Dworshak Fisheries Complex

Monthly Activity Report

U.S. Fish & Wildlife Service, Region 1

Volume 3, Issue 11

October 2014

Highlights:

- **Total Fish on station at Dworshak: 9,040,225**
- **Total Fish on station at Kooskia: 662,323**

Inside this issue:

Manager's Message	1
Hatchery Headlines	2-3
Total Fish on Station	2
I & E Corner	3
Nez Perce Coho	4
Fish Health Report	5,7
Maintenance Activities	6
Aquatic Conservation	8
Hatchery M&E	8-9
Administrative Activities	10
Staff List	10

Manager's Message

Steve Rodgers, Complex Manager

This month I thought I'd briefly review a new budgeting process we're engaged in for the first time beginning in FY2015. That process is called "cost allocation", and it is intended to ensure operation and maintenance (O&M) costs at Dworshak National Fish Hatchery (DNFH) are fairly distributed between the Army Corps of Engineers (ACOE) and the Lower Snake River Compensation Plan (LSRCP); which are our two primary funding entities. This process of allocating costs was negotiated between the Fish and Wildlife Service (FWS), Nez Perce Tribe (NPT), and ACOE.

Under cost allocation, all O&M costs at DNFH are categorized as either "separable" or "shared". Cost allocation is specific to the hatchery budget, and does not apply to other budgets within the Complex.

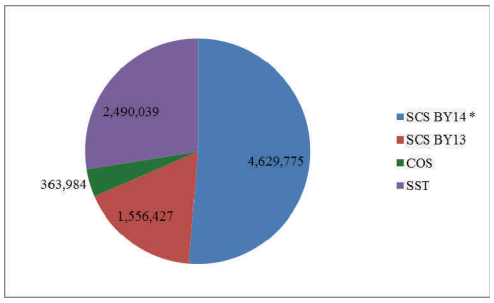
Separable costs are expenses that are clearly the responsibility of only one of the two funding entities. An example of a separable cost is fish food for spring Chinook, which is obviously and obligation of LSRCP. A second example would be tagging and marking costs for the steelhead program, which would be the ACOE's responsibility. All costs that are classified as separate are paid exclusively by the program responsible for them.

Shared costs are those expenses that are difficult to assign to only one of the funding entities. A good example of a shared cost is labor. All of you spend time working on behalf of all the fish at DNFH, and breaking it down into steelhead work and spring Chinook work, then tracking it, would be very difficult. The group decided that shared costs will be split between the two programs as fairly as possible.

How are shared costs split between the COE and LSRCP? It was decided that outside pond usage would determine the shared cost ratio. There are 114 outside ponds (Burrows and raceways) at DNFH. If the ACOE uses 84 of those ponds for steelhead, which represents 74% of the total ponds available, the ACOE will pay 74% of O&M shared costs. Likewise, LSRCP will pay 26% of the shared costs for using 30 raceways for spring Chinook production. Any unused outside rearing ponds are the responsibility of the COE under cost allocation.

The NPT Coho program is handled differently. The Tribe pays a flat fee of $1,000/pond/year for each pond it uses for coho production. That fee is applied to the COE budget as a credit, reducing the COE's overall budget for DNFH O&M each year. The group was focused on fair cost sharing between the COE and LSRCP when cost allocation was developed, and for a variety of reasons this fee-credit system made sense for the relatively small footprint of the coho program.

That's it…the mystery of cost allocation revealed. I hope this has helped you understand the basics of this new budgeting system. The goal was to make sure both programs were paying their fair share. I think cost allocation does that relatively well, although we all know it's not perfect. Feel free to drop by my office if you have any questions or want to understand this further; and make sure to enjoy this beautiful day!



Credit: USFWS

Fish Biologist Jeremy Sommer and Idaho Youth Challenge Academy Cadets managing shade cloth over B Bank of the Spring Chinook rearing units

Credit: USFWS

Shade cloth installed over B Bank of the Spring Chinook rearing units.

Credit: USFWS

Spring Chinook Salmon Hatchery Density Study

Hatchery Headlines: *Dworshak Spring Chinook Salmon (SCS)*

Dworshak Stock

Brood Year 2013 (BY13)

At the end of October there were 1,556,427 fish in 30 RWs averaging 43 fpp (4.3 inches). Mortality was 0.22% (2,256). There are three distinct ponding groups: Low-density, high-density, and flow study. Each group can be identified through parental based tagging (PBT). Raceway flow averaged 600 gpm and water temperature was 47 degrees.

Brood Year 2014 (BY14)

Dworshak completed BY14 SCS spawning in 4 takes where 794 females (or 3,112,480 green eggs) were spawned for Dworshak and 545 females (or 1,517,295 green eggs) were spawned for Kooskia. Eggs are being incubated on secondary reservoir water chilled to 39 degrees. Formalin treatments are occurring twice weekly. Eggs will eye in early November.

Hatchery Headlines: *Dworshak Summer Steelhead (SST)*

Brood Year 2014

There were 2,508,789 SST in the Burrow's Ponds at the end of September averaging 28 fpp (4.7 inches). There were 25,239 mortalities (1.1%). IHNV broke in BPs 20-34. Fish were split from system 1 into System 2 once the fish reached a minimum of 60 fpp. System 1 is on primary reservoir water and system 2 is on river water.

Brood Year 2015

The ladder was opened October 13, 2014. There were a total of 390 adults (128 1-Ocean, and 262 2/3 Ocean) inventoried for the month.

Hatchery Headlines: *Dworshak Coho Salmon (COS)*

Brood Year 2013

At the end of October there were 363,984 Coho in 5 Burrow's ponds. Coho averaged 46 fpp (3.97"). Mortality was 0.04% (132 individuals). The full Coho report can be seen on page 4.

Table 1. Total Production—Fish on Station (10/31/14).

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SCS*	14	incubation	4,629,775				
COS	13	BP 74-82	1,556,427	36,153	43	4.3	108
SCS	13	RWs 1-30	363,984	7,971	46	4.0	101
SST	14	System 1-2	2,490,039	146,469	17	5.6	142
Total Fish/Fry on Station			**9,040,225**	**190,593**			

* SCS BY14 includes DNFH and KNFH egg production

Hatchery Headlines: *Kooskia*

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 Chinook Brood Year 2013

There are 662,323 Chinook smolts on station at 29.2 fish per pound; they are 4.85 inches (123 mm). These fish were fed 3,550 pounds of feed and the feed conversion was 0.89. Total mortality for October was 3,637. The fish were on well water at an average of 50 degrees, on Oct 23 the water was switched to creek and was an average temperature of 49 degrees. The day we transitioned from well water to creek water we had some blockage in the inflow stand pipes during the night causing the dissolved oxygen levels to drop in Burrows Pond 6 giving us the increased mortality for the month. Blockages were removed and dissolved oxygen levels were monitored hourly over the next several days to assure there were no further problems.

Kooskia Chinook Brood Year 2014

Egg shocking and enumeration will start the first of November. For October, eggs have been monitored for fungus and daily TU's.

Kooskia Adult Trap Operations

Trap opened on 10/08 to begin trapping Coho. The trap was closed on Oct 13 because of to many Coho in the trap. The trap was opened for two hours on 10/19th and again on 10/20 for two hours.

Total Trapping: 242 females, 311 males & 9 jacks released into Clear Creek

675 females, 675 males & 2 jacks to Dworshak Hatchery

141 females, 279 males & 9 jacks out planted

118 females, 219 males & 13 jacks to subsistence

5 killed in trapping operations for a total of 2,698 trapped.

Information and Education Corner

Tours– We had 120 visitors from 14 states, Italy and Germany; Website stats: 270 Page Loads, 218 Unique Visits, 192 First Time visitors; 26 Returning visitors; Facebook Reach 139,787

Dworshak-

On-site: Oct. 2 , Idaho Youth Challenge Academy Cadets toured the facility prior to their work activities for the day.

Kooskia-

On-site: There were 257 visitors to the hatchery during this month; this figure is compiled by staff. The abundance of Coho returning drew a lot of visitors and fisherman to the hatchery.

Hatchery Headlines: Nez Perce Tribal Fisheries At Dworshak

Performance October 2014

Credit: Jill Olson/USFWS

Rick Cordes taking gill, slime, and fin samples for the 2014 non-lethal Steelhead River Fresh IHNV study.

Credit: Jill Olson/USFWS

Rick also happens to be the 2014 Chili Champion for this year's Combined Federal Campaign!

Good job Rick!!!

Credit: Jill Olson/USFWS

Table 1. Brood year 2013 Coho inventory as of November 1, 2014.

	Number of Fish	Weight (lbs.)	FPP (average)	Length (inch)
BP 74	80,176	1,695	47.31	3.92
BP 76	79,651	1,593	50.00	3.85
BP 78	80,057	1,662	48.18	3.90
BP 80	51,798	1,164	44.51	4.00
BP 82	72,302	1,858	38.92	4.19
TOTALS	**363,984**	**7,971**	**45.78**	**3.97**

MORTALITY:

- The average percent mortality for Clearwater stock Coho for the month was 0.04%.
- Total monthly mortality after inventory was 132 collected by staff.

GROWTH:

DNFH

- Average fish per pound (fpp) decreased from 74.9 fpp to 47.50 fpp.
- Average length increased from 3.37 inches to3.92 inches.

KNFH

- Average fpp decreased from 46.7 fpp to 38.92 fpp.
- Average length increased from 3.94 inches to 4.19 inches.
- Overall average fpp decreased from 69.22 fpp to 45.78 fpp.
- Overall average length increased from 3.48 inches to 3.97 inches.

FEED:

- A total of 1703 pounds Bio-Oregon's BioPro starter 1.2mm feed was fed for the month.

FISH HEALTH:

- Monthly fish health samples were collected by Corrie Samson. See fish health report 15-023

REPORTS: N/A

MEETINGS/TRAINING: Coho Crew attended mandatory meeting on merit increases.

Idaho Fish Health Center—October 2014

Bacteriology: Corie and Rick confirmed the suspect Aeromonas salmonicida culture collected from moribund adult fall Chinook salmon from the Nez Perce Tribal Hatchery by API and IFAT.

Virology: Corie, Rick and Matt ran a total of 429 samples representing 862 fish from Dworshak NFH, Nez Perce Tribal Hatchery, Nez Perce Tribe Coho program and the Wild Fish Health Survey. Corie ran 15 blind passes representing 73 fish from Nez Perce Tribal Hatchery and the Wild Fish Health Survey.

PCR: Corie completed mycoplasma testing on her virology cell lines. Rick ran one conventional PCR for Myxobolus cerebralis from one suspect wild fish sample that had myxospores of similar morphology. Result was negative. Rick used the Rt-rtPCR to screen for IHNv from one of the adult FCS mortality cases from the Nez Perce Tribal Hatchery that had necrotic kidney tissue.

ELISA: Guppy analyzed 332 samples by the ELISA test for Bacterial Kidney Disease (Renibacterium salmoninarum) on 10/8-10/9. This run primarily included samples from the Wild Fish Health Survey Program, but also included samples from Hagerman NFH RBT prerelease and the HGM RAS study.

Parasitology: Rick screened 535 wild fish samples collected in FY14 for Myxobolus cerebralis using the pepsin digest method.

Histology: Guppy processed 118 white sturgeon larva for the WDFW to test for the White Sturgeon Iridovirus.

FWS Hatcheries

Kooskia: Guppy visited Kooskia for routine exam on 10/15. One Ichthyophthirius parasite and low levels of the parasite Ambiphyra were seen. Kidney samples were taken for monitoring for Bacterial Kidney Disease by the ELISA test.

Hagerman: Corie traveled to Hagerman October 17. While there she did monthly monitoring on the steelhead in the raceways. She also rechecked the steelhead for Ichthyophthirius (Ich) levels. Ich was only observed in the Middle deck. Flashing had decreased considerably in the bottom and middle decks. Light flashing could still be observed in the top deck. Moribund fish were examined that were exhibiting pop-eye, lesions and some necrotic swim bladders. Bacteriology has shown some A. hydrophila. F. psychrophilum is also suspected and is pending confirmation.

Monthly monitoring was also conducted on the RAS groups and RAS controls.

Dworshak:

Corie and Rick attended Coho pre-spawning meeting on 10/2.

Rick, Corie, and Guppy attended Dworkshak steelhead pre-spawning meeting on 10/16.

Rick, Corie, Jill and Matt Stinson took nonlethal samples from steelhead adults fresh from the river on 10/15 and 10/29 for IHNV study.

Guppy examined fish from burrows pond 22 steelhead on 10/8. Low levels of parasites Gyrodactylus, Trichodina and of gas bubble disease were seen.

Rick conducted the monthly monitoring for the spring Chinook salmon in the low and high density raceways for the start of the second year of the density study.

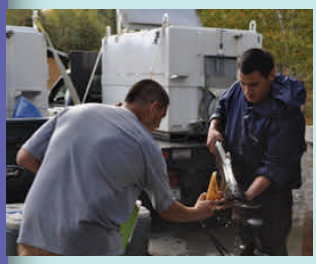
Laura performed monthly monitoring on system 1 on Oct 8.

NEZ PERCE TRIBE:

Monthly monitoring was conducted on the Coho. The fish looked healthy. Pale livers were observed in all five fish examined. This was observed last year at this time as well with no obvious adverse effects.

Credit: Jill Olson/USFWS

Dworshak Fish Ladder is opened up and Steelhead, Coho, and Fall Chinook Salmon coming flying in!



Credit: NPT-Kooskia

Removing coho from Koosia trap

Credit: NPT-Kooskia

Maintenance Activities October 2014

Dworshak *UNDER CONSTRUCTION AT END OF REPORTING TME !!!*

Kooskia

Oct 01: Staff began replacing the gate valve at the intake sediment chamber.

Oct 02: Parking bumpers and stripes were painted on the parking lot completing the paving project.

Oct 07: Gerry repaired the stationary crowder in the trap.

Oct 08: Staff completed repair of the crowder in the trap. Completed the installation of the gate valve in the sediment pond at the intake. The trap was opened.

Oct 09: 142 Coho were taken from the trap; all of these fish were released into Clear Creek for natural spawning.

Oct 10: 227 Coho were taken from the trap, some were released into Clear Creek for natural spawning, the remaining were taken to Dworshak Hatchery for spawning.

Oct 11: 84 Coho were taken from the trap, 25 were released into Clear Creek for natural spawning, 59 were taken to Dworshak for spawning.

Oct 12: 120 Coho were taken from the trap and transported to Dworshak for spawning.

Oct 13: Closed the trap due to too many Coho in the trap. Staff removed the pond covers. Gerry got the incubation system running. 129 Coho were removed from the trap and transported to Dworshak Hatchery for spawning.

Oct 14: 92 female & 92 male Coho were taken from the trap and transported to Dworshak Hatchery for spawning.

Oct 15: Kent assisted Idaho Fish and Game in out planting Chinook eggs at McComas Meadows. Kenny analyzed water quality of the bio-filter.Kenny and Art replaced the wire on the trap Crowder.

Oct 16: 60 female and 61 male Coho were taken from the trap and transported to Dworshak Hatchery for spawning.

Oct 17: 50 female and 50 male Coho were taken from the trap and transported to Dworshak Hatchery for spawning.

Oct 18: 25 female and 35 male Coho were taken from the trap and released into Clear Creek above the weir.

Oct 19: 45 female, 74 male and 2 jack Coho were taken from the trap and released into Clear Creek above the weir. The trap was opened for two hours to replenish the fish in the trap. The mesh screen at the trap entrance was repaired.

Oct 20: The trap was opened. 42 female and 42 male Coho were removed from the trap and transported to Dworshak Hatchery for spawning.

Idaho Fish Health Center (continued from page 5)

Corie, Guppy and Matt Stinson took fish health samples from spawning Coho salmon on 10/21 and 10/28.

Rick collected fish health samples from spawning fall Chinook salmon on 10/21 and 10/28 at the Nez Perce Tribal Hatchery. Rick did monthly monitoring on spring Chinook salmon in the S-channels at the Nez Perce Tribal Hatchery.

Laura investigated a large pre-spawn mortality of fall Chinook salmon at NPTH early in the month. Hatchery staff picked up adults from Lower Granite Dam twice a week to fill broodstock demands. Over the first weekend of October there were 23 mortalities at the hatchery, with 22 of them being females. Many of the fish exhibited fungus on gills and external lesions. Some of the lesions looked to be mechanical in nature, while some did not. Hatchery personnel claimed fish from Lower Granite had bright red lesions at the time they were picked up for hauling. However, other hatcheries on a similar program were not seeing lesions at pick up or experiencing mortality. It was discussed that the possibility of declining fish at time of hauling that were not up to a certain standard should be looked into or standardized. 4 fresh adult mortalities were examined for bacterial infection through kidney samples, as external lesions were covered with fungus. Aeromonas salmonicida was isolated and confirmed.

Wild Fish Survey

Bull trout samples were received weekly during the month of October and processed.

Other

All staff attended a national fish health center conference call hosted by Joel Bader, National Aquatic Animal Health Coordinator on 10/6 and a Region 1 fish health center call hosted by Andy Goodwin on 10/20.

Corie attended a Region 1 project leader conference call on 10/22.

Corie and Guppy participated on a lamprey conference call on 10/7 regarding a request to contribute to a publication of pathogen findings in lamprey throughout the Northwest.

All staff submitted comments on document involving the future direction of the Wild Fish Health Survey Program.

Guppy attended the Snake River SCS Coordination meeting in Lewiston on 10/23. She also attended webinars covering diversity and data management plans on 10/27.

FY14 performance appraisals were completed for all staff, and Guppy submitted FY15 targets in ECOS as requested.

Laura was out most of the month due to surgery.

Kooskia Maintenance and Operations (continued from page 6)

Oct 21: Art and Kent went to Dworshak Hatchery to assist in spawning Coho, 317 females were spawned.

Oct 22: Art to Dworshak Hatchery to assist Tribal Fisheries Coho Division in out planting excess Coho. Switched the burrows ponds from well water to Creek water, turned off extra well pumps and the main chiller.

Oct 23: Had a loss of 3,400 fish in pond 6, after switching to creek water, several of the water ports in pond 6 became plugged with line sediment slowing the flow to the pond. Coho were removed from the trap as follows: 10 females to Dworshak Hatchery, 2 males to Dworshak Hatchery, 127 females out planted, 6 jacks out planted, 142 males out planted, 118 females for subsistence, 13 jacks subsistence and 219 males subsistence for a total of 637 Coho.

Credit: Jill Olson/USFWS

This shy little critter was found clinging tight to the window screen outside the biologist's office . What a fitting visitor for the month of October! I guess this is the wildlife part of the job!

OKAY.. Back to the fish!

Credit: NPT-Kooskia

Kent Hills and Todd Jones of Red Zone using new egg planting apparatus

Aquatic Conservation

Mike Faler—Ahsahka, Idaho

- Met with Kalispell Tribe fisheries staff and the Calispell Lake Duck Hunting Club to visit, review, and discuss fish passage plans at the Duck Club's water control structure. The streams feeding Calispell Lake are designated bull trout critical habitat, and the club's water control structure is a complete block to upstream fish passage. We are exploring opportunities to partner with the Tribe and Duck Club to remedy the problem.
- Deployed 2 hobo temperature loggers on Myrtle Creek for the aquatic climate change monitoring program on National Wildlife Refuges.
- Continued work on our bull trout snorkeling project on Myrtle Creek. We completed 2 daytime samples, and 2 nighttime samples this month; 9 bull trout were observed.

Jody Brostrom –Salmon, Idaho

- I attended the Pacific Lamprey Occupancy Workshop at Tualatin National Wildlife Refuge at the end of October. Hosted by the Columbia River Fisheries Office, and attended by many state, tribal and FWS, the workshop discussed how to set up sampling for Pacific Lamprey, protocols, probability of capture and how best to sample large drainages. High water from several days of rain kept us from real-time sampling in the field, but case studies were presented. This information will be used to work with our Idaho, Oregon and Washington partners to sample for Pacific Lamprey in the Snake, Clearwater and Salmon drainages.

Hatchery Monitoring and Evaluation

We completed the first annual progress report for the spring Chinook salmon rearing density evaluation project here at Dworshak NFH. Production, fish health, and smolt performance data for BY12 were summarized and analyzed statisically:

1). Pre-release testing of PBT assignments to the various replicate raceways in each treatment indicated high accuracy in making those assignments, providing a high level of confidence in being able to assign returning adults to their respective replicate rearing units in each treatment.

2). The preliminary cost estimate of rearing an additional 20,000 smolts per rearing unit, for the purposes of conducting a cost/benefit analysis of adult returns, was estimated at $2,160.00.

3). The preliminary growth, mortality, fish health, and smolt performance information for BY2012 spring Chinook salmon indicates no meaningful differences between the Normal and High Density treatments.

Anyone interested in the report can contact the Idaho FRO or you can download a PDF file from the Idaho FRO website.

(continued on page 9)

Hatchery Monitoring and Evaluation (continued from page 8)

We also completed collecting growth information for BY13 and found no significant differences in length, weight or condition factors between the High and Normal Density groups. These fish will complete rearing in March 2015 and will be released in late March or early April.

Questions regarding the Density Evaluation study for spring Chinook salmon should be directed to Chris Peery or Ray Jones.

Meetings....Training....Travel

Kooskia:

Training and conferences:

Oct 13: Todd Jones of Red Zone arrived for instruction of the new egg planting apparatus. Kent had a meeting at Lapwai.

Oct 23: Kent went to a meeting with the Northwest Fish Culture Committee at Pendleton, Oregon.

Oct 30: Kent to a meeting in Lewiston.

Oct 31: Gerry and Art attended a meeting with Dave Johnson at Dworshak Hatchery.

Kooskia Maintenance and Operations (continued from page 7)

Oct 24: Gerry made a new trap grate for the trap entrance. 78 female and 74 male Coho were removed from the trap and transported to Dworshak Hatchery for spawning.

Oct 25: 39 female and 45 male Coho were removed from the trap and transported to Dworshak Hatchery for spawning.

Oct 26: 33 female and 36 male Coho were transported to Dworshak Hatchery for spawning.

Oct 27: Replaced 2 alarm floats in the mixing chamber and 2 alarm floats in the nursery. 90 female and 89 male Coho were removed from the trap and transported to Dworshak Hatchery for spawning.

Oct 28: Art and Kent to Dworshak Hatchery to assist in spawning Coho.

Oct 29: Gerry worked on the grate for the trap entrance. Kent went to Dworshak Hatchery to out plant Coho.

Oct 30: 25 female & 25 male Coho were removed from the trap and transported to Dworshak Hatchery for spawning, 14 females, 137 males and 3 jacks were also removed and out planted.

Administrative Activities October 2014

Every year we, as employees of the federal government, have the opportunity to give back to our communities. **We make it possible for others to have a better life!**

MAKE IT POSSIBLE– get involved.

Contact Penny to find out how.

http://bit.ly/1sOIWb7

Personnel Actions :

DNFH: 1

Safety Incidents:

None Reported

Staff Birthdays

Feldmann

Hamilton

Service Comp Anniversaries:

King
Feldmann
Drobish
Bretz
Blair
Sprague

Staff List

Complex Management

Steve Rodgers, Complex Manager
Mark Drobish, Dworshak NFH Manager
Mike Tuell, SRBA Coordinator
Dr. Marilyn "Guppy" Blair, Idaho Fish Health Ctr.
Mike Faler, Aquatic Conservation Lead
Adam Izbicki, Maintenance Supervisor
Dr. William Conner , Fall Chinook Research Lead
Kent Hills, Kooskia NFH Manager
Dr. Chris Peery, Fish Production M&E Lead

Dworshak Production Staff

Angela Feldmann, Jill Olson, Rob Bohn, Wayne Hamilton, Tom Tighe, Mike Bisbee, Tui Moliga, Lou Ann Lasswell, Steve Coomer, Jeremy Sommer, Carter Lopez, Casey Mitchell

Administration

Penny Hasenoehrl, Steve Bradbury, Randy Bowen

Maintenance

Adam Izbicki, Terry Weeks, Rick King, Rob Kellar, James Oatman, Scott Koehler, James Paddelty, Melissa Wright, Joe Livesay

Idaho Fish Health Center

Dr. Marilyn Blair, Laura Sprague, Corie Samson, Rick Cordes, Chelsea Weeks

Idaho Fishery Resource Office

Ray Jones, Aaron Garcia, Carrie Bretz, Frank Mullins, Jody Brostrom, Ken Bugler, John Hook, Brad Buechel

Kooskia National Fish Hatchery

Art Broncheau, Kenny Simpson, Gerry Fogelman