Northwest Power and Conservation Council

April 29, 2010

DECISION MEMORANDUM

TO: Council members

FROM: Mark Fritsch, project implementation manager

SUBJECT: Step 3 review of the *Chief Joseph Hatchery Program*, Project # 2003-023-00.

PROPOSED ACTION: Council staff recommends that the Council approve this project for construction and operation.

SIGNIFICANCE

On November 16, 2009 the Confederated Tribes of the Colville Reservation submitted the monitoring and evaluation plan for the *Chief Joseph Hatchery Program*, Project # 2003-023-00 to the Council as part of Step 3 review. In addition, the Colville Tribes submitted final design and construction plans including costs and discussion of the permitting and environmental reviews required for construction of the Chief Joseph Hatchery. The submittals are intended to address the conditions the Council placed on the project during Step 1 (approval of the master plan[1]) and Step 2.[2] At the May Council meeting, Council staff will provide an overview of the Step 3 submittal and propose recommendations for the final design and construction phase of the project.

The goal of the Chief Joseph Hatchery Program (CJHP) is to increase the abundance, distribution, and diversity of naturally spawning populations of summer/fall Chinook salmon and related fisheries in the Okanogan River and in the Columbia River above Wells Dam by constructing a hatchery and acclimation ponds, and instituting terminal, selective fisheries. The proposed facility also will be used to reintroduce extirpated spring Chinook salmon to their historical habitats in and around the Colville Reservation and to re-establish a ceremonial and subsistence fishery. A summary of the proposed production follows.

[1] March 15, 2005 the Council gave a conditional approval of the step 1 submittal (master plan).
[2] May 12, 2009 the Council gave a conditional approval of the step 2 submittal (preliminary design).

I. The summer/fall Chinook components of the CJHP consist of two complementary programs:

- A short-term integrated recovery program designed to increase abundance, distribution, and diversity of naturally spawning summer/fall Chinook salmon within their historical Okanogan subbasin habitat and provide compatible harvest opportunities.

The summer/fall Chinook population in the Okanogan River at present is supported by natural production and by a single hatchery program that produces up to 576,000 yearling smolts annually. The proposed CJHP will increase production of juvenile summer/fall Chinook for the Okanogan River by 400,000 early-arriving and 700,000 later-arriving fish.

- A longer-term integrated harvest program.

The summer/fall Chinook integrated harvest program is designed to support a tribal ceremonial and subsistence fishery and to provide increased recreational fishing opportunities for local citizens. To support the integrated harvest objectives, 500,000 early-arriving, and 400,000 later-arriving summer/fall Chinook will be released at Chief Joseph Hatchery.

Total new production for the production and harvest purposes is therefore up to 2,000,000 summer/fall Chinook.

II. Spring Chinook components of the CJHP:

The Colville Tribes have developed a two-phase management plan to reintroduce extirpated spring Chinook. The CJHP would provide the artificial production facilities necessary for this phased reintroduction. A combination of existing and new facilities will be used to accomplish the program objectives.

The CJHP spring Chinook component includes two complementary parts:

- An integrated recovery program designed to restore naturally spawning spring Chinook populations to their historical habitats in and around the Colville Reservation. The spring Chinook integrated recovery program will initially reintroduce naturally spawning populations of Leavenworth stock spring Chinook into Omak Creek on the Colville Reservation.

- An isolated harvest program designed to restore a stable ceremonial and subsistence fishery, and to provide increased recreational fishing opportunities for local citizens. The isolated harvest program will support selective fisheries in the Okanogan River and in the Columbia River from Wells Dam upstream to the tailrace of Chief Joseph Dam. These fisheries will target the Leavenworth-stock spring Chinook produced in the program.

BUDGETARY/ECONOMIC IMPACTS[3]

The total estimated cost for the CJHP through Fiscal Year 2009 was about $10.8 million and includes the master plan, necessary research studies, conceptual, preliminary and final engineering designs and construction specifications, environmental review, permitting, extensive technical and independent reviews to meet U.S. Army Corps of Engineers (Corps) requirements and a construction bidding process and contractor reviews. Construction of all project elements and management for the CJHP is estimated at about $40 million, assuming that project construction would be initiated in Fiscal Year 2010 and major construction in Fiscal Year 2011 and 2012. The total cost for all aspects of this proposed project, including the master plan, necessary research studies, conceptual, preliminary and final engineering designs, environmental review, permitting, extensive technical and independent reviews to meet Corps requirements, construction bidding process and contractor reviews, capital equipment purchases, land purchases for the Omak and Riverside acclimation ponds and O&M and M&E start-up, is estimated to be about $60 million. Annual operation and maintenance costs after facilities are fully developed would be approximately $1.9 million (in 2012 dollars) annually. Monitoring and evaluation is estimated to cost about $700,000 (in 2012 dollars) annually.

A summary of costs from Fiscal Year 2003 through Fiscal Year 2018 including the assumptions utilized in development of these costs is attached to this memorandum as Table 1.. Capital funds for the project addressed in this Step 3 submittal are reserved in the Memorandum of Agreement (MOA) budgets totaling $41,036,547. The funding identified in the MOA is expected to be a maximum. Anticipated cost sharing of CJHP with mid-Columbia public utility districts should significantly supplement federal costs, by up to 35 percent.

BACKGROUND

In December 2001, as part of the solicitation associated with the Columbia Cascade Province, the Colville Tribes submitted a series of seven new proposals to address habitat restoration; fish propagation; fish harvest; and research, monitoring, and evaluation needs in the Okanogan subbasin.

In October 2002 the Council recommended a total of four new proposals that included two of the original series of seven new proposals submitted by the Colville Tribes -- Proposal #29040 *Develop and Propagate Local Okanogan River Summer/Fall Chinook* and proposal #29033 *Design and Conduct Monitoring and Evaluation Associated with the Re-establishment of Okanogan Basin Natural Production.* The proposals were consolidated into one project titled *Chief Joseph Dam Hatchery Program (*Project # 2003-023-00). In April 2003, Bonneville agreed to fund development of the CJDHP Master Plan and in July 2003, Bonneville negotiated a contract with the Colville Tribes to develop a CJDHP Master Plan.

[3] This project is part of the Columbia Basin Fish Accords. In May 2008, Bonneville, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation (the "Action Agencies") signed an agreement with the Confederated Tribes of Colville Reservation.

I. Major Project Review (The Three-Step Review process)

A. Step 1 – Conceptual Phase (Master Plan)

On May 26, 2004, the Colville Tribes submitted the Master Plan. The spring Chinook components in the CJHP Master Plan were presented in a single separate chapter and all costs and facility requirements were presented as separate components. Council staff determined that the inclusion of this additional information at the Step 1 Master Plan stage benefited both plan reviewers and decision-makers.

On June 9, 2004, the Council supported the staff recommendation that the spring Chinook component of the submitted Chief Joseph Hatchery Program Master Plan be reviewed by the ISRP.

On January 12, 2005, the ISRP provided the Council with its review of the Chief Joseph Hatchery Program Master Plan (ISRP Document 2005-02). The ISRP comments generally confirmed the content and the basis of the master plan for both the summer/fall and spring Chinook components, including support for the proposed research projects (i.e., a radio telemetry study to better understand the migration and spawn timing of the Okanogan summer/fall Chinook, and a study to test and develop live-capture, selective fishing gear for collection of local broodstock). The ISRP suggested revising the master plan to accommodate its comments. The ISRP raised issues that needed to be addressed as the project proceeded in its development. In summary, six issues were raised:

1. A specific time frame process (i.e., decision tree) that outlines the expected range of the production scenarios
2. Additional discussion on the proposal as it relates to alternative forms of mitigation
3. Additional detail regarding the proposal and the relationship to the BAMP (Biological Assessment and Management Plan[4])
4. Better integration with other Council and basinwide documents (i.e., subbasin plans)
5. Basic information regarding the in-basin and out-of-basin assumptions concerning survival, and
6. More detail on methods, designs (including controls), and hypotheses in the monitoring and evaluation plan

On March 15, 2005, the Council approved the Step 1 review of the *Chief Joseph Hatchery Program*, Project # 2003-023-00 and recommended conditions associated with Step 2. The specific language associated with the recommendations and approved budget was as follows:

- The Council approved the Chief Joseph Hatchery Program Step 1 Master Plan, including the spring Chinook component and the two research studies.[5]

[4] The Master Plan benefits from a foundation laid by development of the Habitat Conservation Plans (HCPs) developed among entities affected by three of the mid-Columbia PUD dams, Wells, Rocky Reach and Rock Island. The BAMP presents a plan for operation and evaluation of anadromous salmonid hatcheries in the Columbia River upstream of the Yakima River confluence. Although the BAMP has not been formally approved, it includes broadly supported genetic and ecological assessments of summer/fall Chinook, spring Chinook, sockeye, and steelhead.

[5] The first critical study consisted of radio-telemetry research to determine where and when summer/fall Chinook migrate, where they congregate, the extent to which they are spatially separated from other population components,

- The Council recommended that the Step 2 submittal include estimated costs, including a value engineering review. The submittal should also provide detail of any cost-share opportunities identified with the Bureau of Reclamation, public utility districts and irrigation districts.
- The Council recommended that additional information be included in the Step 2 submittal that fully addresses the issues raised by the ISRP.

B. Step 2 – Progress Review/Preliminary Phase

On November 12, 2007, the Colville Tribes submitted the Step 2 documents addressing the conditions placed on this project as part of the Step 1 Council decision. In addition, the Step 2 review included environmental review and preliminary design of the facility and out-year costs.

On March 7, 2008, the ISRP provided its preliminary review (ISRP document 2008-2) of the Step 2 submittal. The ISRP requested additional information from the project sponsors including recommendations and modeling results from the Hatchery Scientific Review Group and a revised of the Master Plan to address issues raised in the ISRP's Step 1 and Step 2 reviews. The ISRP found that the Master Plan's primary deficiency was a lack of adequate linkage between the environmental assumptions and the objectives of the program. The ISRP thought the HSRG's new modeling capabilities would provide reasonable estimates of natural and hatchery recruitment consistent with limitations on habitat carrying capacity, hydrosystem operations, and downstream and marine harvest.

On July 3, 2008, the Colville Tribes submitted its response to the ISRP's preliminary Step 2 review. The ISRP determined that additional detail was still needed to address the issues raised by the ISRP were addressed. The additional information was provided to the ISRP in August and November 2008 to complete the submittal for review.

On January 22, 2009, the ISRP provided a "response requested" review (ISRP document 2009-2). The ISRP found that two of the six Step 1 issues were resolved, but four issues still required further attention before the ISRP could judge whether the project met scientific review.

On March 2, 2009, the ISRP and the Colville Tribes met to discuss the recent ISRP review. The meeting provided an opportunity for the Colville Tribes to seek clarification of the ISRP's concerns, and on March 11, 2009, the Colville Tribes provided additional modeling results and other information sought by the ISRP.

On April 17, 2009, the ISRP provided its final Step 2 review (ISRP 2009-12). The ISRP found that the Step 2 submittal "meets scientific review criteria." The ISRP stated that the Chief Joseph Hatchery Master Plan had progressed significantly from the Step 1 and earlier Step 2 plans. The ISRP was impressed by the Colville Tribes' efforts to address the issues and their use of modeling to assist them in making plan refinements reflecting the best practices of the Fish and Wildlife Program and the Hatchery Scientific Review Group. The ISRP cautioned however that much uncertainty remains as to whether the salmon harvest and conservation goals could be

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and whether the timing of passage over Wells Dam is related to timing and location of subsequent spawning. This information is critical to the development of broodstock protocols and subsequent acclimation of progeny. The second research study was to test the viability of live-capture, selective fishing gear for local broodstock collection.

reached. The scientists stressed the need for an adequate monitoring and evaluation (M&E) plan to address the uncertainties and to adaptively manage the CJHP.

On May 12, 2009 the Council approved the Step 2 review of the Chief Joseph Hatchery Program and recommended with conditions the activities associated with Step 3. The specific action taken by the Council is as follows:

- That the Council recommend that the Chief Joseph Hatchery Program proceed to Step 3-level activities.
- That the Council call for additional information to be developed that fully addresses the issues raised by the independent peer review for consideration during the Step 3 review.

C. Step 3 – Detailed/Final Phase

1. Science Review

On November 5, 2009, the Colville Tribes briefed the ISRP and Council staff on the Tribes' draft monitoring and evaluation (M&E) plan for the CJHP. In addition, the Colville Tribes provided an update of the progress made in the selective fishing research and development of a weir for the Okanogan River, as recommended by the ISRP. As part of this briefing the ISRP provided helpful comments on the M&E plan, and the Colville Tribes anticipated that the M&E plan for the Step 3 review submittal would be finalized in the near future.

On November 16, 2009 the Council received the revised M&E plan. The submittal included the summer/fall Chinook and spring Chinook components addressing hatchery production, harvest and natural production. The submittal is intended to initiate the Step 3 review and address the issues identified by the ISRP in its final Step 2 review (ISRP document 2009-12).

On January 6, 2010 the Council received the ISRP's review of the M&E plan. The ISRP found that the plan met scientific review criteria. The ISRP found that the essential decision framework associated with the M&E plan is based on the best available scientific information, applies state-of-the-art analytical tools, and reflects the scientific principles and standards of the Council's Program and the Hatchery Scientific Review Group. The ISRP's comments evidenced an appreciation for the "healthy and helpful exchange" with the Colville Tribes as the CJHP Master Plan moved through the step review process. This relationship led to useful adaptation as the project moved through the step-review process, and is reflected in the extensive comments made by the ISRP in its final review. It is evident that the ISRP and the Colville Tribe appreciate the trust and respect of their interactions.

2. Environmental Review and Endangered Species Act

In May 2007, the Draft Environmental Impact Statement (EIS) for the Chief Joseph Hatchery Program was published in the Federal Register. Public hearings on the draft EIS were held in June, 2007. The U.S. Army Corps of Engineers became a National Environmental Policy Act (NEPA) Cooperating Agency in April, 2008, since the hatchery is proposed on their land.

During the environmental process, no unique environmental circumstances or major, controversial impacts were found. Some minor fish impacts were noted such as the effects of the Tribes' ceremonial and subsistence fisheries and impacts to naturally spawning Chinook and steelhead. Hydrology and water quality issues, related mostly to Okanogan River water diversion and use, along with hatchery and acclimation pond discharges were also noted. These water quality impacts, however, fell within the National Pollutant Discharge Elimination System permit limits and will be monitored frequently to ensure compliance. A cultural resources investigation and construction monitoring/mitigation at one acclimation pond currently underway assisted by the Colville Tribes' History/Archaeology Department.

An ESA Section 7 consultation was initiated in May 2006. Upper Columbia River (UCR) summer/fall Chinook are not listed under the Endangered Species Act (ESA) but UCR steelhead are listed are listed and their range includes the Okanogan River. The UCR spring Chinook are listed as endangered, but have been extirpated from the Okanogan River, which was not designated as critical habitat. A Biological Opinion was issued by NOAA Fisheries in July 2008. Bonneville finalized the EIS in November 2009 and issued a Record of Decision (ROD) to fund construction, operation and maintenance on March 22, 2010. These documents are available on the Bonneville website at www.efw.bpa.gov.

3. Final Design

The final designs were completed in November of 2009. Documents were provided to the Council in early April 2010 as part of the step-review process. The design includes proposed new construction of an incubation and rearing facility to accommodate the summer/fall Chinook (2,000,000) and spring Chinook (900,000 yearling smolts) programs, provide adult holding facility, and an administrative office. There also will be four houses constructed for the employees on Washington Parks and Recreation Commission land. In addition, along the Okanogan River, three existing Oroville-Tonasket Irrigation District irrigation ponds, one tribe-owned acclimation pond, and two new ponds will be modified and/or constructed to acclimate, imprint, and volitionally release approximately 1.3 million summer/fall and spring Chinook smolts annually. The proposed weir for local broodstock collection, selective harvest, M&E, and management of hatchery fish in the wild escapement will be constructed on the Okanogan River.[6] The hatchery itself will be located on the Columbia River just below Chief Joseph Dam on Corps land.

Currently the Colville Tribes and Corps are completing the Section 408 Review. This process was initiated by the Chief Joseph Hatchery requirements for water supplies from Chief Joseph Dam.[7] The dam modifications to obtain these hatchery waters require review in local, regional and headquarter offices of the Corps. The review process has proceeded from the District and Division offices to headquarters. The Colville Tribes and Bonneville do not anticipate any significant issues arising from this process, other than delay in starting construction of the main hatchery facilities.

[6]The weir will not be funded through the CJHP. It is anticipated that preliminary funds will be through Project #2007-249-00, *Evaluation of Live Capture Gear*, and assistance with future costs (i.e., implementation and construction) will come through cost shares.

[7] Water will be obtained from Rufus Woods Lake, necessitating access through the dam's right abutment

Although this project is part of the Columbia Basin Fish Accords, the three mid-Columbia public utility districts (PUDs), Chelan County, Grant County and Douglas County, are expecting to provide a cost share for up to 35 percent of the hatchery's production to meet the mitigation requirements of their habitat conservation plans and settlement agreement. The Colville Tribe and Bonneville have initiated negotiations with the PUDs on their cost shares. Budget effects of the cost shares are not yet available, but are expected to be substantial.

ANALYSIS

For a project of this scope and magnitude, the efficiencies and collaboration that this project has generated is impressive. The Chief Joseph Hatchery Program has been actively participating in the step review process for six years during which time it has not only gone from conceptual to final designs but has also established a dialogue with the ISRP that has benefitted both project sponsors as well as the ISRP. In addition, concurrently with the step process, the Colville Tribes implemented two research projects that yielded answers to critical uncertainties associated with the project's design and intent.

Another important outcome of the collaborative approach to the review process exemplified by the Tribes is reflected in the level of cost share, especially with the Chelan County, Grant County and Douglas County PUDs.

Currently, the Corps is in the final review stages of project confirmation. This is at a national level, local support has been gained and maintained with the project, but final authorization is not expected until August or September 2010. In the interim and to initiate construction, as a cost-saving measure, the Corps has provided adequate assurances to Bonneville and the Colville Tribes that construction of the employee housing and acclimation sites is justified. Construction of these facilities is not on Corps land. In addition, all other permits have been secured and environmental review is complete.

Based on the ISRP review, the performance of this project and level of regional support, the Council staff recommends that the Council approve this project for implementation and construction.

Table 1: Estimated Cost Summary for Chief Joseph Hatchery Program, Fiscal Year 2003-2018.

Cost Area	Fiscal Year															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
A. Planning - Summer/fall and Spring Chinook																
A.1 Step 1 Planning	210,000	334,000														
A.2 Step 2: Planning, Preliminary Design			575,000	600,000	860,000											
A.3. Step 3: Planning, final design and permits				75,000	1,423,000	750,000	3,268,318									
A.4 Brood Research Plan to Access Behavior			319,000													
A.5. Broodstock Testing Collection Plan			30,000	240,000	254,500											
B. Construction																
B.1 Summer/Fall & Spring Chinook, Construction								8,200,000	25,800,000	8,600,000						
B.2 Summer/ Fall & Spring Chinook Construction Management (BPA Contractor)								206,759	650,534	216,845						
B.3 Summer/ Fall & Spring Chinook Construction Management (USACE)								100,000	307,652	25,000						
B.4 Estimated TERO Fee									2,000,000							
C. Capital Equipment																
C.1 Summer/fall and Spring Chinook								185,200	752,856							
D. Land Purchase and Easements																
D.1 Site Agreement with COE at Chief Joseph Dam (Long-term lease)								-	-	-	-	-	-	-	-	-
D.2 Irrigation District Ponds (Long-term agreements) Included in Operating Costs after FY 2011								49,000	49,000							
D.3 Riverside and Omak Acclimation Pond (Purchase)				460,000				280,000								
D.4 Purchase of Housing Site from WA Parks								30,000								

Cost Area	Fiscal Year															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
E. Operations and Maintenance, Monitoring and Evaluation																
E.1 Start-up and Future Operations, Summer/ Fall and Spring Chinook						200,000	250,000	658,103	1,398,244	1,871,879	1,935,523	2,001,330	2,069,376	2,139,734	2,212,485	2,278,860
E.2 Start-up and Future Monitoring and Evaluation Summer/fall Chinook and Spring Chinook.,					31,000	70,000	303,200	50,724	54,163	662,872	685,410	708,714	732,810	757,726	783,489	806,993
E.3 Education for CCT Fish Culture Staff								132,000	138,600							
F. Environmental Compliance																
F.1 Produce a Final EIS			32,533	549,467	19,000											
F.2 Cultural Resources, Construction Monitoring								80,000	40,000							
F.3 Construction Permitting								130,000	10,000							
F.4 Colville Tribes, Planning Department								50,003	25,031							
TOTAL ESTIMATED COST	**210,000**	**334,000**	**956,533**	**1,924,467**	**2,587,500**	**1,020,000**	**3,821,518**	**9,891,786**	**31,151,049**	**11,376,596**	**2,620,933**	**2,710,044**	**2,802,186**	**2,897,460**	**2,995,974**	**3,085,853**

Notes and Assumptions:

A1. Step 1 planning, estimated past expenditures
A2. Step 2 planning, estimated past expenditures
A3. Step 3 planning, estimated past expenditures
A4.and A.5. All brood research studies, estimated past expenses
B.1 Construction estimate, current estimated cost from contractor
B.2 Estimated costs for construction management by the design engineer contracted to CCT, BPA
B.3 Estimated costs e for construction management by Corps
B.4 Estimated TERO fee
C.1 Estimated costs for capital equipment for operations and monitoring and evaluation
D.1 Lease is a no-cost agreement with Corps
D.2. Long term irrigation pond leases are included in E. Operating Costs after FY 2011
D.3 Riverside property utilized all FY 2006 funding, added funds were for Omak property reimbursement in FY 2010, decision
D.4 and D5. WA Parks is arranging to lease CCT property to build hatchery housing, assuming BPA will make $30k payment in FY 2010
E.1. Start-up and future operational cost estimates
E.2. Start-up and future monitoring and evaluation cost estimates
E.3. Cost estimates for education funding for future CJHP fish culture staff
F.1 Estimated costs for completing a FEIS and related EC requirements
F.2 Estimated costs for cultural resource monitoring during construction
F.3 Estimated costs for construction building permits
F.4 Estimated costs for CCT Planning Department to support construction permitting

Step 3 Review
Chief Joseph Hatchery Program
Project # 2003-023-00

May 11-12, 2010

Joe Peone, Director
Fish & Wildlife Department
Colville Confederated Tribes

Northwest Power and Conservation Council

Timeline

- October 2002 the Council included the project in its F&W Program.
- May 26, 2004 the Colville Tribes submitted Step 1 documents.
- March 15, 2005, the Council approved Step 1.
- November 12, 2007, the Colville Tribes submitted the Step 2 reports.
- May 12, 2009 the Council approved Step 2.
- January 6, 2010 the ISRP provided their M&E review – “Meets Scientific Review Criteria”

Presentation Purpose

- Seek Council approval of Step 3
- Seek Council approval to initiate project construction and implementation starting in 2010

Major Project Review Step 3

- ESA Biological Opinion – July 2008
- Final EIS – November 2009
- ISRP – “Meets scientific review criteria”
- M&E Plan final and being implemented
- BPA’s ROD issued March 22, 2010

Major Project Review Step 3

- Construction bids received March 19, 2010
- Final construction budget ~ $40 million
- Finishing Corps of Engineers' 408 Review on effects to CJ Dam. Will delay hatchery construction until 2011.
- Start construction of hatchery housing and acclimation ponds in 2010.

Program Purpose

Support Conservation & Harvest of

Upper Columbia Summer/Fall Chinook

and Spring Chinook in the

Okanogan and Columbia Rivers

Chief Joseph Hatchery Program

- 2 million summer/fall Chinook
- 900,000 spring Chinook
- Segregated programs with direct hatchery releases into Columbia River
- Integrated programs with acclimated releases in the Okanogan River

CJH Program Innovations

- Adopted standards of Hatchery Scientific Review Group
- Hatchery production varies with health of wild population
- Predominately selective fishing for hatchery-origin Chinook
- Annual M&E review adaptively managing hatchery production, harvest, and escapement

Project Costs

- Step 1-3 planning costs ~ $10.8 million
  - Research projects
  - Planning and Environmental Compliance
  - Technical and independent reviews
  - Conceptual through final designs and specifications
- Construction costs ~ $40 million
- Annual operating costs ~$2.5 million
  - O&M and M&E

Cost Sharing

- Douglas, Chelan and Grant PUDs still interested in cost-sharing ~ 35% of CJHP production.
- March 2010 discussions with Grant PUD firming up 18.3% of capital and annual operating costs for long-term share of CJH.
- Negotiations with Douglas and Chelan PUDs to continue shortly for flexible shares of CJH.

Recent Highlights
Selective Fishing

- In 2009, used a purse seine to harvest 1,196 hatchery summer Chinook; released 1,199 wild summer Chinook in vigorous condition; only one direct mortality; 99.9% survival. 100% immediate survival of wild Chinook in 2008
- In 2010, will continue evaluation of purse seiner and beach seines.
- Near term testing of scaffold fishing, hoop nets and pound net traps.


COLVILLE CONFEDERATED TRIBES
RESEARCH

COLUMBIA RIVER SALMON TRAP

LEAD

THROAT

HEART

POT

ILLER

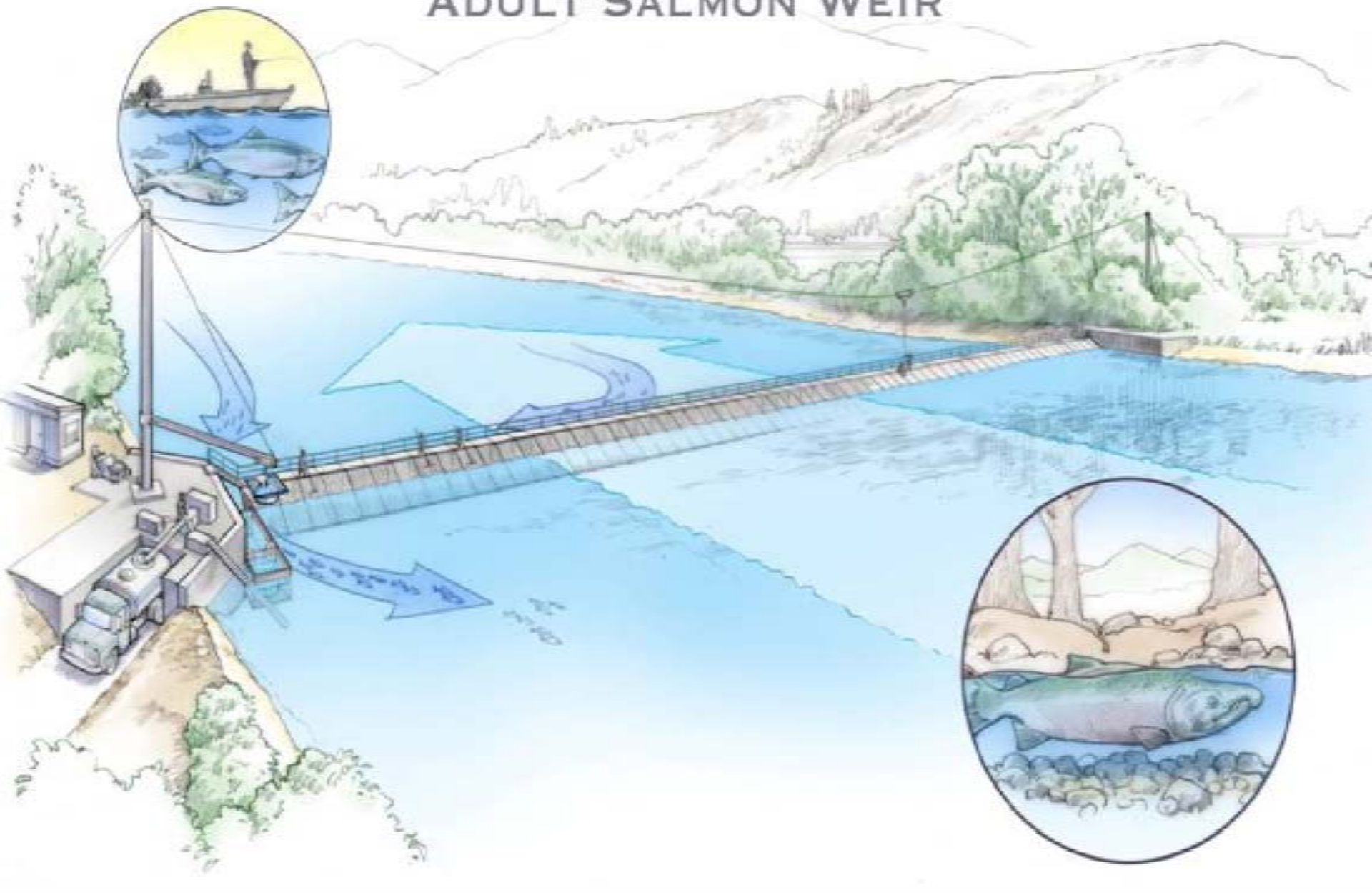
Recent Highlights
Okanogan Weir

- Per ISRP review, Colville Tribes are pursuing a removable weir in the lower Okanogan River.

- Weir for local broodstock collection, selective harvest, M&E, and management of hatchery fish in the wild escapement.

Colville Tribes - Okanogan River

Adult Salmon Weir



Recent Highlights
Summer Chinook Summit

- Colville Tribes hosted summit with co-managers to assess current management practices and stock status.
- Report issued – February 2010
- Expect reformed management framework with updated escapement levels, more non-Treaty selective fishing, and conservation objectives for key populations

Thank You