

ANNUAL REPORT

FISCAL YEAR

1993

National Fish Hatchery

Station

Hagerman, Idaho

City, State

Bryan Korman
Project Leader

12/15/93

Date

Samuel H. Suggs
Associate Manager/
Deputy Assistant Regional Director

1/14/93

Date

Bob Shaker
Assistant Regional Director

1/20/94

Date

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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 3 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; 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 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 National Fish Hatchery. 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 raceway rearing units at the hatchery. Of these, 66 are devoted to Compensation Plan steelhead trout rearing 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; several of which are controlled by the adjacent Tunison Field Station of Fishery Nutrition Research.

STATION OPERATIONS

Under the overall umbrella of the Lower Snake River Compensation Plan the Hagerman NFH is to provide partial mitigation for summer steelhead losses due to the construction of four federal dams on the lower Snake River. A variety of basin wide efforts have been implemented to coordinate anadromous hatchery production programs. Within this overall framework, goals and objectives for the hatchery's steelhead production are established through a high degree of interagency coordination and through specific initiatives such as the Integrated Hatchery Operations Team (IHOT). An adult return goal of 13,600 fish to the Snake River Basin has been identified in the IHOT 1992 Annual Report (volume 1) for Hagerman NFH. Such efforts will continue to affect all aspects of this hatchery's production program. This will be particularly important as it relates to affects on wild fish and the listing of Snake River anadromous species under the Endangered Species Act.

During 1993 the production program also included the rearing of rainbow trout for the for the Duck Valley Indian Reservation on the Idaho-Nevada border. This program utilized a segment of the older raceway system and was fully reimbursed through a contract with the Idaho Fishery Resource Office.

The Snake River Basin Adjudication (SRBA) currently under way continues to confound the issue of water use from the Len Lewis Spring. In the past, transfer of water between the hatchery and the ditch company has been accomplished cooperatively. Typically, October 15 through April 15 has been the period of use for the hatchery. The advent of the SRBA has caused the ditch users to be guarded in their efforts to cooperate. The main issues are: 1.) the ditch users perception of State and Federal government infringing on their water rights, 2.) the hatchery's need for water during a critical period of production in the spring, and 3.) the two to three hours of time required to transfer the water at the head gates and adjust hatchery flows each and every time a call for water is made. With the assistance of The Regional Hydrologist and the Solicitors's Office, efforts will be directed at negotiating a settlement of this issue with the ditch users in 1994.

Problems associated with bird predation have been eliminated with the installation of bird exclosure barriers on the steelhead raceways and the upper bank of trout raceways.

Dave Bruhn, Hagerman National Fish Hatchery Project Leader since 1973 retired from government service April 30. A mentor to many Service employees, Dave's influence on their careers will be long remembered.

Fish Culture Operations - Steelhead Trout

The fiscal year 1993 production goal for Hagerman NFH is 340,000 pounds of steelhead with a target size of 4.0 to 5.0 fish per pound or approximately 1,530,000 smolts. All steelhead are to be "A" strain smolts from the Sawtooth and Pahsimeroi State Fish Hatcheries (SFH).

The survival of broodyear 1992 fish from eyed eggs to distribution was 81.0% and the survival of broodyear 1992 fish on hand during the fiscal year was 91.2%.

Periodic disease inspections by the Dworshak Fish Health Center did not detect any serious disease problems and fish health was considered good. It is estimated that 50,000 to 75,000 steelhead were lost to bird predation by Black-Crowned Night Herons. This predation resulted in a 42,000 shortfall in the smolt distribution goal. The new bird exclosure, over the steelhead raceways, was finally completed in June 1993.

The feed conversion for 1992 broodyear steelhead was 1.35 with a feed cost per pound of gain at 29.6 cents. The major portion of this year's feed was contracted to Rangen Inc. of Buhl, Idaho at a cost of 21.5 cents per pound.

Adipose fin clipping was completed on October 5, 1992 and was supervised by Idaho Department of Fish and Game personnel. There were 1,754,125 ad clips counted for a gain of 20,725 fish or 1.2 % over the book records. The clipping took 16 working days and averaged 109,600 fish per day. This final count resulted in 103,858 excess fingerlings that were transferred to an Idaho Power contractor to supplement Niagara Springs SFH's production goal.

Coded wire tagging (CWT) of broodyear 1992 smolts was completed November 2 by IDFG personnel. Two raceways of fish were tagged for a contribution study on the Little Salmon River (53,165 tags). Three raceways were tagged for a contribution study on the lower Salmon River at Hammer Creek (63,016 tags). Three raceways were tagged for the Sawtooth SFH acclimation study (71,412 tags) and three raceways for controls to the acclimation study (71,623 tags). In addition to CWT's the acclimation study smolts and controls each received 300 passive induced transponder (PIT) tags on February 20, 1993.

Distribution - Steelhead Trout

Constraints resulting from the Endangered Species Act resulted in a revision of the 1993 smolt release sites. Rather than most smolts being released into the Salmon River at the Sawtooth SFH, Idaho Fish & Game revised the release plans so approximately one-half of the smolts would be released at Sawtooth SFH and the other half would be released on the upper Little Salmon River and lower Salmon River near Hammer Creek.

The distribution of broodyear 1992 steelhead was completed April 30. A total of 1,487,842 smolts weighing 308,520 pounds and averaging 4.8 fish per pound were released. The distribution process took twenty eight working days and required 21,014 miles of driving for the three semi-tanker distribution trucks.

Release sites included the transfer of 669,570 smolts to Sawtooth SFH raceways between March 12 - 24. These fish were later released into the Salmon River from Sawtooth SFH on April 9, also 59,950 smolts were released directly into the Salmon River at the Sawtooth SFH weir on the same date. There were 547,316 smolts released in the upper Little Salmon River at Hazard Creek and Warm Springs Bridge between April 12 -23. The remaining 211,006 smolts were released into the lower Salmon River near Hammer Creek between April 26 - 30.

During the September coordination meeting a production goal of 1,460,000 broodyear 1993 steelhead smolts was established for distribution in the spring of 1994. A surplus of an estimated 360,000 fingerlings are to be transferred to the Niagara Springs SFH. These fish will fill in behind a loss incurred by an IHN epizootic.

Fish Culture Operations - Rainbow Trout

Hagerman NFH agreed to produce approximately 100,000 rainbow trout 4 - 5 inches in length for the Duck Valley Indian Reservation. The agreement was arranged by the Dworshak Fishery Resource Office and the cost was covered by the Bureau of Indian Affairs.

On December 29, 152,000 Eagle Lake strain eggs were received from Ennis NFH. The survival to distribution was 76.5 % and was far superior to last years survival of 55.8 %. Last year's rainbow production was reduced by bird predation and an epizootic of infectious hematopoietic necrosis. The bird enclosure constructed by the crew was very effective in reducing bird predation.

The feed conversion was 1.10 and the cost per pound of gain was 43.6 cents for the rearing cycle.

Distribution - Rainbow Trout

Distribution to the Duck Valley Reservation was completed on May 3rd. Sheep Creek Reservoir received 60,937 rainbows and Mountain View Reservoir received 55,514 rainbows. The trout averaged 25.2 fish per pound, or 4.3 inches.

Experiments/Studies - Cold Water Acclimation

This is a continuation of the cold water acclimation study started in the spring of 1992. This study resulted from a request by the Idaho Salmon and Steelheaders Unlimited. It was their feeling that fish released directly into the river were not coming back as well as expected and that acclimating the smolts to the river water before releasing them into the river would increase returns.

This year the study consisted of transferring 669,570 smolts into the raceways at Sawtooth SFH between Mar 12 -24, (66,086 of these fish were coded wire tagged and 300 were PIT tagged). The fish were permitted to acclimate to the river water running through the raceways. On April 9th these fish were released into the Salmon River. On the same date 59,950 marked smolts were released directly into the Salmon River below the Sawtooth Weir. It will be several years before the results can be tabulated from adult returns.

Official Visitors

Ed Bowles	Idaho Department of Fish & Game, Boise ID
Joe Chapman	Idaho Department of Fish & Game, Stanley, ID
Gary Bertellotti	Idaho Department of Fish & Game, Wendell, ID
Tom Rogers	Idaho Department of Fish & Game, Boise, ID
Steve Huffaker	Idaho Department of Fish & Game, Boise, ID
Jerry Mowery	Idaho Department of Fish & Game, Boise, ID
Bud Ainsworth	Idaho Department of Fish & Game, Filer, ID
Dan Diggs	Fish & Wildlife Service, Portland, OR
Bill Miller	Fish & Wildlife Service, Ahsahka, ID
Ed Crateau	Fish & Wildlife Service, Boise, ID
Bill Lellis	Fish & Wildlife Service, Hagerman, ID
Kathy Brooks	Fish & Wildlife Service, Portland, OR
Tamra Swerdlik	Fish & Wildlife Service, Portland, OR
Alice Molinar	Fish & Wildlife Service, Portland, OR
Janet Pitts	Fish & Wildlife Service, Portland, OR
Tammy Froescher	Fish & Wildlife Service, Boise, ID
Chuck Dunn	Fish & Wildlife Service, Portland, OR
David Leith	Fish & Wildlife Service, Longview, WA
Kathy Clemens	Fish & Wildlife Service, Portland, OR
Ray Jones	Fish & Wildlife Service, Ahsahka, ID
Joe Lientz	Fish & Wildlife Service, Ahsahka, ID
Gary Fornshell	University of Idaho, Twin Falls, ID
Dale Honeyfield	University of Idaho, Hagerman, ID
Lionel Boyer	Shoshone-Bannock Tribes, Fort Hall, ID
Don Campbell	Idaho Aquaculture Assn., Buhl, ID
Ron Morinaka	Bonneville Power Admin., Portland, OR

Training

Dan Magnuson, GS-7 Fishery Biologist, entered on duty October 5 as an enrollee in the Region 1 Employee Development Program.

David Bruhn Hatchery Manager	EEO Training for supervisors, 10/20-22/92, Nampa, ID
Dan Magnuson Fisheries Biologist	EEO Training for supervisors, 10/20-22/92, Nampa, ID Word Perfect, 1/12-2/16/93, Twin Falls, ID Temporary duty at Marble Bluff Fish Facility, Pyramid Lake NV May 14-25 Introduction to Fish Health, 5/21-25/93, Olympia, WA Managing Personal Growth, 6/29-30/93, Boise, ID Lotus 1-2-3 Level I, 3/1-4/5/93, Twin Falls, ID
Mike Jacobson Motor Vehicle Operator	Small Engine Repair, 1/26-2/25/93, Twin Falls, ID Mid-Career Retirement Planning 2/24-26/93, Seattle, WA Managing Personal Growth, 6/29-30/93, Boise, ID
Brian Clifford Motor Vehicle Operator	Introduction to Welding, 1/26-3/4/93, Twin Falls, ID Managing Personal Growth, 6/29-30/93, Boise, ID Basic Biology For Technicians, 11/16-20/92, Seattle, WA
Bea Martindale Fisheries Program Assistant	Procurement and Pre-printed Forms System, 2/23 -25/93, Regional Office, Portland, OR IMPAC Visa card training, 6/22/93, Nampa, ID
Jim Kirsch Maintenance Worker	Mid-Career Retirement Planning, 2/24-26/93, Seattle, WA Environmental Training Consultants, Water/Waste Water management, 5/17-19/93, Moscow, ID IMPAC Visa card training, 6/22/93, Nampa, ID Electrical Apprenticeship course, 1/12-4/8/93 (2nd semester 1st year), Twin Falls, ID Managing Personal Growth, 6/29-30/93, Boise, ID Electrical Apprenticeship Course, 8/31-10/30/93, (1st semester 1st year), Twin Falls, ID
Tom Shaw Asst. Hatchery Manager	IMPAC Visa card training. 6/22/93, Nampa, ID

STATION CYCLICAL MAINTENANCE/CONSTRUCTION

Cyclical Maintenance

Purchased double Convault above ground fuel tanks \$9,628.00
Accessory package to install tanks \$1,005.80

Rehabilitation

Crew poured a new concrete pad for the new fueling point. \$ 503.00
Contract to replace asphalt destroyed during removal of
leaky fuel tanks. \$8,466.70
Contract for solid waste removal from cell #2 pollution
abatement pond completed. \$5,660.00
Quarters #4 Interior painted and water damage to floor
of bathroom repaired. \$2,522.81
Replaced overhead doors of main shop building. \$4,995.00

Construction

Crew completed construction of bird enclosure over top of
Trout raceways (#1-12). \$ 199.24
Steelhead raceway bird enclosure completed. \$12,192.00
(\$169,599.00 total)
Crew installed concrete floor in wood storage shed. \$ 647.00

Equipment Purchases

New 4X2 pickup \$10,284.97
Excel lawn mower \$12,263.00

FUTURE OUTLOOK

PRODUCTION

Constraints imposed by the Endangered Species Act 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. Specifically, the hatchery will participate in the implementation of the Hatchery Evaluation Vision Action Plan through development of a Hatchery Evaluation team.

OUTREACH

An increase in visitor activity is anticipated over the next several years. Plans are underway to paint and/or replace signs directing visitors to and around the hatchery. Increased emphasis may be needed for control of visitor access and for facility security after normal working hours.

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, ID NFH		Period Covered: October 1, 1992 through September 30, 1993										
Species/Strain and Lot Number	Fish on Hand Last Day of Period						To Date This Fiscal Year					
	Number	Weight	Length	D.I.	F.I.	F.I.	Weight Gain	Feed Expended		Conversion	Percent Survival	
								Pounds	Costs			
1	2	3	4	5	6	7	8	9	10	11		
STT-PAW-92-ID-2 (56)	-0-	-0-	-0-	-0-	-0-	115,104	149,691	32,725	1.30	92.3		
STT-SAW-92-ID-1 (57)	-0-	-0-	-0-	-0-	-0-	98,186	136,962	29,838	1.39	92.0		
STT-SAW-92-ID-2 (58)	-0-	-0-	-0-	-0-	-0-	65,153	89,793	19,944	1.38	88.0		
RBT-ELD-92-ENN (59)	-0-	-0-	-0-	-0-	-0-	4,572	5,046	1,993	1.10	87.8		
STT-PAW-93-ID-1 (60)	691,066	15,506	3.929	.09	.32	15,277	13,587	4,609	.89	98.5		
STT-SAW-93-ID-1 (61)	304,461	7,174	3.993	.09	.33	7,046	6,210	2,105	.88	92.1		
STT-PAW-93-ID-2 (62)	251,853	4,548	3.654	.08	.28	4,475	4,334	1,523	.97	96.9		
STT SAW-93-ID-2 (63)	647,300	12,110	3.698	.08	.33	11,922	10,464	3,794	.88	99.9		
Totals/Averages	1,894,680	39,338				321,735	416,087	96,531	1.29	94.5		

FIVE YEAR HATCHERY PRODUCTION SUMMARY

Station:

	Fiscal Year				
	1993	1992	1991	1990	1989
I. Fish Production Data					
Intensive Culture:					
Fish Weight Gain (pounds)	321,735	316,697	349,782	404,599	383,733
Fish Numbers	1,894,680	1,744,945	1,586,078	2,151,246	1,743,604
Percent Survival	94.5	90.6	90.2	92.2	94.1
Feed Conversion	1.29	1.23	1.39	1.27	1.33
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 Equivalentents	7.3	7.6	8.0	8.0	8.3
Operational Costs	454,903	618,942	472,463	494,324	493,335
Vehicle/Equipment Costs (Items over \$1,000)	47,132	6,258	23,655	0	14,037
Cyclical Maintenance Costs	17,029	4,000	0	37,394	12,472
Quarters Costs	9,935	0	9,725	7,120	6,268

FISH HEALTH ACTIVITIES SUMMARY -
NATIONAL FISH HATCHERY

Fiscal Year: 19 93

Station: Hagerman, ID NFH

Problem/Incident/Activity	Species	Therapeutic Treatment	Results/Comments
1	2	3	4
Egg Disinfection	Rainbow Trout Steelhead	PVP Iodine at 100 PPM for 10 minutes	Routine Disinfection

Chemical Summary:

Chemical: PVP Purpose: Egg Disinfection Total Amount Used: 5 gals. Total Cost: \$ 69.35
Anti-Foam FG-10 Purpose: Fish Distribution Total Amount Used: 40 lbs. Total Cost: \$121.74

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 1993

Station:

Funding Source				
Operations (Fisheries) (4710) 1	Cyclical Maintenance (Fisheries) 2 (4710)	Quarters Maintenance (8610) 3	Other Funding (1937) 4	
286,607			6,610	
1,538				
6,591				
429				
(21,014)				(565)

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:

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 19 93

Station:

	Funding Source			
	Operations (Fisheries) (4710) 1	Cyclical Maintenance (Fisheries) 2 (4710)	Quarters Maintenance (8610) 3	Other Funding (1937) 4
3. B. Vehicle Maintenance (continued)				
2. Non-Distribution Vehicles	4,207			
Total Mileage:	(24,376)			
C. Fuel for Vehicles/Equipment	6,344			
D. Supplies				
1. Fish Food	99,604			
2. Chemicals/Drugs	191			
3. Fertilizer	-0-			
4. Tags and Tagging Supplies	-0-			
5. Office Supplies/Custodial/Other Supplies	15,124			
E. Travel	3,437			

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/Custodial/Other Supplies

E. Travel

OPERATIONS/MAINTENANCE COST DATA

Fiscal Year: 1993

Station:

	Funding Source			
	Operations (Fisheries) (4710)	Cyclical Maintenance (Fisheries) 2(4710)	Quarters Maintenance (8610) 3	Other Funding (1937) 4
3. F. Moving Expense	4,734			
G. Miscellaneous (List)	13,327			791
Bird Exclosure - Trout Raceways	199			
Bird Exclosure - Steelhead Raceways	12,571			
4. Operations (Total: Lines 1, 2, 3A-G)	454,903			7,401
5. Vehicles/Equipment Purchased (Over \$1,000)	47,132			
6. Cyclical Maintenance		17,029		
7. Quarters Maintenance			9,935	
8. Total Maintenance (Total: Lines 5, 6, and 7)	47,132	17,029	9,935	7,401
9. Column Totals (Total: Lines 4 and 8)	502,035	17,029	9,935	7,401

10. Total Expenditures (Add Totals of Column 1-4) \$ 536,400

Station: Hagerman , ID NFH

REPORT OF STATION PERSONNEL

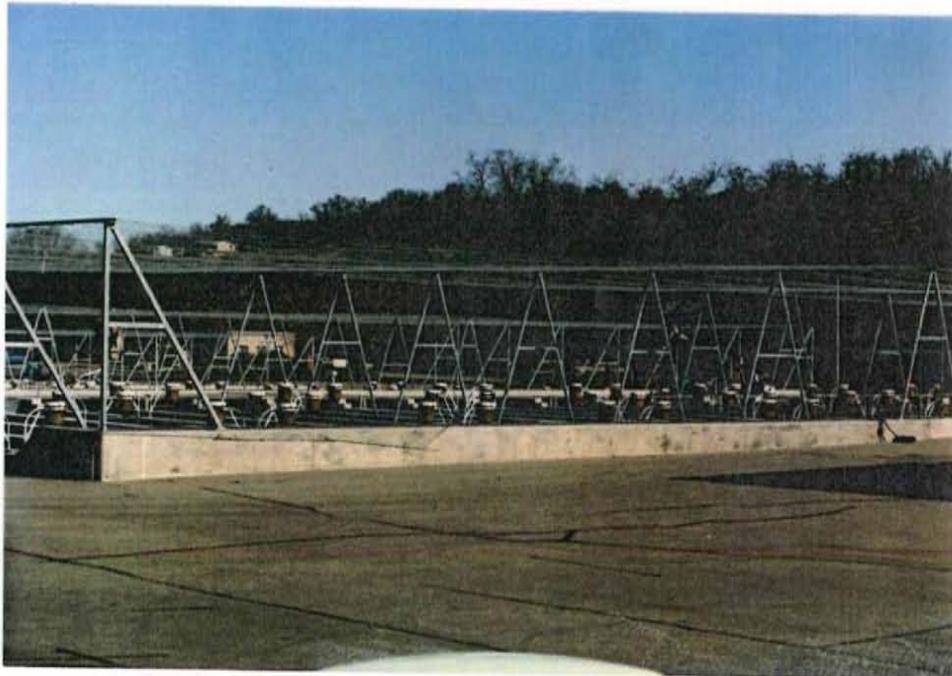
Fiscal Year: 19 93

Part I - Permanent Personnel (FTE's: 7.3)					
Name Of Employee	Functional Title	Grade	Period Worked	Remarks	
David S. Bruhn	Supervisory Fishery Biologist	GS-12	92/10/1 - 93/4/30	Retired	
Bryan R. Kenworthy	Supervisory Fishery Biologist	GS-12	93/9/5 - 93/9/30		
Harry T. Shw	Supervisory Fishery Biologist	GS-11	92/10/1 - 93/9/30		
Daniel M. Magnuson	Fishery Biologist (Mgmt)	GS-7	92/10/5 - 93/9/30		
Beatrice M. Martindale	Fisheries Program Asst.	GS-6	92/10/1 - 93/9/30		
M. J. Kirsch, Jr.	Maintenance Worker	WG-8	92/10/1 - 93/9/30		
Michael Jacobson	Motor Vehicle Operator	WG-8	92/10/1 - 9/3/9/30		
Part II - Temporary Personnel (FTE's:)					
Name Of Employee	Functional Title	Grade	Period Worked	Remarks	

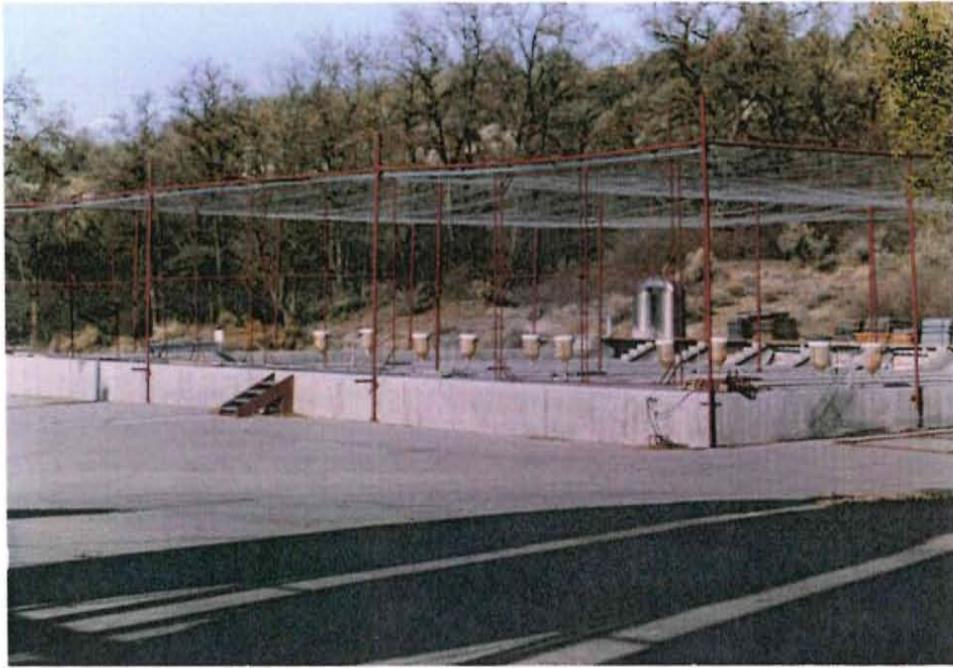
APPENDIX



Above ground fuel tanks



Bird enclosure steelhead raceways



Bird exclosure trout raceways