



Dworshak Fisheries Complex

Monthly Activity Report



November, 2012

U.S. Fish & Wildlife Service, Region 1

Volume 2, Issue 1

Special points of interest:

- Total Fish on station at Dworshak: 6,405,455
- Total Fish/Eggs on station at Kooskia: 1,444,921
- Dworshak's [Face-book page](#) is going strong!
- Coho salmon spawning ended in November.

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Production Update

A lot has been happening at Dworshak National Fish Hatchery recently!

We currently have just shy of 4 million Chinook, 400K Coho, and 2.2 million steelhead on station. There are also 2.6 million eyed Chinook eggs, and around 1.2 million Coho eggs in incubation.

How did we get here?

For several years, Dworshak has been struggling to meet its NPDES permit (National Pollutant Discharge Elimination System). The Environmental Protection Agency (EPA), Army Corps of Engineers (Corps), Fish and Wildlife Service (FWS), and Nez

Perce Tribe entered into a Federal Facility Compliance Agreement (FFCA) to work towards a solution to this problem. As part of the FFCA, Dworshak needed to treat cleaning effluent from System 3 Burrows Ponds. In 2011, the System 3 solution was reducing the number of Burrows Ponds in production so that a limited volume of wastewater could be diverted to the old re-use system for treatment.

As a result of the reduction of System 3 availability, Dworshak increased the density of steelhead smolts reared in the 50 remaining Burrows Ponds to meet a release target of 2.1 million smolts. As part of the density increase, management



Acting Hatchery Manager Nate Wiese

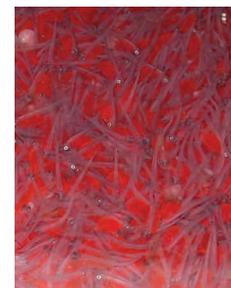
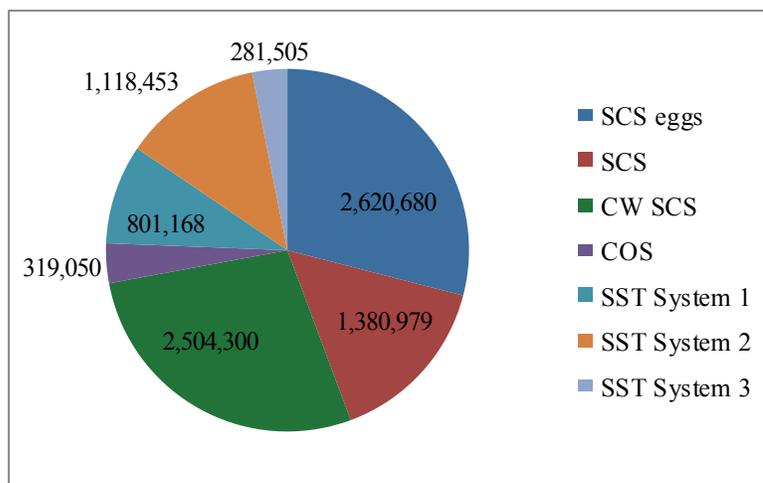
also increased the flows to each Burrows Pond substantially; from an average of 450 gallons per minute (gpm) to over 850 gpm. This flow increase also corresponded with several other key water management changes including:

1. Replacement and rebuilding of the main pumps;
2. Reduction of leakage around the ladder supply

(Continued on page 9)

Production Summary: Dworshak National Fish Hatchery

Figure 1. Total Production—Fish on Station (11/30/12).



Chinook sac fry. Credit: Angela Feldmann/USFWS

SCS=Spring Chinook; CW SCS=Clearwater Hatchery Spring Chinook; SST= Steelhead; COS=Coho





Sorting and counting
Chinook eggs.

Credit: Angela Feld-
mann/USFWS

“Chinook fry
began
hatching at
Kooskia in
November.”



Eyed Chinook eggs.

Credit: Angela Feld-
mann/USFWS

Hatchery Headlines: Dworshak Spring Chinook Salmon (SCS)

Brood Year 2011 (BY11)

At the end of the month there were 1,380,979 BY 11 SCS on station averaging 33 fish per pound (fpp) and 118 mm (4.6 inches) total length. There were 471 (0.03%) SCS mortalities in the raceways (RWs) during the month. Fish in the B bank raceways are on serial reuse and average flow is 1031 GPM. Water temperature averaged 48.7°F in the RWs.

Brood Year 2012 (BY12)

Egg enumeration was completed in November. In total there were 2.62 million eyed eggs enumerated for Dworshak and eye up was 97%. There were 4335 (0.16%) dead eggs removed during November. All Dworshak SCS eggs are being incubated on chilled water at about 36°F. With the additional broodstock our chiller is at maximum capacity. A second chiller has arrived and maintenance is working on installation. This additional chiller will allow us to slow BY 12 SCS growth enough to allow ponding after BY 11 SCS release. In the meantime we have turned on the old “one lung” chiller in hopes that it will pre-chill the water going to the Mechanical chiller and gain us at least 1 more degree of cooling.

Hatchery Headlines: Clearwater Hatchery SCS

Brood Year 2011 (BY11)

At the end of November there were 2,504,300 SCS averaging 28 fpp and 119 mm (4.7 inches). There were 5,089 mortalities in November (0.20%). All 20 Burrow’s ponds began a 28 day Erythromycin medicated feed treatment for BKD. Due to the increase in feed, ponds were cleaned twice a week during the treatment period. Medicated feed will end in early December. Water temperature averaged 46.3 and flow was 700 gpm.

Hatchery Headlines: Dworshak Summer Steelhead (SST)

Brood Year 2012

At the end of the month there were 2,201,126 BY 12 SST in the BPs averaging 18 fpp and 139 mm (5.5 inches) total length. There were 1907 (0.09%) mortalities this month. Systems I, II, & III are on river water; average water temperature was 49 °F and average flow was 600 gpm.

Hatchery Headlines: Dworshak Coho Salmon (COS)

Brood Year 2011

There were 319,050 Coho at the end of the month. Fish averaged 24 fpp and 125 mm (4.9 inches). Total mortality for the month was 282 (0.09%).

Spawning for BY12 wrapped up in November. There were 87 females spawned with 86 males this month for a total of 509 females were spawned with 499 males for the season. Coho eggs are being incubated at Dworshak on non-chilled water until eye-up. Take 1 was shocked and enumerated on 11/28-30. 314,146 eyed eggs to remain at Dworshak were put in A-bank on chilled water; 257,987 eggs were put in F bank and will be transferred to Eagle Creek. The full Coho report can be seen on page 4.

Hatchery Headlines: Kooskia

Kooskia NFH Monthly Activity Report

This activity report is implemented by the Tribal Fish Hatchery manager, Kent Hills. All information in this report was collected and or performed by the hatchery staff during the preceding month.

Under SRBA and the Clearwater Annual Operating Plan, the Tribe, Service and Idaho Fish & Game have agreed to implement other fish production actions related to KNFH mitigation. Reports will include additional information about other species reared, processed and released in relation to KNFH operations.



Kooskia NFH is owned by the USFWS and managed by Nez Perce Tribal Fisheries.

Credit:USFWS

Kooskia Adult Trap Operations Brood Year 2012

During the month of November 102 male Coho and 43 female Coho were trapped by Nez Perce tribal fisheries and transported to Dworshak NFH. The Kooskia NFH trap was open for the entire month and will be closed in December.

Kooskia Chinook Brood Year 2011

Fry have been in the Burrows Ponds (BP) for seven months and mortalities are low (64 for the month). At the end of the month the fry are 27.3 fish to the pound and 4.96 inches (126 mm) long. We have a total of 687,001 fish on station. Total feed consumed this month was 2,375 lbs. BP water temperature for the month has varied. Burrows ponds are on creek water, the average temperature was 40 degrees F. The creek water temperature is dropping, therefore growth is limited, and the water temperatures will continue to decline as will the growth of the fish.

Kooskia Chinook Brood Year 2012

There are 757,920 live eggs on station, we have had a mortality of 7,954; we have treated the eggs with formalin 3 times to keep fungus down. Take 1 has begun hatching; therefore formalin treatments have been discontinued.

The incubation system had a leak and was repaired (see under maintenance) average water temperature in the incubation system was 38 degrees.

Total Fish on Station: Dworshak, 11/30/2012

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SCS	12	eggs/incubation	2,620,680				
SCS	11	RWs 1-30	1,380,979	41,407	33	4.6	118
COS	11	System III	319,050	13,172	24	4.9	125
SCS	11	System III	2,504,300	90,537	28	4.7	119
SST	12	System I	801,168	40,464	20	5.2	133
SST	12	System II	1,118,453	97,280	11	6.3	160
SST	12	System III	281,505	26,296	11	6.4	164
SST	12	SST on feed Tot/Avg	2,201,126	164,040	18	5.5	139
Total Fish/Fry on Station EOM			6,405,455	309,156			

Hatchery Headlines: Nez Perce Tribal Fisheries

Performance for November 2012, BY 11 Coho

The inventory of Brood year 2011 Coho on December 1st showed 319,050 Clearwater-stock are being reared in four Burrows Ponds at Dworshak National Fish Hatchery (DNFH) as shown in Table 1 below.

Table 1. Brood year 2011 Coho inventory as of December 1, 2012.

Ponds	Number of fish	Weight (lbs.)	FPP (average)	Length (inch)	Comments
76	85063	3476	24.47	4.89	
78	85118	3504	24.29	4.90	
80	85133	3387	25.10	4.85	CWT 22-00-08
82	63862	2805	22.77	5.01	CWT 22-00-08
Totals	319050	13172	24.22	4.90	

MORTALITY:

The average percent mortality for Clearwater stock Coho during November was 0.09%. Total monthly mortality was 282 as collected by staff

GROWTH:

Fish per pound (fpp) decreased from an average of 28.36 fpp to 24.22 fpp. Length increased from an average of 4.65 inches to 4.90 inches.

FEED:

Coho fry were fed Bio-Pro 2.0 mm at 1.2% of their body weight.

A total of 1,430 pounds of feed was fed during the month of November. The total cost of feed for the month of November was \$3,304.

FISH HEALTH:

Corrie Samson (USFWS) conducted monthly fish health testing on Coho.

MEETINGS/TRAINING:

- o Mike Bisbee attended weekly supervisor meeting at Dworshak.
- o Coho staff attended daily morning meetings.
- o Tui Moliga attended weekly Fall Coordination Meetings.
- o Mike Bisbee and Tui Moliga called in to the CRTIFC Science Review Team for PCSRF Funding.

Broodstock On Hand in HP2:

11/6/12– All surplus Coho broodstock loaded and outplanted into Lapwai Creek

SPAWNING:

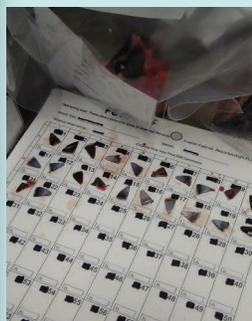
Take # 3 – 11/6/12 – 86 males were spawned with 87 females. All carcasses from spawning were put into Lapwai Creek for nutrient enhancement.



Preparing female Coho for spawning.

Credit: Angela Feldmann/USFWS

“Coho spawning was finalized in November.”



Opercle punches are used to obtain genetic data from Coho.

Credit: Angela Feldmann/USFWS

INCUBATION:

- o Take # 1 enumerated 11/28 – 11/30/12
- o Total number enumerated 687,654 ; 1 female culled, 14 IHNV positive (case # 13-009
- o All Eagle Creek eggs put up in F bank (257,987).
- o All NPT eggs put up in A bank (314,146).

Steelhead Kelt Reconditioning:***FISH CULTURE***

Initiated proposal for new formalin treatment system (Neil Graham) – November 1st
Re-booted alarm system and data logger – November 5th

MAINTENANCE

Installed PVC-T with cam-lock fitting and cap in 3 inch main supply line to receive water from A-bank – November 14th
Tested water delivery from A-bank to kelts tanks using a 3 inch, 5 HP submersible pump, and a combination of 4 inch hose/4 inch PVC – November 15th
Removed throttling valve and replaced hydrant cap – November 16th

MEETINGS/REPORTS

DNFH project coordination meetings – Mondays, all month
COE, USFWS, BPA, CRITFC and NPT discuss DNFH kelt water issues and MOU with DNFH, Portland (conference call) – November 1st .

Information and Education Corner***Dworshak***

Stats: Tours-1, 6 people; Register– 100 visitors from 9 states; Volunteers– 0 logging 0 hours; Website visitors– 293; Blog Visitors– 418 from 10 countries!

On Site:

- Posted 2 articles to the Dworshak Fisheries Complex Blog. Please visit the site: [The Fish Ladder: Notes from Dworshak Fisheries Complex](#); your contributions and comments are always welcome!
- Do you have a Facebook account? Have you “Liked” the Dworshak Fisheries Complex Facebook page yet? Our page is getting a lot of views, shares, and has over 60 likes. We are trying to make daily posts about activities, nature sightings, and general goings-on at Dworshak and the Clearwater River area. If you haven’t yet, take a minute to look at the page: [Dworshak Fisheries Complex](#), and like us!
- Completed the I&E annual report.
- Updated the Dworshak Fisheries Complex Q & A brochure.
- Sent out invitations to apply for Hatchery in the Classroom to area teachers.
- Updated Dworshak web page.

Off-site:

- Presented at the Orofino/Timberline Jr/Sr. High School Career Fair– Nov. 15. There were over 500 students in attendance!
- Attended a meeting with Scott Eckburg (NPS) and Kent Hills to discuss replacing fencing and updating signage along the Looking Glass Trail at Kooskia NFH- Nov. 7

Kooskia

Hatchery Personnel are trying to keep a number count of visitors on the grounds. We had approximately 125 visitors for the month by the manual count. Visitor counts are down due to winter weather.



Maint. staff offloading the new chiller.

Credit: Angela Feldmann/USFWS

“The new chiller has arrived and will be installed next month.”



Removing media from main aeration.

Credit: Angela Feldmann/USFWS

Maintenance Activities

Dworshak

November maintenance activities included:

Completed installation of four new nursery tanks.

Serviced Chevy Trailblazer.

Installed new System I pump.

Working on controller wiring in Mech II.

Finished painting the Maintenance Shop.

Repaired Pressure washers.

Built safety rail for effluent sampling site.

Installed flow meter taps on main pump headers.

Repairing electrical outlets and safety issues at fish health lab.

Removed Mech II sump pump for rebuild.

Kooskia

11/01: Kent brought KK take 4 eggs to Kooskia.

11/02: Kent brought KK take 5 eggs to Kooskia

11/07: The construction project on the domestic water system is still under way and progressing well.

11/11: Upon daily inspection of the hatchery in general, a leak in the pipe coming from the cistern to the incubation trays was detected in the incubation system. Due to it being a Sunday, Gerry was called in and Kenny and Gerry took the coupling that was leaking apart and found a break in the upper pipe. Not having any extra pipe on hand, the leak was duct taped which slowed the leak. .

11/13: Parts were ordered by Gerry to repair the leak in the incubation pipe.

11/15: Gerry went to DNFH and cut the aluminum brackets for the grip struts for the Burrows Ponds.

11/16: All eggs from BY12 began formalin treatments.

11/20: The leak in the incubation system was repaired.

11/26: Take 1 of BY12 has begun hatching.

11/27: Guppy from fish health did an inspection of BY11, found the fish to be healthy and free of parasites and viruses.

Idaho Fish Health Center

Complex Hatcheries

Kooskia: Guppy visited Kooskia on 11/27 for routine monitoring. Fish appeared healthy. Ten fish were sampled for Bacterial Kidney Disease (BKD) monitoring by ELISA, and all were negative.

Dworshak: Rick took ten BY11 juvenile SCS from each of two density treatment groups in B series raceways were collected for the fish health monitoring for the pilot study on November 21. No external or internal abnormalities observed. No external parasites were observed. Kidney tissue was collected for Renibacterium salmoninarum screening by ELISA. Hematocrits were collected to determine percent packed red blood cell volume.

Rick also examined SCS from Clearwater State Hatchery at Dworshak on 11/1.

Rick from the production crew came in with concerns about two burrows ponds in System II. Personnel from the Idaho Fish Health Center did a monthly/diagnostics exam and found a few external parasites but nothing that required treatment at this time.

Liz and Rick took samples from 30 adult steelhead fresh from the Clearwater River for IHN study on 11/6. Due to a low return rate, non-lethal sampling was done on 30 adult STT for the IHN study by Rick, Corie and Liz on 11/20.

Guppy provided veterinary prescription for Dworshak STT adult formalin bath treatments for fungus.

Nez Perce Tribe: Take 3 FCS Spawn- Nov 6, 2012 Laura injected 125 green females with GnRH Ovaplant hormone under an INAD. Chelsea and Laura collected fish health samples from 139 females. Laura provided lunch Kraut and Brats to accompany Steve Roger's beans to feed the spawning crew.

Take 4 FCS Spawn- Nov 13, 2012 Laura and Chelsea collected fish health samples from 127 females. Chelsea demonstrated collecting kidney tissues for ELISA to the camera crew filming NPT activities for a future episode of Outdoor Idaho on Idaho Public TV.

Take 5 FCS Spawn- Chelsea collected fish health samples.

Chelsea, Laura, Corie and Liz processed all coho and FCS kidneys for ELISA.

Steve Rogers is still working on MOU for services. Laura has finished with quote for invoicing services.

Liz took fish health samples for coho spawning on 11/6.

Guppy wrote veterinary prescriptions for oxytetracycline injections of lamprey for the Nez Perce Tribe.

Kootenai Tribe: RBT from Kootenai inspection were sampled for Myxobolus cerebralis and found negative. Guppy and Corie submitted final inspection report for rainbow trout for the Kootenai Tribe. **Bacteriology:** 60 Kokanee collected from Dworshak Reservoir for Wild Fish Health Survey samplings were cultured and only environmental bacteria found. No reportable bacteria were found. Four samples Corie brought back from Hagerman NFH are pending for CWD confirmation.

Virology: Corie with the assistance of Liz and Chelsea ran a total of 300 samples from NPT Coho salmon, NPTH fall Chinook salmon, Dworshak NFH and the Wild Fish Survey. Dworshak samples included steelhead fresh from the river for epidemiological study purposes. She ran 574 blind passes from the Wild Fish Survey, NPTH, NPT Coho, Kootenai Tribe of Idaho rainbow trout and Dworshak. Samples with unidentified CPE from Kooskia SCS Take 3 were sent to Bill Batts, USGS, to help identify the source.

PCR: Rick completed second proficiency plate for extraction of RNA for ISAv screening using real-time RT-PCR for the Pacific Northwest Surveillance Program administered by the US Dept. of Agriculture Animal and Plant Health Inspection Service (APHIS). Completed request from Janet Warg with the APHIS to re-test two samples from plate 2 to confirm results. The next step in the ISAv surveillance project will be to obtain tissues from a potential negative source which will be tested for the ISA virus and used as the negative extraction control for future testing.

Rick also took gill/kidney/heart tissue from early run steelhead to compare real-time RT-PCR screening for IHNv versus traditional cell culture on November 6. Further sampling of early returning steelhead was to be discontinued because of the

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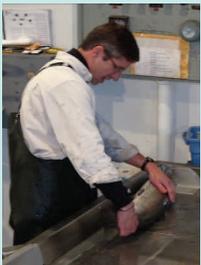
Idaho Fisheries Resource Office- **NEW**



**Ray Jones and
Carrie Bretz taking
data from SCS**

**Credit: Angela Feld-
mann**

**“As of the end
of November
we have
collected over
200 adult
steelhead for
broodstock.”**



**Chris Peery gather-
ing data from re-
turning SST**

**Credit: Angela Feld-
mann**

November is typically a time when we assemble and analyze data from the past year to begin the process of analysis and reporting. For example, we are summarizing information that will be included in the Clearwater River Annual Operations Plan AOP report, to be finalized during the annual meeting in January 2013. The AOP report documents the number of Chinook salmon, coho salmon and steelhead released each year and is developed jointly by USFWS, Nez Perce Tribe and State of Idaho. Other evaluation efforts are also ongoing. We are in the process of hiring a new biologist to replace Brian Simpson. We hope to have a person in place by the end of December.

Chinook salmon evaluations

We continue to collect length and weights on broodyear 2011 Chinook reared in the raceways. This data will be collected until fish are released spring 2013. We have also been working with the Chinook salmon Hatchery Evaluation Team (HET) to develop a study plan to evaluate the effectiveness of rearing Chinook salmon at higher densities in raceways. The purpose of the evaluation is to return more adult Chinook salmon to the Clearwater River to fulfill the mitigation goal set for the Lower Snake River Compensation Plan. We are working with Dworshak production crew, Fish Health, and biologists with the Nez Perce Tribe to develop the study plan and hope to have it finalized in December. Predictions for the Chinook salmon returns in 2013 were estimated to be around 6,000 fish, which would be lower than in recent years.

Steelhead evaluation

We are preparing the PIT tagging effort for BY 2012 steelhead, which will occur in December. We are planning to tag approximately 30,000 steelhead to be used for survival and migration evaluations. Tagged fish will also be used to estimate numbers of fish that return as adults 1 to 3 years from now. Collection of adult steelhead for broodstock and IHN virus monitoring continued in November. Steelhead were sorted on 6 and 20 November. As of the end of November, we have collected over 200 adult steelhead for broodstock but catch rates have been much lower than recent years. There has been much discussion on the anticipated number of adult steelhead returning to the Clearwater River that will be available for broodstock and fishery allocations. Counts of steelhead at dams have been around 50% of recent years and we are estimating a total return to the North Fork Clearwater River of about 5,400 fish.

Fall Chinook salmon evaluations

Redd surveys were conducted in November to estimate spawning escapement for fall Chinook salmon in the Clearwater and Snake rivers.

Lamprey evaluations

We are processing video collected at The Dalles and John Day dams as part as part of a study to count lamprey passage and evaluate passage behavior at dams.

(Continued from page 1)

valve and corresponding change to re-use water for the ladder and holding ponds;
3. Utilizing re-use in the Chinook raceways.

In 2011, System 3 was retrofitted with gates and protocols were developed to divert cleaning waste to the defunct biofilter for the 9 ponds in production. As part of the FFCA-driven System 3 shutdown, the Coho were also moved to the Raceways. This displaced 6 raceways of Spring Chinook production. The densities of the remaining Spring Chinook raceways were increased to maintain the 1.05 million smolt release goal.

During the 2011 rearing, the Hatchery staff was very pleased with the Burrows Pond steelhead rearing and Raceway Chinook/Coho rearing. Approximately 300K steelhead were destroyed due to an infectious haematopoietic necrosis virus (IHN) outbreak, but this was traced back to a breach in the Nursery supply water and only affected the first take of steelhead. No other steelhead contracted IHN in 2011 due to early rearing on reservoir water in the System 1 Burrows Ponds. After early rearing, the steelhead fingerlings were split into final rearing numbers in August through September in the 59 Burrows Ponds. The staff immediately noticed the benefit of higher flow rates in the Burrows Ponds. The increased flows created a cleaner rearing environment and greater swimming velocities for the smolts. Survival in the Burrows Ponds again topped over 90% for the second year in a row, after the dismal 50% survival of BY2009.

Brood Year 2010, 2011 and 2012 steelhead have been produced using reservoir water beginning in May of each respective rearing cycle. BY 10 and 11 were released in full numbers achieving or exceeding the 2.1 million smolt release target. We are positioned well for the SST BY 12 numbers on station to meet or exceed the 2.1 million smolt release target in the April 2013.

In early summer of 2012, the Hatchery Management was much more comfortable with the System 3 cleaning operations. They made plans to return the Coho production to System 3, and increase the Spring Chinook production by 300K smolts and 300K parr at the request of the Lower Snake River Compensation Program (LSRCP). The Steelhead production was slated for 50 Burrows Ponds in Systems 1 and 2, and 10 Burrows Ponds in System 3, along with the 5 Coho Burrows Ponds. All of this would be supported with increased flows per rearing unit, based on the key water management changes from 2011.

In July 2012, it became apparent that Rapid River hatchery (Idaho Department of Fish and Game operated for Idaho Power) was not going to meet their necessary broodstock for spring Chinook salmon. The co-managers requested that Dworshak take an additional 2 million eggs to make up the shortfall. To accomplish this Dworshak would need to collect an extra 500 females at spawning and use twice as much water in incubation than in years past. Rapid River has backfilled Dworshak when they have not met broodstock in the past.

In August 2012, the intake for the Clearwater Hatchery pipeline failed. Several reps from the Corps were at Dworshak the day of the failure and received backing from the Portland office to completely support any efforts to save fish production at Clearwater Hatchery. One week after the failure, all 2.5 million Chinook smolts from Clearwater Hatchery were safely moved to Dworshak in 25 Burrows Ponds in System 3. To accommodate these additional fish, Dworshak consolidated the Steelhead into 5 ponds in System 3 (and 50 in Sys 1 and 2) and the Coho into 4 ponds in System 3. Dworshak is also operating under the premise that when the pipeline is repaired by January 2013, they will receive an additional 25 cubic feet per second (cfs) of water to support the Chinook smolts through final rearing.

When the Clearwater Chinook production came to Dworshak, several key changes happened to wastewater management at Dworshak:

- 1) The staff created a cross connect from the System 3 re-use main aeration to the ladder discharge. This allowed the used of the defunct biofilter system to skim clean water through the launders and discharge it to the river during cleaning operations
- 2) The media from System 2 that had breached the screens was removed and taken offsite. This allowed the cross connection of System 2 and 3 biofilters through the old effluent pipeline and increased the capacity of the treatment pond
- 3) Cleaning protocols changed to incorporate large numbers of staff to maximize availability of the treatment pond space. We currently clean System 3 with a minimum of 10 staff members at a time
- 4) A cross connect was installed to alleviate excess water from System 2 and 3 out to the Clearwater river discharge rather than the

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Veteran's Day celebration

Credit: Angela Feldmann/USFWS



Cake and coffee were enjoyed.

Credit: Angela Feldmann/USFWS



Ben Greene, with wife Jane, received a 30 year award.
Credit: A Feldmann/USFWS

Meetings....Training....Travel

Dworshak

- 11/8 Veteran's were honored for their sacrifice and service to our great nation. Cake and coffee were enjoyed by all those who attended and each Veteran shared their branch of service and duration with all. THANK YOU VETERANS!
- 11/13 Mark Drobish met with Greg Parker, Lucian Stewart and Scott Feldmann, Corps of Engineers staff to discuss roles of the safety officer and formalization of a Complex safety team.
- 11/13 Mark Drobish and Adam Izbicki met with Greg Parker and Lucian Stewart to identify projects for additional funding to address non-routine maintenance needs and finalization of NPDES modifications to further improve effluent water quality.
- 11/29 The primary reservoir pipeline repair and installation was completed.
- 11/30 Primary reservoir pipeline water flow was restored on the 30th. Both the Clearwater Fish Hatchery and the Dworshak Hatchery had been without this water supply since mid-August when the pipeline was damaged and taken out of operation. The additional water has provided great relief for both facilities and risk to fish production is now back to "normal" levels.

Kooskia

- 11/01 Job interview for Technician I Fish Culturist two people were hired Carter Lopez and Ira Wilson.
- 11/07 Meeting with the park service and Angela from DNFH on Looking Glass Park renovations. Considerations of putting up new fences and installing updated signs this summer.
- 11/08 Job interview for Fisheries Technician III Maintenance Mechanic.
- 11/12 Gerry had a meeting with the domestic well project contractor.
- 11/13 Transported hatchery personnel from KNFH and DNFH to Spokane for computer card access.
- 11/16 Job interview for Fish Technician I Fish Culturist for weekend duties.

Administrative Activities

Safety

The Safety Committee met on November 27th. Scott Feldmann, Safety Officer, Liz Steiner, Carrie Bretz, Jim Oatman and LouAnn Lasswell have all stepped up to serve on this committee to help ensure the staff is safe. Thank you!

Staff Service Anniversaries and Birthdays

November Birthdays

Mike Faler
Frank Mullins
Tui Moliga

Years of Service

Rob Keller, 10 years
Adam Izbicki, 20 years
Ben Greene, 30 years



(Continued from page 9)

ladder. This allowed the higher flow rates to be maintained in all 34 ponds in System 3 as compared to the 9 ponds utilized in 2011.

Because of these changes, EPA recommended that the intent of the FFCA agreement had been reached. Necessity had genuinely inspired innovation! This opened the door for future rearing back in System 3 and allowed the continued use of System 3 to finish rearing the Clearwater Chinook smolts in 2013. The EPA hasn't provided anything officially stating we are in compliance, but have verbally supported our efforts to increase Chinook production this year under the emergency situation with the failure of the primary pipeline. They have also verbally supported us to increase production in the future based on our water quality data for how we are now able to operate system III. Included in this effort, it is essential we follow through with the interconnections of System II and III and the pumps to pull supernatant from higher in the water (a float system will accomplish this) column to maximize the opportunity for solids to settle.

In September 2012, it became apparent that Rapid River Fish Hatchery had higher Spring Chinook fecundity and returns than expected. As such, they only needed 600K of the 2M eggs requested from Dworshak. Dworshak staff consulted with the co-managers; Corps, Tribe, LSRCP, and IDFG about rearing these additional eggs to smolts in System 3 during 2013. These additional smolts would help address shortfalls to the LSRCP program for Spring Chinook returns. All the co-managers were supportive of this increased production, if it did not affect the health or performance of current smolt releases. The Corps recommended a real estate agreement for this production increase.

I think this brings us back to today. We have a record number of fish and eggs on-station at Dworshak. We have staff from 4 entities (Corps, Tribe, FWS, and IDFG) actively working at Dworshak daily to make this endeavor a success and we are cautiously optimistic that all smolts will be released in great shape. We are currently battling some BKD issues in the Clearwater Chinook in Systems 3, but mortality from the outbreak is low and the outbreak has been attributed to hauling stress from IDFG Fish Health professionals. We did not have any IHN epizootics in steelhead production this year, and the Coho and Raceway Chinook continue to do great! - by Nate Wiese

Idaho Fish Health Center

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low number of returning adults. The fish health center staff discussed and reviewed non-lethal sampling methods as an alternative to lethal sampling. Non-lethal samples from gill and mucous were collected from adult steelhead on November 20 for real-time RT-PCR and cell culture.

Laura processed the HNFH monthly samples, as well as some diagnostic samples which were found to be positive for N.S. Also, a CWD suspect sample for DW KOK was confirmed.

ELISA: Guppy tested 3 sets of samples for BKD by ELISA in November. The first set included 361 samples for NPT Coho spawning adults and NPT Newsome and Yoosa Acclimation site prereleases on 11/8 and 9. An additional 388 samples for NPT Coho and NPTH FCS spawning were tested on 11/19 and 20. On 11/28 and 29, 428 more samples were analyzed for NPTH FCS spawning adults and Dworshak SCS juveniles.

Parasitology: Rick ran five cases totaling 118 fish from 2012 wild fish health survey screening for *Mxyobolus cerebralis* by pepsin trypsin digest. All five cases are suspect *Mxyobolus cerebralis* positive. All suspect positives will be confirmed by nested PCR.

Wild Fish Survey: Laura received Lake Trout samples from Lake Pend Oreille mid-month. Chelsea helped to process samples. Laura started entering 2012 data results and completed 2011 results into the National Wild Fish Health Database.

Lake Trout for WFS were negative for any reportable bacterial pathogens, environmental bacteria only.

OTHER:

Guppy submitted the final report for a 2 year Science Support Partnership Program grant with USGS collaborators Gael Kurath and Rachel Life for a project studying IHN at Dworshak NFH.

Laura is one of the new USFWS members to sit on the AFS-FHS Inspection Manual Committee. Conference Call was attended at the end of the month.

Laura attended an all-FHC conference call organized by Joel Bader, National Aquatic Animal Health Coordinator on 11/5.

Guppy participated in meeting with contractors concerning the replacement of the Idaho FHC roof on 11/6.

Guppy participated on a call with Andy Goodwin and Joel Bader regarding funding for ISAV surveillance testing on 11/9.

Staff List

Complex Management

Mark Drobish, Acting Complex Manager
Kent Hills, Acting Nez Perce Tribe Co-Manager
Nate Wiese, Acting Hatchery Manager
Assistant Hatchery Manager
Jack Christiansen, Aquatic Engineer

Dworshak Production Staff

Mark Bright, Angela Feldmann, Jill Olson,
Rick Allain, Rob Bohn, Wayne Hamilton,
Ben Wright, Tom Tighe

Nez Perce Tribe Production Program

Mike Bisbee, Tuianna Moliga, Lou Ann
Lasswell, Steve Coomer, Jeremy Sommer,
Clarice Holt, Carter Lopez, Ira Wilson

Administration

Penny Hasenoehrl, Steve Bradbury

Maintenance

Adam Izbicki, Ben Greene, Terry Weeks,
Rick King, Rob Kellar, James Oatman, Ja-
mie Henderson

Idaho Fish Health Center

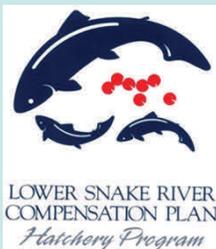
Dr. Marilyn Blair, Liz Steiner, Laura Spra-
gue, Corie Samson, Rick Cordes

Idaho Fishery Resource Office

Howard Burge, Mike Faler, Dr. William
Conner, Ray Jones, Aaron Garcia, Carrie
Bretz, Frank Mullins, Dr. Chris Peery, Jody
Brostrom, Randy Bowen, Ken Bugler

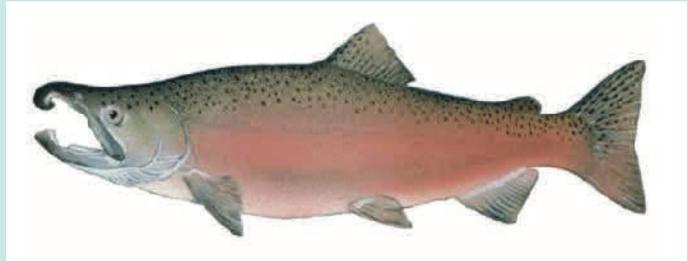
Kooskia National Fish Hatchery

Kent Hills, Art Broncheau, Kenny Simpson,
Gerry Fogelman



Nez Perce Tribe and Dworshak NFH Production, Maintenance, and Administrative staff.

Credit: Angela Feldmann/USFWS



Parting Shot



Dworshak Fisheries Complex Veterans from upper left: Ray Jones, Hubert Sims, Jamie Henderson, Rick King, Frank Mullins, Terry Weeks, Ben Wright, Ben Greene, Tom Tighe, and Randy Bowen.

Credit: Angela Feldmann/USFWS