



# Dworshak Fisheries Complex

## Monthly Activity Report



### January Highlights

#### Dworshak

- SST BY 16 - 476,806
- SST BY15 - 2,316,644
- SCS BY15 - 2,435,182
- SCS BY14 - 1,497,765
- COS BY 15 - 554,450
- COS BY14 - 552,547

#### Kooskia

- BY 14 Chinook fish on station - 660,337
- BY 15 Chinook sac fry on station - 778,356

### Inside this issue:

Manager's Message	1
Dworshak Hatchery Production	2-3
Dworshak Complex M & E	4
Aquatic Conservation	5
Snake River Fall Chinook	5
Idaho Fish Health Center	6
Dworshak Maintenance & Ops	7
Kooskia Hatchery Headlines	8-9
Information & Education	9
Staff List	10

## U.S. Fish & Wildlife Service, Region 1

### Managers Message - Steve Rogers

As has been my habit in previous months, I'd like to utilize the Managers Message to introduce you to another new employee here within the Dworshak Fisheries Complex. This month I'd like you to meet Sean Roon, who joined the Idaho Fish Health Center team short while ago.

Sean was born in Albuquerque, New Mexico but did most of his growing up in Oak Lawn, IL which is a suburb in the southwest part of Chicago. He moved out west to go to college in Seattle at Seattle Pacific University, where he was able to explore and experience the wonders of the Pacific Northwest. Having quick access to mountains and forests hooked him into sticking around the Northwest for as long as possible.

For a few years after college, Sean worked seasonally in the summer as a field or research tech. Each winter he returned to Seattle to work at a ski shop. Some notable tech jobs included trapping and tracking squirrels, putting out motion cameras to survey for carnivores along the coastal range of Oregon, rearing Pacific herring at a USGS field station near Port Townsend for disease research, collecting and rearing frogs and salamanders for more disease research in Tennessee, and he had the pleasure of tackling a deer once – but it was a small doe and it was in a cage, so it wasn't exactly a fair fight.

Most recently, Sean completed his Master's degree in microbiology at Oregon State University. During that time he worked a bit with Oregon Department of Fish and Wildlife in Corvallis, focused on fish health and research. This is where Sean learned the basics of fish health monitoring.

Don't let all the disease stuff make you think Sean is a morbid person. In fact, if he was asked to make a list of his favorite things, laughter would be at the top of the list. Sean also enjoys hiking, backpacking, snowboarding, rock climbing, and high fives. He balances those outdoor activities with movies and video games – throwing in a book here or there.

Feel free to stop by the IFHC and say hello to Sean, and welcome him to the team. Maybe he'll tell the story about tackling the deer, leading to laughter, which Sean and most of us truly value.



Sean Roon enjoys hiking, backpacking, snowboarding, rock climbing, and high fives.



Photo Credits: Steven Hoefgen 2016

## Dworshak Hatchery Production - Izbicki, Sommer, Bisbee

### Dworshak Stock - Spring Chinook Salmon (SCS)

#### Brood Year 2015 (BY15)

Eggs from all 7 egg takes were enumerated. 2.85 million eggs were enumerated with 2.61 million eyed eggs going into production. Enumerated eye up was 91.4%. 23 females were culled due from BKD (ELISA values 0.249 or more) and 20 females were culled for low eye up (>60% dead eggs). Fecundity was very high this year averaging 4,024 eggs per female.

There were 2.44 million eyed eggs in incubation at the end of January. Eggs are being incubated on chilled water and will be ponded as swim up fry in April 2016.

#### Brood Year 2014 (BY14)

At the end of January there were 1,497,765 fry at 31 fpp. Mortality was 0.25%. Many ponds have developed low level bacterial infections and have been treated with salt and Chloramine-T. Pond A-11 has IHNV.

There are 10 distinctive PBT groups ponded: 6 for the density study (3 high density and 3 low density), one for general Dworshak production, one for Selway production, one for Nez Perce Tribal Hatchery (NPTH) additional Lower Snake River Comp. Program (LSRCP) production, and excess fish production. Fish are slightly smaller than previous years but are still expected to make size.

### Coho Salmon (COS)

#### Brood Year 2015 (BY 15)

There are currently 554,450 Coho eggs incubating in 9 stacks.

#### Brood Year 2014 (BY 14)

At the end of December there were 552,547 fry at 30 fpp being reared in six Burrow's ponds. Mortality remains very low at 0.04%.

### Dworshak Stock- Summer Steelhead (SST)

#### Brood Year 2016

Spawning began January 12, 2016 with our first take of early collected adults. 58 females were spawned with 37 males and 4 one- ocean males (Jacks). Eggs were started on secondary reservoir water then moved to chilled water so they will eye up with later egg takes. Take 2 was January 19; we spawned 39 females and one Kelt with 40 males. We fell short of our goal of 60 females due to green fish. A supplementary egg take was scheduled for February 2 to complete our early egg take goals. There were 89 adult females and 18 adult males remaining from early captured broodstock at the end of January.

There are currently no fish in the nursery. Cleaning and repairs will be on going until BY2016 SST are moved in.



Credit: Karen Loranger, FWS

Fish Culturist Jayson Thompson takes a break from production to teach preschoolers about fish growth and development.



Credit: Jill Olson, FWS

Steve Jeffers takes advantage of a sunny day to clean Burrow's ponds.

## Dworshak Hatchery Production

(Continued from page 2)

### Brood Year 2015 (BY 15)

At the end of January there were 2,316,644 fry in the BPs averaging 9.8 fish per pound. Mortality was 0.3%. All takes are on schedule to meet size at release. All takes are on demand feeders and are on a maintenance diet. Steelhead from takes 9 & 10 being hand fed in order to help them to meet size. This is a supplement to the demand feeders.

### SUMMARY

Table 1. Total Production—Fish on Station (1/31/16).

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SCS BY 15	15	Incubation/Eggs	2,435,182				
SCS BY 14	14	Raceways	1,497,765	48,031	31	4.8	121
COS BY15	15	Incubation	554,450				
COS BY 14	14	Raceways	552,547	18,208	30	4.6	116
SST BY 16	16	Incubation/Eggs	476,806				
SST BY 15	15	Raceways	2,316,644	226,160	10	6.6	168
<b>Total Fish/Fry on Station EOM</b>			7,833,394	292,399			

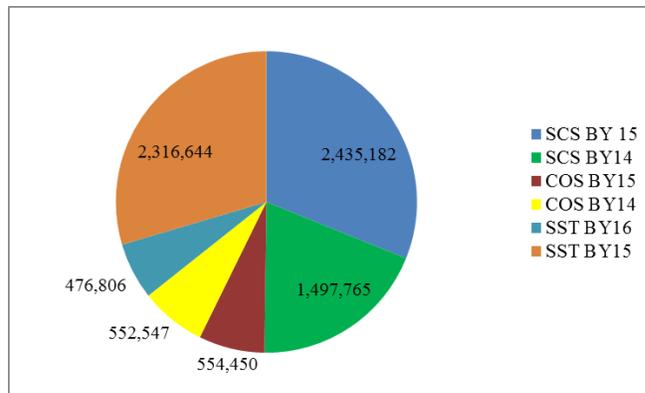


Figure 1. January 31, 2016 Total Fish/Eggs on Station.

### Dworshak NFH Meetings, Training and Conferences - Drobish

On January 7th, Dworshak Fisheries Complex staff participated in a webinar to discuss edits for the Clearwater Annual Operating Plan (AOP) documents. The partnering agencies are all updating and editing the newly developed tables and narrative via Google Drive; therefore, additional coordination/collaboration was necessary to enable all participants to provide input and better understand the purpose and data needs of each of the tables.

On January 21st, Dworshak Fisheries Complex staff participated in the South Fork Clearwater River broodstock coordination meeting. Per Hatchery Review Team recommendations, the Dworshak Hatchery production smolts for release in the South Fork Clearwater River will come from adults collected in the South Fork Clearwater River.

On January 22nd, all edits and updates were completed via Google Drive for the Clearwater AOP tables and narrative by Dworshak Fisheries Complex staff.

Annual hearing testing was initiated for Dworshak Fisheries Complex staff and will be completed in February.

## Dworshak Complex Monitoring and Evaluation Team

The Idaho FRO team PIT-tagged BY15 steelhead. The plan is tag 30,000 steelhead to represent all production.

Participated in first spawn days for BY 2016 steelhead. These first spawn takes were for adult steelhead that had been previously collected fall of 2015.

Participated in Dworshak NFH Hatchery Evaluation Team meeting for Chinook salmon.

Completed work plans for Idaho FRO.

Sent summary of FY15 expenditures for 1311 budget to RO for HQ request

Met with IDFG, NPT and UI researchers to coordinate Clearwater River steelhead radio telemetry project. Mapped out receiver sites and coordinated frequency and codes to be used in the coming year.

Participated in the RO project leaders call.

Participated in Dworshak Complex supervisors meeting.

Participated in Clearwater AOP call to develop 2016 AOP tables.

Completed installing interior of CWT trailer. Trailer was used to measure BY15 Chinook salmon for the density study. This made it much more comfortable to do this work in near zero degree temperatures.

Met with IDFG to discuss efforts to maintain Clearwater steelhead B population characteristics

Received cert list for temporary technician position. Reviewed candidate with M&E team and made an offer.

We received permission to proceed with developing two permanent positions to replace current temporary/term position on Idaho FRO team.

Participated in meeting to discuss developing localized broodstock for Dworshak NFH steelhead released to the South Fork Clearwater River.

Completed tables and text for the 2016 Clearwater River Annual Operating Plan.

Sampled Chinook salmon for Production Density study.

Swept raceways and burrows ponds for shed PIT tags from recently tagged Chinook salmon and steelhead

Worked with IDFG to develop size and PNI criteria for upcoming steelhead spawning

(continued page 5)



Credit: FWS

The Idaho FRO team PIT-tagged BY15 steelhead. The plan is tag 30,000 steelhead to represent all production.



Credit: FWS

## **Aquatic Conservation Team**

(continued from page 4)

Organized the Kootenai GMU Redband Conservation Strategy meeting, held late January.

Reviewed the Redband Conservation Strategy

Reviewed Idaho State Wildlife Action Plan

Participated in the Upper Salmon Basin Watershed Project Tech Team

Participated in the Bald Eagle Survey

Worked on edits to the Juvenile Pacific Lamprey Passage Data Synthesis for the USACE Participated on the NWR Climate Change Monitoring Conference Call.

Reviewed prototype data reporting for the NWR Climate Change Monitoring Corporate database in Microsoft Access.

Worked with Salmon High School Garden/Intern

Attended meeting on a "Pollinator Dreams" science/art project

Reviewed the Bear Lake Refuge I&M

Participated in the Western Lamprey Team call

Registered and made reservations for Idaho Chapter Wildlife Society joint meeting to attend Freshwater Mussels talks, and Idaho Chapter AFS.

Worked with the Nez Perce Tribe to PIT tag adult lamprey and collect eDNA samples.

Summarized FWS grants for pollinators funded in FY15 for Salmon area so others can use as basis for applying for other grants.

Attended Cattlemen's Winter School presentation on Greater Sage-Grouse conservation

Attended bi-monthly regional Aquatic Conservation Team call

Made calls out to Idaho FO for old files from when Janna Brimmer was in Salmon dealing with PFW projects

Touched base with partners on possible FY16 FWS funded intern possibilities as well as CPWN projects

Worked on draft Snake River Pacific lamprey Regional Implementation Plan

Reviewed Regional ACT strategic plan

Participated in Fish Screen Oversight Committee call and follow up

Participated in Quarterly Accords Lamprey workgroup meeting, Prosser WA

## **Snake River Fall Chinook Team**

Worked on a review of summer flow augmentation starting in 1991 and completed and submitted the FY16 SOW and Budget for BPA covering our fall Chinook salmon research.

Coordinated a field study focused on PIT tagging 45–49-mm juvenile fall Chinook salmon as per a request by NMFS.

Prepared beach seining data collected during 1992-2015 for Stream Net

Worked on 2015 Annual Report to BPA.

## Idaho Fish Health Center - Blair Dworshak NFH

January 2016



Credit: Ill Olson, FWS

Joe Livesay works on wiring electronic backup system



Credit: Ill Olson, FWS

**Steelhead juveniles:** System 1 continued to experience chronic mortality. Fish were off feed most likely due to a combination of factors. Feed samples were reported to be slightly rancid, and low levels of IHNV have been detected. A few ponds also started exhibiting large fungal lesions behind dorsal fins. These lesions eventually opened up, and ubiquitous bacteria, as well as, *F. psychrophillum* and *A. salmonicida* were detected at low levels, but not believed to be causing mortality, as only two colonies of each bacteria were isolated from one fish. Fish were monitored several times during the month and no external parasites were seen. Moribund fish did have low level gas bubble trauma, but again was not attributed to mortality. One pond in system 2 was detected positive for the parasite *Trichodina* in moderate levels. Recommendation was given to treat this pond and all others in system 2 with excessive flashing.

**Steelhead adults:** Fish health samples were collected from 2 spawn days totaling 53 fish. 30% ovarian fluids were sampled individually for IHNV, 20 males were sampled for virus, bacteria, *M. cerebralis*, and *C. shasta*. Males that were injected with Ovaplant in Dec were evaluated for sperm motility and production.

**Spring Chinook juveniles:** Increased mortality remained an issue in A bank and a couple raceways in B bank. Fish were examined for bacterial, parasitic and viral pathogens. No parasitic pathogens were detected. No viral pathogens were detected in fish examined in December and results are still pending for fish examined in January. No bacterial pathogens were detected systemically in the kidney, but yellow-pigmented, Gram-negative, rod-shaped bacteria were detected on gills and observed via wet mount and Gram stain of gill imprints. These bacteria were determined negative via PCR for *F. psychrophilum*. Gills also had excessive mucus, swelling, and debris. Two fish in A bank had fungal necrosis on gills. Two fish had low levels of gas bubble trauma in gills. Recommendations were treatments of raceways with increased mortality with 15 mg/L of Chloramine-T in a 60 min static bath for 3 times. After treatment, mortality remained increased. Further diagnostic examination revealed gills no longer had observable bacteria, but were still swollen with excess mucus. Further recommendations were to improve water quality and increase cleaning of affected raceways.

**Coho juveniles:** Five fish were examined 19 January 2016. The parasite *Epitheliocystis* was detected in moderate levels on the gills of 3/5 fish. *Epitheliocystis* was not detected on skin scrape. Ten fish were also collected to send to Bozeman Fish Health Center for further evaluation of kidney abnormalities detected in fish sent in December 2015.

## Kooskia NFH

**Spring Chinook juveniles:** A monitoring exam of spring Chinook juveniles at Kooskia NFH was performed on January 25th. Low levels of the blood fluke *Sanguinicola* were seen on the gills, and low levels of parasites *Epitheliocystis* and *Ambiphyra* were observed on the skin. All fish examined were sampled for *Renibacterium salmoninarum* (Bacterial Kidney Disease) monitoring by the ELISA test.

## **DNFH Maintenance and Operations Activity Report - Koehler**

- All standpipes from system 1,2 and 3 have been upgraded with new fixed handles as requested by production staff.
- Digester pump room roof has been replaced. Old roof was torn off and plywood replaced, dried in and metal flashing installed. As soon as hot weather comes our way, we will apply a roof coating to complete the project.
- New metal buildings are complete. We are now fabricating pipe rack to be installed under the buildings to store hose and pipe out of the weather.
- Incubation egg trough valves and piping have been replaced.
- We are in the process of temporarily rerouting power till a permanent solution can be put into place to fix the main conductors that failed last month.
- New hose bibs were installed at the spawning table to eliminate the need for coiled hoses under the work stations.
- 50 wooden stands for samples from fish health have been built and delivered.
- Ladders and grip holds have been fabricated and installed in the spawning area to enhance safety for production staff.
- A Feed box has had a few modifications completed to help in the dispensing of food into buckets.
- Raceway sump pumps were pulled and inspected. during inspection It was found that the 8 inch check valves were bad. Parts are not available so replacements have been ordered.
- The wall hung water closet in the main building was cracked and leaking. The closet and flushometer have been replaced.
- Replaced leaking water heater in fish health.
- A new heater in Generator 1 building has been replaced.
- New thermostat was needed on the boiler that heats water for incubation and main building heat.

Maintenance has completed all 33 Preventative work orders for the month of January. We have also completed 27 written requests from our staff here at the hatchery. We are currently working on 2 projects that have had HECF protocol implemented.

That's it for January. The new year is off to fast start. See ya next month.

## Kooskia NFH - Hills

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.



Credit: KNFH

## Kooskia Chinook Brood Year 2014

There are 660,337 smolts on station, they are an average of 33.1 fish per pound and are 4.65 inches (118 mm). All fish are in the Burrows ponds on creek water at an average temperature of 35 degrees. Total mortality for the month was 135. The fish consumed 1,211 pounds of 2.0mm Bio-Vita feed during January. The end of December the fish were 35.4 fish per pound so total weight gain for the month was 1,299 pounds This was good because the fish were held back on weight gain during the summer due to late July tagging. Fish health sampling was done by the Idaho Fish Health Center on January 26, all fish had food in their stomachs, we had low levels of Sanguinicola on the gills and low levels of Epitheiliocystis and Ambiphyra on the skin over all at this time fish were healthy.



Credit: KNFH

## Kooskia Chinook Brook Year 2015

There are 778,356 sac fry on station, we have had mortality this month of 3,861 and they are on chilled well water at 38 degrees. All eggs have hatched.

## Kooskia Adult Trap Operations:

Trap has been closed all month.

## Maintenance & Operations:

Jan 02: Cold temperature resulted in low water in the mixing chamber, 2 boards were put into the drain to compensate for the reduction of water.

Jan 05: Ice in the creek between the intake and hatchery broke loose and piled up against the weir by the trap.

Jan 16: Had bio-filter power failure alarm at 4:33 am. A search of the hatchery revealed no issue with the operation of the hatchery. The bio-filter is not in use therefore turned off, all the alarms are turned off except the power alarm to keep the circuit box powered.

Jan 19: Rear tires and rims arrived for the International Tractor.

Jan 20: Staff installed a drain pipe in the adult building.

Jan 25: Staff noticed alarm notifications on the alarm computer, upon

(Continued on page 9)

Ice in Clear Creek between the intake and hatchery broke loose and piled up against the weir by the trap.



Credit: KNFH

## Kooskia NFH - Hills

(Continued from page 8)

### Maintenance & Operations:

further investigation, it was determined that a breaker had tripped in the generator room, Gerry reset it and this solved the alarm issue, as well as the alarm issue on the 16th. There was never a safety issue for the fish as they were on creek water and the bio-filter is not in use.

Jan 26: The ballast was replaced in one of the light fixtures in the screen chamber.

Jan 27: Kent, Kenny & Art to Clearwater Casino for a seminar on climate change. Les Schwab installed rear tires on the International Tractor.

### Kooskia NFH Training and conferences:

Kent's evaluation was on the 5th.

Dworshak complex production meeting at DNFH on the 7th.

Monthly Region 1 production leaders meeting call in on January 11th.

Kent had a NPT production leaders meeting in Lapwai on the 26th.

Kent, Kenny & Art attended the department of fisheries seminar at the Clearwater Casino on the 27th.

Kent & Art attended the department of fisheries seminar at the Clearwater Casino on the 28th.



## Information and Education

### Dworshak - Jill Olson

**Facebook:** Reach - 920      Engagements - 187

**Website:** Page Views - 199; Unique Visits - 156 ; First Timers - 143 ; Returning Visitors - 13

**Visitors:** We had 19 registered visitors from five states.

**Tours:** There were no public tours scheduled in the month of January.

**Outreach:** Jayson Thompson met with 22 preschoolers and 13 adults at the Early Childhood Program in Weippe, ID. Jayson talked to the kids about the salmon life cycle and fish anatomy.

**Volunteer Hours:** Seven volunteers contributed 62 hours; the majority of the hours were spend in the spawning room.

### Kooskia - Kent Hills

**Visitors:** There were 125 visitors to the hatchery during this month; this figure is compiled by staff. Fishermen are beginning to stop by to check out the Steelhead trapping.

We can also be found on the web @ <http://www.fws.gov/dworshak/>



Like us on  and keep up with what is happening at the

## Dworshak Fisheries Complex

<https://www.facebook.com/pages/Dworshak-Fisheries-Complex/411264238917917#>



**Let's Go Outside!**

**Connecting People With Nature**

<http://www.fws.gov/letsgooutside/>

### Staff List

**Dworshak Fisheries Complex Management:**

Steve Rodgers, Dworshak Fisheries Complex Manager

Mark Drobish, Dworshak NFH Manager

Adam Izbicki (FWS) & Jeremy Sommer (NPT)  
Dworshak NFH Assistant Hatchery Managers

Mike Tuell, SRBA Coordinator

Dr. Marilyn "Guppy" Blair, Project Leader-Idaho Fish Health Center

Scott Koehler, Dworshak NFH Maintenance Supervisor

Vacant, Project Leader, Idaho Fishery Resource Office

Mike Faler, Aquatic Conservation Lead

Dr. William Conner, Fall Chinook Research Lead

Dr. Chris Peery, Fish Production M&E Lead

Kent Hills, Kooskia NFH Manager

Gerry Fogelman, Kooskia NFH Maintenance Supervisor

**Dworshak NFH Production:** Angela Feldmann, Tom Tighe, Rob Bohn, Wayne Hamilton, Mike Bisbee, Tui Moliga, Lou Ann Lasswell, Steve Coomer, Carter Lopez, Casey Mitchell, Zach Broncheau, Jayden Hudson, Steve Jeffers, Jayson Thompson

**Administration:** Heather Leopard- Administrative Officer, Brian Devin-Budget Technician,

**Dworshak NFH Maintenance:** Terry Weeks, Rick King, Rob Kellar, James Oatman, James Paddelty, Melissa Wright, Joe Livesay

**Idaho Fish Health Center:** Laura Sprague, Corie Samson, Sean Roon

**Idaho Fishery Resource Office:** Ray Jones, Aaron Garcia, Carrie Bretz, Frank Mullins, Jody Brostrom, Ken Bugler, John Hook

**Complex Information and Education:** Jill Olson

**Kooskia NFH:** Art Broncheau, Kenny Simpson,