

Priest Rapids Hatchery Complex John Day Mitigation Operations and Maintenance Reporting July 1, 2011 to June 30, 2012



by Mike Lewis, Glen Pearson, and
Mike Erickson



*Washington Department of
FISH AND WILDLIFE
Fish Program
Hatcheries Division*

STATE OF WASHINGTON
DEPARTMENT OF FISH AND WILDLIFE

**PRIEST RAPIDS COMPLEX
JOHN DAY MITIGATION**

**OPERATIONS AND MAINTENANCE
ANNUAL REPORT**
July 1, 2011 – June 30, 2012



Prepared For
U.S. Army Corps of Engineers

By

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Introduction

The U.S. Army Corps of Engineers (USACE) is required to provide mitigation for the loss of fall Chinook salmon spawning habitat caused by the inundation associated with the construction and operation of John Day and The Dalles dams. Specifically, the USACE funds hatchery production of upriver-bright (URB) and tule fall Chinook smolts to replace lost natural production. This hatchery production is known as John Day/The Dalles Mitigation (JDM).

In 1992, the Washington Department of Fish and Wildlife (WDFW) and the USACE, in agreement with Grant County Public Utility District (GCPUD), began rearing and releasing 1.7 million JDM fall Chinook salmon at the Priest Rapids Hatchery (PRH). USACE funding for this program initially was limited to purchasing fish food.

In 1996, a cooperative agreement was signed by USACE, WDFW, the National Marine Fisheries Service (NMFS) and U.S. Bureau of Reclamation (USBR) to share the facilities at Ringold Springs Rearing Facility (RSRF) to increase JDM fall Chinook salmon releases upstream of McNary Dam and the Snake River. The USACE agreed to provide funds to transfer 3.5 million (M) pre-smolts from Bonneville Hatchery (operated by Oregon Dept. of Fish & Wildlife) and to acclimate and release them at RSRF. Subsequent releases demonstrated that RSRF could successfully rear fall Chinook smolts for the JDM program. The RSRF program continues today at the existing capacity, which ranges from 3.5 to 5.5M fall Chinook smolts, depending on fish size. However, the abundant gravity water supply will support substantially more capacity and is currently being studied by USACE for expansion.

In May 2008, Washington, Oregon, Idaho, federal fishery agencies, and the treaty tribes agreed to a new, *U.S. v. Oregon* 10-year Columbia River Fish Management Plan (CRFMP), which is a detailed harvest and hatchery fish production plan. The CRFMP parties jointly develop harvest sharing and hatchery management plans that are entered as orders of the court and are binding on the parties.

In 2009, the WDFW entered into a new funding agreement with the USACE for the production of upriver bright (URB) fall Chinook salmon at both PRH and RSRF. WDFW will produce JDM fish for USACE provided adequate funding, eggs and PRH hatchery space are available annually. Current goals at PRH include rearing and releasing approximately 1.7M smolts on-station. Also, the Hatchery Scientific Review Group (HSRG) finalized their work on the mainstem Columbia River and recommended that the PRH broodstock be used for the RSRF program rather than Bonneville Hatchery mid-Columbia bright fall Chinook. PRH has been trapping adults, spawning, incubating and transferring approximately 3.7M eyed eggs to Bonneville Hatchery for the RSRF program since the fall of 2008.

Project Location

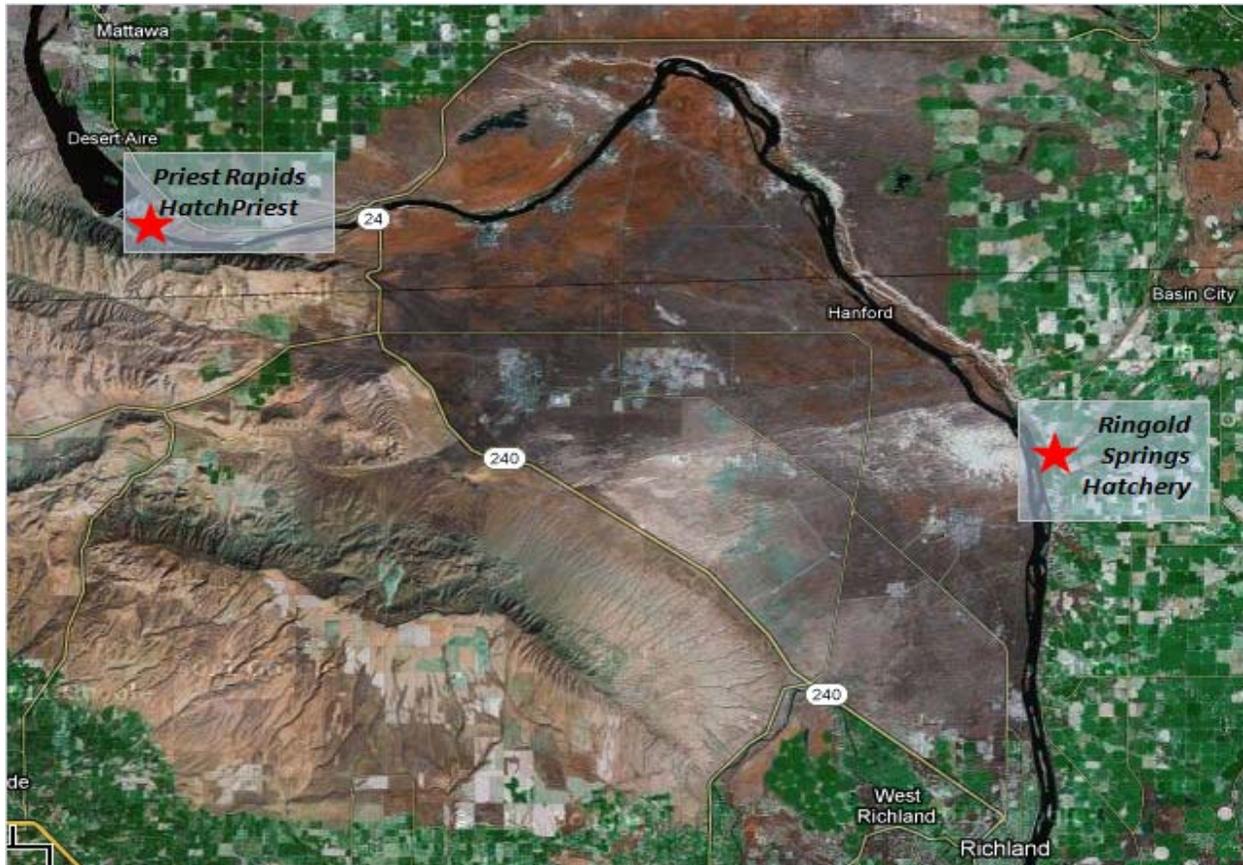


Figure 1. Project Area Map

The Hanford Reach is a 56-mile segment of the Columbia River located between the upstream end of McNary Dam reservoir and Priest Rapids Dam. It is the only sizeable unimpounded reach of the mainstem Columbia River upstream of Bonneville Dam. Fall Chinook salmon continued to successfully use Hanford Reach spawning and rearing habitat as other production areas became inundated by reservoirs. The Hanford Reach contains the most significant area of URB fall Chinook salmon production in the mainstem Columbia River and are considered a higher quality food fish compared to the lower Columbia River tule fall Chinook salmon.

Broodstock collection, adult holding, spawning, incubation, rearing, and release occur at the PRH on the Columbia River at river mile (RM) 397. Release of sub-yearling smolts from the RSRF is at river mile (RM) 352.

Facilities



Figure 2. RSRF shop and residence, 9-acre pond, vinyl raceways, and fish trap.

The RSRF 9-acre earthen rearing pond gravity water supply is primarily from the “18-inch Diversion” and “Lower Diversion”, which divert spring water collected in the ditch along the upstream side of the Ringold Road visible in Fig. 2. The pond has one outlet with direct discharge into the hatchery creek (visible at right). Visible above the 9-acre pond are the 14 vinyl raceways. The gravity water supply for the vinyl raceways comes from the “Main Diversion”, which also diverts from the collection ditch above the county road. The raceways can provide re-use for the 9-acre pond or discharge directly into the hatchery outlet creek. These ponds are in need of replacement.



Figure 3. RSRF 9-acre pond, outlet structure, fish trap, 2 concrete raceways and 32 blue round tanks.

RSRF's adult fish trap consists of two picket weirs constructed in the hatchery outlet creek (visible in Fig. 3). The downstream weir has a vee-shaped fish entrance which allows upstream movement of fish while preventing downstream movement.

Two concrete raceways are located next to an array of blue plastic round tanks. The concrete raceways were constructed with USACE funding following the signing of the 1996 cooperative agreement. The original purpose was to study the relative smolt-to-adult survival of fall Chinook produced in concrete raceways compared to the 9-acre earthen rearing pond. These raceways are still used primarily for fall Chinook and the round tanks are primarily used for warm water species. The water supply for all these rearing vessels comes from the Lower Diversion.



Figure 4. RSRF – Walter’s Ponds and the 5-Acre Pond (upper left), USBR Ringold irrigation wasteway (center), and the five Meseberg warmwater ponds (right).

Ringold’s 5-acre rearing pond is a horseshoe-shaped earthen pond. The gravity water supply, known as the “Steelhead Diversion”, is also located next to the county road, but is separate from the RSRF Main Diversion and Lower Diversion. This pond has a concrete flume downstream of the outlet structure which allows the use of an electronic fish counter for enumerating steelhead smolts at release.

The Meseberg Warm Water facility has 5 rearing ponds. The water supply for these ponds comes from the Lower Diversion. Two of these ponds are lined and the others have earth bottoms.



Figure 5. Priest Rapids Hatchery and the original spawning channel.

The original spawning channel at PRH was constructed to voluntarily attract adult fall Chinook and provide natural spawning habitat. Fish failed to use the channel as designed and this resulted in modifications to the channel and ultimately 5 rearing ponds were constructed in the upper end of the channel. These ponds are used today for Grant County PUD's mitigation obligation as well as rearing 1.7M fall Chinook for the USACE.

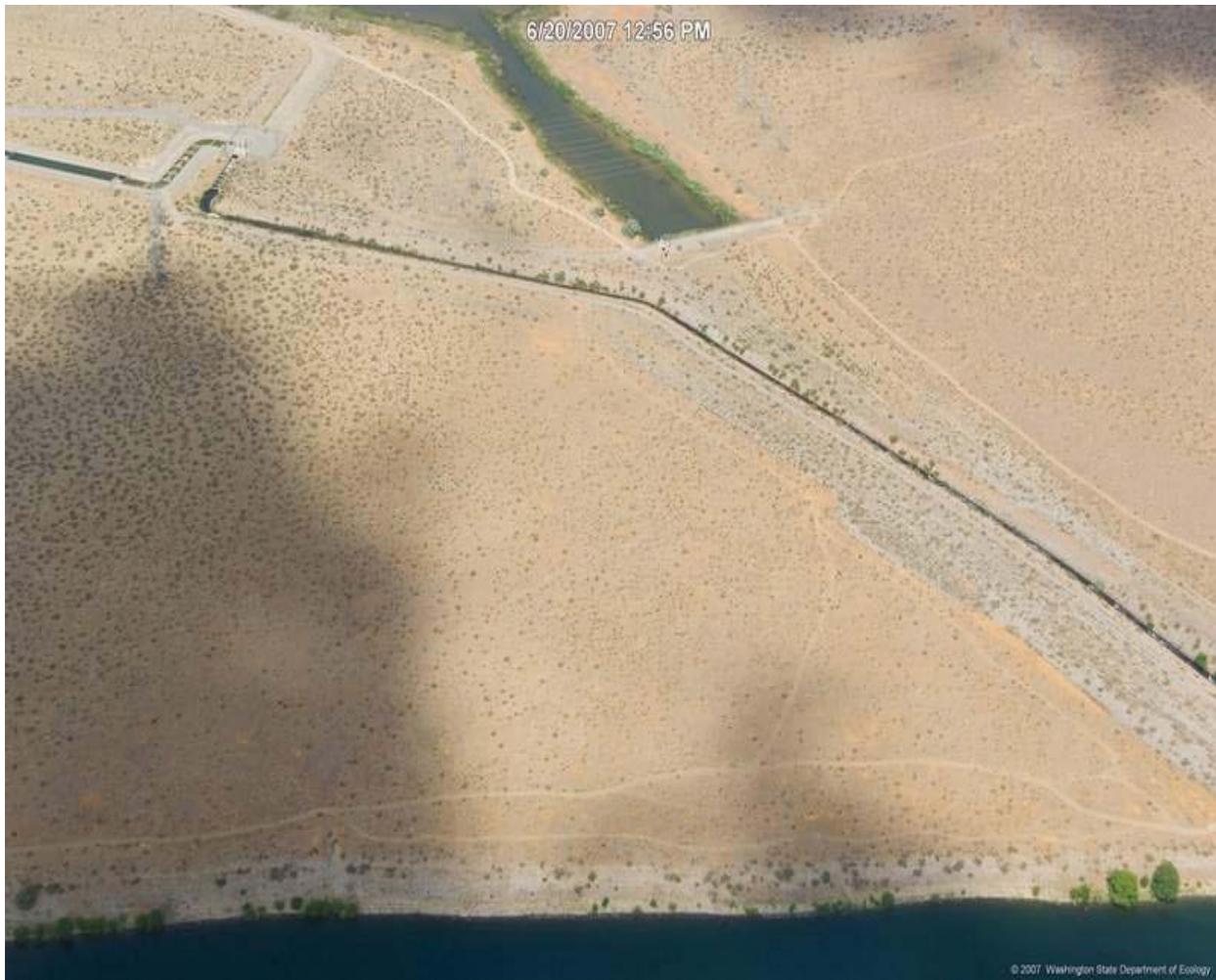


Figure 6. Existing volunteer trap at Priest Rapids Hatchery on Jackson Creek outlet channel.

The adult volunteer trap at PRH is located on the Jackson Creek hatchery outlet channel about one mile from the Columbia River and consists of a barrier weir at the upper end and a finger weir at the lower end.



Figure 7. Jackson Creek (hatchery outlet and adult volunteer channel) at Columbia River mile 397.

Fish Culture Activities (PRH)

Adult Trapping and Brood Stock

The 2011 trapping season occurred at two locations: 1) the Jackson Creek volunteer trap, and 2) at the Priest Rapids Dam Off-Ladder Adult Fish Trap (OLAFT), which is located on the east side of the dam. The OLAFT's primary function is to conduct research for migrating adult salmon and steelhead; however it is also being used to trap natural-origin broodstock for the hatchery.

The 2011 PRH fall Chinook collection at the volunteer trap consisted of 17,176 adults and 3,210 jacks (Appendix 1). Fish were held in two channel ponds and the season mortality was 3,317 (19.3%). Brood information relative to origin, fish size, and condition can be found in the 2011 PRH Monitoring & Evaluation (M&E) report.

The 2011 PRH fall Chinook collection at the OLAFT consisted of 298 adults and 12 jacks. Fish were marked and held in the same ponds with the hatchery returns and the season mortality was 9 fish (2.9%). The intent of the program is to fully implement an integrated spawning population. This will require 30 to 40% natural-origin fish (NOR) to be included in the hatchery broodstock. One of the difficulties with implementation is not being able to easily identify NORs because not all hatchery fish are externally marked.

Total egg take was 12.7M green eggs. A total of 6.3M eyed eggs were retained for all the PRH programs, including the 1.7M smolt on-site JDM production. A total of 3.7M eyed eggs were shipped to Bonneville Hatchery for the RSRF JDM program.

Table 1. Spawning Summary.

Date spawned	Number of eggs taken	Number of males	Number of females	Number of jacks
10/24/11	777,000	101	207	0
10/31/11	2,880,000	382	704	6
11/07/11	2,864,000	343	696	12
11/08/11	1,978,500	255	513	10
11/14/11	2,832,000	389	793	8
11/21/11	1,00,500	196	301	11
TOTAL	12,693,000	1,675	3,214	47

Table 2. Escapement Estimates for Priest Rapids Fall Chinook

Stock ID	Date of report	Lethal Spawned	Adults Shipped	Mortality	On hand	Jack total	Comments
Unknown	20-Sep-11	0	0	0	191	6	Fish trapped at OLAFT. First report of the season.
Priest Rapids	20-Sep-11	0	0	1,025	1,352	512	First Report of the season
Unknown	27-Sep-11	0	0	0	247	9	Fish trapped at OLAFT
Priest Rapids	27-Sep-11	0	0	292	2,723	976	
Unknown	5-Oct-11	0	0	0	281	10	Fish trapped at OLAFT
Priest Rapids	5-Oct-11	0	2,647	593	2,899	1,531	
Unknown	12-Oct-11	0	0	1	290	11	Fish trapped at OLAFT
Priest Rapids	12-Oct-11	0	3,558	1,134	4325	2,067	
Unknown	19-Oct-11	0	0	1	299	12	Fish trapped at OLAFT
Priest Rapids	19-Oct-11	0	4,558	1,733	4,916	2,521	
Unknown	2-Nov-11	69	0	5	341	13	Fish trapped at OLAFT
Priest Rapids	2-Nov-11	1,331	6,747	2,627	3,858	2,973	
Unknown	23-Nov-11	234	0	9	0	12	Fish trapped at OLAFT
Priest Rapids	23-Nov-11	4,500	9,301	3,188	0	3,209	
Priest Rapids	6-Dec-11	4,500	9,326	3,195	0	3,209	
Unknown	7-Dec-11	234	0	9	0	12	Fish trapped at OLAFT
Unknown	14-Dec-11	234	55	9	0	12	Fish trapped at OLAFT. Final in season estimate.
Priest Rapids	14-Dec-11	4,655	9,326	3,195	0	3,209	Final in season estimate.

Note: There are estimates only and do not necessarily match the trapping summary.

Rearing Summary

In addition to GCPUD hatchery production, 1,785,701 USACE - JDM fish were reared and released from the channel ponds June 12 - 20, 2012. They averaged 49.6 fish per pound (FPP), for a total of 36,002 pounds planted. These fish were adipose clipped and 996 fish were PIT tagged by USFWS prior to release. Predation from birds was typical this year, with hazing efforts doing little to deter aggressive feeding behavior. Fish loss due to bird predation was estimated at 10,000.

Table 3. Production Summary

Fry Pondered

Total number of fry pondered	1,818,544
Total pounds of fry pondered	1,818

Rearing to Fingerling Stage

Number of fingerlings released	1,785,701
Total pounds of fingerlings released	36,263
Percent survival from ponding to release	98.5
Average size (fish/lb.) of fingerlings released	48.2

Food Fed and Weight Gain

Total pounds of food fed	21,410
Conversion rate	0.62 to 1
Total pounds gained	34,445

Length Frequency Data (Average)

Mean (mm.)	92.44
Standard Deviation	6.63
Coefficient of Variation	7.08

Fish Health Summary

On March 1 and April 26, 2012, the Fish Health Specialist examined fish (8 and 6, respectively) from channel pond 2. No external lesions or parasites were observed. Gills were normal without bacteria or parasites and internal organs were normal. The overall diagnosis was that fish were "Healthy".

On May 24, 2012 the Fish Health Specialist examined 6-8 fish from channel pond 4 and 5. No external parasites were found. Gills were normal without bacteria or parasites and internal organs were normal except one fish with a pale liver. The overall diagnosis of fish was "Healthy". It was recommended to release fish as scheduled.

Release Summary

Fish releases occurred between June 12 and June 20, 2012. Table 3 provides data specific to rearing pond, dates, number of fish released, weight of the fish, and fish size. All fish released from PRH are volitionally released through the hatchery outlet channel (i.e. Jackson Creek).

Table 4. PRH Release Summary

Pond	Date	Location	Number	Weight	Fish / lb.
C6	6/12/12	Columbia R.	1,567,406	31,411	49.9
C5	6/14/12	Columbia R.	1,067,453	21,740	49.1
C4	6/16/12	Columbia R.	1,108,078	22,340	49.6
C3	6/18/12	Columbia R.	1,583,216	32,049	49.4
C2	6/20/12	Columbia R.	1,730,795	35,395	48.9
	TOTALS		7,056,948	142,935	49.4

Note: This table includes releases for both the USACE's and GCPUD's programs.

Fish Culture Activities (RSRF)

Adult Trapping and Brood Stock

Trapping of adult fall Chinook adults occurred at RSRF on a daily basis from Oct. 1 – Nov. 30, 2011. A total of 5,634 adults and 1,289 jacks were trapped. RSRF fish move volitionally through a picket weir (with a V-notch) into Spring Creek Channel where an upstream picket weir contains the adults. Weekly efforts (see appendix 1) to collect the adults from the trap consist of seining the fish to one corner of the trap and sorting them by gender into totes. Sampling of each fish is done by a crew checking for a coded wire tag and any visual marks. The fish are categorized as AD-ONLY, AD+CWT, CWT-ONLY and UM (unmarked). Scales and lengths were collected to be analyzed from every twentieth fish to determine the age class and to estimate average fork length for each age class. All fall Chinook that return to RSRF are surplused, meaning none of the returns are used as hatchery broodstock. Initially the broodstock for the program was Bonneville Hatchery URB fall Chinook, but it was switched to Priest Rapids/Hanford Reach stock in 2008 to allow for proper integration with the natural population in the Hanford Reach. Data on origin, fish size, and condition can be found in the 2011 RSRF Monitoring & Evaluation report.

Table 5. RSRF Trapping Summary & Disposition

	Adult Males	Adult Females	Jacks
Mortality	75	114	9
Carcass Distribution	2,780	2,665	1,280
Total	2,855	2,779	1,289

Table 6. Escapement Estimates for Ringold Springs Fall Chinook

Stock_ID	Date of report	Adults Shipped	Mortality	On hand	Jack total	Total Eggtake	Comments
Priest Rapids	19-Oct-11	0	0	0	582	0	First report of the season.
Bonneville	19-Oct-11	2121	0	0	0	0	First report of the season.
Priest Rapids	25-Oct-11	0	0	0	875	0	
Bonneville	25-Oct-11	2916	0	0	0	0	
Priest Rapids	2-Nov-11	0	0	0	1112	0	
Bonneville	2-Nov-11	3964	0	0	0	0	
Priest Rapids	9-Nov-11	0	0	0	1112	0	
Bonneville	9-Nov-11	3964	0	0	0	0	
Priest Rapids	16-Nov-11	0	1	0	1275	0	
Bonneville	16-Nov-11	5345	2	0	0	0	
Priest Rapids	30-Nov-11	0	9	0	1280	0	
Bonneville	30-Nov-11	5445	189	0	0	0	
Priest Rapids	7-Dec-11	0	9	0	1280	0	
Bonneville	7-Dec-11	5445	189	0	0	0	
Priest Rapids	14-Dec-11	0	9	0	1280	0	
Bonneville	14-Dec-11	5445	189	0	0		
Priest Rapids	21-Dec-11	0	9	0	1280		
Bonneville	21-Dec-11	5445	189	0	0		
Priest Rapids	28-Dec-11	0	9	0	1280		Final in-season estimate.
Bonneville	28-Dec-11	5445	189	0	0		Final in-season estimate.

Note: There are estimates only and do not necessarily match the trapping summary.

Rearing Summary

In May 2012 we received 3,547,976 Priest Rapids stock Fall Chinook at \approx 125 FPP from Bonneville Fish Hatchery. The fish were distributed into two rearing ponds; the 9-acre pond received 2,438,784 and the 5-acre pond received 1,109,192. The fish were started on a diet of Bio Clarks Fry 1.2 with an additive of TM 100 (oxytetracycline) to aid as a preventative treatment against botulism for the first 14 days. They were sampled often and a computerized growth projection program assisted in establishing the feeding rate. Fish releases occurred from the 9-acre and 5-acre ponds from June 27th thru July 9th. These fish were 100% adipose fin clipped.

Staff expended a great amount of effort to deter avian predators. In addition to an electric fence around the perimeter of the ponds to deter wading birds (e.g. herons and egrets), hazing was performed using propane cannons, hand-held revolvers that project “screamers”, and “bird bangers”. High predation losses still occur, particularly on the 9-acre pond, but without hazing efforts would be significantly worse. Fish health during the acclimation period was excellent and growth was consistent with the projected estimates.

Table 7. Production Summary**Fry Poned**

Total number of fry poned	3,547,976
Total pounds of fry poned	28,752

Rearing to Fingerling Stage

Number of fingerlings released	3,328,919
Total pounds of fingerlings released	61,603
Percent survival from ponding to release	93.8
Average size (fish/lb.) of fingerlings released	57.6

Food Fed and Weight Gain

Total pounds of food fed	27,896
Conversion rate	.85 to 1
Total pounds of gain	32,851

Length Frequency Data (Average)

Mean (mm.)	91.07
Standard Deviation	5.15
Coefficient of Variation	5.7

Fish Health Summary

On May 31, 2012 the Fish Health Specialist examined 6 fish from both the 9-acre and the 5-acre ponds. No external parasites or lesions were found. Gills were normal without bacteria or parasites and internal organs were normal. The overall diagnosis of fish was "Healthy". It was recommended to release fish as planned.

Maintenance and Capital Projects (PRH)

Work Performed by Grant County Public Utility District

1. Checked all the fire extinguishers around the hatchery for compliance.
2. Changed out the filters in the main building and the air conditioning units in the incubation room.
3. Pulled and rebuilt well pumps 5 and 7.
4. Added pump 8 to the well field for back up of the new system.
5. Fixed a cracked pipe on the MC&S line by the channel ponds.
6. New linoleum floor in the kitchen on residence #16.
7. New duct work was done on residence #6, #15, and #16.
8. New section of river water pipe installed for future use.

Work Performed by the Hatchery Crew

1. Staff performed building and grounds maintenance.
2. Fixed seines and nets that had holes.
3. Cleaned out the mud/dirt area above volunteer trap for this coming year.
4. Replaced some of the nets that were falling apart for the vinyl ponds and channel ponds.
5. Went through all the incubation trays fixing all the holes and bought some new tray lids to replace the older broken ones.

Maintenance and Capital Projects (RSRF)

Work Performed by Fish and Wildlife Maintenance Crew

1. WDFW maintenance crew made interior improvements and upgrades to resident #2 to include new counter tops, fireplace tile and screen replacement, molding replacement, ½ bath room toilets and exhaust fan installation.
2. The intake structure on the 18 inch line intake was repaired and upgraded.

Work performed by Vendor

1. Carpet was professionally cleaned in Resident #2
2. HVAC system in resident #2 was serviced.
3. Domestic well disconnect was replaced.
4. New Vinyl flooring installed in Resident #2

Work Performed the Hatchery Crew

1. Spread additional gravel around trap area.
2. Cleared trees and vegetation from around hatchery's main intake pipe line, and burned piles.
3. Disposal of unwanted items.
4. HPA work to include excavation work for the removal of undesirable vegetation and silt in hatchery main water supply.
5. Continued noxious weed spraying efforts.
6. Disking on both ponds for disease and weed control.
7. Regular maintenance to drum screens and stop logs and weekly flow measurements.
8. Painted interior of Resident #2.
9. Replaced lawn irrigation pump Resident #2.

Expenditures (PRH)

CONTRACT TITLE:		Priest Rapids Hatchery O&M (ACOE) FY12																													
REIMBURSEMENT:		100.00%		Send copy of ledger to Mike Lewis each month																											
OVERHEAD RATE:		23.51%		FY12 Rate																											
OVERHEAD EXCLUSION:		EA0003, "J", N		CFDA# 55.999																											
CONTRACT SUMMARY		FY12 Rate		July - Oct 11 Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 FM99 FM99 P1 FM99 P2																											
CONTRACT #		W9127N-09-2-0011-0007																													
PROJECT DURATION		7/1/2011 - 6/30/2012																													
APPROPRIATION		001-020																													
REV. CODE		03-55-DR9991																													
CAPS #		11-1406																													
Contract Amount		503,178.00																													
Prior Bn Billings		0.00																													
Total billings to Date		481,258.34		0.00		0.00		66,423.48		35,966.57		29,599.58		18,923.93		22,809.74		107,983.39		32,002.24		20,300.75		147,248.66		0.00		0.00		0.00	
CONT. BALANCE		21,919.66																													
Expenditure Coding		5197		Invoice #		Billed with		124218		124327		124443		124591		124678		124722		124828		125027									
001-020-53329-3000-5197		Master Index		Invoice Date		November		22-Dec-11		31-Jan-12		29-Feb-12		4-Apr-12		4-May-12		16-May-12		15-Jun-12		24-Jul-12									
		53329		Receipt #																											
		Receipt Date																													
OBJECTS:						FM 1-4		FM5		FM6		FM7		FM8		FM9		FM10		FM11		FM12		FM99		FM99 P1		FM99 P2			
A - SALARY		108,719.59		108,719.59		32,989.41		11,278.14		14,471.60		7,695.05		8,944.59		7,970.06		12,839.63		6,466.92		6,064.19									
B - BENEFITS		46,750.67		46,750.67		12,654.34		5,861.96		6,271.17		3,373.02		3,804.46		3,607.32		5,285.81		2,981.55		2,911.04									
C - CONTRACTS		0.00		0.00																											
E - GOODS & SERVICE		200,909.71		200,909.71		7,954.10		11,477.68		3,265.49		4,253.71		767.94		69,798.37		7,785.21		6,246.41		89,360.80									
EA-0003 Fish Food		38,297.06		38,297.06										6,114.90		6,746.65		532.98		24,902.53											
G - TRAVEL		926.08		926.08						200.00						495.95				230.13											
JA - Non-Capitalized Equip.		1,338.01		1,338.01		181.99		502.59		(242.93)						94.73		310.12		491.51											
J - CAPITAL		0.00		0.00																											
N-Grants		0.00		0.00																											
P-Debt Service		0.00		0.00																											
S-Interagency Reimbursement		0.00		0.00																											
TE 1051 - Fed Contract OFM Ind		1,791.14		1,791.14						572.01		165.36		105.72		93.27		565.57		178.78		110.43									
TE 1052 - State Match OFM Indi		0.00		0.00																											
TE 477x - Agency Indirect		59,237.62		59,237.62						18,917.83		5,468.89		3,496.43		3,084.58		18,704.74		5,912.81		3,652.34									
BTD TOTAL EXPENDITURES		457,969.88		457,969.88		0.00		0.00		53,779.84		29,120.37		43,455.17		20,956.03		23,234.04		91,890.93		45,180.96		22,629.57		127,722.97		0.00		0.00	
TE OFM In-Direct 105x		1,791.14		1,791.14		0.00		0.00		0.00		0.00		572.01		165.36		105.72		93.27		565.57		178.78		110.43		0.00		0.00	
TE Agency In-Direct 477x		59,237.62		59,237.62		0.00		0.00		0.00		0.00		18,917.83		5,468.89		3,496.43		3,084.58		18,704.74		5,912.81		3,652.34		0.00		0.00	
Billable Expenditures (DR)		396,941.12		396,941.12		0.00		0.00		53,779.84		29,120.37		23,965.33		15,321.78		19,631.89		88,713.08		25,910.65		16,537.98		123,960.20		0.00		0.00	
DISALLOW Expenditures		0.00		0.00																											
BTD Not Allowed OH Expenditures		38,297.06		38,297.06		0.00		0.00		0.00		0.00		0.00		6,114.90		6,746.65		0.00		532.98		24,902.53		0.00		0.00		0.00	
Expenditures for In-Direct		358,644.06		358,644.06		0.00		0.00		53,779.84		29,120.37		23,965.33		15,321.78		13,516.99		81,966.43		25,910.65		16,005.00		99,057.67		0.00		0.00	
BTD AGENCY OVERHEAD		81,842.58		81,842.58		0.00		0.00		12,272.56		6,645.27		5,468.89		3,496.43		3,084.58		18,704.74		5,912.81		3,652.34		22,604.96		0.00		0.00	
BTD OFM OVERHEAD		2,474.64		2,474.64		0.00		0.00		371.08		200.93		165.36		105.72		93.27		565.57		178.78		110.43		683.50		0.00		0.00	
TOTAL OVERHEAD		84,317.22		84,317.22		0.00		0.00		12,643.64		6,846.20		5,634.25		3,602.15		3,177.85		19,270.31		6,091.59		3,762.77		23,288.46		0.00		0.00	
BTD BILLING AMOUNT		481,258.34		481,258.34		0.00		0.00		66,423.48		35,966.57		29,599.58		18,923.93		22,809.74		107,983.39		32,002.24		20,300.75		147,248.66		0.00		0.00	
BTD ALLOTMENT		0.00		0.00																											
BTD VARIANCE		(481,258.34)		(481,258.34)		0.00		0.00		(66,423.48)		(35,966.57)		(29,599.58)		(18,923.93)		(22,809.74)		(107,983.39)		(32,002.24)		(20,300.75)		(147,248.66)		0.00		0.00	

Figure 9. Priest Rapids Hatchery ledger

Budgets (RSRF)

RINGOLD SPRINGS REARING FACILITY						
OPERATIONS AND MAINTENANCE BUDGET REQUEST						
July 1, 2011 through June 30, 2012						
A. Salaries				Direct	Indirect	Grand Total
	Complex Manager	.5 MM	Pos # 70068842	297	70	
	Hatchery Specialist 4	2.5 MM	Pos # 70068703	10,745	2,526	
	Hatchery Specialist 3	3.5 MM	Pos # 70068705	12,970	3,049	
	Hatchery Specialist 2	3.5 MM	Pos # 70069141	11,205	2,634	
			Salaries SubTotal	35,217	8,280	43,497
B. Benefits						
	Complex Manager	3 MM	Pos # 70068842	135	32	
	Hatchery Specialist 4	4 MM	Pos # 70068703	4,573	1,075	
	Hatchery Specialist 3	4 MM	Pos # 70068705	5,382	1,265	
	Hatchery Specialist 2	4 MM	Pos # 70069141	4,793	1,127	
			Benefits SubTotal	14,883	3,499	18,382
E. Goods and Services						
	Supplies and Materials			8,500	1,998	
	Communications			2,000	470	
	Utilities			2,731	642	
	Repairs and Maintenance			6,147	1,445	
	Vehicle Milage			6,500	1,528	
			SubTotal	25,878	6,084	
	Fish Feed			36,000	N/A	
			Goods & Services SubTotal	61,878	6,084	67,962
G. Travel						
	Lodging, Per Diem, and Mileage			0	0	
			Travel SubTotal	0	0	0
J. Capital Equipment						
	Vehicle purchase			0	N/A	
	Micro scope (Fish Health)			0	N/A	
			Capital Projects and Equipment SubTotal	0	N/A	0
K. Contract Services						
	Computer rental			0	0	
			Contract Services SubTotal	0	0	0
T. Overhead						
	23.51% of Total Excluding Fish Food and Capital Projects				17,862	
			GRAND TOTAL	111,978	17,862	129,840

Figure 10. Ringold Springs Operating Budget

Summary (PRH)

In 2011, PRH had a good return of upriver fall Chinook to the volunteer trap. Early returning adults suffered pre-spawning mortality this year caused by a Columnaris infection. The adults were spawned in October-November. After hatching the fry were moved out of the incubation room from December-March for early rearing. In April, marking occurred and the 1.7 million JDM fish were adipose clipped by using the manual marking trailer and the fish were transferred to channel pond 3 and 6 for final rearing and release. The release went very well during with normal losses from avian predation occurring. Propane cannons were used to haze birds to reduce smolt predation.

Summary (RSRF)

During the 2012 rearing and acclimation period at RSRF, staff witnessed higher levels of avian predation activity than in the previous five years on the 9-acre rearing pond. The extremely large earthen ponds at RSRF continue to be challenging to staff in preventing avian predation. Hatchery staff performed bird counts 3 times daily and estimated avian mortalities prior to release based on this information. Despite intensive hazing efforts with propane cannons and hand-held revolvers firing screamers and banger-type projectiles many avian predators were undeterred.



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