Anadromous Fish Program (AFP)
Federal Fiscal Year 2016 Annual/Final Progress Report

Prepared by:

Joshua Jackson and Lytle Denny

Shoshone-Bannock Tribes
Fish and Wildlife Department
3rd and B Avenue
Fort Hall, Idaho
(208) 239-4560

Prepared for:

United States Fish and Wildlife Service
Lower Snake River Compensation Plan – Office
1387 S. Vinnell Way, Suite 343
Boise, Idaho 83709

Cooperative Agreement F16AC00032
October 1, 2015 – September 30, 2016

January 31, 2017

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.

February 9 – Lytle Denny, Melissa Evans, Josh Jackson, and Rebecca Croy attended the Salmon River AOP/SOP meeting in Boise.

March 9 – Melissa Evans, Lytle Denny, and Dan Stone participated in a conference call with individuals from D. J. Warren & Associates to discuss our strategy for getting Hatchery Genetics Management Plans completed and/or approved by NOAA-Fisheries.

March 15-17 – All program staff members (excluding Joi Soldier) attended the Lower Snake River Compensation Plan's annual meeting in Boise, Idaho.

April 26 – Lytle Denny participated in a conference call with D. Warren and Associates and NOAA, regarding Crystal Springs' HGMPs.

May 2 – Lytle Denny participated in a conference call on Crystal Springs HGMPs.

In addition, program staff reviewed correspondence related to IDFG's Fish Marking Plans and annual harvest plans for salmon and steelhead returns to the Salmon River basin.

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.

January 6 – Melissa Evans participated in a conference call with Evan Brown and Chris Harrington from IDFG.

January 12 – Lytle Denny, Carlos Lopez, Melissa Evans, Josh Jackson, Rebecca Croy, and Rebecca Arsenault participated in a conference call with IDFG regarding future plans for steelhead trapping in Yankee Fork.

January 14 – Lytle Denny participated in the US vs. Oregon PAC conference call.

January 14 – Melissa Evans held a conference call with Matt Campbell and IDFG lawyer, Dallas Burkhalter, regarding a proposed ICA for genetics work.

January 20 – Lytle Denny, Melissa Evans, Danny Stone, Justin Guardipee, Josh Jackson, Rebecca Croy, and Rebecca Arsenault participated in a coordination meeting with the U.S. Forest Service regarding proposed actions at Panther Creek and to provide an update on the Crystal Spring Hatchery planning process.

January 21 – Lytle Denny, Melissa Evans, Josh Jackson, Rebecca Croy, and Rebecca Arsenault attended the Columbia Habitat Monitoring Program (CHaMP) presentation in Fort Hall by Boyd Bouwles.

February 2 – Lytle Denny, Melissa Evans, Josh Jackson, Rebecca Croy, and Rebecca Arsenault participated in a conference call with the USFS regarding Panther Creek permitting.

February 16 – Lytle Denny, Carlos Lopez, Josh Jackson, and Rebecca Croy attended a meeting with Trout Unlimited.

February 24 – Melissa Evans and Lytle Denny participated in the U.S. vs. Oregon Production Advisory Committee (PAC) meeting.

March 1 – Melissa Evans and Josh Jackson traveled to Challis, Idaho to attend the Yankee Fork Interdisciplinary Team Meeting.

April 13 – Lytle Denny participated via conference call in the Snake Basin Coordination Meeting.

April 14 – Lytle Denny participated via conference call in the U.S. vs. Oregon Production Advisory Committee (PAC) Meeting.

April 27 – Lytle Denny participated in the U.S. vs. Oregon PAC meeting.

May 23-24 – Melissa Evans traveled to Boise/Eagle to visit IDFG's Genetics Lab.

May 23-24 – Melissa Evans met with Matt Campbell and staff at IDFG's Genetics Lab in Eagle.

May 31 – Lytle Denny and Melissa Evans participated in the Snake Basin Coordination Meeting.

May 31 – Lytle Denny and Melissa Evans participated in a conference call with Biomark, Inc.

June 7 – Melissa Evans and Lytle Denny participated in the Snake Basin coordination meeting.

June 14 – Melissa Evans and Lytle Denny participated in the Snake Basin coordination meeting.

June 21 - Melissa Evans and Lytle Denny participated in the Snake Basin coordination meeting.

July 5 – Melissa Evans and Lytle Denny participated in the weekly Snake Basin coordination meeting.

July 6 – Lytle Denny corresponded with Sam Scharr (IDFG) regarding adult outplanting potential at Yankee Fork.

July 12 – Lytle Denny participated in the weekly Snake Basin coordination meeting.

July 19 – Melissa Evans and Lytle Denny participated in the weekly Snake Basin coordination meeting.

July 19 – Lytle Denny participated in a conference call with IDFG and the Nez Perce Tribe regarding upper Salmon River and South Fork Salmon River fisheries.

July 26 – Melissa Evans and Lytle Denny participated in the weekly Snake Basin coordination meeting.

August 2 – Melissa Evans participated in the Snake Basin coordination conference call.

August 11 – Lytle Denny met with Trout Unlimited regarding YF restoration projects.

August 19 – Melissa Evans and Lytle Denny held a conference call with IDFG's Eagle Fish Genetics lab on the status of genotyping projects.

August 23 – Lytle Denny and Melissa Evans participated in the Snake Basin coordination conference call.

August 30 – Melissa Evans and Lytle Denny participated in the Snake Basin coordination conference call.

September 6 – Lytle Denny participated in the Snake Basin coordination meeting call.

September 13 – Melissa Evans participated in the Snake Basin coordination meeting call.

September 20 – Melissa Evans participated in the Snake Basin coordination meeting call.

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).

Staff corresponded with NOAA Fisheries about our salmon and steelhead production programs and reminded NOAA that HGMPs had already been submitted and are awaiting comments. NOAA Fisheries was unable to identify when they would review our HGMPs. NOAA Fisheries

did indicate that when they were ready to move forward with the consultation process, they will likely start with spring Chinook salmon in the upper Salmon River.

Activity 2.1.2 Submit and acquire an IDFG Scientific Collection Permit

We acquired IDFG Scientific Collection Permit # F-09-06-16.

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

USFS Special Use Permit # YFK 84 expired during FY 2016. When we attempted to renew this permit, USFS stated that they would not renew said permit. USFS insisted that a new permit was not required as long as our activities do not deviate from previous years.

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

The Tribes met with IDFG and determined that an MOA was not needed in 2016 because nothing has changed since the 2010 MOA.

Task 2.2 Operate and Maintain Pole Flat Weir

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

Pole Flat Weir was installed on June 14 and removed on September 26, 2016. The weir was transported from Yankee Fork to the Tribes' satellite facility located in Clayton, Idaho for storage.

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 89 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.*

Pre-season planning efforts indicated that sufficient numbers of hatchery adults would be obtained at Sawtooth Fish Hatchery for the YFCSP. Therefore, all adult salmon trapped in Yankee Fork were released to spawn naturally.

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.*

We did not need to complete activity 2.2.5 because all Chinook salmon were released to spawn naturally.

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.*

From August 3, 2016 – September 16, 2016, 842 adult Chinook salmon were outplanted throughout Yankee Fork and West Fork Yankee Fork

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 gender.*

All adult outplants had their gender 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 2016 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 on February 19, 2016 – February 20 2016 and March 9, 2016 – March 10, 2016 for snow removal. On April 20, 2016 staff acquired extra smolt pipes from Sawtooth FH. Smolt pipes for PS1 release site were set up on April 16, 2016 and the direct stream release site on April 20, 2016. Block nets were placed in PS1 on April 18, 2016.

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.

Staff helped crowd and load juvenile Chinook salmon smolts at Sawtooth Fish Hatchery. We released these Chinook smolts during April 19, 2016. The block net was checked periodically to ensure a 72 hour acclimation in Pond Series 1.

Task 2.5 Operate and maintain the instream PIT tag array

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.

<u>Monitoring and Evaluation Tasks:</u>

Task 2.6 Estimate natural production at the rotary screw trap

Activity 2.6.1 Continue to operate rotary screw trap through the 2015 field season (October 1 – November 15, 2015) to estimate BY 2014 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 (±0.01g), 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 November 10, 2015. 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 2015.

The rotary screw trap was removed on November 10, 2015 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.

Activity 2.6.4 Install the rotary screw trap as soon as conditions permit in 2016.

The rotary screw trap was installed on March 30, 2016 as soon as conditions warranted.

Activity 2.6.5 Operate the rotary screw trap from April 1 – September 30, 2016 to estimate BY 14 smolt production and BY 15 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 March 30, 2016 and removed on November 7, 2016 for a total of 200 days of trapping. During this period, the screw trap was not operated on 23 days primarily as a result of juvenile smolt releases, extensive ice or freezing conditions, safety due to high streamflows, debris, or lack of personnel. 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 2014 and 2015 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 2014 and 2015 production estimates will be developed and included in the 2016 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 2016 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, McKay Creek, and West Fork Yankee Fork from mid to late September, 2016. Juvenile Chinook salmon > 55 mm fork length were PIT tagged. Chinook salmon, bull trout, and steelhead all had biological data collected from them.

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 2016 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 2016 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 16, 2016 – August 17, 2016. A total of 63 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 and similar to previous years 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 2016. The training was performed 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 2016 from August 12, 2016 – September 22 , 2016.

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 2016 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 Utilize 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 2016 field season. These estimates are in progress and will be included in the 2016 Yankee Fork Salmon River Chinook Salmon Run Report.

Activity 2.11.2 Utilize 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 2016 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 2016 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 2016 Yankee Fork Salmon River Chinook Salmon Run Report once escapement estimates are finalized.

Objective 3: Synthesize project results in the form of annual reports

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 LSRCP; address comments, and proceed through consultation process (contingent upon NOAA Fisheries schedule).*

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

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.*

We met with the Salmon-Challis National Forest and due to the timing and permitting necessary, a temporary picket weir near the outlet of Pond Series 1 to collect steelhead was not feasible. Instead, the tribes utilized tangle nets inside of the Pond Series to collect steelhead.

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.*

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 the process of being reviewed/accepted. Due to this we cannot move forward with a permanent satellite facility at this time.

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

The EIS for the Yankee Fork satellite facility is still in the process of being reviewed/accepted.

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 28, 2016 and May 3, 2016. 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.

Smolt pipes for the PS1 release site were set up on April 16, 2016 and the direct stream site on April 20, 2016. Pipe removal occurred on May 3, 2016 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 March 30, 2016 – May 17, 2016. A total of 49 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 no 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 2016. There were issues with availability during the time conditions were compatible for fishing.

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 met with the Salmon-Challis National Forest and due to the timing and permitting necessary, a temporary picket weir near the outlet of Pond Series 1 to collect steelhead was not feasible. Instead, the tribes utilized tangle nets inside of the Pond Series to collect steelhead for biological information and mark-recapture analysis.

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.

We met with the Salmon-Challis National Forest and due to the timing and permitting necessary, a temporary picket weir near the outlet of Pond Series 1 to collect steelhead was not feasible. Instead, the tribes utilized tangle nets inside of the Pond Series to collect steelhead for biological information and mark-recapture analysis.

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.

Steelhead captured from the tangle nets were marked with a right operculum punch for genetic analyses and mark-recapture analysis. Each steelhead was also sampled for biological information.

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.

No steelhead from the Pond Series were needed for broodstock in 2016.

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.

Since no steelhead were collected for broodstock in 2016 from the Pond Series, a schedule for spawning was not necessary.

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.

We plan to use PIT tags to develop survival and outmigration estimates of the hatchery steelhead smolt releases to the Yankee Fork PIT tag array, Lower Granite Dam, and other FCRPS projects. These analyses will be completed once a steelhead Research Biologist has been hired.

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.

The estimated number of hatchery and natural adults that return to the Yankee Fork PIT array data has been collected and uploaded. This analysis will be completed once a Steelhead Research Biologist has been hired.

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

One hatchery steelhead was trapped at the Pole Flat picket weir in 2016.

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

Task 4.1 Provide Annual/Final Progress Report for Fiscal Year 2014 Statement of Work associated with Cooperative Agreement # F14AC00015.

Activity 4.1.1 Develop and submit a final 2015 Annual/Final Progress Report by December 31, 2015

The 2015 Annual/Final Progress Report was completed and provided to the LSRCP Office on December 30, 2015.

Task 4.2 Provide summary reports for applicable permits

Activity 4.2.1 Develop and submit a final 2015 Summary Report for the IDFG Scientific Collecting Permit by January 31, 2016.

The final 2015 Summary Report for the IDFG Scientific Collection Permit was completed and submitted by the end of January 2016.

Activity 4.2.2 Develop and submit the final 2015 Summary Report for the NOAA Fisheries ESA Section 10 – 1127 Scientific Research Permit by January 31, 2016.

The final 2015 NOAA Scientific Research Permit Report was completed and submitted by the end of January, 2016.

Task 4.3 Provide 2015 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 March 31, 2016.

The draft 2015 Yankee Fork Chinook Salmon Run Report was completed and submitted.

Activity 4.3.2 Develop and submit the final 2015 Yankee Fork Salmon River Chinook Salmon Run Report by June 31, 2016.

The final 2015 Yankee Fork Salmon River Chinook Salmon Run Report was completed and submitted to the LSRCP office on May 25, 2016.

Task 4.4 Provide Fiscal Year 2017 Statement of Work and Budget.

Activity 4.4.1 Develop and submit the draft FY 2017 Statement of Work and Budget according to LSRCP timeline.

The FY 2017 Statement of Work and Budget was completed and submitted in June 2016.

Task 4.5 Provide Monthly Vehicle Reports

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

Monthly vehicle reports were submitted.