



Dworshak Fisheries Complex

Monthly Activity Report



June 2013

U.S. Fish & Wildlife Service, Region 1

Volume 2, Issue 8

Special points of interest:

- Total Fish/Eggs on station at Dworshak: 5,567,010
- Total Fish/Eggs on station at Kooskia: 674,993
- Read Dworshak's Blog, [The Fish Ladder](#).
- There are 381,394 BY12 Coho salmon in raceways at Dworshak.

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Manager's Message....

Last month I highlighted the complexity of the fish water delivery system at DNFH, and how impressed I am with your operation of that system to meet fish production goals. This month I'd like to discuss NPDES (National Pollutant Discharge Elimination System), in hopes of simplifying this complicated issue in relation to Dworshak. NPDES "prohibits [discharges] of pollutants from any point source into the nation's waters except as allowed under an NPDES permit". It is administered by the Environmental Protection Agency (EPA). Based on a visit from EPA in 2008, Dworshak was cited for three violations of our NPDES permit:

Accidental discharge of untreated cleaning waste (which means an employee accident-

ly sent some solids from a raceway into the river). Routine discharge of untreated cleaning waste (which means intentional discharge of system III cleaning waste directly into the river... as designed).

Failure to submit NPDES discharge monitoring reports (DMR's) (which means we were not reporting as required).

The good news is you have addressed these violations. The system I & II standpipes have been labeled, so cleaning waste is dependably routed for treatment, addressing the first violation. The system III cleaning waste is now directed to the old bio-filter/reuse system, where settling of solids occurs, satisfying the second violation. Finally, DMR's are now routinely submitted in a timely fashion,

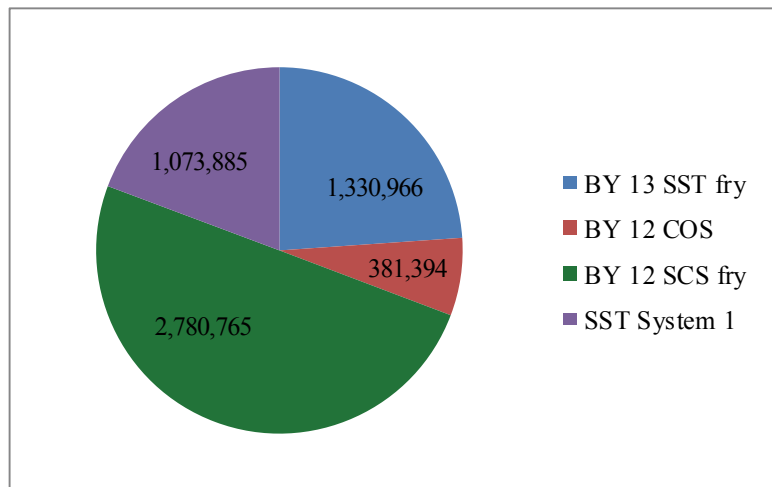


Acting Complex Manager Steve Rodgers

resolving the last violation. Not only have you addressed these violations, it's important to note the facility is well within limits for total suspended solids and phosphorous, the "measured" part of the permit. EPA also expects offline settling to be "90% efficient". That means for every 100 chunks of stuff that float into our offline settling pond, they'd like to see 90 of them settle to the bottom before the water leaves the pond. Although we're not meeting this
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Production Summary: Dworshak National Fish Hatchery

Figure 1. Total Production—Fish on Station (5/31/13).

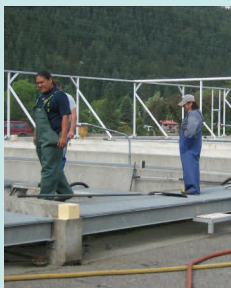


Newly ponded Chinook fry.

Credit: Angela Feldmann/USFWS

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

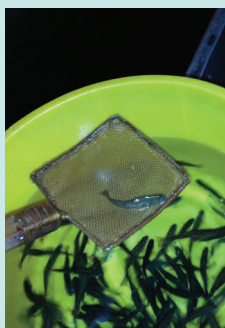




Staff prepare Burrows Ponds for SST from the Nursery.

Credit: Nate Wiese/USFWS

"We began moving SST fry out to System 1 in June!"



SST nursery sample counts.

Credit: Angela Feldmann/USFWS

Hatchery Headlines: Dworshak Spring Chinook Salmon (SCS)

Brood Year 2012 (BY12)

There were 2,780,765 SCS fry in twelve raceways at the end of June. By the end of the month fry averaged 438 fpp and 50 mm (1.97 inches). Total mortality for the month was 64,344 or 2.26%. Water temperature remained cool at 43°F and flows were increased to 500 gpm. The density index averaged 0.22. Fish health monitoring indicated possible Bacterial Gill Disease in most of the raceways. Fish were treated with salt on June 11 and 17 and then treated with a three day course of Chloramine T beginning on 18. Rations were cut back 50% beginning June 17 throughout the treatment period.

We have been finding a high number of unclipped Chinook smolts in the raceway headboxes this season. It is not uncommon to find a few trout /salmon fry in the headboxes. Some fish manage to make it through the intake pumps, through main aeration, and find their way into the raceways each year. We usually can net these fish out and the problem is solved. This year we have removed well over 100 Chinook smolts from the raceway headboxes. Fish health has sampled these fish as we are concerned they may pass disease to our Coho and Chinook. So far only some external parasites have been found on the fish. Fin clips have been taken to try to find the source of these fish.

Brood Year 2013 (BY13)

The fish ladder was opened June 17 to begin collecting broodstock for BY13. At the end of June there were about 300 fish on the counter. Holding Pond 9 will be sorted in July. Spawning will begin on August 13.

Hatchery Headlines: Dworshak Summer Steelhead (SST)

Brood Year 2013 (BY13)

There were approximately 1,330,966 fish on feed from Takes 5, 7, 9, &10 in the nursery at the end of the month. Fish averaged 158 fpp and 67mm (2.6 inches). Nursery temperature averaged 53.2°F for the month. Tank 316 from take 9 showed high mortality. Fish health found a high incidence of coagulated yolk in the fry and early signs of bacterial gill disease. Staff increased cleaning for this tank to twice a day and picked morts out twice daily. The tank was treated with salt on June 4.

We began moving fry out to System 1 in June. Takes 1-4 were moved into BPs 35-49 after making the trip through the marking trailer. At the end of the month there were 1,073,855 BY 13 SST in System 1 averaging 91 fpp and 80 mm (3.20 inches) total length. There were 1,177 (0.11%) mortalities this month. System I temperature averaged 53°F for the month.

Hatchery Headlines: Dworshak Coho Salmon (COS)

Brood Year 2011 (BY11)

There were 381,394 Coho in two raceways at the end of June. Fry averaged 257fpp and 57 mm (2.23 inches). Total monthly mortality was 919 or 1.18%. See page 4 for the full Nez Perce Fisheries Report.

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 Adult Trap Operations

This month we have trapped a total of 958 salmon. 101 were released above the weir at the upper bridge, 804 were transported to Dworshak Hatchery, 49 jacks were killed for tribal subsistence and we had a mortality of 4. The trap was closed on June 27.

Kooskia Chinook Brood Year 2012

There are 674,993 fry on station. The fish are currently averaging 162 fish per pound and are 2.73 inches in length. The fish were fed 1327 pounds of feed. The fish are in well water and it is being chilled to an average of 50 degrees F.



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

Credit:USFWS



Total Fish on Station: Dworshak, 6/30/2013

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SST	13	Nursery	1,330,966	8,439	158	2.6	67
COS	12	RWs 1-2	381,394	1,482	257	2.2	57
SCS	12	RWs 3-15	2,780,765	6,356	438	2.0	50
SST	13	System 1	1,073,885	11,772	91	3.2	80
BY 13 SST	13	SST on feed Tot/Avg	2,404,851	20,211	119	2.9	73
Total Fish/Fry on Station EOM			5,567,010	28,049			

Hatchery Headlines: Nez Perce Tribal Fisheries, Coho

Performance for June 2013, BY 12 Coho

The inventory of Brood year 2012 Coho on July 1st showed 381,394 Clearwater-stock are being reared in two raceways at Dworshak National Fish Hatchery (DNFH) as shown in Table 1 below.

Table 1. Brood year 2012 Coho inventory as of July 1, 2013.

Raceways	Number of fish	Weight (lbs.)	FPP (average)	Length (inch)	Comments
1	193423	732	264	2.21	
2	187971	750	250	2.25	
Totals	381394	1482	257	2.23	

MORTALITY:

The average percent mortality for Clearwater stock Coho during May was 0.24%.

Total monthly mortality was 919 collected by staff

GROWTH:

Average fish per pound (fpp) decreased from 425.05 to 257.38 fpp.

Average length increased from 1.89 inches to 2.23 inches

FEED:

Coho juveniles were fed Bio-Pro #0 and #1 started feed at 1.6% of their body weight.

A total of 454 pounds of Bio-Pro #0 and #1 feed was fed for the month. The total cost of feed for the month was \$951.28.

FISH HEALTH:

Monthly fish health samples were collected by Corrie Samson. *Fish Health Report 13-168*

REPORTS:

Intern recruitment packet submitted to HR.

MEETINGS/TRAINING:

Tui Moliga, William Coomer, and Casey Mitchell sat on the intern interview panel in Lapwai on 6/19-20

PERSONNEL:

6/24/13 - Tommy Williams, Ivory Williams, Tyler Terry, and Ryan Terry were hired on as Summer Interns for Dworshak NFH and Clearwater Coho Restoration Projects



Staff put the finishing touches on the SCS raceways

Credit: Angela Feldmann/USFWS

“NPT hired four summer interns to work for Dworshak and Clearwater Coho Restoration Project.”



Adult holding ponds at Dworshak

Credit: USFWS

Idaho Fish Health Center

Complex Hatcheries

Kooskia: Rick, Liz, Corie and Chelsea took additional samples from adult spring Chinook salmon collected from the trap at Kooskia National Fish Hatchery on three dates in June for the IHNv study project to determine the numbers of returning adults that have IHNv in the river and if the numbers of positive adults increases during holding until the time of spawning. Also the genotype of this virus will be determined for epidemiological tracking.

Guppy visited Kooskia for monthly monitoring on 6/21. A few fish with whirling behavior were observed and sampled from one pond. However, no pathogens were detected.

Dworshak: Rick continued to monitor BY12 juvenile spring Chinook salmon mortality in the A bank raceways during June. No specific pathogen has been detected, but gills from moribund samples collected continued to be severely hyperplastic. Histological results suggested that environmental water quality issues and stress are causing the poor gill condition resulting in respiratory distress. Salt treatments were administered followed by Chloramine-T treatments using an INAD. With the adjustment in feeding practices and treatments, daily mortality has been reduced and gill condition is improving.

Spring Chinook smolts found in the headboxes/raceways of Chinook raceways were examined as captured on 6/18, 6/19, and 6/26. On request, fin clips were also sampled for genetic analysis to provide information on the source of these fish.

Corie sampled steelhead from Tank 316 multiple times. The majority of the fish were suffering from coagulated yolk. Some of the fish had open lesions of Coldwater Disease (*Flavobacterium psychrophilum*) with the coagulated yolk showing through. Bacteria were found in both the steelhead with lesions as well as those without lesions. Moderate amounts of bacteria were observed around the gills. It was recommended to treat the tank with Chloramine-T.

Nez Perce Tribe: Corie, Chelsea, and Liz examined Pacific Lamprey that had died the day after being hauled from Bonneville Dam. *Aeromonas salmonicida* was found to be an issue.

Rick examined SCS at NPTH on 6/7 due to an overnight spike in mortality. High levels of Hexamita were seen in the intestines but no direct cause of the mortality was determined.

Guppy provided an extra-label veterinary prescription to the Nez Perce Tribe lamprey program for oxytetracycline injections during summer lamprey collections. She also provided another extra-label veterinary prescription to the Nez Perce Tribal Hatchery for erythromycin injections of SCS female adults.

Bacteriology: *Aeromonas salmonicida* was found in one of 17 Lamprey from the NPTH. Yellow colonies on TYES media from Dworshak nursery STT fry were presumptive positive for *Flavobacterium psychrophilum* and Coldwater Disease.

Virology: Corie ran a total of 135 samples representing 260 fish from Dworshak NFH, Kooskia NFH, Washington Department of Fish and Wildlife, Hagerman National Fish Hatchery, Kootenai Tribe of Idaho and the Wild Fish Health Survey. Corie ran 71 blind passes representing 149 fish from Kootenai Tribe of Idaho, Nez Perce Tribal Hatchery, Kootenai Tribe of Idaho, Washington Department of Fish and Wildlife and the Wild Fish Health Survey.

PCR: Ninety adult steelhead trout from River Take 5 - 7 at Dworshak NFH were screened for Infectious Hemorrhagic Necrosis virus (IHNv) by Rick using protocols for a real time reverse transcriptase PCR developed by the USGS Western Fisheries Science Center. Two low positive adults were detected from take 5.

A total of seventy juvenile and adult steelhead trout were screened for Infectious Salmon Anemia virus (ISAv) by Rick from the Abernathy Technology Center and Winthrop National Fish Hatchery for the Pacific Northwest ISAv Surveillance Program. All samples were negative.

Laura and Chelsea extracted and confirmed positive two samples for *Flavobacterium psychrophilum* from Dworshak fry in the nursery.

Wild Fish Survey: Laura and Chelsea helped LCRFHC with the McNary National Wildlife Refuge fish health survey for three days at the beginning of the month. We assayed 1 case number from the Snake River including 15 carp, 10 LMB, 7 SMB, and 12 LSS.

Laura received a letter from the Governor of the State of Montana, Steve Walsh, for "her great attitude and willingness to go the extra mile" in helping with the pathogen surveillance of bull trout as a part of the WFHS program!!! Congratulations Laura!

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Information and Education Corner

Dworshak

June Stats: Tours-2, 10 people; Register- 400 visitors from 10 states; Volunteers- 2 Hours-4; Website visitors- 372; Blog Visitors- 826 from 10 countries!

On Site:

[The Fish Ladder: Notes from Dworshak Fisheries Complex](#) had four posts this month. More than ever, your contributions are needed and comments are always welcome!

The Dworshak Fisheries Complex Facebook page finally reached the 100 like milestone. I have been able to increase our posts to at least two daily. If you visit facebook, take a minute to look at the page: [Dworshak Fisheries Complex](#), and like us!



Worked on special report to distribute to partners and stakeholders

Contributed an article and activity for a Junior River Explorer booklet being developed by BLM

Volunteers were contacted for tours

Updated Dworshak web page

Kooskia

There were 315 visitors to the hatchery during this month, this figure is compiled by staff, the weather is good, salmon are returning and the hatchery is a good resting spot for travelers.

Art Broncheau participated in the Kooskia Fish Fair at the Kooskia Park; Art handled inquiries regarding Kooskia National Fish Hatchery as well as the Nez Perce Tribe.

Two students from the intern program with the Nez Perce Tribe started work at Kooskia National Fish Hatchery on June 26, they will be assisting staff in fish culture as well as many other hatchery tasks.



System 1 degassers.

Credit: Nate Wiese/USFWS

“Kooskia is replacing the pump in Well #5.”



We had some wet weather in June!

Credit: Angela Feldmann/USFWS



Two of the YCN summer interns sorting fish



Display at the Kooskia Fish Fair

Maintenance & Operations

Dworshak

June maintenance activities included:

Replace batteries and wiper motor Cart #8
 Replaced gas strut and repaired O2 fitting on fish truck
 Replaced charger on cart #1
 Replaced pneumatic cylinders on holding pond gates
 Repair camshaft gear and fuel pump JD lawn tractor
 Install doorknob in managers office
 Repair parking brake on cart #10
 Replace filters Lab Air handlers
 Replace Man Lift starter solenoid

Main pump PMs
 Dodge Dump Bed PMs
 Sys I 150 HP pump removed for repair
 Lab roof replacement
 Installed containment boom in settling point pond
 Repairing main building HVAC System
 Core drill 14" hole in Sys II bio filter
 Ordered new 500 KW generator
 Installed flow meters in incubation
 Degassing tower installation completed on main aeration

Kooskia

June 12: Hatchery staff rebuilt the crowder for the trap.

June 18: Hatchery staff rebuilt the crowder for the trap.

June 25: Had a low water well alarm at 8:25 PM handled by Gerry, it was determined that the 15 horsepower pump in Well #5 failed. Gerry adjusted water flows from Well #1 and started using the 2 horsepower pump in Well # 5. Our pond cleaning schedule was modified due to the reduction of well water.

June 26: Two students from the intern program with the Nez Perce Tribe started work at Kooskia National Fish Hatchery, they will be assisting staff in fish culture as well as many other hatchery tasks.

June 27: Chuck with Uhlenkott Pump Service arrived to check the pump in Well #5, it was determined the pump had indeed failed and a new pump and motor were ordered.

Manager's Message....

(Continued from page 1)

standard yet, we have been trending toward compliance over time. The key may be to concentrate solids before they enter our off-line settling pond, since every time we've concentrated solids prior to entry we've met the 90% criteria.

On top of addressing the violations and improving "cleaning efficiency", you've all enjoyed the pleasure of "chasing solids" and removing them, across the entire facility. And you've completed a vast array of facility and SOP changes that have shown good faith in trying to improve our NPDES performance. The mountain of plastic media piled up on the grounds is evidence to that. As is the army of employees I see cleaning ponds every day to ensure our effluent is as clean as possible, within the constraints of a facility built pre-NPDES.

As we work together with the Corps and others to "rehab" our facility for the future, I want to thank each of you all for your hard work in addressing these violations and going the extra mile to minimize solids in our effluent. This hatchery was built prior to NPDES so it wasn't designed to meet the requirements of our permit. However, your hard work, coupled with innovative facility modifications and retrofitting, has helped DNFH dramatically improve the quality of the water leaving our facility. The Service, NPT, EPA and the Corps truly appreciate your efforts...and so do I.



Gill filaments from a fish with heavy gas bubble trauma

Credit: ID Fish Health

“The IDFHC is developing an Intro to Fish Health class for Dworshak employees.”



Chinook displaying signs of Bacterial Kidney Disease

Credit: ID Fish Health Center

Meetings....Training....Travel

Dworshak

On June 3rd, Lieutenant General Thomas Bostick (Chief of Engineers), Brigadier General Tony Funkhouser (Northwestern Division Commander), Karen Durham-Aguilera (Senior Executive Service, USACE Headquarters), David Ponganis (Senior Executive Service, Northwestern Division), Major Hall (Aide-de-Camp) and Captain Tinnin (Aide-de-Camp) visited the facility for a tour. From the Walla Walla District, Lieutenant Colonel Kelly (Walla Walla District Commander), Alan Feistner (Deputy District Engineer for Project Management), Major Baker (Deputy Commander), Brian Miller (Chief of Engineering and Construction), Ann Setter (Fish Biologist) and Greg Parker (Dworshak Operations Project Manager). Mike Hanna, Regional Director for Senator James Risch also toured with the group in support of the hatchery.

On June 11th, Ann Setter (Fish Biologist) and Tyler Moore (Office of Counsel) visited the facility to discuss cost allocation status, tour the facility, review projects (eg. Installation of the vacuum degassers on the south half of the main aeration, nursery painting project, etc.) and conquer the “Jack Burger” at the Woodlot for lunch!

On June 20th, Jessie Steinhart (Accountant), Rhonda Turnbow (Accountant), Vicki Challis (Contract Specialist) and Patrick Edward (Internal Review) all from the Walla Walla District, U.S. Army Corps of Engineers visited the hatchery to better understand the role of the hatchery and to review purchasing and identify changes in assets for inclusion in the facilities asset inventory.

Steve Bradbury traveled to Portland the week of June 24th and attended the “FAPO-Basic Financial Assistance Course” for all of the work he does on Grants and Agreements.

On June 26th, Nate Wiese traveled to the Lolo Creek Weir along with staff from the Nez Perce Tribe to review and provide insight to design and operations of this system. This work is linked to the development of a localized steelhead broodstock in the South Fork of the Clearwater River.

Administrative Activities

Safety

The Dworshak safety committee met on June 19 and did a walk through of the facility listing safety concerns.

Personnel Actions

Rick Allain announced his retirement active 9/30/13

Steve Rodgers’ IPA was effective 6/1/13

Aaron Bachelier started as temp BioAid with the FRO 6/17/13

Idaho Fish Health Center

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Other: Laura attended the ID Chapter AFS ExCom conference call.

Laura and Rick attended the AFS annual meeting/Western Fish Disease Workshop in Port Townsend, WA during the week of 6/17.

Laura completed NCTC Course FIS2c01 through DOILearn: Principles and Techniques of Electrofishing as per USFWS policy to remain a Team Leader for Electrofishing activities, FWS employees must complete the class every five years.

Laura and Guppy have been working with Matthew Patterson at NCTC on helping to develop an “Intro to Fish Health Class” through NCTC here in the PNW. In addition they are looking into producing videos of normal fish behavior and abnormal (flashing, jumping, etc.) fish behavior. If anyone has cool footage to contribute, please let Laura know.

Guppy attended all weekly Dworshak Complex management team meetings every Monday at 12:00 pm. She also met with Steve Rodgers and Mark Drobish on 6/4 to discuss the COE budget.

Guppy participated on fish health policy/Title 50 conference calls consisting of all FWS FHCs to discuss updates to the language concerning the importation of salmonids into the United States on 6/5, 6/6, and 6/24. She received the assignment of writing the draft language for ISAV testing.

The older portion of the Idaho FHC building received a new roof during the last 2 weeks of June. The last electrical inspections are to be completed in July. All staff completed Hazard Awareness training prior to the commencement of roof construction. Guppy attended preconstruction meeting with contractors on 6/18.

Guppy contributed information and photos to be used in the new Region 1 Fish Health Center website.

With help from Laura and Corie, Guppy submitted the FY14 budget and Statement of Work for the Idaho FHC to the Lower Snake River Compensation Plan Office by the requested deadline of June 7.

All available staff attended biweekly Region 1 FHC conference calls hosted by Andy Goodwin on 6/10 and 6/24. Guppy attended Region 1 Project Leader call on 6/10 and FBMS call on 6/12.

All staff participated in hearing tests on 6/12.

Guppy attended webinar on new Canadian import regulations for aquatic animals on 6/20.

APHIS veterinarian Lyn Langford visited the Idaho FHC on 6/27 for APHIS laboratory approval inspection. The lab passed the inspection.

Staff Service Anniversaries and Birthdays

June Birthdays

Nate Wiese

Rick King

Jack Christiansen

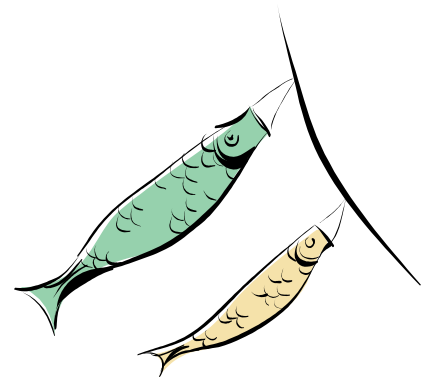
Randy Bowen

Adam Izbicki

Years of Service

Ray Jones—31 years

Frank Mullins—15 years



Staff List

Complex Management

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

Dworshak Production Staff

Angela Feldmann, Jill Olson, Rick Allain,
Rob Bohn, Wayne Hamilton, Tom Tighe

Nez Perce Tribe Production Program

Mike Bisbee, Tuianna Moliga, Lou Ann Lasswell, Steve Coomer, Jeremy Sommer, Ira Wilson, Carter Lopez, Casey Mitchell, Kim Jefferson

Administration

Penny Hasenoehrl, Steve Bradbury

Maintenance

Adam Izbicki, Terry Weeks, Rick King, Rob Kellar, James Oatman, Scott Koehler, Melissa Billups

Idaho Fish Health Center

Dr. Marilyn Blair, Liz Steiner, Laura Sprague, Corie Samson, Rick Cordes

Idaho Fishery Resource Office

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

Kooskia National Fish Hatchery

Kent Hills, Art Broncheau, Kenny Simpson, Gerry Fogelman



Dworshak Fisheries Complex staff.

Credit: Mark Drobish/USFWS



Parting Shot



Adult Chinook brought over from the trap at Kooskia

Credit: Angela Feldmann/USFWS