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October 1, 2013

## DECISION MEMORANDUM

**TO:** Fish and Wildlife Committee members

**FROM:** Mark Fritsch, project implementation manager

**SUBJECT:** Step 1 review of *Walla Walla Spring Chinook Hatchery Master Plan*. Project #2000-038-00, *Walla Walla Hatchery Final Design/Construction*.

**PROPOSED ACTION:** Council staff recommends that the Council support the *Walla Walla Spring Chinook Hatchery Master Plan* to proceed with Step 2 activities. This recommendation is subject to the requirement that the CTUIR fully address the comments raised by the ISRP (ISRP document 2013-12) as part of the Step 2 submittal.

**SIGNIFICANCE:** On June 17, 2013, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) submitted a Step 1 (master plan) documents to the Council, as part of the Three-Step Review Process, for the *Walla Walla Spring Chinook Hatchery Master Plan*, a component of Project #2000-038-00, *Walla Walla Hatchery Final Design/Construction*.

The CTUIR is proposing to add incubation, early rearing, and final rearing facilities to the existing South Fork Walla Walla Adult Holding and Spawning Facility (i.e., Umatilla Hatchery satellite facility under the Program that began operation in 1997<sup>1</sup>) in order to produce

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<sup>1</sup> Project #1983-435-00, *Umatilla Hatchery Satellite Facilities and Maintenance (O&M)*. The Umatilla Basin artificial production program consists of Umatilla Hatchery for fish production and satellite facilities for adult holding and spawning and juvenile acclimation/release. The ODFW currently operates the Umatilla Hatchery and the CTUIR, under this project, operates the satellite facilities. Bonifer, Minthorn, Imeques C-mem-ini-kem, Thornhollow, and Pendleton were completed in 1983, 1985, 1994, 1995, and 1999, respectively, and are used for temporary holding (acclimation) and release of juvenile salmon and steelhead. Minthorn is also used to hold and spawn adult summer steelhead collected from Three Mile Dam on the Umatilla River. Three Mile Dam Adult Holding and Spawning Facility was completed in 1996 and is currently used to hold and spawn fall Chinook adults.

500,000 yearling spring Chinook smolts annually (at 12 fish per pound (fpp)) annually into the Walla Walla Basin - 400,000 in the South Fork Walla Walla River and 100,000 into the Touchet River.

The goals of the CTUIR for Spring Chinook in the Walla Walla subbasin are to provide in-basin harvest for treaty and non-treaty fisheries, and restore natural spawning. The presence of naturally spawning salmon in the river in places and times where they spawned historically is of cultural value to the CTUIR. The long-term goal for the Walla Walla Basin is to reestablish a self-sustaining naturally spawning population of spring Chinook through an all-H approach that requires both habitat and passage improvements. The program will be implemented in three phases, shifting from one phase to another based on predefined observable criteria (“triggers”)<sup>2</sup>. The phases reflect different states of natural and hatchery survival conditions and therefore differ in purpose and in the disposition priority for the returning adults.

## **BUDGETARY/ECONOMIC IMPACTS**

### **I. Overview of Step 1 Project Costs**

Regional action agencies (BPA, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation) and three Columbia Basin tribes (the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Indian Reservation, and the Confederated Bands and Tribes of the Yakama Nation) are operating under a memorandum of agreement (MOA) titled *3 Treaty Tribes-Action Agency Agreement*, dated April 4, 2008, that funds habitat and hatchery actions in the Columbia River Basin. Support for all programs proposed by the three tribes under the MOA is over a 10-year period. Capital funds totaling \$13,998,275 are reserved in MOA budgets between the CTUIR and the Action Agencies for the Walla Walla spring Chinook production facility construction.

Project costs presented in the Step 1 documents are consistent with Council’s Three-Step Review Process. It is important to note that these conceptual costs are a planning baseline from which to refine cost estimates, evaluate alternatives and protect against budget expansion as the proposed project progresses through the preliminary (Step 2) and final design (Step 3) phases and implementation.

Capital and expense funds for the Walla Walla Hatchery development including planning, operation and maintenance, acquisition, and construction totaling \$14,446,600<sup>3</sup> were reserved in

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The South Fork Walla Walla Adult Holding and Spawning Facility was completed in 1997 and is used to hold and spawn spring Chinook adults. The operation of these facilities is closely coordinated with ODFW and is detailed in the Umatilla Hatchery and Basin Annual Operation Plan.

<sup>2</sup> Phase 1- Local Adaptation, Natural Spawning and Harvest; Phase 2 - Harvest Augmentation and Transition to an Integrated Program; and Phase 3 - Integrated Harvest and Demographic Safety Net.

<sup>3</sup> This is for Fiscal Year 2008 - 2017 at \$11,862,000 capital and \$584,600 expense funds.

MOA budgets between the Confederated Tribes of the Umatilla Indian Reservation and the FCRPS Action Agencies.

## II. Key Expenditures by Program Area

The summary of key expenditures by step and program area (see Attachment 1) provides an approximate overview of future costs for planned programs as presented in the Step 1 Master Plan. The estimated one-time costs by program area are as follows:

- Conceptual Design, Step 1 - \$216,102 (cost to date for the Step 1 Master Plan as submitted)
- Progress Review and Preliminary Design, Step 2 - \$340,498
- Final Design, Step 3 - \$900,000
- Construction - \$13,798,217
- Capital Equipment - \$596,658<sup>4</sup>

The total budget for the conceptual planning associated with the submitted Master Plan is about \$216,000. This figure is an estimate that includes conceptual planning, engineering, and development of the Step 1 Master Plan including earlier efforts in 2008.

The preliminary planning and design stage is designed to identify any major difficulties or concerns with the program and facility designs. Step 2 design work should provide sufficient detail and specifics to ensure that the intent and scope of the Step 1 conceptual design work can be met and to refine the cost estimates further. In addition, Step 2 will include refinement of scientific information, environmental compliance, and ESA reviews. A placeholder of about \$340,498 has been identified for Step 2 preliminary planning, environmental compliance, site investigations and design.

A placeholder of about \$900,000 has been identified for the Step 3 final planning and design stage. Refinement of the Step 3 budget will occur in Step 2 during development of the preliminary design.

The total estimated construction budget for the Walla Walla Hatchery as outlined in the master plan is \$11,798,217. To accommodate the level of uncertainty associated with the current level of design, a +25 to -15 percent contingency has been applied to this cost. This estimate will be refined as part of the next submittals associated with Steps 2 and 3.

Future cost estimates for O&M at Walla Walla Hatchery is estimated to be about \$978,668 annually. Following completion of the hatchery, the ongoing Project #2000-039-00 *Walla Walla Basin Natural Production Monitoring and Evaluation* will increase to approximately \$1,550,000 annually. Approximately \$250,000 of that increase is due to the additional M&E attributable to the Walla Walla Hatchery. These estimates are in 2016 dollars to reflect the anticipated construction and when these activities would be incurred, respectively. The Master Plan shows these costs escalated at 2.5 percent annually through 2022. The 10-year estimated cost summary

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<sup>4</sup> Reflects costs associated with various equipment for office, laboratory and water systems.

included with the master plan will be updated as costs are refined and included as part of Step 2 and Step 3 submittals.

## **BACKGROUND**

Spring Chinook have been absent for the Walla Walla Subbasin since the first quarter of the 20<sup>th</sup> century. The decline of spring Chinook has been attributed to the development of agriculture and related irrigation diversions, which resulted in channel dewatering and loss of habitat. In addition, the federal Columbia River dams changed the character of the mainstem migration corridor from a free flowing river to a series of impoundments. These developments altered juvenile and adult Chinook migratory patterns, compromising salmonid lifecycles (CTUIR 2008). Over the past several years, significant efforts to address passage, flow, and habitat issues have occurred throughout the basin. Great strides have been made in recognizing and addressing the importance of healthy, viable aquatic and terrestrial communities in addition to sustaining agriculture, a critical component of the Walla Walla Basin economy. Passage improvements ongoing since 1997 include removing two decommissioned diversion structures, constructing seven new or improved juvenile screen and bypass facilities, and building/upgrading seven ladders. In addition, numerous habitat improvement projects have been implemented by various agencies throughout the basin.

Since 2002, total adult spring Chinook returns to this dam have averaged 357 and ranged from 2 to 1,194 fish. Natural origin (NOR) abundance has been increasing over time and has ranged from 2 to 301 fish (average 145). Hatchery-origin (HOR) adult returns were produced from an average hatchery release of 250,000 out-of-basin spring Chinook smolts.

### **I. Walla Walla Spring Chinook Hatchery Master Plan**

The action addressed by the master plan was adopted into the Program by the Council in 1987 as part of the Northeast Oregon Hatchery (NEOH) initiative. Measure 703 (f) (5) authorized the planning, design, construction, operation, maintenance and evaluation of artificial production facilities to raise Chinook salmon and steelhead for enhancement and restoration of fish runs in the Hood, Umatilla, Walla Walla, Grande Ronde and Imnaha rivers and elsewhere. The measure, known as the Northeast Oregon Hatchery (NEOH) Project, further stated that prior to design of the facilities, a master plan should be developed by the tribes and fish agencies for review and approval by the Council.

The proposed program will be implemented in three phases<sup>5</sup>, shifting from one phase to another based on predefined, observable criteria (“triggers”). The phases reflect different states of natural and hatchery survival conditions and therefore differ in purpose and in the disposition priority for the returning adults. The proposed program is designed to release up to 500,000 yearling smolts (at 12 fish per pound (fpp)) annually into the Walla Walla Basin (i.e., 400,000 in the South Fork Walla Walla River and 100,000 into the Touchet River in each phase). The South Fork Walla Walla release will be reduced as the 3-year running (geometric) mean total return (natural-origin

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<sup>5</sup> Phase 1: Local Adaptation, Natural Spawning and Harvest. Phase 2: Harvest Augmentation and Transition to an Integrated Program. Phase 3: Integrated Harvest and Demographic Safety Net.

return (NOR) and hatchery-origin return (HOR)) to the Walla Walla reaches 5,500 adults and terminated when the 3-year mean NOR exceeds 5,500 adults. These targets are based on natural production and harvest goals established in the subbasin plan, and Wy-Kan-Ush-Mi-Wah-Kish-Wit. They are also consistent with US v Oregon production agreements.

### Facilities

The proposed Walla Walla Hatchery includes construction of new hatchery facilities as well as modifications to existing South Fork of the Walla Walla Adult Holding and Spawning Facility. This facility is operated by the CTUIR in support of existing artificial production programs (e.g., Umatilla Hatchery).

Proposed modifications to the existing site includes, the river intake and pump station, juvenile release channel, adult holding/spawning facility, ozone building, generator building, chemical storage building, two residences, pollution abatement pond, and outfall structure. In addition deficiencies and the required modifications to support broodstock collection at Nursery Bridge Fishway will be addressed<sup>6</sup>. The proposed new hatchery components include a new hatchery building, flow splitter structure, shop building, 16 outdoor raceways, juvenile release channel, and two new residences.

### III. Major Project Review (The Three-Step Process)

The initial draft master plan for the Walla Walla was circulated in 1993. The draft plan included 600,000 spring Chinook and 100,000 summer steelhead smolts for release into the Walla Walla. Based on review and comments received regarding the need for additional information and data, as well as “various reasons” the draft plan was never submitted to the Council.

On July 7, 1997 Council staff received a draft Walla Walla Master Plan that was being circulated for review and comment. The CTUIR were planning on presenting and submitting the master plan to the Council at the Council’s meeting in October.

On September 16, 1998 a revised master plan (dated August 25, 1998) was circulated by the CTUIR. The CTUIR planned on submitting the finalized plan to the Council on November 16, 1998. On November 5, 1998, Council staff provided comments to the draft NEOH Walla Walla Master Plan.

On December 24, 1998 the Council received a letter from CTUIR stating that they anticipated submitting Step 1 documents to Council on October 4, 1999. This revised schedule was based on the need to make adjustments to the proposed actions based on co-managers concerns. It was anticipated that if this date were met the Council would be able to provide a recommendation to Bonneville in February 2000. The proposed production actions that were adjusted included the reduction of Walla Walla spring Chinook production from the 600,000 initially proposed to 350,000. This production would be released on site and targeted at the more favorable and

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<sup>6</sup> Project #2009-026-00, *Walla Walla Juvenile and Adult Passage Improvements* is addressing issues downstream from the fishway (i.e., head cutting), but not the structure of the Nursery Bridge Fishway.

extensive spawning and rearing habitat in the S. Fk. Walla Walla River. Releases in the Touchet River (where more uncertainties exist regarding habitat capability) will not be proposed initially but may be in the future pending findings from current WDFW habitat evaluation efforts.

The above submittal dates were not met (i.e., November 16, 1998 and October 4, 1999) and therefore as part of the Council's Fiscal Year 2000 funding recommendation it was concluded that until completion and approval of a master plan as part of the Step 1 review process, all activities associated with this project should be funded at a level for this specific master-planning task<sup>7</sup>. In addition, the issues raised by the ISRP in the Fiscal Year 2000 Response Review (ISRP document 99-4, October 29, 1999) and the Artificial Production Review report (Council document 99-15), policies need to be addressed and made part of the Step 1 review. This review will provide the direction needed to ensure that the master planning effort is developed in a productive manner that meets the needs of the basin.

On April 5, 2000 the Council approved a CBFWA Anadromous Fish Committee request from CTUIR (for Project #8343500, *Umatilla Hatchery O&M*). The request was for \$8,800 to hold 1,500 surplus spring Chinook at the South Fork Walla Walla facility from April to July, and then out-plant the adults into the upper Walla Walla River tributaries in August. The Council included the following conditions in this recommendation:

- *The funds be used to collect and hold 1,500 surplus spring chinook at the South Fork Walla Walla facility and to outplant them into Walla Walla tributaries in August. The Council recommends that Bonneville release those funds only when item 2 below is satisfied.*
- *The CTUIR, ODFW, and Washington Department of Fish and Wildlife (if the latter desires to participate) must agree upon a study design, as part of the monitoring and evaluation of this proposal. That agreement must also address any ESA requirements of the National Marine Fisheries Service. This monitoring and evaluation plan needs to be submitted to Council along with documentation that each of the agencies listed above support the plan.*
- *The monitoring and evaluation plan needs to include out-year costs (if any) associated to this proposal.*
- *This is a one-year agreement as an experimental effort until the NEOH master planning can address the management needs in the Walla Walla River.*

On August 21, 2001 Council staff received from Bonneville an Environmental Clearance Memorandum addressing a Categorical Exclusion for activities associated with out-planting adult spring Chinook in the Walla Walla River. This action was intended to continue the out-

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<sup>7</sup> Bonneville, in consultation with the sponsor, determined the appropriate funding level for this effort to be \$100,000. Bonneville determined to maintain this funding level until the Council receives and approves Step 1 documents that clearly answer the technical questions required as part of the Three-Step Review Process. Though requested on January 27, 2000, no submittal date has been received for the master plan.

planting that had been initiated the previous year. The out-planting into the natural production areas of the South Fork Walla Walla River and Mill Creek with Carson stock spring Chinook adults, from Ringold Springs Hatchery and the Umatilla River, has occurred since 2000. The out-planting and the conditions placed on this action, as the Council recommended, have not been addressed to date.

As part of the Project Funding Recommendations for Fiscal Years 2002 through 2004 for the Columbia Plateau province the Council concluded that the ISRP's criticisms<sup>8</sup> were appropriate, and should be addressed as part of the Step 1 (i.e. master plan) submittal, and provided the following comment.

*This proposal has been in existence since the late 1980s, as part of the Northeast Oregon Hatchery (NEOH) Project, and to date no progress has occurred. The Step 1 submittal is to be delivered by August 31, 2002. No new funds, additional funds are dependent on the submittal and favorable review of a master plan and securing funds through budget reallocations. Bonneville Power Administration determined this proposal is not a high priority and that funds in the basin should be focused on correcting critical habitat issues.*

On January 7, 2005 the CTUIR circulated a Walla Walla Hatchery Master Plan<sup>9</sup> to the co-managers and on February 23, 2005 the Council received the cover letter and master plan submittal. Based on Council staff review it was found that the master plan was not adequate for ISRP review and issues were discussed with CTUIR on a conference call on March 3, 2005. This action was again confirmed on May 2, 2005 via email from Council staff.

On November 23, 2005 the Council received from the CTUIR a master plan titled Walla Walla Subbasin Spring Chinook Master Plan<sup>10</sup>. This plan was also provided, in hard copy, to staff during a visit with tribal staff on November 10, 2005. As discussed at the meeting on the 10<sup>th</sup> and a follow-up phone conversation the review of the proposed master plan would occur with the solicitation and review process associated with Fiscal Year 2007-2009 and any additional review activities would not occur until the project was prioritized in the Fiscal Year 2007-2009 project selection process<sup>11</sup>.

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<sup>8</sup>ISRP document 2001-8. Project # 2000-038-00, *Design and Construct NEOH Walla Walla Hatchery*. ISRP Final Comments: *Not Fundable. A scientifically sound justification was not given for construction of this facility to increase hatchery fish production.*

<sup>9</sup> Titled, *Walla Walla Subbasin Spring Chinook Master Plan*, dated November 9, 2005.

<sup>10</sup> The revised Walla Walla Subbasin Spring Chinook Master Plan was upgraded from the December 2004 version (i.e., January 2005) based on Council staff comments and the incorporation of the All Hatchery Analyzer Model analysis

<sup>11</sup> During this period it was also transmitted to CTUIR that the master plan in its current form has not addressed all the requested Step 1 review elements. These Step 1 review elements include: Master planning - Section 7.4B 1994 Program; Questions identified in the FY 1998 AIWP; Questions by the ISRP in 1998; Development schedule and estimated costs, and APR policies and standards. The email also outlined the step elements, both the earlier version and the 2001 updated version, that need to be addressed as part of the Step 1 review. The November 23<sup>rd</sup> submittal only covered some of the master plan elements and then included response to findings of the ISAB Document #2003-3 (*A Review of Salmon and Steelhead Supplementation*) that are not review elements associated with a step review.

In October 2006 the Council made its final project funding recommendations to Bonneville for Fiscal Year 2007- 2009. The project<sup>12</sup> addressing the actions of the Walla Walla Master Plan was not recommended for funding. In addition, as part of the ISRP review of the Fiscal Year 2007-2009 proposal review, the ISRP found the proposal did not meeting review criteria and provided a “Not fundable” finding (ISRP document 2006-6).

Bonneville, as part of the 2007 hydropower operations, provided “bridge funding for tribal fish mitigation projects.” The Walla Walla project received \$30,000<sup>13</sup>.

On March 9, 2007 the Council received<sup>14</sup> a master plan from CTUIR. Based on Council staff review, correspondence was sent to CTUIR regarding the submittal on April 10, 2007. The Council staff recognized CTUIR for the determination to compile and submit the master plan without Program funding, but requested additional information and clarification, in part based on the staff review and step reviews elements requirements (e.g., edits regarding the dates and information updates, lack of addressing step review elements and conceptual designs).

On August 27, 2008 the Council received, from CTUIR the revised Walla Walla Spring Chinook Master Plan<sup>15</sup>. The Master Plan and support documents were received through several emails and seemed to demonstrate that the plan had been refreshed and updated. On September 5, 2008 the master plan and support information were submitted to the ISRP, and on November 13, 2008 the Council received the ISRP review (ISRP document 2008 -14). The ISRP found that the master plan did not meet scientific review criteria and commented that their previous 2007-2009 review still applied<sup>16</sup>.

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<sup>12</sup> Project # 2000-038-00, *Design and Construct NEOH Walla Walla Hatchery*.

<sup>13</sup> This is the initial CTUIR share. It is understood that upon completion and acceptance by BPA of the master plan, BPA commits to future funding in the amount of \$255,000 to non-CTUIR parties (contractors) necessary to complete the project at a total FY 07 budget amount of \$285,000.

<sup>14</sup> Based in part on new information (*these goals are the same as reflected in the January 7, 2005 submittal*), the Walla Walla Subbasin co-managers proposed the following revised near term goals for the WWHMP: Return an average of 3,850 adult spring Chinook to the upper mainstem and South Fork Walla Walla River in Oregon. Returns would be comprised of 2,750 hatchery-produced and 1,100 naturally-produced adults. Restore natural spawning populations in Mill Creek and the Touchet River by out-planting hatchery adults into each tributary. Provide annual opportunities for Tribal and non-Tribal subbasin harvest. Actions being proposed in order to meet the above stated goals: Release 500,000 yearling smolts at 10fpp into the Oregon portion of the subbasin; Externally mark hatchery releases at 100% in order to differentiate between returning hatchery and natural adults for management of broodstock, harvest, and escapement; Outplant up to 390 hatchery adults into Mill Creek and 470 hatchery adults into areas of the upper Touchet River; and Collect 350 adults for Walla Walla Hatchery Program broodstock needs.

<sup>15</sup> This Master Plan was upgraded from previous versions based on Council staff comments (April 10<sup>th</sup>), the incorporation of the All Hatchery Analyzer (AHA) Model analysis and data updates. The submittal also included an Appendix X which designates fish disposition based on a sliding adult return scale. The AHA and Appendix X exercises were also coordinated with the Hatchery Science Review Group (HSRG) during their examination of the Walla Walla Basin hatchery programs. The production goal to meet the juvenile production target remained at 500,000 yearling spring Chinook smolts annually.

<sup>16</sup> “*The ISRP remains unconvinced of the rationale for the hatchery as the appropriate rebuilding tool for spring Chinook in the Walla Walla River, based on the material contained in the proposal. From the proposal it is confusing to determine what mix of harvest augmentation and natural production restoration is the real purpose of the hatchery production. From the proposal it is not possible for the ISRP to conclude that the habitat conditions are actually sufficient to support the hatchery production in addition to the fish that are currently returning to the watershed, even though those numbers are only in the tens to hundreds annually.*”



On May 19, 2009 the Council received a “response report” from Bonneville intended to address the ISRP issues raised as part of their previous review. Based on Council staff review it was found that the response review was inadequate to address the issues raised by the ISRP (ISRP document 2008-14) and on May 20, 2009 the submittal was returned to Bonneville for confirmation of their intentions.

On August 27, 2009 a teleconference was held with Bonneville, Council and CTUIR staffs to discuss the master plan update and path forward. During that discussion Council staff expressed the need for the CTUIR to seek assistance in addressing the step review elements and in revising the master plan as requested by the ISRP. It was also noted that an A&E firm could refresh the designs and costs.

In late January 2010 Council staff requested an update from Bonneville on the status of the project and how it should be dealt with in the anticipated categorical review associated with artificial production.

On March 25, 2010 the Council received from Bonneville responses to the ISRP developed by CTUIR, with assistance from Bonneville. On March 29, 2010 the submittal was sent to the ISRP.

On May 28, 2010 the ISRP provided their review of the Walla Walla Spring Chinook Master Plan (ISRP document 2010-17). The ISRP provided a *does not meet scientific review criteria* finding as an overall recommendation to the Council. As outlined above, the ISRP found that the issues raised in the past were still not addressed in a way that would allow the ISRP to find the master plan complete. In addition, the ISRP noted the *considerable explanatory prose and tribal perspective* in the most recent master plan did not adequately address the underlying scientific concerns. The ISRP requested that if their *concerns or interpretations, or the basis of targets or recommendations by HSRG (e.g., PNI and pHOS) are incorrect, misguided, or otherwise unsupported by scientific principles or evidence, the proponents should clearly demonstrate these rather than suggesting that they disagree that the levels are not important.*

The ISRP’s review basically stated that the responses to the following four topics, as identified in their last review (i.e., ISRP document 2008 -14), were helpful in places but ultimately incomplete in terms of the content needed to permit the ISRP to find the master plan meets scientific review criteria.

- Evaluate the natural production of smolts and adults from the recent releases, and if information is lacking to conduct the evaluation, develop a proof-of-concept release program to justify the need for potential raceway construction;
- provide evidence that the habitat in the subbasin is adequate to support a reintroduced population and link with the habitat restoration description;
- provide a decision framework; and

- provide an HGMP for the program.

On June 11, 2010 Council and Bonneville staff discussed scheduling a meeting with ISRP regarding their master plan review. Based on this discussion Bonneville and the CTUIR requested a meeting with the ISRP. The intent of the meeting was for Bonneville and the CTUIR to engage the ISRP in a *discussion about outstanding issues in ways that might allow the project to progress while addressing everyone's interests*. Council staff supported this request and on September 7, 2010 CTUIR met with the ISRP and provided an overview to the goals and objectives of the master plan.

On November 6, 2012 the CTUIR presented to the Fish and Wildlife Committee an update on the project and current status and that a decision is needed so that the project can move ahead to implementation. At the committee meeting the CTUIR was advised to respond fully to the ISRP's concerns as expressed in the past reviews (ISRP document 2010-17).

Subsequently, the CTUIR revisited their goals and plans for the entire Walla Walla Basin, and separately for the Walla Walla hatchery facilities. Bonneville and the CTUIR engaged McMillan, LLC, D.J. Warren & Associates, Inc. and Meridian Environmental, Inc. to create a new master plan. On June 17, 2013 the Council received a substantially revised the master plan (titled *Walla Walla Spring Chinook Hatchery Master Plan*) from the CTUIR intended to initiate the review process (i.e., Three-Step Review) associated with a proposed hatchery master plan for Project #2000-038-00, *Walla Walla Hatchery Final Design/Construction*.

On July 31, 2013 the ISRP requested additional information and data on the production levels and productivity for each phase, details on the expectations how long phase 1 and 2 will last, and clarification on the decision rules and guidelines used to transition from one phase to the next (ISRP document 2013-10). On August 18, 2013 the Council received from the CTUIR a response intended to address the information needs of the ISRP and on September 16, 2013 the Council received their review (ISRP document 2013-12).

## **ANALYSIS**

The ISRP found that the *Walla Walla Spring Chinook Hatchery Master Plan* meets scientific review criteria and stated that they appreciated the clarity and additional perspective provided during the ISRP's review process of the master plan. Though the ISRP did not qualify their review recommendation they requested that the CTUIR continue to refine and clarify analysis and provide additional information as raised in the ISRP's review (ISRP document 2013-12). These comments are outlined to the response loop topics as outlined in the response from CTUIR on August 18, 2013.

The ISRP points out the importance of having the comments addressed as part of an adaptive management process and M&E plan described in Step 2 of the review process. The M&E plan should ensure that data and information will be available to guide the program toward harvest and conservation goals in a scientifically defensible manner, in the face of uncertainty about assumptions and environmental variability. The adaptive management process should show how

new information about habitat, passage, harvest, and hatchery conditions is brought forward to inform future decisions.

Based on the ISRP review the Council staff recommends that the Council support the *Walla Walla Spring Chinook Hatchery Master Plan* to proceed with Step 2 activities. This recommendation is subject to the requirement that the CTUIR fully address the comments raised by the ISRP (ISRP document 2013-12, as outlined above) as part of the Step 2 submittal.

**Attachment 1. Summary of key expenditures by step and program area as outlined in the Master Plan.**

<b>Program Step and Area</b>	<b>Estimated Cost</b>	<b>Occurrence</b>	<b>Level of Certainty</b>
Land Purchases, Leases & Easements	\$98,500	One Time	Purchase is completed before FY 2011
Conceptual Design, Step 1 <sup>17</sup>	\$216,102	One Time	Contract to develop the initial Step 1 Master Plan and revisions in 2013
Progress Review and Preliminary Design, Step 2 <sup>18</sup>	\$340,498	One Time	Contract to Develop Step 2 Preliminary Design
Final Design, Step 3 <sup>19</sup>	\$900,000	One Time	Contract to Develop Step 3 Final Design
Construction	\$11,798,217	One Time	Preliminary Estimate (+ 25% to - 15%) (2014 dollars)
Capital Equipment	\$596,658	One Time	Preliminary Estimate (+ 25% to - 15%) (2014 dollars)
Environmental Compliance Step 2 (Permitting, EIS, Other)	\$336,338	One Time	Preliminary Estimate (+ 25% to - 15%) (2013 dollars)
Annual Operations & Maintenance	\$978,668	Annual	Preliminary Estimate (+ 25% to - 15%) (Escalated to 2016 dollars)
Monitoring & Evaluation	\$1,549,089	Annual	Preliminary Estimate (+ 25% to - 15%) (Escalated to 2016 dollars)

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<sup>17</sup> Shows the actual contractual figure for completion of the Step 1 Master Plan including the additional \$82,977 for revision of the 2008 plan.

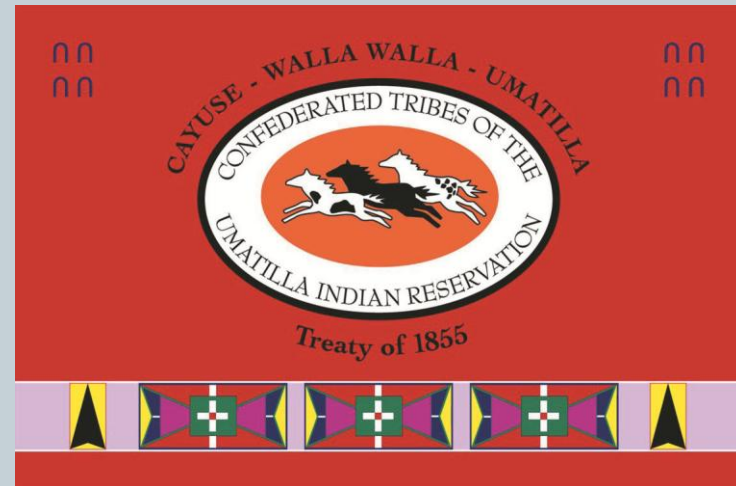
<sup>18</sup> Shows the actual contractual figure for completion of the Step 2 Preliminary Design.

<sup>19</sup> Shows the estimated figure for completion of the Step 3 Final Design.

# Walla Walla Spring Chinook Hatchery Master Plan 2013



**PRESENTED BY:**  
**N. KATHRYN BRIGHAM**  
**BRENT H. HALL**  
**LARS MOBRAND**



# Step One of the Northwest Power and Conservation Council's Three-Step Review Process



## Topics Covered:

- I. Master Plan and Review
- II. First Foods, the Treaty Reserved Fishing Right, and the Walla Walla Basin
- III. Walla Walla Basin and the Hatchery – Phases, Decision Rules, Facilities



# Master Plan and ISRP Review



- On June 14, 2013 the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) submitted Step 1 Walla Walla Spring Chinook Hatchery Master Plan documents to the Council.
- On July 31, 2013 the ISRP provided their preliminary review (ISRP Document 2013-10). The ISRP requested additional information.
- On August 18, 2013 the CTUIR responded to the ISRP's request for additional information.

# Master Plan and ISRP Review



- On September 16, 2013 the ISRP provided its final Step 1 review (ISRP Document 2013-12). The ISRP found that the Walla Spring Chinook Hatchery Master Plan 2013 “Meets Scientific Review Criteria for Step 1,” with the qualification that the ISRP’s questions and concerns raised in its review be addressed in Step 2. (ISRP Document 2013-2, p. 2.)



# First Foods, the Treaty Reserved Fishing Right, and the Walla Walla Basin



- In 1855, the United States entered into several treaties with Indian tribes and bands living along the Columbia River and its tributaries;
- Treaty negotiations took place in the Walla Walla Valley, part of the homeland of the Walla Walla, Cayuse and Umatilla bands, now known as the CTUIR.
- The 1855 treaties were cession agreements in which the Tribes reserved homelands, sovereignty, and other rights, including fishing rights, in exchange for 6.4M acres.
- These fishing rights were central feature of the treaties, as the tribes relationship with fish was a dominant feature of their culture and society. The treaty minutes are clear that the tribes would not have entered into the treaties without the United States' promise to secure the fishing right.



# First Foods



# Sample historical references to CTUIR fishing in the Walla Walla basin



- Lewis and Clark, Tuesday, April 29<sup>th</sup> 1806: [O]ur guide now informed us that it was too late in the evening to reach an eligible place to encamp; that we could not reach any water before night. we therefore thought it best to remain on the Wallahwollah river about a mile from the Columbia untill the morning, and accordingly encamped on that river near a fish wear. this wear consists of two curtains of small willow switches matted together with four lines of withs of the same materials extening quite across the river, parrallel with eah other and about 6 feet assunder...

○ Moulton, Gary E. (editor), 1983, *Atlas of the Lewis and Clark Expedition*. University of Nebraska Press, Lincoln, NE.

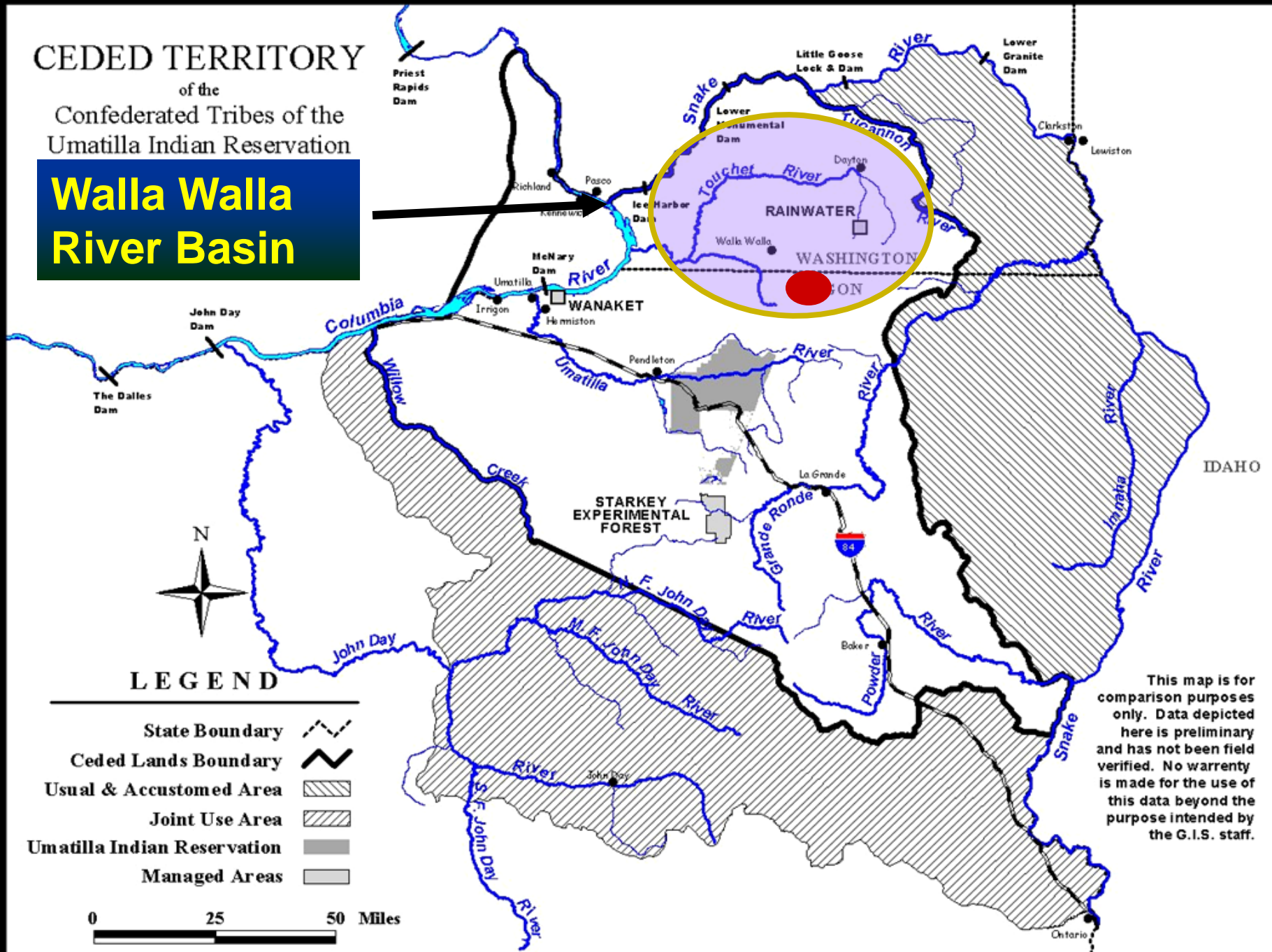
- Waxwutnamí, A fishing site on the north fork of the Walla Walla River. A salmon fishing site used by the Walla Walla and Cayuse people. Fishing was done by spear or gaff.
- 'Imchahapa, This was a fishing site for salmon and lamprey eels used by Cayuse and Walla Walla Indians. They used spears and dip nets at this site. The South Fork itself is named 'Imcaha.

○ Hunn, Eugene, Thomas Morning Owl, Jennifer Karson, and Philip Cash Cash, 2010, *Cáw Pawá Láakni / They Are Not Forgotten: Sahaptian Place Names Atlas of the Cayuse, Umatilla, and Walla Walla*. University of Washington Press, Seattle, WA.

- Lane and Lane Report re Usual and Accustomed Fishing Places
- 1942 Swindell Report to US DOI re: Indian Fishing, Hunting and Grazing Sites

CEDED TERRITORY  
of the  
Confederated Tribes of the  
Umatilla Indian Reservation

**Walla Walla  
River Basin**



**LEGEND**

- State Boundary 
- Ceded Lands Boundary 
- Usual & Accustomed Area 
- Joint Use Area 
- Umatilla Indian Reservation 
- Managed Areas 

This map is for comparison purposes only. Data depicted here is preliminary and has not been field verified. No warranty is made for the use of this data beyond the purpose intended by the G.I.S. staff.

# Extirpation of Spring Chinook in the Walla Walla



- Absent for over 75 years. 1925 was last run of importance (Van Cleave and Ting.)
- Changes to the flow and habitat conditions, overfishing in the early 1900s, and changes to the shape and flows in the mainstem
- Significant work to address these problems over the last 20 years
  - Minimum instream flows required
  - Passage Improvements (App. D, Sect. 4.3 of HMP, NPCC Project # 2009-026-00)
  - Habitat improvements by CTUIR and others (WW SubBasin Plans, NPCC project #1996-046-01, and others)

# Walla Walla Basin Spring Chinook Hatchery Program



# Walla Walla Basin Goals and Hatchery Contribution

## Greater Walla Walla Basin:

- Implement comprehensive water and fish restoration program that will lead to self-sustaining population **in the long term.**
- All-H approach
  - Habitat & Passage
  - Hydro – flow improvements
  - Harvest
  - Hatchery

## Hatchery Project:

Contribute to **harvest** and natural spawning, consistent with long term goal.

- Three Phased Approach:
  1. Local Adaptation and Natural Spawning
  2. Harvest Augmentation and Transition to Integrated Program
  3. Integrated Harvest and Demographic Safety Net

# Flow Improvement Example

## Mainstem Walla Walla River reach near state line

- Dry reach in August 1999
- Same area in 2002 with initial flow improvements





# Hatchery Program Size

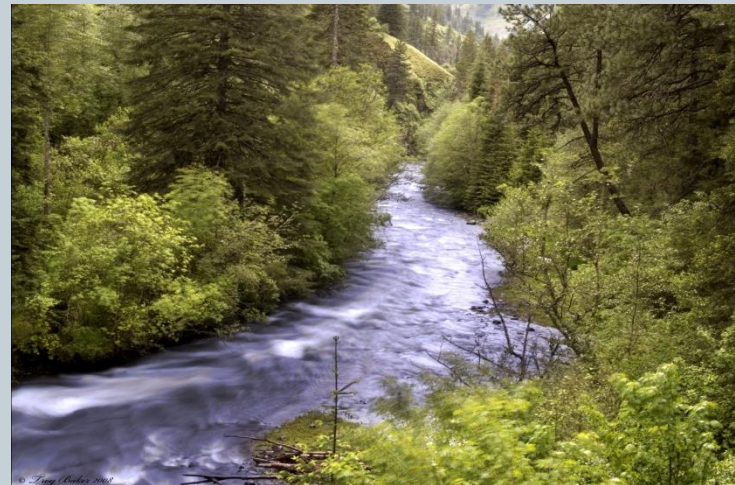


- Release up to 500,000 yearling smolts annually into the Walla Walla Basin in a 3 phase approach
  - 400,000 into the SF Walla Walla
  - 100,000 into the Touchet River
- In Phase 3, SF Walla Walla release reduced as 3 year running mean total return (NOR + HOR) to the Walla Walla reaches 5,500 adults
- SF WW release terminated when the 3-year mean natural origin return exceeds 5,500 adults.
  - Goals and triggers: subbasin plan and Wy-kan-Ush-Mi-Wah-Kish-Wit
- Touchet River maintained as a safety net; design addressed further in Step 2

# Phase 1: Local Adaptation and Natural Spawning

## Purpose:

- Develop a locally adapted hatchery population of spring Chinook
- Produce sufficient Chinook to populate habitat in the S Fork Walla Walla, Touchet River and Mill Creek



# Phase 1: Local Adaptation and Natural Spawning

Decision Rules (HMP § 2.2.4):

Adult Disposition:

- Broodstock, using local to extent possible
  - Natural spawning
  - Harvest in terminal areas when possible
- Move to Phase 2 when 3-year running average of NOR+HOR is greater than 1,000 adults



# Phase 2: Harvest augmentation and Transition to an Integrated Program

## Purpose:

- Provide fish for terminal tribal and sport fisheries (primary purpose)



- Begin transition to integrated harvest program



- Continue to produce fish to populate habitat in the SF WW, Touchet and Mill Creek

# Phase 2: Harvest Augmentation and Transition to an Integrated Program

## Decision Rules (HMP § 2.2.4)

- **Adult Disposition:**
  - Broodstock – ONLY local returns, with NORs at least 20% (5 year running ave.)
  - Escape 1,100 adults to SF WW (NOR + HOR)
  - Harvest adult and jacks in sport and tribal fisheries
  - Natural spawning in Mill Creek
- Begin transition to integrated harvest program
- Continue to produce fish to populate habitat in the SF WW, Touchet and Mill Creek
- Transition to Phase 3 when 3-yr running avg. of NOR adult returns is >750.



# Phase 3: Integrated Harvest and Demographic Safety Net

## Purpose, SF Walla Walla:

- Harvest Augmentation through an integrated harvest program
- Demographic Safety net for natural Population



## Purpose, Touchet River:

- Harvest and natural spawning
- Out-planting to continue support for natural spawning



# Phase 3: Integrated Harvest and Demographic Safety Net

## Decision Rules:

- Adult disposition priorities continue for the most part, but with larger natural component of broodstock as move to integration
  - Fisheries managed to allow spawner escapement target of 1,100 adults in SF Walla Walla River
- SF WW Releases reduced as the 5-year running geomean of total adults reaches 5,500 adults, and terminated when 5-year geomean of NOR adults exceeds 5,500 adults.



# Adaptive Management and the Annual Operating Plan



1. Establish and document a scientifically defensible working hypothesis (key assumptions) for the program;
2. Report and review the most recent empirical data on key population metrics (status and trends);
3. Establish biological targets and management triggers to assure appropriate responses to annual variations in population abundance (referred to as the Decision Rules); and
4. Apply the Decision Rules to set management targets for hatchery broodstock, natural escapement, terminal harvest and priorities for M&E for the coming season (this is the Annual Operating Plan).



# Walla Walla Hatchery Existing Facility



# Existing Adult Holding/Spawning Facility



# Proposed Additional Facilities

- **New building containing:**
  - ✓ Egg incubation
  - ✓ Early rearing troughs
  - ✓ Office and shop
- **Outdoor rearing units**
- **Release channel to river**
- **New on-site residences**

An aerial photograph of a facility situated in a valley. The facility includes several buildings, a parking lot with several cars, and a large open area. The surrounding landscape features steep, forested hillsides and a winding road. A callout bubble in the foreground points to a specific area of land.

Incubation and rearing location



# Walla Walla Hatchery Project Schedule



- **Planning and Design, Master Plan Step 1, HGMP: FY 2013**
  - **Co-manager MOA signed Oct. 2012**
- **Planning and Design Step 2 (and Env. Compliance): Aug 2014**
- **Construct hatchery: fall 2014 – winter 2015**
- **Capital Equipment: fall 2014 – winter 2015**
- **First brood: spawn fall 2015 Aug/Sept**
- **First smolt release: April 2017**
- **First adult return: spring 2019**

# Questions





# Thank You!

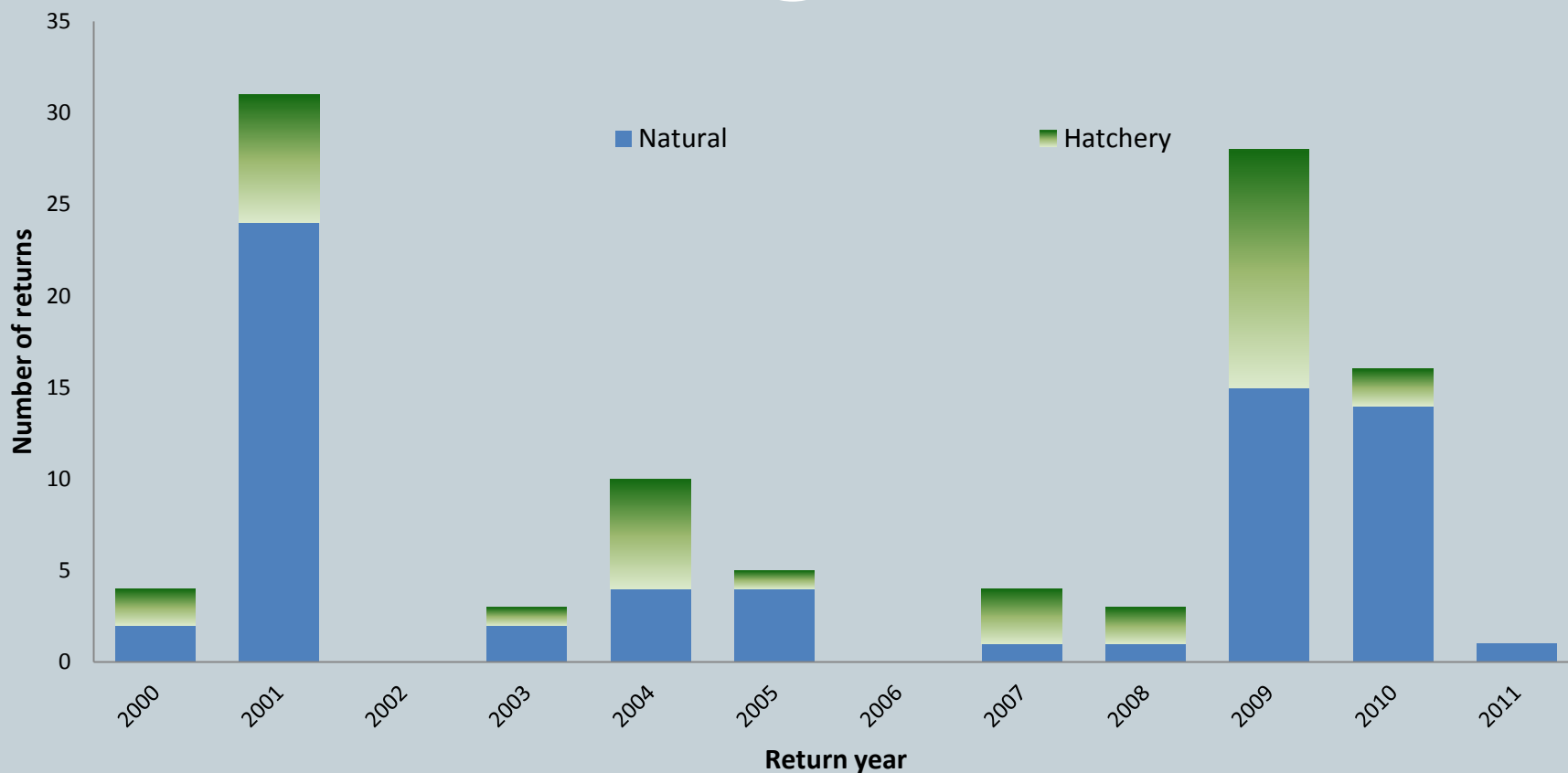
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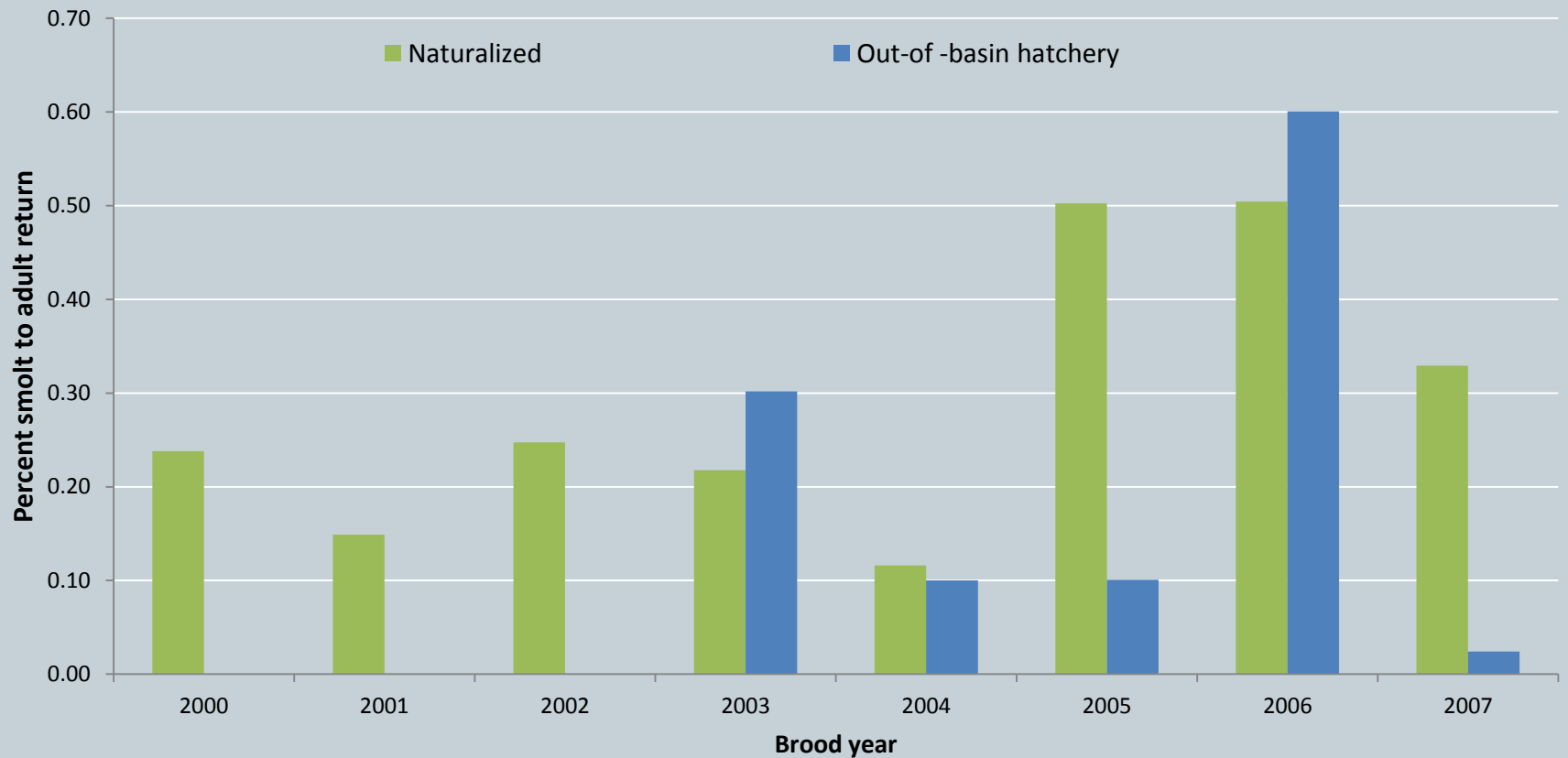




# Spring Chinook captured in the Dayton Adult Trap (DAP) in the Touchet River, 2000-2011.



# Smolt to adult return rate for naturalized (natural origin) and out-of-basin hatchery spring Chinook based on PIT-tag detections to the lower Walla Walla River for brood years 2000-2007



# Phase 3 – Habitat Action Effectiveness



## 2.3.1.2 Forecasts of Habitat Quality and Quantity in Phase 3

- The expected outcomes for natural-origin spring Chinook production in Phase 3 is highly dependent on future basin habitat quality and quantity. This, in turn, is dependent on the amount and effectiveness of habitat restoration actions implemented as part of the Recovery Plan (SRRB 2011) which is discussed below.
- **Habitat Actions** - The Recovery Plan identifies five strategies for improving salmon habitat in the Walla Walla River Basin. These are:
  1. Protect floodplain and riparian function as well as channel migration processes, structure and complexity.
  2. Restore floodplain and riparian function as well as channel migration processes, structure and complexity.
  3. Improve passage and connectivity between habitat areas and screen irrigation diversions.
  4. Improve in-stream flow during critical periods.
  5. Maintain and/or reduce sediment delivery to streams.

The list of proposed habitat actions for the Walla Walla and Touchet rivers can be found in Appendix D. These habitat actions are designed to achieve the objectives shown in Table 2-7. The Recovery Plan estimates that the cost of implementing the habitat strategy is approximately \$157 million. These actions are expected to be implemented over the next 10 years, depending on funding, permitting and landowner cooperation.

# Comprehensive Restoration Strategy

- Fish passage improvements
- Instream flow enhancement
- Floodplain enhancement
- Watershed protection and restoration
- Artificial propagation – salmon reintroduction
- Monitoring and evaluation



# Examples of Completed Fish Passage Projects

## 2 Dam Removals

- Marie Dorian
- Maiden



## 7 Fish Ladders

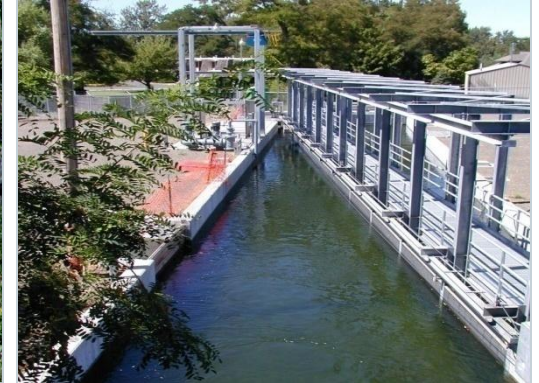
- Little Walla Walla
- Burlingame
- Garden City/L-2
- Hofer
- Gose Street
- Dayton
- Nursery Bridge (with adult trap)



# Examples of Completed Fish Passage Projects

## 7 Juvenile Screens

- Little Walla Walla (with smolt trap)
- Burlingame
- Cost share: Hofer, Smith-Nelson, City of WW, Blalock, Garrison



## 4 Ditch Consolidation Projects

- Milton, Garden City/Lowden-2/Berg.-Williams/Old-L, Dayton

## 350 New pump intake screens



## 18 Push-up dams converted to pumps

# Interim Reintroduction Steps

- Adult facility 1996
- Adult outplanting 2000
- First salmon return 2004
- First smolt release 2005





# CTUIR/ODFW/WDFW MOA for Walla Walla Hatchery Design, Construction & Operations

## MEMORANDUM OF AGREEMENT

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION DEPARTMENT OF NATURAL RESOURCES  
and  
OREGON DEPARTMENT OF FISH AND WILDLIFE  
and  
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

### Regarding Walla Walla Spring Chinook Hatchery Design, Construction and Operations

#### Purpose

The Confederated Tribes of the Umatilla Indian Reservation's Department of Natural Resources (CTUIR DNR), Oregon Department of Fish and Wildlife (ODFW), and Washington Department of Fish and Wildlife (WDFW) are recognized as tribal and state co-managers of hatchery operations for salmon and steelhead in the Walla Walla River Basin. A Walla Walla Spring Chinook Hatchery Master Plan (WWHMP) was submitted to the Northwest Power and Conservation Council by CTUIR DNR in August 2008. The objective of this CTUIR-sponsored and BPA Fish Accord-funded project is to contribute to Walla Walla spring Chinook restoration by locally producing spring Chinook-smolts at a hatchery constructed on the South Fork Walla Walla River. The project is a key component in the overall Walla Walla spring Chinook restoration program that will complement other efforts such as flow, fish passage and stream habitat improvements. The project is expected to produce enough returning adults to provide for broodstock, supplementation and harvest throughout the Walla Walla Basin (upper mainstem and tributaries, Mill Creek and the Touchet River). The terms of this Agreement identify the Walla Walla Spring Chinook Hatchery design, construction and operations supported by the co-managers.

#### Terms

##### **1. Hatchery Design and Construction**

Co-managers support design and construction of incubation, early rearing, and final rearing facilities at the existing South Fork Walla Walla Adult Holding and Spawning Facility in order to accommodate a production capacity of 500,000 yearling spring Chinook smolts (as detailed in the WWHMP). This enhanced facility would then be known as the Walla Walla Hatchery.

##### **2. Hatchery Production Level**

Co-managers support annual production of up to 500,000 spring Chinook to be reared full term at the new facility (as per US v OR agreement Table B1, Footnote 6). For purposes of developing the Hatchery Genetic Management Plan (HGMP) analysis, production would be split with up to 400,000 reared/acclimated on site and released directly into the South Fork Walla Walla River; up to 100,000 would be transported into the upper Touchet River. Actual and future adjustments in production levels and release location (as mentioned in WWHMP) will be made as per co-manager agreement through Annual Operations Plans (AOP's).

##### **3. Management Guidelines for Fish Disposition**

In contrast to initial management in the neighboring Umatilla Basin, brood collection, harvest, and escapement into the upper mainstem portion of the subbasin will be managed in an attempt to expedite the restoration of a naturally reproducing population. This natural production emphasis is incorporated into the WWHMP which allocates hatchery and natural origin adults for broodstock, natural spawning escapement, outplanting, and harvest.

In order to avoid annual negotiations regarding management decisions for spring Chinook returning to the Walla Walla River, co-managers will develop Walla Walla River Adult Spring Chinook Management Guidelines similar to those used successfully in the Umatilla Basin. Fish disposition such as harvest, broodstock collection, spawning escapement and adult outplanting will be determined based on these guidelines and sliding scale pre-season run projections and

then incorporated into AOP's. It is assumed that co-manager harvest planning would target an equal 50/50 tribal/state share. Any adjustments to the management guidelines would be made as per co-manager agreement during annual AOP discussions. The parties will work together in good faith to resolve any differences including elevating issues to CTUIR/ODFW/WDFW policy representatives as necessary.

##### **4. Hatchery Effectiveness Monitoring and Evaluation**

CTUIR DNR and WDFW will continue the BPA-funded project "Walla Walla Basin Collaborative Monitoring and Evaluation" to evaluate the hatchery and natural production effectiveness of the Walla Walla Hatchery project. The spring Chinook management approach in the Walla Walla Basin will allow for direct comparisons between restoration and supplementation strategies within the Walla Walla Subbasin as well as in neighboring subbasins.

##### **5. HGMP/Federal Consultation**

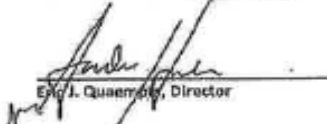
The parties to this agreement will propose to the federal government that all terms of agreement in this MOA be incorporated into the final Walla Walla Hatchery HGMP.

##### **6. Modification and Withdrawal**

Modifications of this MOA can be made at any time as per written agreement of all parties. Any Party may withdraw from this Agreement at any time by serving written notice to the other Parties. Included in the notice shall be an explanation as to the reason for withdrawal. Upon withdrawal of any Party, any remaining Party may withdraw upon notice to the remaining Party.

#### **Signatures:**

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION, DEPARTMENT OF NATURAL RESOURCES

  
Eric J. Quammen, Director

Date 9/5/12

OREGON DEPARTMENT OF FISH AND WILDLIFE

  
Roy Elcker, Director

Date 10/30/12

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

  
Phillip Anderson, Director

Date 10/30/12

# Complementary Efforts

## Settlement Agreement – US Fish and Wildlife & 3 Irrigation Districts

- Avoid ESA take (25 cfs min. flow - WW mainstem)

## Basin-wide Habitat Conservation Plan

- 50-yr operations permit (maintain or increase in-stream flows)

## COE/CTUIR Ecosystem Restoration Study

- In-stream Habitat Restoration