157,738 3-6 inch fish, 229,023 6+ fish, and 679 brood fish.

We took eggs numbering 1,404,136 from 709 female brood fish. Average eggs per female numbered 1,981, and the eggs averaged 210 per ounce.

We received 25,000 sack fry for broodstock replacement from the College of Southern Idaho Hatchery. We received additional fingerlings from Grace Hatchery numbering 50,400.

We planted rainbow trout numbering 349,679 fish that weighed 156,180 pounds. Sockeye salmon were planted that numbered 173,880 fish, and weighed 4,200 pounds.

The rainbow trout consumed 318,833 pounds of fish food, to produce 156,180 pounds fish, for a conversion rate of 2.04 pounds of feed per pound of fish flesh produced.

The sockeye salmon were fed 8,150 pounds of feed, to produce 4,200 pounds of fish flesh, for a conversion rate of 1.94 pounds of feed per pound of fish produced.

Some problems with low oxygen in the water supply to the incubators during the winter months caused some losses.

Fish disease problems were still with us, but not in such large numbers. Suspected diseases included IPN, IHN, and bacterial gill. Enteric redmouth disease was no problem, as all the fish were vaccinated and seemed to be well protected.

Predatory birds were a problem at the hatchery again this year.

Kramer, Chin, and Mayo, a consultant engineering firm, has had a contract to develop a master plan for the possible rebuilding of this hatchery. Two possible alternatives were looked at. While checking the water at the hatchery, they found that the water had from 121 to 126 percent dissolved nitrogen. This fact, combined with low dissolved oxygen, makes fish rearing difficult.

About 4,000 people visited the hatchery this year. Senior citizens, students, and scout troops made up about 85% of the visitors.

Author:

Fenton S. Hays
Fish Hatchery Superintendent II

OBJECTIVES

The objectives of American Falls Hatchery are to produce 130,000 pounds of 8-10 inch rainbow trout for distribution as part of the overall hatchery program (Table 1).

INTRODUCTION

American Falls Hatchery is located one-half mile below American Falls Reservoir Dam. The facility was constructed in 1932, with the exception of nine raceways and a new hatchery building, it has remained basically unchanged.

The water source is some 16 cfs of water from Reuger Springs. The hatchery is capable of producing 130,000 pounds of fish in raceways of the following descriptions:

4 - 12' x 400' x 2'
4 - 12' x 130' x 2'
1 - 12' x 300' x 2'
3 - 8' x 100' x 2'
4 - 4' x 100' x 2'
8 - 3' x 50' x 1.5'

FISH PRODUCTION

We began the 1981 fish year with no 0-3 inch fish, 148,761 3-6 inch fish, and 277,808 6+ in fish on hand.

We ended the fish year with no 0-3 inch fish, 157,738 3-6 inch fish, 299,023 6+ inch fish, and 679 brood fish.

We planted 349,679 rainbow trout weighing 156,180 pounds, and 173,880 sockeye salmon that weighed 4,200 pounds.

Brown trout eggs were received from Plymouth Rock Trout Company, and because of low oxygen in the incubators, disease, and human error, we lost 100% of the fish.

Our rainbow trout brood fish produced 1,404,136 eggs, with an eye-up of 78%. Fifteen percent of the remaining eggs were infertile and did not shock out. In fact, we had only an eye-up of about 63%.

Sockeye salmon eggs were received from Fulton River, British Columbia. We received 536,000 eggs, one-tenth of one percent, about 5,000 eggs, were lost on the first pick off. During the first month, one of the stoppers came out of the top tray of a sixteen tray stack, and the whole stack was a loss (118,000 eggs).

Grace transferred 50,400 fingerling rainbow trout to American Falls Hatchery. Two weeks later we had disease problems with these and lost about 25,000 before we could get the problem resolved.

Table 1.

Region	Month	Species	Receiving waters	No. of fish	Pounds of fish
4	Oct.-June	Rainbow	Emerald Lake	17,311	7,350
	March	"	Stone Reservoir	4,725	2,250
	April		Lake Walcott	15,438	6,175
	May		Burley Boys Pond	1,520	8 00
	May		Cassia Creek	2,625	1,050
	May	..	Marsh Creek	2,035	925
	June-Sept.	it	Lake Cleveland	12,570	6,700
			TOTALS:	56,224	25,250
5	Dec.-April		American Falls Res.	77,055	26,075
	November		Pleasant View Res.	980	350
	Nov.-April		St. Johns Res.	4,470	3,350
	Dec.-Oct.		McTucker Springs	5,060	2,300
	March-June		Springfield Lake	20,755	9,450
	April-July		Hawkins Reservoir	19,035	10,350
	April-July		Portneuf River	10,740	5,000
	May		Crowthers Res.	2,420	1,100
	April-July		Devils Reservoir	24,565	10,600
	April-June		Deep Cr. Reservoir	23,300	11,000
	April		Daniels Reservoir	20,000	9,400
	April-July		Chesterfield Res.	24,200	11,450
	April-June		Wiregrass Reservoir	6,776	2,880
	May-July		East Fork Rock Creek	4,040	2,125
	June-July		Toponce Creek	1,810	900
	June-July		Pebble Creek	2,530	1,200
	June		Mink Creek	1,200	500
	July		Calder Creek - Am. Falls	1,680	1,200
	July		Snake River Rose Area	3,973	2,125
	July		Snake River Bingham-Bonneville Line	5,100	3,400
	July		Morgan and Trail Bridge	2,640	1,100
	Mav		Sterling Creek	400	200
			TOTALS:	262,310	141,505
6	October		Sheridan Reservoir	207	500
	Nov.-Dec.		Ririe Reservoir	14,303	5,525
	May-July		Willow Creek	10,580	4,550
	July		Island Park Res.	4,500	3,000
	October	"	Camas Creek	1,760	1,100
	June	Sockeye Salmon	Stanley Lake	173,880	4,200
			TOTALS:	205,025	18,875

Rainbow Trout planted 1981 — 349,679 fish, 156,180 pounds

Sockeye Salmon planted 1981 — 173,880 fish, 4,200 pounds

FISH HEALTH

We fed medicated food during 1980-1981 amounting to 4,123 pounds, that cost $1,595.19, a sizeable reduction from the 17,050 pounds of medicated feed that cost $5,648.70 during the 1979-1980 fish year.

This year, only the bottom section of one raceway required treatment for the ERM disease.

One fourteen-day treatment of medicated feed was run on a group of rainbow trout, and the sockeye salmon when we were having problems with bacterial disease. The sockeye salmon were treated once weekly after that with Cutrine and Purina 4x, and the disease seemed to be under control. Harold Ramsey made a number of trips to the hatchery during the year. Treatments were made under his recommendations.

Another problem was with the eggs originating from our broodstock. The eye-up was only 78%, and an additional 15% were not fertilized that would not shock out. Some possible causes for these problems were age of broodstock, high water temperatures during the late summer, reused water supply, and exposure to the load of fecal material from fish being reared above broodstock.

FISH TRANSFERS

Grace transferred to American Falls Hatchery 50,400 fingerling fish. In a time period of almost two weeks to the day after we received the fish, they had bacterial disease problems. The fish seemed to be in good health upon arrival at American Falls.

FISH FEED UTILIZED

Rainbow trout were fed 318,833 pounds of feed, to produce 156,180 pounds of fish. A conversion rate of 2.04 pounds of feed per pound of fish produced was realized.

Sockeye salmon were fed 900 pounds of Oregon Moist pellets, and 8,150 pounds of dry feed, for a total of 9,050 pounds of feed, for a conversion rate of 2.15 pounds of feed per pound of fish produced.

HATCHERY NEEDS

Due to the aging of the hatchery facility, deterioration has taken place, and the hatchery needs to be replaced.

Water quality is very poor, with low dissolved oxygen and nitrogen saturization as high was 126%.

SPECIAL STUDIES

Idaho Power Company purchased fish from Batise Springs Hatchery, a commercial hatchery, and some 32,000 fish, of which 6,000 fish were jaw-tagged at Batise were released at Seagull Bay Marina. A group of 6,000 fish that were jaw-tagged at American Falls Hatchery were released at the same time to provide comparative information on catch rates, fish movements, and return to the creel.

Idaho Power Company funded a creel census program on the reservoir, and the Snake River below American Falls Dam starting April 1, 1981 through November 6, 1981.

This program was under the supervision of Regional Fisheries Manager John Heimer. Two bio-aides were hired to work the program, and the bio-aides were housed at the crew quarters at the hatchery. The results of the study will be available in 1982.

We also assisted John Heimer in catching fish out of the Snake River below the dam for pesticide studies.

GENERAL

All the hatchery personnel have attended workshops or conferences throughout the year.

We assisted in delivering fish to the Idaho State Fair at Blackfoot. One member of the hatchery staff spent one day at the fair booth.

IMPROVEMENTS

We replaced one two-ton fish truck with a new GMC truck and got a new radio. The radio is giving us some problems, but we will get it corrected before planting season. We are also replacing oxygen controls and making some additional adjustments to oxygen systems.

The hatchery personnel, with the assistance of Ralph Taylor, refinished the inside of one house. A new cabinet top, sink, faucets, and kitchen lights were installed. We completely refinished the bathroom with shower, installed storm doors, front entrance door, and new wiring. We replaced the oil furnace with a new electric forced air furnace and completely repainted the inside of the house. This house is in good condition.

A new trash pump was purchased to clean raceways, but is far too slow to keep up with fecal material in the raceways. It would take one person every day to keep up with the cleaning shores.

We have built several new frames for racks and screens that have deteriorated and needed replacing.

MISCELLANEOUS

Duirng the year, the hatchery crew assisted with the opening of fishing season work. We wrote several citations for illegal fishing and hunting activities during the year. We gave tours of the hatchery to senior citizens, school groups, and scout troops. We furnished information for school teachers, cared for owls and foxes that were hurt, in addition to our regular duties. Some of the trees around the small raceways were cut down to prevent the leaves and seed pods from falling into the raceways and plugging the screens.

ACKNOWLEDGEMENTS

Hatchery staffing during the fish year included Fenton Hays, Superintendent II; Mel Sadecki, Superintendent I; William Senkosky, Fish Culturist (terminated); Dave Horton, Fish Culturist, and Gene McPherson, Superintendent I at Henry's Lake during the summer and at American Falls during the winter. Linda Cacopardo, laborer and CETA people were part of our hatchery crew during the year.

The unpaid, always present, willing help of Wanda Hays, Donna Sadecki and Donna McPherson is greatly appreciated.

I would like to thank Ralph Taylor and Bill Fiscus for their help, and all of the people in regions four, five, and six, that helped with our fish planting this year. Boise Office personnel had a large helping hand, too. Thanks to all of you.