

**Lower Snake River Compensation Plan FY2016 Performance Report  
Idaho Department of Fish and Game – Clearwater Fish Hatchery (CFH)  
Species: B-Run Summer Steelhead, Spring Chinook, Summer Chinook**

Objective 1: Manage all operations and maintenance at the Clearwater Fish Hatchery, the Powell, the Red River and the Lower Crooked River Satellite facilities, to achieve LSRCP goals. This also includes overseeing spending, all fish marking, fish transportation, and fish health activities associated with this program.

Report:

- A. Provided administrative oversight, developed and managed budgets, and met reporting requirements. This included overseeing spending, fish marking, fish transportation and fish health activities associated with this program.
- B. Adult Trapping and Broodstock Development
  1. The LSRCP goals for the Clearwater Fish Hatchery are to return 14,000 adult steelhead and 12,000 adult (spring/summer) Chinook Salmon above Lower Granite Dam annually. In addition to managing the Clearwater Fish Hatchery, the staff also oversees operations at three satellite facilities, the Powell, the Red River and the Lower Crooked River Satellite facilities.
    - a. Pertinent physical and biological data associated with all aspects of program operations were collected. Program operations are detailed in Clearwater River Annual Operating Plan (AOP).
  2. Steelhead
    - a. The broodstock goal for B-run steelhead is 452 (226 males, 226 females) adults collected by anglers on the South Fork of the Clearwater and backfilled with broodstock from Dworshak National Fish Hatchery (DNFH) if needed.
      - i. A total of 354 (119 males, 235 females) adult B-run steelhead were collected on the South Fork of the Clearwater in 2015 by fisherman.
      - ii. All broodstock was collected by the localized broodstock program and no DNFH fish were needed.
  3. Spring Chinook Salmon
    - a. The broodstock goal for Spring Chinook Salmon is 1,844 adults.
      - i. A total of 973 Chinook Salmon were trapped in 2016 (912 HO, and 61 NO).
  4. Summer Chinook Salmon
    - a. The broodstock goal for Summer Chinook Salmon is 426 adults.
      - i. A total of 1483 Summer Chinook Salmon were trapped in 2016, 464 were jacks (1460 HO and 23NO).
- C. Spawning
  1. Pertinent physical and biological data associated with all aspects of program operations were collected. Program operations are detailed in the Clearwater River Annual Operating Plan (AOP).
  2. Steelhead
    - a. The smolt release target is 843,000 Clearwater localized B-run

steelhead with a green egg collection target of 1,424,205 and a broodstock of 452 adults collected by fisherman.

i. A total of 226 B-run steelhead females were spawned in 2016 at DNFH for CFH producing 1,417,366 green eggs.

3. Spring Chinook Salmon

a. The smolt release target is 2.75 million Spring Chinook Salmon with a green egg collection target of 3,717,129 and a broodstock target of 1,814 adults.

i. A total of 1,019 (396 South Fork Clearwater stock, 423 Kooskia/Dworshak stock, and green eggs from 200 Kooskia stock) spring Chinook females contributed in 2016 for the Clearwater program producing 3,742,744 green eggs. Eggs from 35 females were culled due to high BKD.

4. Summer Chinook Salmon

a. The smolt release target is 600,000 Summer Chinook Salmon with a green egg collection target of 918,060 and a broodstock target of 426 adults.

i. A total of 232 (168 Powell stock, 64 South Fork Salmon stock) Summer Chinook Salmon females were spawned in 2016 producing 963,670 green eggs. There was 1 cull due to high BKD and 1 culled for poor egg quality. Included in this total was 32 females used for a copper study.

D. Incubation and Rearing

1. Steelhead

a. Incubated and reared steelhead eggs and fish to appropriate lot levels.

b. Collected and recorded appropriate physical and biological data during incubation and rearing.

i. Brood Year 2015 steelhead survival from eyed egg to stocking was 77.5%. A total of 132,700 pounds of feed was fed for a weight gain of 189,503 resulting in a feed conversion of 0.70. The final entire hatchery average rearing densities were under 0.3 D.I.

ii. Brood Year 2016 steelhead number on hand is 981,328 presmolts at 8.02 fpp. This group of fish will winter in twelve large outside raceways. Smolts will be released in the spring of 2017 at Red House, Meadow Creek and Newsome Creek.

2. Spring Chinook Salmon

a. Incubated and reared Spring Chinook Salmon eggs and fish at appropriate lot levels.

b. Collected and recorded appropriate physical and biological data during incubation and rearing.

i. Brood Year 2014 Spring Chinook Salmon survival from eyed egg to stocking was 98.6%. A total of 167,043 pounds of feed was fed for a weight gain of 215,939 resulting in a feed conversion of 0.78. The final entire hatchery average rearing densities were under 0.3 D.I.

- ii. Brood Year 2015 Spring Chinook Salmon number on hand is 2,932,630 presmolts at 23 fpp. This group of fish will winter in banks A through D. Smolts will be released in the spring of 2016 at Red River, Clear Creek, Selway, Nork Fork Clearwater and Mill Creek.
  - iii. Brood Year 2016 Spring Chinook Salmon number on hand is 3,541,388 swim-up fry. This group of fish will winter in 50 indoor vats until spring of 2017 when they will be moved to outdoor rearing. Smolts will be released in the spring of 2018.
3. Summer Chinook Salmon
- a. Incubated from eyed-egg, reared Summer Chinook Salmon eggs and fish at appropriate lot levels.
  - b. Collected and recorded appropriate physical and biological data during incubation and rearing.
    - i. Brood Year 2014 Summer Chinook Salmon survival from eyed egg to stocking was 97.8%. A total of 11,072 pounds of feed was fed for a weight gain of 15,794 resulting in a feed conversion of 0.70. The final entire hatchery average rearing densities were under 0.3 D.I.
    - ii. Brood Year 2015 Summer Chinook Salmon number on hand is 775,546 presmolts at 24 fpp. This group of fish will winter in the C and D banks. Smolts will be released in the spring of 2016 at Powell
    - iii. Brood Year 2016 Spring Chinook Salmon number on hand is 807,423 swim-up fry. This group of fish will winter in 10 indoor vats until spring of 2017 when they will be moved to outdoor rearing. Smolts will be released in the Spring of 2018

E. Juvenile Fish Releases

1. Steelhead

a. Annual release plans

- i. Distribution of Brood Year 2015 B run Steelhead occurred on March 28, 2016 and was completed on April 7, 2016. A total of 902,010 smolts were released at 3 different sites: 553,355 localized stock at Meadow Creek, 123,816 at Newsome Creek and 232,066 at Red House hole on the South Fork of the Clearwater.
- ii. All fish hauling was done by Clearwater staff, Fish and Game staff from other stations and 2 contract drivers that drove CFH transport trucks.

2. Spring Chinook Salmon

a. Annual release plans.

- i. Distribution of Brood Year 2014 Spring Chinook Salmon occurred on March 21, 2016 and was completed on April 15, 2016. A total of 3,410,666 smolts were released at five different sites: 791,578 at Clear Creek, 464,568 at Lower Selway, 1,272,709 at Red River, 392,739 at Mill Creek and

489,072 in the North Fork Clearwater.

b. Fish loading and hauling information.

- i. All fish hauling was done by Clearwater staff, Fish and Game staff from other stations and 2 contract drivers that drove CFH transport trucks.

3. Summer Chinook Salmon

a. Annual release plans

- i. Distribution of Brood Year 2014 Summer Chinook Salmon occurred on March 17-18, 2016. A total of 244,485 smolts were released at Powell.
- ii. All fish hauling was done by Clearwater staff, Fish and Game staff from other stations and 2 contract drivers that drove CFH transport trucks.

Objective 2: Develop the facility annual operating budget, to be submitted to the LSRCP office by June 15. The FY2016 proposed operating budget was \$1,982,316 (excluding fish feed and utilities paid directly by LSRCP office). A separate maintenance and equipment needs list will be submitted with the annual operating budget. Major maintenance and improvement projects will be coordinated with the LSRCP office.

Report:

- A. The Annual Operating Budget was submitted to IDFG Headquarters office prior to June 15.
- B. A capital improvement project list was submitted along with the budget.
- C. All major maintenance and improvement projects were coordinated with the LSRCP office.
  - a. Residence 1- Replaced water hydrant, painted main bathroom, painted floor in utility room, replaced storm doors, repaired north side of house and rodent abatement
  - b. Residence 2- Replaced storm door in front, replaced smoke alarm in bathroom
  - c. Residence 3- New flooring was installed in living room, new window installed, installed two storm doors, installed sunshade structure, replaced frost free hydrant, repaired sheet rock around electric panel.
  - d. Residence 4- Repaint interior, new flooring installed including subfloor and removed entry tiles, installed new stove, replaced garbage disposal, repaired dishwasher, replaced window shades, disinfected utility room and storage areas, pulled trim, changed smoke alarms, repaired/replaced closet doors and stained to match, replaced entry door seals, repaired HVAC bleeder, rebuilt both fence gates, repair or replace light diffusers, repaired kitchen counter and toilet repair
  - e. Residence 5- Painted interior of house
  - f. Residence 6- Painted kitchen, living room and hallway, changed all the blinds, replaced fire alarms, cleaned pellet stove, repair fencing and gate, installed dishwasher, installed new windows/siding repair, installed new heater in bonus room and trimmed out bonus room, relocated electrical outlet, installed

new garbage disposal, repaired water line under sink, repaired toilet hardware, installed and repaired all three gates, installed new fencing around shed, reseeded backyard, replaced P traps in main bathroom, installed new carpet, repaired bi-fold door in kitchen, replaced bedroom main door, replaced ceiling fan, removed light hanger from kitchen, cleaned out HVAC room of old filters and garden hoses

- g. Residence 7- Installed new flooring and subfloor, replaced screen doors, painted the interior, new trim, removed tile entryway, replaced ceiling fan, replaced lights in hallway/bedrooms, installed new toilet hardware in both bathrooms, installed garbage disposal and new door seals.
- h. Residence 8- repaired screen backdoor, repaired HVAC
- i. Garden shed door repaired and replaced door jam
- j. Wall constructed in Red shed for overhead door, cleaned and organized steel inventory
- k. Wall constructed in Cold storage for overhead door
- l. Constructed shade structure for spawning, constructed and installed baffles on ponds 2&4, modified gate, removed shade over ponds for winter and repaired alarms in Adult holding ponds
- m. Installed shade structure in summer and removed in the fall, repaired cement, alarms repaired and catwalk repaired in A and B banks
- n. Installed/repairs bird netting over raceways, repaired drive on south bridge, replaced wheels and bearings, replaced bearing for center drive, repaired hoist, repaired raceway wall, repaired/replaced raceway bridge top running plate and drive plate and new modifications for operations on C and D banks
- o. Repaired heater in isolation incubation room
- p. Replaced two sets of doors with new locks and repaired north side locks of Hatchery building
- q. Repaired drum screen, new sprocket and chain, new gear box, rebuilt electric motor, clean sprayer and adjusted to filter drum
- r. Demolished water tank, installed new variable speed drives for maintenance water, repaired lights in vat room (30 ballasts), replaced fixtures (10 fixtures), changed safety light in Satellite storage room
- s. Replaced shop light fixture
- t. Admin Building- Surveyed roof for leak repair, removed window trim, replaced toilet in dorm bathroom, painted dorm rooms, counter top in kitchen ordered, replaced frost free line in south wall of administrative/office building
- u. Installed sprinkler on River side, installed signage for public at show pond and repaired asphalt
- v. New valve ordered for truck filling station
- w. PLC for controller replaced, primary intake screen cleaned, log boom latch repaired at intake platform
- x. Alarm system/installation of new dorm room, ordered material to enclose garage door and intake dug out at Powell
- y. Crowder winch repaired, sprinkler pump repaired, floor in cabin reinforced for fire suppression tank, garage leak repaired, hot water tank replaced and plumbed, faucet replacement, main hatchery 18" line repaired at Red River

- z. Safety inspections done at Powell, Red River, Crooked River and Upper Crooked and the Hatchery
- aa. Lift Station repaired, gutters at residences and admin building cleaned, primary water meter removed and repaired
- bb. Pressure washed raceways
- cc. Both 8” fish pump hydraulic motors rebuilt
- dd. Annual valve exercise performed

Objective 3: Develop an annual facility Statement of Work, to be submitted to LSRCP office by June 15.

Report: The Clearwater Fish Hatchery submitted their Annual Statement of Work prior to June 15, 2016.

Objective 4: Conduct annual safety inspections and submit findings to the LSRCP office by August 1.

Report:

- A. Clearwater Fish Hatchery received a State Safety Inspection on August 1, 2016. A report was received on August 18th and a response was sent to LSRCP and Division of Building and Safety. All deficiencies noted have been repaired. Inspections were not done by the August 1 deadline due to availability of State Inspector.
- B. Red River Satellite Facility received a State Safety Inspection on August 16<sup>th</sup>, 2016. A report was received on August 18, 2016 and a response was sent to LSRCP and Division of Building and Safety. All deficiencies noted have been repaired. Inspections were not done by the August 1 deadline due to availability of State Inspector.
- C. Lower Crooked River Satellite Facility received a State Safety Inspection on August 16, 2016. A report was received on August 18, 2016 and a response was sent to LSRCP and Division of Building and Safety. All deficiencies noted have been repaired. Inspections were not done by the August 1 deadline due to availability of State Inspector.
- D. Powell Satellite Facility received a State Safety Inspection on August 17, 2016. A report was received on August 18, 2016 and a response was sent to LSRCP and Division of Building and Safety. All deficiencies noted have been repaired. Inspections were not done by the August 1 deadline due to availability of State Inspector.

Objective 5: Conduct annual facility condition assessments and submit findings to the LSRCP by August 1.

Report: A condition assessment was completed by LSRCP, Chris Starr.

Objective 6: Conduct annual real property and personal property inventories; coordinate with LSRCP personnel.

Report:

- A. Verified personal property inventory with Chris Starr on July 7, 2016.
- B. IDFG Annual Inventory submitted to the Bureau on January 13, 2016.
- C. IDFG Fiscal Year End Inventory was submitted to the Bureau on May 13, 2016.

Objective 7: Contribute to the development of the Clearwater Basin AOP.

Report: Fish Hatchery Managers attended the Clearwater Basin AOP meeting in Ahsahka on February 2, 2016. All CFH data was entered into the CFH AOP document on Google Docs in a timely manner.

Objective 8: Provide monthly fish inventory data to the LSRCP office by the 7<sup>th</sup> of each month.

Report: All monthly LSRCP reports were submitted to the LSRCP office by the 7<sup>th</sup> of each month during the fiscal year.

Objective 9: Provide a written facility annual report to the LSRCP office, including the standardized LSRCP production tables to the LSRCP office by December 31. A progress summary of all ongoing hatchery research projects will be included in this report.

Report:

- A. This annual report was submitted prior to December 31.
- B. LSRCP Standardized Production Tables

**Steelhead (S.F Clearwater B-run Stock):**

Adult Return Goal:	14,000
Smolt Release Target:	843,000
Egg Collection Target:	1,424,205
Broodstock Target:	226 pair

**Spring Chinook Salmon**

Adult Return Goal:	12,000
Smolt Release Target:	2,750,000
Egg Collection Target:	3,717,129
Broodstock Target:	907 pair

**Summer Chinook Salmon**

Smolt Release Target:	600,000
Egg Collection Target:	918,060
Broodstock Target:	213 pair

C. Report of ongoing hatchery research projects

- i. A research project to evaluate the use of copper as a substitute for formalin for treating fungus on eggs was conducted on BY16 steelhead eggs and BY16 summer Chinook eggs. Early results indicate that copper can be used as a substitute. Further work will be conducted prior to making any changes in current protocols.
- ii. A research project evaluating how raceway baffles increase the intensity and variability of flow throughout the raceway and the effect on smolt to adults returns has been started in the adult holding ponds. This is the first year of a multi-year study.