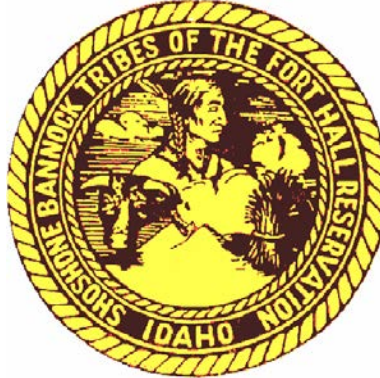


**Anadromous Fish Program (AFP)  
Federal Fiscal Year 2017 Annual/Final Progress Report**



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## **Objective 1: Participate in LSRCP coordination and production planning**

### Operation and Maintenance Tasks:

*Task 1.1 Participate in LSRCP program activities including, but not limited to the LSRCP Annual Meeting or Program Reviews, fish marking and tagging, fish health, harvest, production planning (e.g., Salmon River AOP), M&E planning, and ESA permitting (e.g., HGMP). Provide updates and technical recommendations to meet SBT production and harvest goals and objectives.*

We participated in a number of LSRCP program activities. Major activities included the annual SBT/LSRCP Coordination Meeting, Salmon River AOP/SOP meeting, LSRCP Annual Meeting, and meeting to discuss standardization of reporting in August. Additionally, significant progress was made on Monitoring and Evaluation planning through a program strengths, weaknesses, opportunities, and threats analysis and the further re-development of the programs long term RM&E plan. Our staff provided data, writing, and comments on four Proposed Actions and Biological Opinions related to Chinook and Steelhead in the Salmon River basin. We regularly provided adult return data and spawn updates to SBT's harvest program to inform harvest management.

More specifically, staff participated in the following LSRCP program activities:

- October 31 – L. Denny participated in a call with Rod Engle, LSRCP to review and finalize FY 2017 statement of work
- November 22 – L. Denny participated in a coordination meeting with NOAA-Fisheries regarding ESA consultations on the Tribes artificial propagation projects
- December 1 – L. Denny, M. Evans, R.Croy, and J. Jackson participated in a coordination meeting in Fort Hall with administrators from the LSRCP
- January 17-18 – L. Denny and J. Jackson traveled to Boise, Idaho to attend our annual coordination meeting with the LSRCP
- January 25 – M. Evans, J. Jackson, and L. Denny participated in a conference call with NMFS and LSRCP regarding HGMP development
- January 25 – L. Denny participated in a conference call NMFS and USFS regarding permitting needs for trapping steelhead in Yankee Fork
- January 26 – L. Denny participate in a conference call with IDFG regarding trapping steelhead in Yankee Fork
- February 13 – M. Evans and L. Denny participated in a conference call with Rod Engle at LSRCP regarding steelhead smolt PIT tagging plans within the Upper Salmon River
- February 14-16 – M. Evans and L. Denny traveled to Boise, ID, to participate in the Salmon/Snake River AOP/SOP meeting and hold coordination meetings with IDFG and LSRCP
- February 23 – L. Denny participated in a conference call with NMFS on HGMP consultation and steelhead trapping activities in Yankee Fork
- March 15 – L. Denny and M. Evans participated in a conference call with NMFS regarding Yankee Fork, Panther Creek, and South Fork Salmon River HGMPs.

- March 17 – L. Denny participated in a conference call with the Columbia HGMP Task Force
- March 28-30 – M. Evans participated in the LSRCP Annual Meeting in Clarkston, WA
- April 3 – M. Evans participated in a HGMP conference call
- April 5 – M. Evans participated in a steelhead coordination meeting
- May 11 – L. Denny corresponded with Mark Robertson, LSRCP regarding consultation needs for Yankee Fork and Panther Creek weir construction vs. weir operation
- August 1: J. Ebel and L. Denny met with Rod Engle (LSRCP), Mark Robertson (USFWS), Brian Leth (IDFG), Chris Sullivan (IDFG), and Sam Sharr (IDFG) at LSRCP offices in Boise to discuss smolt release studies
- August 2: J. Ebel and L. Denny attended a meeting of all LSRCP collaborators in Boise, ID to discuss standardization of reporting requirements.
- August 7: L. Denny provided smolt-to-adult survival and smolt-to-adult return information from Yankee Fork Chinook salmon to B. Farman for the Upper Salmon Chinook Proposed Action.
- August 17: L. Denny held a call with LSRCP to discuss funding, Crystal Springs Fish Hatchery/Sawtooth Fish Hatchery long-terms plans, Yankee Fork weir needs, bull trout information for Hells Canyon/Snake draft Biological Assessment, and NOAA-Fisheries RM&E take needs.
- August 17: L. Denny held a call with C. Hurst, NOAA-Fisheries to discuss LSRCP and BPA funding of RM&E activities, Yankee Fork and Panther Creek RM&E plans, steelhead and Chinook RM&E take needs, and the draft Letter of Sufficiency NOAA-Fisheries plans to send to the Tribes.
- August 24: L. Denny provided the Shoshone-Bannock Tribes letter, requesting ESA consultation on our two steelhead projects, to A. Purcell, NOAA-Fisheries.
- August 30: L. Denny and J. Ebel provided an addendum to the Hells Canyon and Salmon River Steelhead and Spring/Summer Chinook Salmon Programs Biological Assessment, including a summary of all research, monitoring, and evaluation (RM&E) activities and take specific to bull trout.
- September 1: L. Denny held a conference call with NOAA-Fisheries (B. Farman and C. Hurst) to discuss RM&E take tables for YFCSP and PCCSP.
- September 14: L. Denny held a conference call with NOAA-Fisheries (B. Farman and C. Hurst) to discuss RM&E take tables for YFCSP and PCCSP.
- September 21: J. Ebel participated in the CRSO fish modelling workshop #3.
- September 28: L. Denny submitted provided summarized RM&E take numbers for the YFCSP and PCCSP to NOAA-Fisheries, for Upper Salmon Chinook Proposed Action.

*Task 1.2 Participate in regional fishery management activities including, but not limited to US vs. Oregon Production Advisory Committee, US vs. Oregon Technical Advisory Committee, Snake Basin Coordination Meetings, IDFG Coordination Meetings, NOAA Fisheries Coordination meetings, USFWS Coordination Meetings, and USFS Coordination Meetings. Provide updates and technical recommendations to meet SBT production and harvest goals/objectives.*

During FY 2017, our staff participated in numerous regional fishery management activities. Our program staff participated on the US vs. Oregon Production Advisory committee on a regular basis and Snake Basin Coordination meetings on harvest and adult returns for Chinook. We met regularly with IDFG to coordinate hatchery releases, adult carcass outplants from LSRCP hatcheries. Additionally, staff participated in NMFS Steelhead Workgroup discussions, attended and presented at American Fisheries Society conferences, and obtained training with data repositories (i.e., FINS and PTAGIS). Finally, program staff provided comments on the CRSO EIS draft alternatives as part of the Anadromous Fish Modelling Technical Team. Finally, staff participated in coordination of Yankee Fork Salmon River restoration activities with Trout Unlimited, Bureau of Reclamation, United States Forest Service, etc.

More specifically, during FY 2017, program staff participated in the following:

- October 4 – M. Evans participated in the Snake Basin coordination meeting phone call
- October 11 – 12 – L. Denny attended and provided a power point presentation at the Native American Fish and Wildlife Society Annual Meeting in Fort Hall, ID.
- November 7 – L. Denny and M. Evans participated in a coordination meeting with IDFG in Boise, ID
- November 28 – M. Evans participated in a coordination meeting with the Upper Snake River Tribes Foundation in Boise, ID
- November 30 – L. Denny and R. Croy traveled to Idaho Falls, ID to meet with IDFG to discuss Crystal Springs Fish Hatchery
- December 14 – L. Denny participated in a US vs. Oregon PAC meeting
- December 15 – L. Denny participated in a Columbia River HGMP Task Force meeting
- January 23 – M. Evans and L. Denny participated in a conference call with NMFS on the Snake Basin Recovery Plan and specifically with reference to Panther Creek
- January 30 – L. Denny and J. Jackson participated in the Yankee Fork IDT meeting via conference call
- February 15 – J. Jackson, R. Croy, N. Suppah, S. Ponzo, and C. Lopez participated in PTAGIS' P4 program training via webinar
- February 27-March 3 – L. Denny, J. Jackson, and C. Lopez traveled to Boise, Idaho to attend the Idaho chapter of the American Fisheries Society meeting and workshops; L. Denny participated in a R-coding workshop

- February 28-March 3 – M. Evans and R. Croy traveled to Bend, Oregon to attend the Oregon chapter of the American Fisheries Society meeting. M. Evans presented on the genetic composition of Panther Creek Chinook salmon
- March 8 – L. Denny met with Jay Winfield (USFS) to discuss permitting the RST, array, and lodging
- March 9 – L. Denny participated in a conference call with NMFS regarding Ecological Effects Analysis
- March 22 – L. Denny participated in a conference call with the U.S. v Oregon Production Advisory Committee (PAC) regarding completed proposals
- March 24 – L. Denny and M. Evans participated in a departmental meeting on proposed changes to US v Oregon Production tables
- March 24 – L. Denny participated in a conference call with USFS regarding the draft Crystal Springs Hatchery Environmental Impact Statement
- April 10 – M. Evans and L. Denny participated in a conference call with IDFG regarding steelhead coordination and HGMPs
- April 12 – M. Evans participated in the Snake Basin Coordination meeting and a steelhead coordination meeting
- April 25 – M. Evans participated in the weekly Snake Basin coordination call
- May 3 – M. Evans and L. Denny participated in a conference call with IDFG on Chinook salmon tagging at Sawtooth Fish Hatchery and HGMPs
- May 9 – M. Evans and L. Denny attended a coordination meeting with IDFG at Springfield Fish Hatchery
- May 16 – M. Evans, L. Denny, and J. Ebel participated in the Snake Basin Weekly Coordination Call
- May 18 – M. Evans participated in US v. OR mediation conference call
- May 18 – M. Evans participated in US v. OR policy conference call
- May 18 – M. Evans and J. Ebel participated in the Snake Basin Weekly Coordination Call
- May 22 – L. Denny attended the Shoshone-Bannock Tribes' Fisherman's Meeting
- May 23 – L. Denny participated in a US v Oregon PAC conference call
- May 25 – L. Denny participated in a Columbia River HGMP Task Force conference call
- May 30 – M. Evans participated in the Snake Basin coordination call
- May 31 – L. Denny and M. Evans participated in a coordination call with LSRCP, IDFG, and others on BA/HGMP development
- May 31 – L. Denny participated in a conference call with IDFG regarding steelhead smolt releases in Yankee Fork
- June 6: M. Evans and J. Ebel participated in the Snake Basin Coordination call
- June 13: M. Evans and L. Denny traveled to Jerome for a coordination meeting with IDFG headquarters staff
- June 13: J. Ebel participated in the Snake Basin Coordination call
- June 20: J. Ebel and M. Evans participated in the Snake Basin Coordination call
- June 27: M. Evans participated in a HGMP coordination call (Snake River steelhead programs)
- June 27: M. Evans and J. Ebel participated in the Snake Basin Coordination call

- July 5: M. Evans and J. Ebel participated in the Snake Basin Coordination call
- July 11: M. Evans participated in the Snake Basin Coordination call
- July 12: M. Evans participated in the US vs. OR PAC meeting
- July 13: M. Evans participated in conference call on Idaho steelhead proposed action
- July 17: M. Evans held conference call with BPA and LSRCF on proposed action funding language for SSI project
- July 18: M. Evans and J. Ebel participated in the Snake Basin Coordination call.
- July 24: L. Denny provided data/information to C. Hurst, NOAA-Fisheries for the Idaho Steelhead Proposed Action
- July 25: M. Evans and J. Ebel participated in the Snake Basin Coordination call
- August 1: M. Evans participated in the Snake Basin coordination call.
- August 22: M. Evans participated in the Snake Basin coordination conference call.
- August 23: M. Evans and L. Denny participated in the US vs. OR conference call
- August 29: M. Evans participated in the Snake Basin coordination call.
- August 31: L. Denny corresponded with N. Meyer-Cherry, NOAA-Fisheries regarding Columbia River Hatchery Genetics Management Plan (HGMP) Task Force Meeting
- September 8: J. Ebel participated in the biweekly CRSO fish modelling technical team webinar.
- September 19: L. Denny held a call with J. Sandow, NOAA-Fisheries regarding Grouse Creek Mine NPDES Permit and data needs.
- September 21: J. Ebel participated in the CRSO fish modelling workshop #3.
- September 28: L. Denny participated in the monthly Columbia River HGMP Task Force Meeting.

## **Objective 2: Yankee Fork Chinook Salmon Project**

### Operation and Maintenance Tasks:

#### *Task 2.1 Environmental Compliance Requirements*

*Activity 2.1.1      Submit HGMP to NOAA-Fisheries, address comments, and proceed through consultation process (contingent upon NOAA Fisheries schedule).*

Throughout the Fiscal Year, staff participated in numerous meetings and conference call to review and update HGMPs, draft and final Proposed Actions, draft and final Biological Assessments, and draft and final Biological Opinions.

*Activity 2.1.2      Submit and acquire an IDFG Scientific Collection Permit.*

We acquired IDFG Scientific Collection Permit# F-09-06-17 on March 27, 2017.

*Activity 2.1.3 Acquire a special use permit from the Salmon-Challis National Forest that address operation, including a campsite/workstation for project employees, installation and operation of a temporary picket weir, kiosk, and rotary screw trap. Contact Mark Robertson – LSRCP for permit development. The permit should address installation of permanent anchors and a cable/pulley system to effectively operate the rotary screw trap during spring conditions.*

The Tribes met consistently with the Salmon-Challis National Forest to acquire/renew our special use permit. Our expired permit was extended and a new permit will be forthcoming when the Crystal Springs Fish Hatchery NEPA is complete.

*Activity 2.1.4 Develop a MOA with IDFG and LSRCP describing the long-term project plans.*

The Tribes started working on a draft MOA with IDFG, but this was not finalized in 2017.

## *Task 2.2 Operate and Maintain Pole Flat Weir*

*Activity 2.2.1 Install a picket weir in June and remove the weir in mid-September*

Pole Flat weir was installed on 11 July 2017 and removed on 09 September 2017. Weir install was delayed due to high flows.

*Activity 2.2.2 Operate and maintain temporary picket weir on a daily basis. Snorkel the front and back of the weir and trapping device to ensure the device is operating properly. Clean and remove debris from the face of the weir and trapping device daily. Collect fish carcasses from weir daily and sample for biological information and mark-recapture analysis; identify any incidental take.*

Pole Flat Weir was checked on a daily basis for 61 total trapping days. Staff snorkeled the front and back of the weir and removed debris as necessary.

*Activity 2.2.3 Enumerate adult Chinook salmon and all other species trapped in the weir daily. Mark adult Chinook salmon released above the weir with a right operculum punch for genetic analyses and mark-recapture analysis. Collect biological information from all trapped adult Chinook salmon (e.g., length, weight, gender, origin, tissue, scale) and identify pre-existing marks or tags. Mark adult bull trout with right operculum punch and PIT tag.*

Pole Flat Weir was operated on a daily basis and all trapped fish were identified, enumerated, and marked with right operculum punches consistent with mark-recapture

protocols. All fish were released directly upstream of the weir after biological information was collected.

*Activity 2.2.4 Collect broodstock according to HGMP and/or MOA and transfer to East Fork Salmon River satellite facility or Sawtooth FH. If adult Chinook salmon are collected for broodstock and held at the East Fork Satellite Facility, monitor adults and coordinate with Sawtooth FH to maximize fish health.*

All adult salmon trapped in Yankee Fork were released to spawn naturally and no broodstock was collected because escapement was very low.

*Activity 2.2.5 Develop spawn schedule and spawn adult Chinook salmon at East Fork (or Sawtooth FH) and collect eggs. Transfer fertilized eggs to Sawtooth FH (if spawned at East Fork Satellite Facility) for egg incubation and final rearing.*

There were no fish to spawn in 2017 due to very low escapement.

### *Task 2.3 Hatchery adult Chinook salmon out-planting*

*Activity 2.3.1 Coordinate live adult Chinook salmon outplanting activities including the numbers to be outplanted, dates of outplanting, release locations, truck logistics, and sampling requirements.*

Due to low returns across the upper Salmon River basin, significant outplants of adults in the Yankee Fork did not occur in 2017. Only ten male Chinook from Sawtooth Fish Hatchery were released in the Yankee Fork for supplementation.

*Activity 2.3.2 During each live adult outplanting event, sample tissue from the left operculum of each fish and store in 95% ethanol. Operculum punch will be used to verify whether a spawned out carcass is a Sawtooth outplant and to provide future genetic analysis options. Collect phenotypic characteristics including fork length and sex.*

All adult outplants (10 males) had their sex and fork length recorded while also receiving a left operculum punch.

*Activity 2.3.3 Outplant live hatchery adult Chinook salmon in agreed to locations; record transfer time, release location, mortalities, and total fish outplanted.*

All adult outplants included a record of transfer time, release location, and total number of fish outplanted.

### *Task 2.4 Hatchery juvenile Chinook salmon smolt out-planting*



*Activity 2.4.1      Coordinate hatchery smolt outplanting activities, including the numbers to be outplanted, dates of outplanting, release locations, and truck logistics.*

Hatchery smolt outplanting goals and objectives for 2017 were coordinated with IDFG at our SBT/IDFG Anadromous Fish Coordination Meeting.

*Activity 2.4.2      Snow plow smolt release sites, acquire additional pipes from East Fork and set-up and take-down smolt pipes at agreed to locations.*

Staff traveled to Yankee Fork to remove snow from the Clayton facility, the Pole Flat Campground, and the rotary screw trap (RST) install site and smolt release sites. Staff obtained, installed and removed the smolt release equipment.

*Activity 2.4.3      Assist with all aspect associated with loading smolts at Sawtooth FH and releasing smolts in Yankee Fork. Set-up and maintain block nets at the acclimation release site for 48 hours.*

During April, staff and IDFG released 188,280 Sawtooth Hatchery Chinook salmon smolts into Yankee Fork pond series 1 and block-netted the area for a 72-hour acclimation period.

*Task 2.5          Operate and maintain the instream PIT tag array*

The PIT array was checked following high flows by Biomark technicians. Staff also periodically checked on the PIT tag array throughout the season.

*Activity 2.5.1      Check on the site periodically, snorkel the array panels, check for damages, and maintain infrastructure and equipment.*

Throughout the season, staff periodically checked the instream PIT tag array. Other than resetting the array a couple of times throughout the season, the array was fully functional.

*Activity 2.5.2      Download and manage PIT tag detection files daily; upload PIT tag detection files to PTAGIS.*

PIT tag detection files were uploaded to PTAGIS on a daily basis. Staff checked that all PIT tags released are accurately uploaded to PTAGIS.

#### Monitoring and Evaluation Tasks:

*Task 2.6          Estimate natural production at the rotary screw trap*

*Activity 2.6.1      Continue to operate rotary screw trap through the 2016 field season (October 1 – November 15, 2017) to estimate BY 2015 pre-smolt*

*production. Quantify out-migrating juvenile salmonids daily and identify all fish to species. Sample at least 25 Chinook salmon daily and collect length (mm), weight ( $\pm 0.01$ g), and tissue sample. PIT tag all juvenile Chinook salmon >70 mm fork length and bismarck brown stain fish smaller <70 mm fork length. Calibrate rotary screw trap as necessary to accurately estimate juvenile migrants using PIT tagged fish and/or bismarck brown stain fish.*

The rotary screw trap was operated until 09 November 2017 when ice forced us to remove the trap. When the trap was operated, juvenile fish were enumerated, biological data collected and a sub-sample were PIT tagged or brown stained. A number of in-season calibrations occurred to improve rotary screw trapping efficiency. These included upstream and downstream trap adjustments, left and right adjustments, and digging out underneath the trap during low flows. Depth adjustments were completed to allow the entire trap and cone to remain submerged and operate in the optimum position.

*Activity 2.6.2 Remove, clean, and winterize the rotary screw trap in November 2016.*

The rotary screw trap was removed on November 09, 2016 due to winter conditions in the Yankee Fork. The trap was loaded, transported, and stored in Fort Hall.

*Activity 2.6.3 Install permanent anchors and a cable/pulley system.*

A more permanent anchor and cable/pulley system was installed in the spring of 2014. The cable/pulley system is operated by two battery powered winches. The new system dramatically improved operations in the spring of 2015 and 2016 by allowing full lateral movement of the rotary screw trap in all streamflow conditions. However, the need to install truly permanent anchors (I-beam anchors) still exists and has been delayed by United States Forest Service permitting processes.

*Activity 2.6.4 Install the rotary screw trap as soon as conditions permit in 2017.*

The rotary screw trap was installed on March 28, 2017 as soon as conditions warranted.

*Activity 2.6.5 Operate the rotary screw trap from April 1 – September 30, 2017 to estimate BY 15 smolt production and BY 16 fry, parr and pre-smolt production. Quantify out-migrating juvenile salmonids daily and identify all fish to species. Sample at least 25 Chinook salmon daily and collect length (mm), weight (g), and tissue sample. PIT tag all juvenile Chinook salmon >70 mm fork length and bismarck brown stain fish smaller <70 mm fork length. Calibrate rotary screw trap as necessary to accurately estimate juvenile migrants using PIT tagged fish and/or bismarck brown stain fish.*

The rotary screw trap was installed on 30 March 2017 and removed on November 14, 2017 for a total of 89 days of trapping (prior to 30 September) and 128 total trapping

days during 2017. During this period, the screw trap was not operated from 08- 11 April 2017, 15 April – 19 May 2017, and 22 May – 27 June 2017 due to hatchery smolt releases and high flows. Additionally, the trap was not operated on 11 July 2017, 02 August 2017, 09 August 2017, 21-22 August 2017, 06-12 September 2017, 16 September 2017, 19 September 2017, 26 September 2017, 03 October 2017, 27-28 October 2017, and 07-08 November 2017 due to staff shortages. When the trap was operated, juvenile fish were enumerated, biological data collected, and a sub-sample were tagged with PIT or stained with Bismarck brown. A number of in-season calibrations occurred to improve the rotary screw trap dataset. These included upstream and downstream trap adjustments, left and right trap adjustments, digging out underneath the trap during low flows for depth adjustments. The depth adjustments were complete to allow the entire trap and cone to remain submerged and operated in the optimum position.

*Activity 2.6.6 Estimate broodyear 2015 and 2016 production by life stage (e.g., fry, parr, pre-smolt, and smolt); estimate mean survival, mean passage date, mean length, mean weight and condition.*

Broodyear 2015 and 2016 production estimates will be developed and included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Activity 2.6.7 Use PIT tagged juveniles to estimate mean survival, mean travel time, mean passage date from the rotary screw trap to 1) Yankee Fork instream array; 2) Lower Granite Dam; and 3) through FCRPS hydro-power system.*

Mean survival, mean travel time, and mean passage to the Yankee Fork PIT tag array, Lower Granite Dam, and other FCRPS projects will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Task 2.7 Conduct electrofishing to document juvenile distribution and estimate abundance, density, and overwinter survival*

*Activity 2.7.1 Conduct single-pass electrofishing at identified sample sites. Collect juvenile Chinook salmon and non-target species. PIT tag all juvenile Chinook salmon > 55 mm fork length, and collect biological data from all fish.*

Electrofishing was conducted in Eightmile Creek, mainstem Yankee Fork and West Fork Yankee Fork from mid to late September, 2017 in collaboration with crews and Columbia River Habitat Monitoring Program. Chinook salmon, bull trout, and steelhead all had biological data collected from them. We did not PIT tag fish because of time and staff constraints.

*Activity 2.7.2 Estimate the number of PIT tagged juvenile Chinook salmon detected at the rotary screw trap and/or Yankee Fork array and estimate overwinter*

*survival, movement post screw trap operations, and relate survival to mechanistic factors (e.g., length, weight, distance upstream, etc).*

Total number of pit tagged juvenile Chinook salmon detected at the rotary screw trap and/or Yankee Fork array will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report. This data is currently archived on PTAGIS website.

*Task 2.8 Monitor and evaluate hatchery juvenile Chinook salmon broodyear release*

*Activity 2.8.1 Use PIT tags to estimate hatchery Chinook salmon smolt survival from release to: 1) Yankee Fork array and 2) Lower Granite Dam. Estimate mean passage date and mean travel time to each detection point.*

We plan to use PIT tags to develop survival and outmigration estimates of the hatchery Chinook salmon smolt releases to the Yankee Fork PIT tag array, Lower Granite Dam, and other FCRPS projects. These analyses will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Task 2.9 Conduct creel survey of Tribal fisherman in Yankee Fork*

*Activity 2.9.1 Conduct statistically valid creel survey on Tribal fisherman in Yankee Fork Salmon River.*

Creel surveys were conducted daily in Yankee Fork from June 25, 2017 – August 17, 2017. A total of 51 passes were completed in Yankee Fork. During each survey, fishery monitors collected catch per unit effort (CPUE) data from Tribal fishermen. CPUE data included number of fishermen, number of days fished, amount of time fished, number of fish caught, type of gear used, origin, and length of fish harvested. These surveys were completed in coordination with the Tribal Fish and Game Department and in conjunction with other daily program activities (e.g., checking screw trap and weirs).

*Activity 2.9.2 Estimate total hatchery and natural Chinook salmon harvested.*

Overall, Tribal fishing efforts were both very low because of low adult escapement. Preliminary estimates indicate no fish were harvested by Tribal members.

*Task 2.10 Conduct weekly spawning ground surveys in Yankee Fork*

*Activity 2.10.1 Develop spawning ground survey protocol and conduct redd count training.*

The Tribes conducted spawning ground survey training for inexperienced crew members during the first week of spawning ground surveys in 2017. Staff attended IDF&G's Spawning Ground Survey Training. The training was furthered by pairing experienced crew members with inexperienced crew members to insure adherence to protocol established by the Shoshone-Bannock Tribes.

*Activity 2.10.2 GPS, ribbon-mark, and record the location and number of Chinook salmon redds on a weekly basis.*

GPS coordinates were recorded for all observed redds with portable GPS devices and documented on datasheets. Additionally, all observed redds were marked with survey flagging that included the location, unique redd ID, and number of redds observed. Spawning ground surveys were conducted on a weekly basis in 2017 from August 07, 2017 – September 09, 2017.

*Activity 2.10.3 Collect spawned-out carcasses for mark-recapture estimate and percent spawned.*

All observed carcasses were collected and examined for mark-recapture information, including operculum punches, PIT tags and coded-wire tags. Carcasses were cut open in the midsection to verify sex and determine if females were completely spawned, partially spawned, or were pre-spawn mortalities. Additionally, GPS locations of all carcasses were recorded.

*Activity 2.10.4 Collect genotypic and phenotypic information from all carcasses.*

Phenotypic information was collected for all observed carcasses. Genotypic information was collected for most of the observed carcasses, but some highly decayed carcasses did not allow for genotypic sample collection.

*Activity 2.10.5 Develop fish/redd estimate for area upstream of Pole Flat Weir.*

The fish/redd estimates will be in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Task 2.11 Estimate total hatchery and natural adult Chinook salmon escapement to Yankee Fork*

*Activity 2.11.1 Use mark-recapture data to estimate adult Chinook salmon escapement above Pole Flat weir. Estimate the natural and hatchery contributions from carcasses recovered above Pole Flat weir. If insufficient carcasses are obtained, use the hatchery and natural fraction observed at Pole Flat weir to estimate contributions by origin.*

Hatchery and natural adult escapement estimates will be conducted based on weir and spawning ground survey data collected during the 2017 field season. These estimates are in progress and will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Activity 2.11.2 Use fish/redd expansion factor to estimate the number of adult Chinook salmon escaping to the area below Pole Flat weir. Estimate the natural*

*and hatchery contributions from carcasses recovered below Pole Flat weir. If insufficient carcasses are obtained, use the hatchery and natural fraction observed at Pole Flat weir to estimate contributions by origin.*

Fish/redd estimates below Pole Flat weir will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report.

*Activity 2.11.3 Estimate adult Chinook salmon escapement to the Yankee Fork array using PIT tagging efforts at Lower Granite Dam; coordinate estimates with ISEMP.*

This analysis will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report once escapement estimates are finalized.

*Activity 2.11.4 Compare and contrast the estimated hatchery and natural adult Chinook salmon escapement estimates to the escapement estimate derived at the instream PIT tag array utilizing PIT tags.*

This analysis will be included in the 2017 Yankee Fork Salmon River Chinook Salmon Run Report once escapement estimates are finalized.

### **Objective 3: Yankee Fork Steelhead Project**

#### *Task 3.1 Program Planning and Environmental Compliance Requirements*

*Activity 3.1.1 Assist with Magic Valley Fish Hatchery HGMP development; submit HGMP to NOAA-Fisheries in coordination with IDFG and LSRCF; address comments, and proceed through consultation process (contingent upon NOAA Fisheries schedule).*

Staff met with the USFWS, IDFG, and NMFS on a regular basis to develop proposed actions and draft Biological Opinions.

*Activity 3.1.2 Assist in the development of a coordinated monitoring, research, and evaluation plan.*

Staff are working with Dan Warren and Associates to complete a Strength, Weaknesses, Opportunities, and Threats assessment of our monitoring, research, and evaluation program. A final RM&E Plan will be completed in 2018.

*Activity 3.1.3 Acquire a special use permit from the Salmon-Challis National Forest to operate a temporary picket weir to trap steelhead near the outlet of Pond Series 1.*

The Tribes received a permit to trap steelhead in the Yankee Fork Salmon River in 2017.

*Activity 3.1.4 Contingent upon HGMP approval; submit an ESA Section 10 Scientific Research Permit to NOAA Fisheries to trap and collect adult steelhead broodstock in Yankee Fork.*

We included this language in “Nine Snake River Steelhead Hatchery Programs and one Kelt Reconditioning Program in Idaho” Biological Opinion.

*Activity 3.1.5 Coordinate the Yankee Fork Salmon River Satellite Facility to meet the needs of the proposed program.*

The EIS for the Yankee Fork satellite facility is still in consultation. We conducted multiple analyses of migration timing to inform whether the Yankee Fork weir would meet the needs of the steelhead program and when it would be operated.

*Activity 3.1.6 Assist with Environmental Impact Statement and NEPA process regarding the construction of the Yankee Fork Salmon River Satellite Facility.*

We commented on multiple parts of the Crystal Springs NEPA process and provided summarized data and analyses to inform analyses.

*Task 3.2 Hatchery juvenile B-run steelhead smolt out-planting*

*Activity 3.2.1 Coordinate hatchery smolt outplanting activities, including the dates of outplanting, release locations, and truck logistics.*

Steelhead smolt releases occurred between April 14, 2017 and May 1, 2017. The smolts were placed in either Pond Series 1 for acclimation or placed directly in the Yankee Fork. Magic Valley Fish Hatchery was in charge of all truck logistics.

*Activity 3.2.2 Prepare smolt release sites; snow removal, pipe installation, and pipe removal.*

Snow was cleared for all operations during late March. Smolt pipes for the PS1 and for the direct stream site in the middle of April. Pipe removal occurred on May 1, 2017 after the final release of direct stream steelhead smolts.

*Activity 3.2.3 Help unload smolts at desired release locations.*

At least one tribal staff member was present for all smolt releases in Yankee Fork.

*Task 3.3 Conduct creel survey of Tribal fisherman in Yankee Fork*

*Activity 3.3.1 Conduct statistically valid creel survey on Tribal fisherman in Yankee Fork Salmon River.*

Creel surveys were conducted daily in Yankee Fork from 10 April 2017 – 10 May 2017. A total of 31 passes were completed in Yankee Fork. During each survey, fishery monitors collected catch per unit effort (CPUE) data from Tribal fishermen. CPUE data included number of fishermen, number of days fished, amount of time fished, number of fish caught, type of gear used, origin, and length of fish harvested. These surveys were completed in coordination with the Tribal Fish and Game Department and in conjunction with other daily program activities (e.g., checking screw trap, smolt releases, etc.).

*Activity 3.3.2 Estimate total hatchery and natural steelhead harvested.*

Preliminary estimates indicate two fish were harvested by Tribal members.

*Activity 3.3.3 Participate in the Annual Kids Steelhead fishing trip to the Yankee Fork; estimate harvest.*

The Annual Kids Steelhead fishing trip, unfortunately did not happen in 2017. It was cancelled by the Recreation Department

*Task 3.4 Operate and Maintain Pond Series 1 Weir*

*Activity 3.4.1 Install a temporary picket weir near the outlet of Pond Series 1 and operate until the steelhead runs ceases.*

We operated two weirs for steelhead, one on Pond Series 1 and another on Pond Series 3. The weirs were installed on 04 April 2017 – 04 May 2017 when high flows over-topped the weirs.

*Activity 3.4.2 Operate and maintain temporary picket weir on a daily basis. Ensure the trapping device is operating properly by cleaning and removing debris and ensuring pickets are secured the streambed interface. Collect fish carcasses from weir daily and sample for biological information and mark-recapture analysis.*

Weirs on Pond Series 1 and Pond Series 3 were operated from 04 April 2017 – 04 May 2017 when high flows over-topped the weirs.

*Activity 3.4.3 Enumerate adult steelhead and all other species trapped in the weir daily. Mark steelhead released above the weir with a right operculum punch for genetic analyses and mark-recapture analysis. Collect biological information from all trapped steelhead (e.g., length, weight, gender, origin, tissue, scale) and identify pre-existing marks or tags.*

We captured 52 steelhead in total (17 NOR and 35 HOR). 44 individuals were captured at the Pond Series 1 weir (12 NOR, 32 HOR) and 8 individuals at the Pond Series 3 weir (5 NOR, 3 HOR). Biological data will be included in the 2017 Steelhead Run Report.



*Activity 3.4.4 Collect broodstock according to HGMP and/or MOA and transfer to East Fork Salmon River satellite facility or Sawtooth. If adult steelhead are collected for broodstock and held at the East Fork Satellite Facility, monitor adults and coordinate with Sawtooth to maximize fish health.*

Some steelhead captured the Pond Series weirs were collected for broodstock and transferred to Sawtooth Fish Hatchery in 2017.

*Activity 3.4.5 Develop schedule and spawn adult steelhead at East Fork (or Sawtooth) and collect eggs. Transfer fertilized eggs to Sawtooth (if spawned at East Fork Satellite Facility) for egg incubation and final rearing.*

It was determined that the Sawtooth Fish Hatchery would transfer broodstock in 2017 from the Pond Series to Pahsimeroi Fish Hatchery for spawning. SBT effort was deemed unnecessary.

#### Monitoring and Evaluation Tasks:

*Task 3.5 Monitor and evaluate hatchery smolt releases*

*Activity 3.5.1 Use PIT tags to estimate hatchery steelhead smolt survival from release to: 1) Yankee Fork array and 2) Lower Granite Dam. Estimate mean passage date and mean travel time to each detection point.*

These analyses will be included in the 2017 Steelhead Run Report

*Task 3.6 Estimate total hatchery and natural adult steelhead escapement to Yankee Fork.*

*Activity 3.6.1 Estimate the number of hatchery (by release group) and natural adults that return to the Yankee Fork PIT array.*

Completed and included in “Ebel, J. D. 2017. Technical Memorandum: Migration timing of hatchery and natural origin steelhead in the Yankee Fork Salmon River, ID 2012-2017. Shoshone-Bannock Tribes’ Fish and Wildlife Department, Fort Hall, Idaho.” This data will be summarized in the 2017 Steelhead Run Report.

*Activity 3.6.2 Record the number of hatchery (by release group) and natural adults that are trapped at the picket weir.*

Zero hatchery steelhead were trapped at the Pole Flat picket weir.

#### **Objective 4: Synthesize project results in the form of annual reports**

*Task 4.1 Provide Annual/Final Progress Report for Fiscal Year 2016 Statement of Work associated with Cooperative Agreement # F14AC00015.*

*Activity 4.1.1 Develop and submit a final 2016 Annual/Final Progress Report by December 31, 2016*

The 2016 Annual/Final Progress Report was completed by Field Biologist Joshua Jackson and provided to the LSRCP Office on December 30, 2016.

*Task 4.2 Provide summary reports for applicable permits*

*Activity 4.2.1 Develop and submit a final 2016 Summary Report for the IDFG Scientific Collecting Permit by January 31, 2017.*

The final 2016 Summary Report for the IDFG Scientific Collection Permit was completed and submitted on 23 January 2017.

*Activity 4.2.2 Develop and submit the final 2016 Summary Report for the NOAA Fisheries ESA Section 10 – 1127 Scientific Research Permit by January 31, 2016.*

The final 2016 NOAA Scientific Research Permit Report was completed and submitted.

*Activity 4.2.3 Coordinate with LSRCP (Mark Robertson) on ESA related reporting or permit development with LSRCP funded salmon or steelhead activities, including monitoring and evaluation activities.*

Our program coordinated with Mark Robertson to help develop the “Hells Canyon and Salmon River Steelhead and Spring/Summer Chinook Salmon Programs”.

*Task 4.3 Provide 2016 Yankee Fork Chinook Salmon Run Report*

*Activity 4.3.1 Develop and submit the draft 2015 Yankee Fork Salmon River Chinook Salmon Run Report by December 31, 2016. Develop and submit the draft 2016 Yankee Fork Salmon River Chinook Salmon Run Report by March 31, 2017.*

The draft 2016 Yankee Fork Chinook Salmon Run Report is drafted, but requires revision to more concisely describe the data collected with reference to the Statement of Work. It will be submitted with the 2017 Annual Run report.

*Activity 4.3.2 Develop and submit the final 2016 Yankee Fork Salmon River Chinook Salmon Run Report by June 31, 2017.*

Please see above (Activity 4.3.1)

*Task 4.4 Provide 2016 Yankee Fork Steelhead Run Report*

*Activity 4.4.1 Develop and submit the draft 2015 Yankee Fork Salmon River Steelhead Run Report by 31 December 2016. Develop and submit the draft 2016 Yankee Fork Salmon River Steelhead Run Report by 31 March 2017.*

Due to staff shortages, the 2016 steelhead report is partially drafted and the 2015 steelhead report has not been started. These will be submitted with the 2017 Steelhead Run Report.

*Task 4.5 Provide Fiscal Year 2017 Statement of Work and Budget.*

*Activity 4.5.1 Develop and submit the draft FY 2017 Statement of Work and Budget according to LSRCF timeline.*

The FY 2018 Statement of Work and Budget was completed and submitted in June 2017.

*Task 4.6 Provide Monthly Vehicle Reports*

*Activity 4.5.1 Submit a monthly vehicle report for each vehicle at each facility by the 5<sup>th</sup> day after the end of each month; include mileage for each vehicle.*

No monthly vehicle reports were submitted because all of our vehicles are owned by the Tribes.

*Task 4.7 Participation and Use of FINS Database*

*Activity 4.7.1 Attend FINS introduction/ training session by PFMFC staff and other FINS group participants (location to be determined) and provide input on implementation on SBT data on LSRCF program into FINS.*

Our field biologist attended the FINS workshop. Adult weir collection data was submitted into the FINS system. Additionally, all live fish data (weir and rotary screw trap data collection) is digitally recorded upon collection in BigFin Scientific and FINS.

*Activity 4.7.2 Start transitioning SBT data collections into FINS that are LSRCF funded programs*

We acquired and set up the hardware and software infrastructure to collect data in FINS in 2016-2017. All adult weir data was collected into FINS. We are in the process of working on transitioning screw trap data into FINS.