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ANNUAL REPORT
FISCAL YEAR 1985
HAGERMAN, IDAHO NFH

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INTRODUCTION

The Hagerman National Fish Hatchery produced steelhead trout and Snake River fall chinook (upriver brights) for the Lower Snake River Compensation Plan (Public Law 94-587). Rainbow trout were also produced to offset lost production at Dworshak NFH; due to IHN virus problems at Dworshak. The U.S. Army Corps of Engineers, Walla Walla District installed impressive public displays at Hagerman during 1985. The Corps also continued design for a completion contract at Hagerman.

MAJOR ACCOMPLISHMENTS

An "Open House" for the local public was hosted by the hatchery staff on Sunday, September 14 with approximately 200 visitors attending. As no formal dedication was held following the hatchery expansion, the open house provided an opportunity to publicize the new facilities.

The hatchery's constant 59o F. water temperature, coupled with arrival time of eyed steelhead eggs, has posed problems with steelhead smolts being larger than desired at release time. Through use of the station computer for feed calculation and growth projection, the smolt size was programmed and achieved to the satisfaction of Idaho Department of Fish & Game.

STATION OPERATIONS

Fiscal

Expenditures for Fiscal Year 1985 were \$447,307. Total cost to produce one pound of fish was \$1.37. Labor costs totaled \$235,175; a production labor cost of \$0.72 per pound. Fish transport expenses were \$37,826; a transport cost of \$0.12 per pound of fish transported and released.

Labor

Total full-time equivalents (FTE's) for Fiscal Year 1985 were 9.3. An additional fishery biologist (GS-5/7) position was added to the staff; improving capabilities for water quality and EPA monitoring. Two positions that had formerly been staffed on a

temporary basis were converted to permanent career seasonal which will afford better management flexibility and avoid the uncertainty of hiring freezes. An Idaho Department of Fish & Game employee was assigned to assist with fish production from October to May. This, due to lack of construction activity at the LSRCF Magic Valley hatchery.

Fish Cultural Operations

The species reared this year were steelhead trout, fall chinook salmon and rainbow trout.

Steelhead smolt production was very successful. Planned production numbers, based on available eggs, and distribution numbers agreed within 3.3%. The size range (4-5/lb.) requested by Idaho Department of Fish & Game was met by controlled feeding from computer projections. The results were 4.4/lb. smolts at a 1.34 feed conversion. The general health of the smolts was good and survival rates at the hatchery compared favorably with previous years. No disease problems occurred.

Most of the Brood Year '85 steelhead eggs received this year were from the new Idaho Fish & Game Sawtooth Hatchery. The eyed eggs were delayed 4-5 weeks by colder incubation temperatures. Delaying egg development should help control smolt size and enable feeding at less restricted levels. The requested production ratio of 60% "A" smolts and 40% "B" smolts cannot be achieved because of insufficient "B" eggs available. The ratio for Brood Year '85 distribution (F.Y. '86) should be near 66% "A" smolts and 34% "B" smolts.

The fall chinook salmon production program was less successful than previous years. The hatchery survival rate of 57%, from eyed eggs to distribution, as contrasted to 83%, for previous years, is unexplained. Histological and pathological examinations showed little. Treatment with TM-100 had no observable effect. The losses occurred at all stages - eggs, sac fry, fingerling and smolts. In spite of the losses incurred during the year, growth (.750"/month) and conversion (1.44) were comparable to previous lots of fall chinook. The fall chinook program at Hagerman NFH has ended as Lyons Ferry, Washington SFH will take over the program.

The rainbow trout production program was highly successful. Planned production and distribution numbers were within 1% and the size was right on target. Survival rates were comparable with previous Ennis NFH eggs hatched and reared at this station. Even though growth was held back by computer-generated feed projections, the conversion was 1.10. A small rainbow program is also planned for F.Y. '86.

Distribution

Steelhead smolt distribution was very successful. 1,364,497 smolts at 4.4/lb. and 310,090 pounds were distributed in 22 days. Smolt distribution required 60 trips and covered 23,583 miles. This includes 9 trips by an Idaho Fish & Game contract hauler. The distribution breakdown was: Little Salmon River - 308,103 "A" strain smolts, Salmon River - 786,186 "A" strain smolts and East Fork Salmon River - 270,208 "B" strain smolts. The distribution ratio of 80% "A" strain to 20% "B" strain smolts was determined by the availability of Brood Year '84 "B" eggs. Additional "A" strain eggs were brought in to utilize available space.

Fall chinook salmon distribution was below average performance. There were 128,229 smolts at 48.8/lb. and 2,561 pounds. An estimated 3-4,000 smolts were lost in transit; generally attributed to the general poor quality of the lot. Stocking took place in the Snake River between Asotin, Washington and the mouth of the Grande Ronde River.

Rainbow trout distribution was very successful. The fish were distributed to Cascade Reservoir by Idaho Fish & Game. The numbers and size were as requested; 101,301 seven-inch fish.

COOPERATION WITH OTHER AGENCIES

Two coordination meetings were held during the year with Idaho Fish & Game to facilitate the hatchery operation. These meetings were also attended by local commercial hatchery operators which afforded an opportunity for better communication with the private sector. Close contact was maintained with the Corps of Engineers relative to design and installation of visitor facilities and the forthcoming completion contract.

CYCLICAL MAINTENANCE & REHABILITATION

The last fuel oil-fired furnaces in the station residences were replaced with air-to-water heat pumps; utilizing the hatchery's constant 59o F. spring water as the water source.

Basement windows in all residences were replaced with double-pane glass for energy conservation.

A satellite television system was installed to provide the residences with improved television reception.

YOUTH PROGRAMS

The station hosted a Youth Conservation Corps program which accomplished considerable grounds and building maintenance. Additionally, administrative support (hiring, payrolls, purchasing) was provided to the nearby Hagerman state fish hatchery YCC program.

HATCHERY PRODUCTION SUMMARY

Station
Hagerman, Idaho Nat'l. Fish Hatchery
Period covered
10/1/84 through 9/30/85

Species and Lot	Density Index			Flow Index			Total Flow			T. U. per Inch	T. U. to Date	Length Increase 30 day month Inches	
	0.011			0.559			18,136						
	Number	Weight	Length	FISH SHIPPED THIS F.Y.	GAIN THIS F.Y.	FISH FEED EXPENDED	Conversion	UNIT FEED COST					
			Number	Weight	Pounds	Cost	Per Lb., 1000						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
STT													
4-UID-12	0	0	8.909	1,094.0	218,478	285,510	63,576.00	1.31	0.29	62.99	22.66	179.40	0.000
STT													
4-UID-13	0	0	8.450	270.2	49,049	73,910	16,481.98	1.51	0.34	63.00	23.74	175.00	0.000
RBT													
4-EN-14	0	0	6.947	106.3	17,787	19,624	4,595.28	1.10	0.26	43.44	16.09	99.00	0.000
FCS													
4-UWA-15	0	0	4.086	128.2	2,482	3,648	1,555.93	1.47	0.63	12.42	20.07	55.05	0.000
STT													
5-UID-16	385.4	12,456	4.520	0	12,303	13,419	3,668.61	1.09	0.30	9.59	19.52	68.73	0.803
STT													
5-UID-17	937.5	17,382	3.755	5.3	17,004	19,228	5,378.99	1.13	0.32	5.82	18.87	52.20	0.797
STT													
5-UID-18	482.5	8,802	3.736	0	8,581	11,249	3,153.98	1.31	0.37	6.61	19.50	52.70	0.848
STT													
5-UID-19	63.3	1,079	3.652	0	1,042	1,410	395.98	1.35	0.38	6.32	19.23	49.62	0.914
TOTALS	1,868.7	39,719		1,604.0	326,726	427,998	98,806.75						
AVERAGES			3.916					1.31	0.30	28.45	19.96	91.46	0.841

Marked Releases

<u>Date</u>	<u>Species</u>	<u>Strain</u>	<u>River</u>	<u>Location</u>	<u>CWT</u>	<u>NO. TAGGED</u>	<u>FREEZE BRAND</u>	<u>NO. BRANDED</u>	<u>PURPOSE</u>
4/9	STT	A	Salmon	Sawtooth	10-26-30	40,475	- - -	- - -	Hatchery Evaluation & Contribution
4/9	STT	A	"	"	- - -	- - -	R.D. Y-1	35,125	Migrational Timing
4/25	STT	A	Little Salmon	Hazard Crk	10-26-32	39,175	- - -	- - -	Hatchery Evaluation & Contribution
3/26	STT	B	E. Fork Salmon	Fish Trap	10-25-55	17,425	- - -	- - -	Time of Release - Early
4/10	STT	B	"	"	10-28-2	8,100	- - -	- - -	Time of Release - Middle
4/10-12	STT	B	"	"	10-28-3	16,950	- - -	- - -	"
4/29	STT	B	"	"	10-28-54	25,525	- - -	- - -	"
4/10-12	STT	B	"	"	10-26-36	35,225	- - -	- - -	Trnsp't. Media-Propoly Aqua
4/10-12	STT	B	"	"	10-26-31	39,375	- - -	- - -	" - Control
4/17	STT	B	"	"	- - -	- - -	R.D. Y-3	31,775	Migrational Timing
6/4	FCS	Snake River	Snake R.	Asotin-Grande	5-13-53	54,425	- - -	- - -	Contribution
		"	"	Ronde River	- - -	- - -	L.D. R-4	33,700	Migrational Timing
6/4	FCS	"	"	"	- - -	- - -	- - -	- - -	- - -

* Numbers based on Idaho F&G tag & brand retention.