

COLVILLE TRIBES FISH & WILDLIFE NEWS



Team from PCL, Tetra Tech and the Tribe head down to inspect the broodstock collection facilities.

CHIEF JOSEPH HATCHERY FACTS

- The goals of the project are: to increase the abundance, productivity, distribution, and diversity of natural spawning populations of spring/summer/fall Chinook salmon in the Okanogan and Columbia Rivers, and to help provide hatchery fish for tribal ceremonies and subsistence needs and increase recreational fishing opportunities.
- Construction of Grand Coulee and Chief Joseph dams eliminated the salmon from surrounding Reservation Rivers. To provide for losses of anadromous fish species, Congress authorized construction of four hatcheries in the 30's, but only three were previously built. Chief Joseph Hatchery is the fourth.
- Phase I began January 2010 and included four houses for hatchery staff, a domestic water supply, wastewater treatment, RV pads with power supply for additional staff, camping site and construction of two acclimation ponds at Omak and Riverside. Each pond can rear up to 400,000 Chinook for release into the Okanogan River. Prior to Phase I beginning, five production wells were drilled near and in Bridgeport State Park to supply groundwater for the hatchery.
- Phase II began December 2010 and involved completion of the water supply systems and main hatchery site. Work at the site includes the hatchery, office and storage buildings, headbox that filters surface water, strips excess nitrogen, adds oxygen and distributes water sources, two raceway structures, three rearing ponds, a fish ladder/spawning facility, and cleaning waste pond to concentrate and separate waste.
- The construction cost was approximately \$50 million and was funded by monies acquired through rate payer dollars, from Bonneville Power Administration through the Colville Tribe's Fish Accords.
- CJH is located on 15 acres of land owned by the Army Corp of Engineers, but within the boundaries of the Colville Indian Reservation; the Colville Tribe will operate the facility.
- The hatchery will employ up to 11 full-time employees.
- The hatchery was completed May 2013.
- The hatchery will start production in June of this year, and be fully ramped up by 2015 producing up to 2.9 million Chinook salmon annually.

SPECIAL THANKS TO THE PROJECT PARTNERS



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Aerial view of the Chief Joseph Salmon Hatchery.

CHIEF JOSEPH HATCHERY UPDATE

There has been a flurry of activity for Chief Joseph hatchery (CJH) staff in the last three months. Learning how to operate the facility, and preparing to receive the first brood fish, has taken up the majority of daily operations. Maintaining the facility, grounds, and equipment keeps the crew busy too! The commissioning and equipment testing process for the hatchery water supply was done in two phases. In the first phase hatchery staff learned how to operate the groundwater supply system and wells. Later, they started up the surface water system (water from the reservoir) and learned how to operate both groundwater and surface water systems to achieve desired water quality and temperatures at different times of the year. The commissioning process involved staff from PCL and Tetra Tech as well as hatchery operations personnel.

CJH staff have been running operational scenarios and learning the ins and outs of day-to-day operations. In this process, they have identified numerous issues that required

additional work to be performed by the contractor PCL, and specifically additional programming needs for the computer program that operates and monitors the entire facility. "These changes are exactly why these test runs are required as part of the contract," said Pat Phillips, CJH manager. "They have proven very beneficial to the staff. Couple that with the need to purchase and implement all of the equipment, supplies, and specific operational protocols of a large scale hatchery, you begin to understand why staff won't have the luxury of a normal routine for several months."

"Having the opportunity to participate in the CJH Project has been a very special experience," said John McGlenn, project engineer and vice-president of Fisheries for Tetra Tech. "I am proud to be part of the team working to restore healthy populations of Chinook to the Okanogan region. Thank you to the Colville Tribes, BPA, U.S. Army Corps of Engineers and PCL for the strong and committed partnership in this effort."

"After over two years of construction, it is exciting to see the facility being operated by the Colville Tribe in anticipation of taking brood in June," said Tyler Kautz, project manager for PCL. "There have been a lot of challenges to get to where we are today, and it is great to see the facility operators preparing for events that the Tribe has been waiting for since construction of the dam began in 1949."



Hatchery Manager re-checks SCADA system

COLVILLE TRIBE TO CELEBRATE OPENING OF CHIEF JOSEPH HATCHERY



Chief Joseph Hatchery Admin Building

The Confederated Tribes of the Colville Reservation will host a First Salmon and Ribbon Cutting Ceremony as it officially opens a state-of-the-art hatchery June 20 in Bridgeport, Wash., near Chief Joseph Dam. The facility will significantly boost Chinook salmon available for the tribe and sport fishing in the Columbia River as well as reintroduce spring Chinook to the Okanogan River.

The \$50 million hatchery will release up to 2.9 million Chinook salmon. The construction and program implementation was a collaborative effort between the Colville Tribes, the U.S. Army Corps of Engineers, the Bonneville Power Administration and Grant County Public Utility District. Additional partners include the Washington State Parks and Recreation, Douglas County Public Utility District and Chelan County Public Utility District.

“The opening of the Chief Joseph Hatchery is a cause for celebration for the Tribe,” said John Sirois, Chairman of the Confederated Tribes of the Colville Reservation. “It commemorates both the return of the Chinook salmon and serves as a testament to the important and meaningful work that can be accomplished when federal, tribal, and state entities come together for the common purpose of restoring our Columbia River.”

The completed project is due in part to a historic agreement, the Columbia Basin Fish Accords, signed in 2008 that enables a greater level of cooperation between federal agencies in the northwest responsible for salmon recovery efforts and Tribes as well providing assured funding for numerous projects over a 10-year period.

“At the heart of this project is a lasting partnership that leverages the combined capabilities of the Colville Tribe and state and federal agencies to bring ecological, social and economic benefit to the Columbia River Basin,” said Lorri Bodi, the vice president of BPA’s Environment, Fish & Wildlife department.

The main hatchery facility is located on 15 acres of U.S. Army Corps of Engineers property on the north bank of the Columbia River within the boundaries of the Colville Indian Reservation. The Colville Tribes will manage the hatchery under guidelines recommended by the Hatchery Scientific Review Group, a committee of scientists that reviewed all salmon and steelhead hatcheries in the Columbia Basin at the request of the U.S. Congress.

The complex will include 40 raceways (10-foot by 120-foot), three rearing ponds and three acclimation ponds (both onsite and

offsite at the Okanogan River). It will draw water from a combination of production wells and the reservoir behind the dam, Rufus Woods Lake.

“The U.S. Army Corps of Engineers is committed to working with Tribes as equal partners on programs and projects beneficial to Tribes, and to address protected Tribal resources and rights,” said Col. Bruce Estok, Commander, U.S. Army Corps of Engineers, Seattle District. “This state-of-the-art facility will provide benefits to the Colville Tribe and the entire Columbia River Basin. It is representative of what can be accomplished through meaningful partnerships among the Tribe and state and federal agencies to achieve a common goal.”

The hatchery will help to rebuild naturally spawning salmon runs in areas impacted by the construction and operation of the Federal Columbia River Power System as well as provide partial mitigation for hydro project impacts to Upper Columbia Chinook salmon associated with the operation of the Mid-Columbia Public Utility District dams on the Columbia River.

“We are proud to celebrate our collective achievements and look forward to a long-lasting relationship with the Colville Tribe and the other partners involved with this important program,” said Terry Brewer, Grant PUD Commission President.

The days’ activities are open to the public and take place at both the Chief Joseph Hatchery Administration Building off of State Park Golf Course Road east of Washington State Route 17 as well as a park adjacent to the hatchery. Attendees can park at the Quik-E-Mart gas station in Bridgeport where shuttles will transport people to event and back. Look for the parking signs.



Tetra Tech’s project manager John McGlenn, and his able project engineer, Darrel Nice, make a final adjustment to the valves in the headbox.



CHIEF JOSEPH HATCHERY AT A GLANCE

1. RESERVOIR WATER INTAKE

On the upstream face of Chief Joseph Dam, a screened intake draws water from the dam’s reservoir for use at the hatchery. A 36" steel pipe on the downstream face of the dam delivers the water to a buried pipeline starting near the foot of the dam.

2. RESERVOIR WATER PIPELINE

The buried pipeline conveys water drawn from the dam’s reservoir to the hatchery headbox.

3. FISH LADDER

Cool water from the hatchery flows through this ladder to attract adult Chinook salmon that have returned after several years in the ocean.

4. ADULT SALMON RACEWAYS

Adult salmon (“broodstock”) that enter the fish ladder are directed to holding tanks, called “raceways.” There they are held until their eggs ripen.

5. SPAWNING BUILDING

In the spawning building, fish culturists collect and fertilize eggs from the returned adult fish. The fertilized eggs are transferred to the main hatchery, where they are placed in incubators.

6. MULTI-USE PIPELINE CORRIDOR

Major pipelines run through the corridor between the main hatchery and the broodstock area. These include the reservoir water supply line going to the headbox, a groundwater supply line going to the spawning building, and a hatchery water discharge line going to the fish ladder.

7. ADMINISTRATION BUILDING

Hatchery managers and administrative staff work in this building, which also features meeting space and a display area.

8. PUBLIC USE TRAIL

A trail outside the fenced hatchery grounds has been reconstructed for public use.

9. GROUNDWATER PIPELINE CORRIDOR

A pipeline buried in this corridor delivers groundwater to the hatchery from five wells at Bridgeport State Park.

10. HEADBOX

The headbox is the central arrival point for water supply to the hatchery. Groundwater and reservoir water are aerated, excess nitrogen is removed, the river water is filtered, and the water is conveyed to various end uses at the hatchery.

11. STORAGE BUILDING

This building is the hatchery’s home for supplies, spare parts, vehicles and trailers.

12. HATCHERY BUILDING

This 14,000-square-foot building is where eggs are incubated and salmon fry are raised. It also houses a laboratory, a shop area, some offices, fish food storage, and equipment for treating and chilling water.

13. REARING RACEWAYS

Chinook salmon fry are raised to small fingerlings and smolts in these two banks of 20 raceways, each 10 feet wide and 110 feet long.

14. REARING PONDS

Chinook salmon are raised from fingerlings to smolts in 210-footlong rearing ponds—one that is 80 feet wide and two that are 50 feet wide.

15. CLEANING WASTE POND

Fish waste from the rearing raceways and ponds settles in this pond for later removal from the site.

16. GENERATOR

A generator is available on site to provide power in the event of failure of the main power source for any reason.