The LSRCP goals for the Clearwater Fish Hatchery are to return 14,000 adult B-run summer 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. Pertinent physical and biological data associated with all aspects of program operations are also collected. Program operations are detailed in Clearwater River Annual Operating Plan (AOP).

FY2018 OBJECTIVES:

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. Pertinent physical and biological data associated with all aspects of program operations were collected.

2. Steelhead

   a. The broodstock goal for B-run steelhead is to collect 371 adults with the assistance of anglers on the South Fork Clearwater River. Deficits in angler-collected localized brood may be backfilled with broodstock trapped at the Dworshak National Fish Hatchery (DNFH) if needed.

      i. A total of 355 (249 angler caught, 106 trapped at KNFH) adult B-run steelhead were collected on the South Fork Clearwater River in 2018 by fishermen. A portion of these fish were collected to fulfill localized steelhead programs spawned at DNFH.

      ii. All broodstock was collected by the localized broodstock program and no DNFH fish were needed to fill 2018 CFH needs.

3. Spring Chinook Salmon

   a. The broodstock goal for spring Chinook Salmon is 1,979 adults.

      i. A total of 810 Chinook Salmon were trapped in 2018 (782 HO, and 28 NO). 48 HO came from seineing efforts below Red River weir. Remaining broodstock needs were fulfilled by trapping at DNFH and Kooskia National Fish Hatchery (KNFH).

4. Summer Chinook Salmon

   a. The broodstock goal for summer Chinook Salmon is 407 adults.

      i. A total of 506 summer Chinook Salmon were trapped in 2018 (479 HO and 27 NO).
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 1,216,092 to be taken from a broodstock of 179 male and 179 female returning adults collected by anglers.
      i. A total of 180 B-run steelhead females were spawned in 2018 at DNFH for CFH producing 1,294,400 green eggs.

3. Spring Chinook Salmon
   a. The smolt release target is 3,109,000 million spring Chinook Salmon with a green egg collection target of 3,744,845 and a broodstock target of 1,979 adults.
      i. The BY 2018 Clearwater Fish Hatchery spring Chinook Salmon production is comprised of eggs taken from 415 South Fork Clearwater stock females, 480 Kooskia stock females, and 140 Kooskia/DNFH stock females, as well as eggs contributed from 145 Little White Salmon Hatchery females. The total number of BY 2018 green eggs produced for the Clearwater program was 2,970,705. Eggs from 69 females were culled due to high BKD (52) or due to double trayed females (17).

4. Summer Chinook Salmon
   a. The smolt release target is 640,000 summer Chinook Salmon with a green egg collection target of 770,891 and a broodstock target of 407 adults.
      i. A total of 246 (196 Powell Stock, 50 SFSR stock) summer Chinook Salmon females were spawned in 2018 producing 949,874 green eggs. There were 0 culls due to high BKD and 4 culled for poor egg quality.

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 2017 steelhead survival from eyed egg to stocking was 83.7 %. A total of 166,677 pounds of feed was fed for a weight gain of 189,948 resulting in a feed conversion of 0.88. The final entire hatchery average rearing densities were 0.3 D.I.
      ii. Brood Year 2018 steelhead number on hand is 787,288 presmolts at 7.97 fpp. This group of fish will winter in twelve large outside raceways. Smolts will be released in the spring of 2018 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 2016 spring Chinook Salmon survival from eyed egg to stocking was 93%. A total of 157,312 pounds of feed was fed for a weight gain of 187,242 resulting in a feed conversion of 0.83. The final entire hatchery average rearing densities were under 0.3 D.I.
      ii. Brood Year 2017 spring Chinook Salmon number on hand at the end of November is 2,978,263 presmolts at 19.5 fpp. This group of fish will winter in banks A through D. Smolts will be released in the spring of 2019 at Red River, Clear Creek, Selway, and North Fork Clearwater.
      iii. Brood Year 2018 spring Chinook Salmon number on hand is 2,808,593 swim-up fry. This group of fish will winter in 48 indoor vats until spring of 2019 when they will be moved to outdoor rearing. Smolts will be released in the spring of 2020.

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 2016 summer Chinook Salmon survival from eyed egg to stocking was 95.9%. A total of 33,470 pounds of feed was fed for a weight gain of 41,446 resulting in a feed conversion of 0.81. The final entire hatchery average rearing densities were under 0.3 D.I.
      ii. Brood Year 2017 summer Chinook Salmon number on hand at the end of November is 624,865 presmolts at 19.5 fpp. This group of fish will winter in the C and D banks. Smolts will be released in the spring of 2019 at Powell.
      iii. Brood Year 2018 summer Chinook Salmon number on hand is 810,664 swim-up fry. This group of fish will winter in 13 indoor vats until spring of 2019 when they will be moved to outdoor rearing. Smolts will be released in the spring of 2020.

E. Juvenile Fish Releases

1. **Steelhead**
   a. Annual release plans
      i. Distribution of Brood Year 2017 B-run Steelhead occurred on April 3, 2018 and was completed on April 12, 2018. A total of 906,052 smolts were released at 3 different sites: 540,830 localized stock at Meadow Creek, 131,430 at Newsome Creek and 233,792 at Red House hole on the South Fork of the Clearwater.
ii. All fish hauling was done by Clearwater staff, IDFG staff from other stations, and 4 contract drivers that drove CFH transport trucks.

2. **Spring Chinook Salmon**
   a. Annual release plans.
      i. Distribution of Brood Year 2016 spring Chinook Salmon occurred on March 19, 2018 and was completed on April 3, 2018. A total of 3,890,800 smolts were released at four different sites: 818,037 at Clear Creek, 451,416 at Lower Selway, 1,276,194 at Red River, and 544,153 in the North Fork Clearwater.
   b. Fish loading and hauling information.
      i. All fish hauling was done by Clearwater staff, IDFG staff from other stations, and 4 contract drivers that drove CFH transport trucks.

3. **Summer Chinook Salmon**
   a. Annual release plans
      i. Distribution of Brood Year 2016 summer Chinook Salmon to Powell occurred on March 12-14, 2018 A total of 673,181 smolts were released at Powell.
      ii. All fish hauling was done by Clearwater staff, IDFG staff from other stations, and 4 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 FY2018 proposed operating budget was $1,824,295 (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.
   1. Installed new door and lock in feed room
   2. DOT inspections on fish transport vehicles
   3. South bridge drive track repair
   4. 8” fish pump new hydraulic system overhauled for better operation
   5. Replaced aged 8” fish hose and fittings
   6. New attic fan switches installed at residences
   7. New lighting in Red Shed
   8. New range in Residence 3
   9. New dishwasher in Residence 2
10. New oven hood installed at residence 2
11. Trim was installed at residence 6
12. Broken domestic water line in residence 2 repaired
13. New bird net was installed over A and B banks
14. Septic lines on residences 2 and 3 were pumped
15. Bathroom plumbing fixed at both Red River and Powell
16. Fencing replaced between residences 5 and 6
17. New spawn shelter was constructed
18. Raceway wall between 11D and 12D was repaired
19. Filter drum water pump was pulled and repaired
20. 200’ screens replaced by aluminum screen frames
21. New gutters installed on residences 1-7
22. New toilets, drywall work, outlets replaced in residences 4, 6 and 8
23. Sanitation station was stripped and painted
24. New roofs on residence 1-7 sheds installed
25. New garage doors installed on residences 1-7
26. New blinds and porch railings on residence 4
27. New irrigation system installed around administrative building
28. New cement pad on residence 4 HVAC room
29. Residence 2 outdoor spigot repaired
30. Entrance gate and perimeter fence gates completed
31. New flooring in residence 3
32. Residence 3 HVAC line was patched
33. Annual removal of debris at Powell Intake was completed
34. New vat room light control panels installed
35. New LED motion and front door lights installed at residences
36. New door sill and weather stripping at Crooked/Red River
37. New LED lights being installed at residences
38. Primary and secondary intake screens cleaned

This list of projects does not include regular monthly or annual maintenance, of the hatchery properties or equipment used on the hatchery repairs, maintenance of our fleet of transport trucks, pressure washers, Wacker pumps, or other equipment used on the hatchery.

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

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

Report:
A. Clearwater Hatchery safety inspections performed before August 1st. All deficiencies noted have been repaired.
B. Red River Satellite Facility safety inspections performed before August 1st. All deficiencies noted have been repaired.
C. Lower Crooked River Satellite Facility safety inspections performed before August 1st. All deficiencies noted have been repaired.
D. Powell Satellite Facility safety inspections performed before August 1st. All deficiencies noted have been repaired.

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

Report: A condition assessment was completed by LSRCP by August 1st.

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

Report:
A. Verified personal property inventory with Chris Starr on August 20, 2018.
B. IDFG Annual Inventory submitted to the Bureau on December 31, 2017.
C. IDFG Fiscal Year End Inventory was submitted to the Bureau on June 25, 2018.

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

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

**Objective 8:** Monthly fish inventory data available to the LSRCP office each month.

Report: FINs data was made available to LSRCP office by the 10th of each month.

**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: 1,216,092  
Broodstock Target: 179 pair

**Spring Chinook Salmon**

成人回归目标: 12,000  
孵化鱼苗释放目标: 3,109,000  
卵收集目标: 3,744,845  
亲鱼目标: 990 对

**Summer Chinook Salmon**

孵化鱼苗释放目标: 640,000  
卵收集目标: 770,891  
亲鱼目标: 204 对

C. 报告正在进行的孵化场研究项目
   1. 继续评估跑道挡板如何增加跑道内流速的强度和变化性，并评估对孵化鱼苗到成鱼回归的影响。这项研究已经在成人池塘中开始。这是多学年研究的第三年。