

# **Annual Work Plan Summary**

## ***Chief Joseph Hatchery Production Program***

This summary provides for the Operations and Maintenance (O&M) and administration of the Chief Joseph Hatchery (CJH) Program for production purposes. Specific activities and functions include: general maintenance of CJH facility, grounds and equipment (including acclimation ponds); acquiring adult broodstock (spring and summer/fall Chinook); holding and sorting of adult spring Chinook; adult holding of summer/fall Chinook; associated in-house and contracted fish health during adult holding of spring and summer Chinook and spawning/incubation of spring Chinook; sorting/spawning of spring Chinook; and incubation of spring Chinook eggs.

General administration activities including development of the annual CJH Statement of Work (SOW) and budget, Pisces reporting, annual report, monthly reports to BPA and cost-share partners (Grant County Public Utility District (GPUD), Douglas County Public Utility District (DCPUD) and Chelan County Public Utility District (CPUD)).

### **1. Segregated Spring Chinook Program:**

Spring Chinook adult broodstock from Leavenworth National Fish Hatchery (LNFH) will include the transfer of spring Chinook adults from LNFH to Chief Joseph Hatchery (CJH) via distribution truck by Colville Tribal staff and will target a transfer of 640 adults in May and June. Transferred adults will be from adult collection at LNFH performed by United States Fish and Wildlife Service (USFWS) personnel at LNFH and will include adults from across the run-at-large returning at LNFH. Adult spring Chinook transferred from LNFH to CJH will be held at CJH until spawning. During the adult holding period, CJH personnel will record pre-spawn mortalities daily and perform routine fish health activities such as daily chemical treatments (formalin) to control fungus and other such treatments as necessary to preserve the fish health integrity of the broodstock, and general maintenance and operation of the facility infrastructure supporting adult holding. During the sorting/spawning period, CCT staff will assess maturation state of adults, will assist the contracted fish health provider with acquiring fish health samples (ovarian and kidney/spleen) for bacterial and virology assessment, record pertinent biological data such as sex, origin, length, marks (ad-absent/ad-present) and sub-sample for CWT; will spawn gravid fish on a 1:1 ratio, fertilize eggs, record egg size, total eggs/female (weight samples) and transfer eggs to Heath trays for incubation and provide culture activities during the incubations stage of spring Chinook egg development (i.e. temperature control, chemical treatments to control fungus, general maintenance of facility infrastructure supporting incubation). After receipt of bacterial/viral analysis, staff will cull those eggs from the program as recommended by the contracted fish health provider.

### **2. Integrated and Segregated Summer/Fall Chinook Program:**

Summer/Fall Chinook broodstock will occur from July-October 15<sup>th</sup>. and consist various methods of collection, including: (1) purse seining at the confluence of the Okanogan River; (2) "rack returns" at the CJH adult ladder facility; (3) Okanogan River Temporary weir; (4) tangle-netting in Okanogan River estuary and Okanogan River; (5) beach seining in the

Okanogan/Similkameen rivers, and (6) potentially collections at the east and west ladders at Wells Dam. Collections may utilize any and/or all collection sites; however, prioritized collections locations are (1) purse seining at the Okanogan River confluence; (2) CJH ladder and (3) Okanogan Temporary Weir. Other collection methods will be employed as necessary to achieve the collection objective. Summer/fall broodstock collected via purse seine will be transferred from the purse seine to barges and then transferred to a distribution truck to CJH for holding until spawning. Fish collected via the other methods described above will be transferred via distribution truck to CJH for holding until spawning. The collection summer/fall broodstock will target 1206 adults (656 and 550 for the integrated and segregated program, respectively). During broodstock collection CCT staff will select broodstock (origin) with a target of 100% natural origin fish for the integrated program (656 adults) and 100% hatchery origin adults for the segregated program (550 adults). Identification of natural origin fish will be based on presence of the adipose fin and absence of coded-wire tag (CWT). Hatchery origin fish identification will be based on the absence of the adipose fin and /or the presence of CWT. Sex of fish collected for broodstock will also be determined prior to retaining broodstock (ultrasound) to assure that the collections acquire the appropriate sex ratio (1:1) to meet the production objectives. During the adult holding period, CJH personnel will record pre-spawn mortalities information (number, origin, sex, length, tags/marks) daily and perform routine fish health activities such as daily chemical treatments (formalin) to control fungus and other such treatments as necessary to preserve the fish health integrity of the broodstock. During the sorting/spawning period, CCT staff will assess maturation state of adults, will assist the contracted fish health provider with acquiring fish health samples (ovarian and kidney/spleen) for bacterial and virology assessment, record pertinent biological data such as sex, origin, length, marks (ad-absent/ad-present) and sub-sample for CWT; will spawn gravid fish on a 1:1 ratio, fertilize eggs, record egg size, total eggs/female (volumetric) and transfer eggs to Heath trays for incubation and provide culture activities during the incubations stage of summer / fall Chinook egg development (i.e. temperature control, chemical treatments to control fungus, general maintenance of facility infrastructure supporting incubation). After receipt of bacterial/viral analysis, staff will cull those eggs from the program as recommended by the contracted fish health provider.

### **3. Met Comp Reintroduction 10j Spring Chinook:**

Met Comp Spring Chinook will include transfer, acclimation and release of Met Comp Spring Chinook from Winthrop National Fish Hatchery (WNFH), in the fall, to the Tonasket (or Riverside pending water right application) acclimation Pond. Activities covered under this contract, for Met Comp Spring Chinook, will also include an eyed egg transfer of Met Comp Spring Chinook from WNFH to Chief Joseph Hatchery (CJH), in December.

All juveniles reared during this contract period, will be monitored daily, and will be reared in an environment meeting or exceeding HSRG guidelines. Mortality will be picked daily, and rearing parameters will be measured and monitored to ensure optimum survival in the hatchery environment. All fish will be fed a commercial diet that is of high quality, and promotes vigorous fish health.