ANNUAL REPORT

CALENDAR YEAR 2013
OF ACTIVITIES UNDER THE ANADROMOUS FISH AGREEMENT AND HABITAT CONSERVATION PLAN
WELLS HYDROELECTRIC PROJECT FERC LICENSE NO. 2149

Prepared for

Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20426

Prepared by

Anchor QEA, LLC
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of Douglas County, Washington
1151 Valley Mall Parkway
East Wenatchee, Washington 98802-4497

March 2014

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1 INTRODUCTION

On June 21, 2004, the Federal Energy Regulatory Commission (FERC) approved an Anadromous Fish Agreement and Habitat Conservation Plan (HCP) for the Wells Hydroelectric Project (Wells Dam – FERC License No. 2149) on the Columbia River in Washington State. The Wells Project is owned and operated by Public Utility District No. 1 of Douglas County (Douglas PUD). The HCP provides a comprehensive and long-term adaptive management plan for species covered under the HCP (Plan Species) and their habitats. This document is intended to fulfill Section 6.9 of the HCP, which requires an annual report of progress toward achieving the No Net Impact (NNI) goal, as described in Section 3 of the HCP, and a summary of common understandings based upon completed studies.

Designated representatives of the signatories of the Mid-Columbia HCPs (HCPs for the Wells, Rocky Reach, and Rock Island hydroelectric projects) comprise the Coordinating Committees, Hatchery Committees, and Tributary Committees for each HCP, which meet collectively to expedite the process for overseeing and guiding the implementation of their respective HCPs. Minutes from the monthly meetings are compiled in Appendices A (Coordinating Committees), B (Hatchery Committees), and C (Tributary Committees). In addition, a Policy Committee provides a forum for resolution of disputes that are either elevated to or arise in the Coordinating Committees and remain unresolved. The Policy Committees did not meet in 2013 because there were no disputes. Appendix D lists members of the Wells HCP Committees. The Coordinating Committee for the Wells HCP oversaw the preparation of this tenth Annual Report for calendar year 2013, which covers the period from January 1 to December 31, 2013 (the first through ninth Annual Reports covered January 1 to December 31, 2004 through 2012).

2 PROGRESS TOWARD MEETING OR MAINTAINING NO NET IMPACT

The Wells Project HCP requires preparation of an Annual Report that describes progress toward achieving the performance standard of NNI for each Plan Species. The NNI standard consists of two components: 1) 91 percent combined adult and juvenile project survival achieved by project improvement measures implemented within the geographic area of the project, and 2) 9 percent compensation for unavoidable project mortality, with 7 percent compensation provided through hatchery programs and 2 percent through tributary programs (Section 3.1 of the HCP). In 2013, Douglas PUD was also required to prepare for the Coordinating Committees a comprehensive progress report that assesses the status of NNI during the first ten years of the HCP by no later than March 2013, per Section 6.9 of the Wells HCP.

In December 2012, Douglas PUD distributed their draft Comprehensive 10-Year NNI Progress Report for review by the Coordinating Committee. The report described the means by which Douglas PUD achieved NNI for all Plan Species by the 2013 deadline, and also the measures through which Douglas PUD has maintained NNI to the present, per the requirements contained in the Wells Project HCP. On March 26, 2013, the Wells Coordinating Committee approved a Statement of Agreement (SOA) approving the Douglas PUD Final 2013 Comprehensive 10-Year NNI Progress Report (Appendices A and E). The final report (Appendix G) was distributed to the Coordinating Committees on April 4, 2013.

In 2013 Douglas PUD continued achievement of NNI for the Wells Project by successfully meeting or exceeding all requirements for NNI under the Wells HCP.

The remainder of this section of the report summarizes decisions and agreements reached by the Wells Coordinating, Hatchery, and Tributary committees in 2013 in support of achieving NNI. This section is followed by sections summarizing achievements, actions, and activities specific to the areas of Wells Project survival and dam operations, hatchery compensation, and Tributary Committees funding of habitat protection and restoration.

Throughout 2013, the HCP Coordinating, Hatchery, and Tributary Committees reached agreement on numerous issues during meetings, all of which were documented in the

meeting minutes, with many of those decisions described in stand-alone SOAs. All of the agreements approved during calendar year 2013 are summarized in Table 1 and are discussed in the remainder of this section.

Table 1
Summary of 2013 Decisions by the Wells HCP Committees

Date	Agreement	HCP Committee	Reference
January 10, 2013	Approved the Douglas PUD 2013 HCP Action Plan	Tributary	Appendix C
January 10, 2013	Approved the Okanagan Nation Alliance's (ONA's) request for additional funds needed to complete the final report for the Okanagan River Restoration Initiative (ORRI) monitoring; and approved a 2-month time extension for the project	Tributary	Appendix C
January 16, 2013	Approved the Douglas PUD 2013 HCP Action Plan	Hatchery	Appendix B
January 16, 2013	Agreed that the revised Hatchery Monitoring and Evaluation (M&E) Analytical Framework 5-Year Update will consolidate and replace both the former Hatchery M&E Analytical Framework and Conceptual Framework	Hatchery	Appendix B
January 16, 2013	Agreed to extend the current HCP Hatchery Committees Conflict of Interest Policy, which was originally approved in November 2010, for 2 additional years	Hatchery	Appendix B
January 22, 2013	Approved the Douglas PUD 2013 HCP Action Plan	Coordinating	Appendix A
January 22, 2013	Approved the Douglas PUD 2013 Bypass Operations Plan	Coordinating	Appendix A
January 22, 2013	Agreed to include in the Douglas PUD Draft 2013 10-year NNI Comprehensive Check-in Report the Executive Summary of the Fish and Water Management Tool (FWMT) Report from Dr. Kim Hyatt, Department of Fisheries and Oceans Canada (DFO), in lieu of the full report, with the expectation that the full report will be appended when available about August 2013	Coordinating	Appendix A
February 1, 2013	Approved the Douglas PUD 2013 Gas Abatement Plan	Coordinating	Appendix A
February 11, 2013	Approved the Douglas PUD Sub-yearling 2011 Interim Report	Coordinating	Appendix A

Date	Agreement	HCP Committee	Reference
February 26, 2013	Approved the SOA for Wells Dam 2013 Lamprey Operations, as revised	Coordinating	Appendix A and Appendix E
February 26, 2013	Approved the Douglas PUD 2012 Wells Post-season Bypass Report	Coordinating	Appendix A
March 14, 2013	Approved funding for Cascade Columbia Fisheries Enhancement Group's (CCFEG's) *Methow/Chewuch Shallow Groundwater Monitoring Project*	Tributary	Appendix C
March 20, 2013	Agreed to use the steelhead broodstock collected in the fall of 2012 for the Douglas PUD Methow Safety-Net program broodstock, and to not collect additional broodstock in the Methow basin in the spring of 2013 for this program, unless an unexpected need for additional broodstock is identified by hatchery personnel	Hatchery	Appendix B
March 26, 2013	Approved the SOA approving the Douglas PUD Final 2013 10-year NNI Comprehensive Progress Report	Coordinating	Appendix A and Appendix E
March 26, 2013	Approved the Douglas PUD Final 2013 10-year NNI Comprehensive Progress Report with the expectation that the Executive Summary of the FWMT Report from Dr. Kim Hyatt, of DFO, will be incorporated when available *(Note: based on subsequent discussions with Dr. Hyatt, the Coordinating Committees later agreed to revise the existing FWMT summary that was included in the report to reflect that those data are based on preliminary analysis. A separate FWMT Report will be prepared by Dr. Hyatt, but will not be appended to the 10-year NNI Comprehensive Progress Report.)*	Coordinating	Appendix A
March 26, 2013	Approved the Douglas PUD 2012 Pikeminnow Program Annual Report	Coordinating	Appendix A
April 17, 2013	Approved the Douglas PUD SOA approving the revised M&E Plan for PUD Hatchery Programs: 2013 Update	Hatchery	Appendix B and Appendix F
April 23, 2013	Conditionally approved Columbia River Inter-Tribal Fish Commission's (CRITFC's) annual request for tagging sockeye at Wells Dam, with the requirement that sockeye are also Floy-tagged	Coordinating	Appendix A

Date	Agreement	HCP Committee	Reference
May 22, 2013	Approved Douglas PUD's revised Wells Summer Chinook Hatchery and Genetic Management Plan (HGMP) and SOA by email vote, with the National Marine Fisheries Service (NMFS) abstaining	Hatchery	Appendix B and Appendix F
June 13, 2013	Approved a contract extension for Trout Unlimited's *Twisp River Well Conversion*	Tributary	Appendix C
June 13, 2013	Approved a budget amendment for CCFEG's *Methow/Chewuch Shallow Groundwater Monitoring Project*	Tributary	Appendix C
June 19, 2013	Approved CRITFC's request to collect tissue samples from broodstock for parentage-based tagging (PBT) of Columbia River hatchery programs. The Colville Confederated Tribes (CCT) approved the request, but did not participate in 2013	Hatchery	Appendix B
June 19, 2013	Approved Grant PUD's request for Douglas PUD to produce 100,000 steelhead at Wells Hatchery for release in the Okanogan River, and 134,126 Methow River spring Chinook at the Methow Hatchery, for Grant PUD's respective programs	Hatchery	Appendix B
June 25, 2013	Approved the amendment to the final SOA for Wells Dam 2013 Pacific Lamprey Operations. The Committee also agreed that it would suffice to simply note in the meeting minutes the approved change in start date for lamprey operations, rather than amending the final SOA. *(Note: Teresa Scott indicated Washington Department of Fish and Wildlife (WDFW) approval of the amended SOA via email on June 21, 2013.)*	Coordinating	Appendix A
June 25, 2013	Agreed to review the Phase III (Additional Juvenile Studies) designation for subyearling Chinook under the Wells, Rocky Reach, and Rock Island Hydroelectric Projects HCPs in January 2015	Coordinating	Appendix A
June 25, 2013	Agreed to amend the start date for research identified in the final SOA for Wells Dam 2013 Pacific Lamprey Operations, from August 1, 2013, to no earlier than July 15, 2013. *(Note: Teresa Scott indicated WDFW approval to amend the SOA for Wells Dam 2013 Pacific Lamprey Operations via email on June 21, 2013.)*	Coordinating	Appendix A

Date	Agreement	HCP Committee	Reference
July 13, 2013	Approved the Wells Fish Hatchery Modernization Master Plan	Hatchery	Appendix B
July 23, 2013	Agreed to include data from the month of June in the summer study period in the updated flow duration curves for valid survival studies	Coordinating	Appendix A
August 15, 2013	Approved funding for Trout Unlimited – Washington Water Project's *MVID Instream Flow Improvement Project*	Tributary	Appendix C
August 21, 2013	Agreed that Greg Mackey would develop draft tables for inclusion in the Hatchery M&E Plan Appendices, for Hatchery Committee review	Hatchery	Appendix B
September 12, 2013	Approved funding up to $68,022.58, for Trout Unlimited's *Twisp River Well Conversion*	Tributary	Appendix C
September 12, 2013	Approved a time extension for ONA's *Shingle Creek Fish Passage Project*	Tributary	Appendix C
September 24, 2013	Agreed to hold the Coordinating Committees meeting on October 22, 2013, by conference call	Coordinating	Appendix A
September 24, 2013	Agreed to reschedule the Coordinating Committees meeting on November 26, 2013, to November 19, 2013, to be held in person at the Radisson Hotel in SeaTac, Washington	Coordinating	Appendix A
September 24, 2013	Agreed to reschedule the Coordinating Committees meeting on December 24, 2013, to December 17, 2013, to be held either by conference call or in person at the Radisson Hotel in SeaTac, Washington	Coordinating	Appendix A
October 9, 2013	Approved the Wells Dam Water Quality Attainment Plan (WQAP)	Coordinating	Appendix A
October 16, 2013	Agreed to consider approval of the Twisp River Steelhead Live Spawning Plan SOA by email	Hatchery	Appendix B
October 18, 2013	Approved, via e-mail, a contract extension for Trout Unlimited's *Twisp River Well Conversion Project*	Tributary	Appendix C
October 22, 2013	Approved the 2013 Wells Dam Post-Season Bypass Report, as revised (WDFW abstained citing their recent changes in HCP representation)	Coordinating	Appendix A
November 4, 2013	Approved the Twisp River Steelhead Live Spawning Plan SOA, as revised, via email	Hatchery	Appendix B and Appendix F
November 14, 2013	Approved the Douglas PUD 2012 M&E Plan Report	Hatchery	Appendix B

Date	Agreement	HCP Committee	Reference
November 19, 2013	Agreed to the removal of the ramps located on the upstream side of the count windows at Wells Dam	Coordinating	Appendix A
November 20, 2013	Approved the Chewuch Acclimation Plan SOA, as revised	Hatchery	Appendix B and Appendix F
November 20, 2013	Agreed to continue discussions on fish marking schemes after the Joint Fisheries Parties (JFP) develop a document summarizing the current status of marking for each program	Hatchery	Appendix B
November 15, 2013	*[Pending]* Approved a scope change and budget amendment for CCFEG's *Methow/Chewuch Shallow Groundwater Monitoring Project*	Tributary	Appendix C
December 18, 2013	Approved the Douglas PUD 2014 Hatchery M&E Implementation Plan, as revised	Hatchery	Appendix B
December 18, 2013	Agreed, in principle, to the CCT's Wells Steelhead Broodstock Replacement proposal, pending further discussion at the Hatchery Committees' meeting on January 15, 2014	Hatchery	Appendix B

2.1 Wells Project Survival and Dam Operations

2.1.1 Status of Phase Designations for Current Plan Species

A major feature of the Wells HCP is what is termed a "phased implementation plan" to achieve the survival standards. These phases have been described in previous HCP Annual Reports to FERC. Since February 2005, steelhead, subyearling Chinook, yearling Chinook, and sockeye salmon have been in Phase III (either designated Standard Achieved or Additional Juvenile Studies; see Table 2). In December 2007, coho salmon were designated as in Phase III (Additional Juvenile Studies). In 2008, land and cash with a total value of $600,000 were transferred to the Yakama Nation (YN) pursuant to Douglas PUD's coho mitigation agreement. This transaction completes Douglas PUD's coho mitigation obligation through 2017. No changes in phase designations have occurred since. Douglas PUD, in coordination with the Wells Coordinating Committee, plans to re-evaluate the phase designation for subyearling Chinook in 2015, following the completion of their 3-year subyearling life history study (see Sections 2.1.2 and 2.1.2.2).

Table 2
Phase Designations for Wells Dam

Plan Species	Phase Designation	Date
Upper Columbia River (UCR) steelhead	Phase III (Standard Achieved)	February 22, 2005; verified November 16, 2010 [1]
UCR yearling Chinook	Phase III (Standard Achieved)	February 22, 2005; verified November 16, 2010 [1]
UCR subyearling summer/fall Chinook	Phase III (Additional Juvenile Studies)	February 22, 2005
Okanogan River sockeye	Phase III (Additional Juvenile Studies)	February 22, 2005
Methow River Coho	Phase III (Additional Juvenile Studies)	December 12, 2007

Note:
1 Verified in a SOA on November 16, 2010, by the Wells Coordinating Committee. Verification study included Okanogan Basin yearling Chinook per Sections 4.2.1 and 8.4.5.2 of the Wells HCP.

Under Phase III conditions (Standard Achieved), Douglas PUD is required to re-evaluate survival every 10 years, following the initial completion of three years of valid juvenile project survival studies. Douglas PUD conducted valid juvenile survival studies in 1998, 1999, and 2000. In 2010, Douglas PUD completed the first 10-year juvenile survival validation study, verifying the continued achievement of Phase III (Standards Achieved) for yearling Chinook and steelhead migrating through the Wells Project (see Section 2.1.2). There were no juvenile project survival studies conducted in 2011, 2012, or 2013.

2.1.2 Assessment of Wells Project Survival

As previously reported, Douglas PUD has met the HCP survival standard of 91 percent combined adult and juvenile Wells Project survival, and is in Phase III of the phased implementation plan for all Plan Species. As required by Section 4.2.5.1 of the Wells HCP, in 2010, Douglas PUD re-evaluated survival, constituting the first 10-year "verification" survival study. The Wells Coordinating Committee selected yearling summer Chinook as representative of spring migrant salmonids (juvenile spring Chinook and yearling summer Chinook and steelhead), and directed Douglas PUD to include both Methow and Okanogan release sites for the study to fulfill Sections 4.2.1 and 8.4.5.2 of the Wells HCP. The results of the 2010 survival study (96.38 percent Wells Project survival for yearling Chinook smolts)

confirmed the continued achievement of Phase III (Standards Achieved) for yearling Chinook and steelhead migrating through the Wells Project, even during the second lowest flow year in the past 25 years. Douglas PUD is required to re-evaluate juvenile project survival for yearling spring migrants again in 2020.

In 2011, Douglas PUD initiated a 3-year subyearling life history study aimed at determining whether the technology and tools exist to empirically estimate survival of subyearling Chinook migrating through the Wells Project. By the end of 2012, over 30,000 subyearling Chinook were tagged and released above Wells Dam. The study continued in 2013, implementing the same methods that proved effective in 2011 and 2012. A final report is expected in 2014 that will include comprehensive 3-year comparisons (2011-2013) to examine year-to-year variability in behavior and life-history strategies.

2.1.2.1 Adult Passage Monitoring

When the HCP was completed in 2002, the signatories acknowledged the lack of a scientifically accepted methodology for assessing adult Wells Project survival for Plan Species (presumed to be 98 percent). Available methods cannot differentiate between mortality caused by the project versus other sources of non-detection. Such sources might include mortality from natural causes or fisheries; delayed mortality from injuries resulting from passage at downstream projects, or from injuries sustained by marine mammals or harvest activities; or fish not detected for other reasons, such as spawning in locations downstream from Wells Dam or loss of body-cavity Passive Integrated Transponder (PIT)-tags due to gonadal maturation during migration. Regardless of tagging method, this limitation remains: technology still does not allow a determination of the fates of all tagged fish detected passing a dam but not detected at the next dam upstream. However, calculations of total losses of tagged fish between projects provide a means for evaluating compliance with the Wells HCP standards for adult passage. Sequential detections of PIT-tagged adult salmonids through PIT-tag-detection systems in the fishways of each dam provide data for calculating conversion rates through the hydrosystem. Calculated per-project conversion rates furnish sufficient evidence for the achievement of adult survival standards, in that project-related mortality must be less than 2 percent when per-project

conversion rates exceed 98 percent (i.e., less than 2 percent of fish missing from all sources including Wells Project-related mortality).

Table 3 details, for all run-years available, PIT-tag detections at Rocky Reach Dam of known-origin adult spring and summer Chinook salmon and steelhead, the number of those adults redetected at Wells Dam, and the estimated conversion rate (Rocky Reach Dam to Wells Dam). The Rocky Reach-to-Wells conversion rate is 98.4 percent for spring Chinook (that is, mortalities from all sources averaged less than 2 percent), 98.1 percent for steelhead, and 96.5 percent for summer Chinook. Most of the summer Chinook used in the conversion-rate analyses were raised at either the Wells Fish Hatchery or the Eastbank Fish Hatchery, located downstream of Wells Dam, and were released as smolts upstream from Wells Dam. Similarly, most steelhead originated from the Wells Hatchery but were released upstream from Wells Dam. Thus, these fish may exhibit homing to their hatchery of origin and may not attempt passage of Wells Dam. Additionally, summer Chinook, steelhead, and sockeye are subjected to popular recreational fisheries downstream of Wells Dam. All spring Chinook used in the conversion-rate calculations originated from hatcheries upstream from Wells Dam and most are not subjected to fisheries in the mainstem Columbia River between Rocky Reach and Wells dams, although late-running fish may be inadvertently harvested in some years when their migration overlaps with the summer Chinook fishery (overlap of run timing with summer Chinook fishery estimated from PIT-tag detections at Rocky Reach and Wells dams: 1.4 percent of the run in 2012, 3.3 percent in 2011, 2.1 percent in 2010, 11.1 percent in 2007, and 1.2 percent in 2006). Insufficient numbers of sockeye have been PIT-tagged as juveniles to develop a per-project conversion rate of known-origin fish; however, the CRITFC PIT-tags adult sockeye at Bonneville and Priest Rapids dams without determining the origins of those fish. Table 3 includes conversion rates of sockeye from Rocky Reach Dam to Wells Dam (98.6 percent). The Rocky Reach-to-Wells conversion rate for sockeye was further refined by subtracting from the Rocky Reach detections those fish that were subsequently detected passing Tumwater Dam in the Wenatchee River (indicating a voluntary fallback event at Rocky Reach Dam).

Table 3

Rocky Reach-to-Wells Adult Conversion Rates for Available Release Groups

Stock Species	Number Detected at Rocky Reach Dam	Number Detected at Wells Dam	Rocky Reach-to-Wells Conversion Rate
Summer Steelhead[1,2] Return Years 2006 through 2013	4,315	4,235[3]	98.1%
Spring Chinook[1,4] Return Years 2006 through 2013	676	665[5]	98.4%
Summer Chinook[1,6] Return Years 2011 through 2013	1061	1026[7]	96.7%
Sockeye[8] RY 2010-2013	2,585[9]	2,550[10]	98.6%

Notes:

1 Source of conversion-rate calculations for steelhead and Chinook: Columbia River DART website (http://www.cbr.washington.edu/dart/query/pitadult_conrate). Calculation parameters: Basin = Columbia River and Tributaries; Conversion Reach = Rocky Reach to Wells; Species = respective species; Run = respective run; Rear Type = All. Minijacks and fish tagged as adults were excluded, and recaptures, mortalities, upstream detections, upstream recaptures, and upstream mortalities were included.

2 Summer steelhead released into the Okanogan and Methow River Systems—PIT-tag release site designations: BEAV2C, CHEWUR, GOLD2C, LIBBYC, METH, METHR, METTRP, OKANR, OMAKC, SALMOC, SGOLDC, SIMILR, STAPAC, TWIS2P, TWISPP, TWISPR, TWISPW, WINT, and WOLFC. Please note that some fish detected at Rocky Reach Dam in 2013 will not pass Wells Dam until the spring of 2014.

3 Number corrected (added 34 fish) for fish trapped at Wells Dam for broodstock and stock assessment in 2006 and 2007 when the PIT-tag-detection system on the west ladder trap and Wells Dam was malfunctioning. Wells counts are not corrected for fish harvested between Rocky Reach and Wells dams.

4 Spring Chinook released into the Methow River System—PIT-tag release site designations: BEAV2C, BIDDLP, CHEWUP, CHEWUR, MDVAP, METH, METHR, METTRP, TWISPP, TWISPR, WINT, WINTBC, and WOLFC.

5 Number corrected (added 8 fish) for fish removed at Wells Dam for broodstock for Methow Hatchery in 2006 and 2007 when the PIT-tag-detection system on the west ladder trap and Wells Dam was malfunctioning. Wells spring Chinook counts are not corrected for fish harvested between Rocky Reach and Wells dams (late running spring Chinook are subjected to harvest in July in some years by fishers targeting summer Chinook).

6 Summer Chinook released upstream of Wells Dam—PIT-tag release site designations: CARP (Eastbank Hatchery), COLR8, METHR (Wells Hatchery), OKANR (Wells Hatchery), and SIMILR (Eastbank Hatchery). Most of these release groups originated from hatcheries downstream of Wells Dam, COLR8 comprises returns from wild Chinook tagged in Wells Reservoir in 2011 and 2012.

7 Number corrected (added 9 fish) for fish trapped at Wells Dam/Hatchery. Wells counts are not corrected for fish harvested between Rocky Reach and Wells dams.

8 PIT-tagged sockeye primarily comprise run-at-large adults tagged by CRITFC at Bonneville and Priest Rapids dams and include fish originating from Lake Wenatchee and the Canadian Okanagan Basin. Sockeye destined for Redfish Lake in Idaho were excluded from conversion-rate calculations. Rocky Reach-to-Wells conversion rates for sockeye were calculated with data from PTAGIS (http://www.ptagis.org/) rather than via the conversion-rate function on the Columbia River DART site because the latter option does not allow the inclusion of sockeye adults tagged at Bonneville Dam.

9 Rocky Reach sockeye counts exclude fish detected at Tumwater Dam after being detected at Rocky Reach, as a means of excluding Wenatchee-origin fish that ascended and voluntarily fell back over Rocky Reach.

10 The Wells sockeye counts are not corrected for fish harvested between Rocky Reach and Wells dams.

Conversion rates of PIT-tagged fish provide a minimum survival estimate between detection sites because they encompass mortalities from all sources and non-detected fish (as described in Table 3) between the two detection sites. They do not include any indirect or delayed mortality that might occur upstream of Wells Dam (the redetection site). As noted above, conversion rates reflect a combination of mortality attributable to both non-project related causes (e.g., recreational and tribal harvest, predation, and disease) and dam passage, as well as non-detections resulting from straying and spawning downstream of Wells Dam. For this reason, the actual Wells Project survival rate for adult Plan Species exceeds or likely exceeds the 98-percent assumption set forth in the HCP.

Although not addressed in the HCP, passage of adult bull trout has been considered in the operation of Wells Dam for almost a decade. In 2004, FERC issued an order incorporating the HCP and the U.S. Fish and Wildlife Service's (USFWS's) *Bull Trout Biological Opinion* into the FERC license for the Wells Dam Project. Article 62 of the original Wells Project license requires Douglas PUD to file an annual report with FERC describing the activities required by Douglas PUD's Bull Trout Monitoring and Management Plan. In May 2013, Douglas PUD filed the *Bull Trout Management Plan 2012 Annual Report* that included activities conducted between January 1, 2012, and December 31, 2012 (Appendix H).

In November 2012, the Wells Project was issued a new FERC license which requires Douglas PUD to implement, among other measures, three bull-trout-related plans and programs. Specifically, the license requires Douglas PUD to implement the *Bull Trout Management Plan* contained within the Aquatic Settlement Agreement, the *2012 Bull Trout Biological Opinion,* and Section 18 of the Federal Power Act: Fishway Prescriptions for Bull Trout.

The first license deadline for reporting annual 2013 bull trout activities is April 15, 2014, when the Annual Bull Trout Report is due to be filed with USFWS, and the second is May 31, 2014, when the Annual Bull Trout Report is scheduled to be filed with FERC.

2.1.2.2 Grand Coulee Valid Study Flow Duration Curve Update

The Wells HCP, Section 4.1.4, requires that spring and summer period Flow Duration Curves used to define valid survival studies must reflect "Representative Environmental Conditions"

for each test, and for each Plan Species and life history. "Representative Environmental Conditions," as defined by the Wells HCP, means river flows between the 10 percent and 90 percent points on the Flow Duration Curve, as calculated using the best available information on historical average river flow (1929-1978, 1993-2001HydroSim) as measured at the Grand Coulee Dam tailrace. In March 2013, data were compiled to update the Flow Duration Curves, as periodically required by the Wells HCP. The HCP Coordinating Committees agreed to develop an updated Flow Duration Curve using the historical 1929-1978 and 1983-2001 data sets to which the new 2002-2012 dataset is added, and for comparison, also using only the 1983-2012 dataset. They also agreed to revise the definition of "summer period," to include June 1 through August 15, as opposed to the former July 1 through August 15 summer dataset. Efforts to update the Flow Duration Curves are underway, and are expected to become finalized in early 2014. These efforts are driven by requirements in the Rocky Island and Rocky Reach HCPs for updating the Flow Duration Curves in 2013, whereas the Wells HCP specifies only periodic review. Nevertheless, the Wells Coordinating Committee considers the updated curves applicable to future survival studies conducted by Douglas PUD.

2.1.2.3 Completed Studies 2013

Pikeminnow Removal Program

Since 1993, Douglas PUD has funded research on, and removal of, northern pikeminnow at the Wells Hydroelectric Project in an effort to understand and control predators of juvenile salmonids within the Project. Annual reports are developed that summarize the pikeminnow research and removal efforts for each year. The 2012 Douglas PUD Pikeminnow Program Annual Report (Appendix I) was finalized in May 2013. Douglas PUD documented the removal of 13,218 northern pikeminnow from the Wells Reservoir and tailrace during annual removal efforts occurring from April 12, 2012, to November 18, 2012. Catch Per Unit Effort (CPUE) levels in 2012 were the lowest to date of any of the annual pikeminnow removal projects. A trend in decreased annual CPUE has been documented over the previous 4 years. This trend suggests that removal efforts are effectively reducing the pikeminnow population within Wells Reservoir and the Wells tailrace area. However, as experienced in 2011, high spring flows in the Columbia River during 2012 prevented pikeminnow capture during the seasonal period when capture has been historically the

highest. From 1995 to 2012, the pikeminnow removal programs, funded by Douglas PUD, have resulted in the removal of approximately 241,000 pikeminnow from the Wells Project.

In 2013, Douglas PUD continued pikeminnow removal efforts, and a final report is expected to be available by spring 2014.

Lamprey Passage Studies

In 2009 and 2010, Douglas PUD conducted studies of adult lamprey fishway entrance efficiencies at both 1.0-foot and 1.5-feet head differentials in water surface elevations between the Wells fishway collection gallery and the Wells tailrace, using Dual Frequency Identification Sonar (DIDSON) cameras. A 0.5-foot head differential was tested in 2009, but was abandoned in 2010 because that differential appeared to offer no additional benefits to lamprey passage in comparison to the 1.0-foot differential. The effect of the different operating conditions on Wells fishway residency times for salmonids was evaluated by species.

In 2009, no differences were detected in fishway residency times for any salmonid species evaluated (coho, sockeye, steelhead, and Chinook), although the sample size may have been too low to detect significant differences. In 2010, there was a large sample size of steelhead and Chinook and no differences were detected at either the 1.0-foot or 1.5-feet head differential. Based on the study findings, it was concluded that lamprey appeared to have increased entrance efficiency at the 1.0-foot head differential with no apparent decrease in salmonid passage relative to the 1.5-foot differential. National Marine Fisheries Service (NMFS) staff questioned whether the statistical tests applied were appropriate for the study design, and requested additional statistical analysis of the data on salmonid passage during the lamprey studies.

In 2012, Columbia Basin Research and the University of Washington's School of Aquatic and Fishery Sciences completed a report that examined the possible effects of changes in fishway entrance water velocity on the passage counts of Chinook, coho, and sockeye salmon, and steelhead (Skalski, J. R., and R. L. Townsend, 2012). Results of the analysis indicated that there were no statistically detectable effects on salmonids from reduced velocities at the fishway entrances (at the 1.0-foot head differential) during the study hours of operations.

NMFS approved the report and the implementation of a 1.0-foot fishway entrance head differential was approved for each night, from 1700 to 0100 hours, of the 2012 lamprey migration period at Wells Dam.

In 2013, as treatments in the Adult Lamprey Passage and Enumeration Study, lamprey operations consisted of alternating 1.0-foot and 1.5-feet head differentials. The Adult Lamprey Passage and Enumeration Study is a radio-telemetry study of lamprey dam-passage behavior being conducted at the request of Douglas PUD's Aquatic Settlement Work Group (SWG). The study employs active tagging of translocated adult lamprey to assess lamprey passage and enumeration under reduced Wells Project fishway entrance velocities at Wells Dam.

Subyearling Studies

In 2010, Douglas PUD and Chelan PUD agreed to monitor PIT-tagged, natural-origin summer/fall Chinook detected at the Rocky Reach Juvenile Fish Bypass (RRJFB) to begin study of their life history diversity. A focus of the study was to determine outmigration timing and size-at-migration: information that is necessary for estimating the survival of migratory summer/fall Chinook salmon. However, the initial year of study (2010) revealed limited numbers of PIT-tagged subyearlings in the Upper Columbia River.

In 2011, Douglas PUD conducted a pilot study to investigate spatial and temporal distribution of subyearling Chinook in the Wells Reservoir and to identify opportunities to increase the numbers of PIT-tagged subyearling Chinook for the life history investigation. In 2011, Douglas PUD staff successfully collected more than 18,500 natural-origin subyearling Chinook, and PIT-tagged and released 13,223 subyearling Chinook back to the Wells Reservoir. The collections occurred at several locations in the Wells Reservoir. The 2011 study results, reported in the *Wells Project Subyearling Chinook Life-History Study 2011 Interim Report*, which was appended to the 2012 Wells HCP Annual Report and approved by the HCP Coordinating Committees in February 2013, identified study limitations and logistical obstacles, primarily regarding fish availability, migratory behavior, and fish size, that were used to inform future research.

In 2012, Douglas PUD implemented a similar study, during which more than 30,000 subyearling summer/fall Chinook salmon were collected and more than 20,000 were tagged and released. Fish were collected at three locations in the reservoir: 1) on the right bank upstream of the Okanogan River near Washburn Island; 2) on the right bank downstream from the mouth of the Okanogan River; and 3) on the left bank approximately one mile upstream of Wells Dam. The data collected during the 2012 study were compared to the 2011 data and the results were reported in a technical memorandum (Appendix J), which was presented at the HCP Coordinating Committees meeting on March 26, 2013.

In 2013, Douglas PUD implemented the third year of study on the life-history diversity of subyearling Chinook in the Wells Reservoir, in accordance with the study plan *Subyearling Study Plan Year 3* (Appendix K). The same methods were used as those used in 2011 and 2012 to allow comparison of year-to-year findings and to evaluate behavior under different environmental conditions. Approximately 20,000 subyearling summer/fall Chinook salmon were collected and nearly 18,000 were tagged and released. Fish were collected from the same locations that proved successful in 2012, with the addition of a collection site used in 2011 but not in 2012. A comprehensive 3-year report is being developed and is expected to be available in 2014.

Wells Dam Bypass Operations and Outmigration Effects

The Wells HCP, Section 4.3.2, requires Douglas PUD to conduct a 10-year verification of the effectiveness of the timing of bypass operations at Wells Dam in passing 95 percent of the spring and summer migration of HCP Plan Species. Historically, hydroacoustic and fyke netting studies at Wells Dam provided these data on passage timing necessary to determine the timing of annual bypass operations. Douglas PUD discussed the requirement found in Section 4.3.2 of the HCP with the Wells Coordinating Committee in early 2011 to plan for a study in 2012. The Wells Coordinating Committee representatives questioned the need for such a study because of the potential for take, and instead suggested an alternative to using the past methods of hydroacoustic monitoring and fyke netting for species verification. Douglas PUD agreed to verify run-timing by comparing Rocky Reach Dam juvenile bypass index samples to bypass operations at Wells Dam, using the run-timing of fish passing through the RRJFB as a surrogate for run-timing at Wells Dam.

Results of the analysis of run-timing at the RRJFB confirmed that in most years the Wells bypass was appropriately operated to cover 95 percent of the spring and summer migration at Wells Dam. However, in 2 of the 6 years analyzed, an earlier start of the Wells bypass would have provided additional benefits to spring Chinook. Also, the analysis determined that the Wells bypass system could have been shut down earlier in each of the 6 years analyzed and would still have provided greater than 95 percent protection for summer migrating Chinook. The Wells Coordinating Committee agreed that this data would be used to guide the operations of the Wells Bypass System, beginning in 2012.

In 2012, following the termination of sampling at the RRJFB, Douglas PUD updated the analysis with data from 2012; and in December 2012, distributed the report, *Analysis of Proportion of Outmigration Affected by Bypass Operations at Wells Dam, 2005-2012* (Columbia Basin Research, Skalski and Townsend 2012). The updated analysis indicated that the modified bypass timing initiated in 2012 provided bypass passage for greater than 99 percent of both spring and summer migrations of Plan Species.

Similarly, in 2013, following the termination of sampling at the RRJFB, Douglas PUD updated the analysis with 2013 bypass data; and in October 2013, distributed the report, *Analysis of Proportion of Outmigration Affected by Bypass Operations at Wells Dam, 2005-2013* (Columbia Basin Research, Skalski and Townsend 2013), which was appended to the final 2013 Wells Dam Post-Season Bypass Report (Appendix O). The updated analysis indicated that the modified bypass timing implemented in 2013 provided bypass passage for greater than 98 percent of both spring and summer migrations of Plan Species (see Section 2.1.3.1).

Gas Bubble Trauma Monitoring

In conformance with the 2013 Gas Abatement Plan (Appendix L), Douglas PUD implemented monitoring for Gas Bubble Trauma (GBT) in adult Plan Species at Wells Dam and the Wells Hatchery, and in juvenile Plan Species at the RRJFB sampling facility. Total dissolved gas (TDG) conditions in 2013 necessitated only one sampling event (on April 12), and none of the fish sampled showed any indication of GBT.

2.1.2.4 Planned Studies 2014

No new studies are planned for implementation at the Wells Project in 2014. However, Douglas PUD will continue the annual implementation of the pikeminnow removal program in 2014. Also, as in previous years, Douglas PUD will continue the evaluation of the effectiveness of the timing of bypass operations at Wells Dam and its effects on outmigration, by updating the analysis of run-timing at the RRJFB with 2014 data, following the termination of sampling at the RRJFB; a report will be developed summarizing the results.

2.1.3 Wells Project Operations and Improvements

This section summarizes project operations toward meeting and maintaining HCP requirements at Wells Dam in 2013. Actions in 2013 were guided by the 2013 Wells HCP Action Plan (Appendix M), as approved by the Coordinating Committees on January 22, 2013 (Appendix A).

2.1.3.1 Operations

Wells Project FERC License

In November 2012, FERC issued Douglas PUD their new Wells Hydroelectric Project license. The term of the new license is 40 years. The new license requires additional documentation of Project activities including the development of a number of reports. The license also stipulates additional review and approval processes, including a new requirement to provide the HCP Coordinating Committees with the opportunity to review certain documents. In December 2012, Douglas PUD filed a request for re-hearing to address a number of questions regarding the new license. The FERC issued orders on May 16, 2013, granting in part and denying in part Douglas PUD's request for rehearing. In June 2013, Douglas PUD filed with the FERC a request for reconsideration of two of the decisions for which the FERC had denied a rehearing: 1) the decision by the FERC to exclude the costs of the HCP in the evaluation of the extent of measures included in the new license, and 2) the FERC decision to issue a 40-year license rather than the requested 50-year license. That request was denied on September 19, 2013, and the new license stands as revised by the FERC orders of May 16, 2013.

Juvenile Bypass System

As in past years, operation of the juvenile bypass system in 2013 was guided by the Juvenile Bypass Operating Plan (BOP; Appendix N) and criteria contained within Section 4.3 of the Wells HCP. Bypass operations were initiated on April 9, 2013, at 0000 hours, and operated continuously until terminated at 2400 hours on August 19, 2013, for a total of 133 days. To implement compliance measures as described in the 2013 BOP (Appendix N) and provisions of the 2013 Gas Abatement Plan (GAP; Appendix L), bypass barriers in Spill Bay 6 were pulled on May 23, 2013, and reinstalled on May 30, 2013; and then removed again on July 1, 2013, and reinstalled on July 11, 2013. Douglas PUD achieved the HCP requirement to provide bypass operations during 95 percent of the juvenile salmon and steelhead migration passing Wells Dam by providing bypass passage during 98.29 percent of the yearling Chinook migration, 99.21 percent of the steelhead migration, 99.99 percent of the sockeye migration, 100 percent of the coho migration, and 99.33 percent of the sub-yearling Chinook migration passing Wells Dam in 2013. A complete summary of 2013 bypass operations at Wells Dam is included in the final 2013 Post-Season Bypass Summary (Appendix O). In December 2013, the draft Wells Dam 2014 GAP and BOP were distributed to the Coordinating Committees for review, and in January 2014, the plans were approved by the Wells Dam Coordinating Committee.

Modified Wells Dam Fishway Entrance Velocities

In February 2013, the Wells Coordinating Committee approved implementation of modified Wells Dam fishway entrance velocities (lamprey operations) during the 2013 lamprey migration, to enhance lamprey entrance efficiency. Studies in 2009 and 2010 at Wells Dam indicated that the reduction of the fishway collection gallery-to-tailwater head differential from 1.5 feet to 1.0 foot may enhance lamprey entrance efficiencies into the Wells Dam fishways by reducing velocities at the entrance. In 2012, the Wells Coordinating Committee approved implementation of a 1.0-foot head differential at Wells Dam fishway entrances each night during the 2012 lamprey migration. Prior to approving the changes, an evaluation of the effects of the change in entrance velocities on salmonid species passage rates was conducted. The evaluation showed no differences in passage rates for Chinook, coho, and sockeye salmon and steelhead, in 2009 and 2010. In 2013, lamprey operations consisted of a 1.0-foot head differential at Wells Dam fishway entrances every other night, and the normal, 1.5-feet head differential operating on alternating days. The alternating

operations served as treatments in a radio-telemetry study of lamprey dam-passage behavior being conducted at the request of the Aquatic SWG. Timing of the initiation of lamprey operations at Wells Dam fishways, which was based on the timing of release of radio-tagged lamprey below Wells Dam, was implemented from 1900 hours to 0200 hours from July 15, 2013, until October 7, 2013. Douglas PUD committed to conducting a full study of the effects of modified head differentials on salmonid passage rates prior to considering any permanent change in fishway operations.

Trapping Activities at Wells Dam

Multiple hatchery programs obtain broodstock from the Well Dam fishway traps and Wells Hatchery volunteer channel. The Coordinating Committees oversee these activities as certain trapping activities can affect passage at the dam. In 2013, trapping operations at Wells Dam included: 1) Washington Department of Fish and Wildlife (WDFW) for Douglas PUD's spring Chinook and steelhead programs; 2) the Colville Confederated Tribes (CCT) as backup for the Chief Joseph Hatchery program; 3) Dr. Jeff Fryer for the Columbia River Inter-Tribal Fish Commission's (CRITFC's) sockeye study; 4) the YN for their coho reintroduction program and their Yakima River summer Chinook reintroduction program; 5) Grant PUD for their Carlton summer Chinook program; and 6) USFWS for their Entiat summer Chinook program. Douglas PUD also occasionally receives trapping requests from various interests and those associated with research proposals.

Water Quality Documentation

Douglas PUD develops a number of plans that address water quality in the Wells Reservoir. Historically, these types of documents have solely been the purview of the Aquatic Settlement Workgroup. However, with the issuance of the new FERC License Order in 2012, there is now a requirement to provide the HCP Coordinating Committees with the opportunity to review these documents. In 2013, the Wells Dam Water Quality Attainment Plan (WQAP; Appendix P), which addresses meeting water quality standards for Washington State, was reviewed and approved by the HCP Coordinating Committees.

2.1.3.2 Improvements

Facility improvements and maintenance at Wells Dam in 2013 that had the potential to affect Plan Species are discussed in the paragraphs that follow.

The fishways at Wells Dam are inspected annually during winter, but at least one fishway is always in service to provide fish passage. Typically, each fishway receives, according to an alternating schedule, either a routine annual or a more substantial biannual inspection and maintenance. However, during the 2012/2013 winter fishway maintenance at Wells Dam, both east and west fishways were offline for staggered, extended maintenance periods, as several projects were scheduled to be completed for both ladders. Maintenance on the east fishway commenced the first week of December 2012 and concluded on January 24, 2013. Specific projects included: 1) installation of grating to benefit passage of lamprey and other plan species; 2) installation of safety railings and walkways on lower ladder sections; 3) installation of half-duplex (HD)-PIT detection at pool 19; 4) installation and repair of radio telemetry (RT) antennas in preparation for the 2013 Adult Lamprey Passage and Enumeration Study; and 5) completed work on the fish pumps for the auxiliary-water-supply system that provides attraction flow in the Wells Dam collection gallery. Maintenance on the west fishway in February included installation of lamprey grating, safety railings, and walkways, and also installation of RT antennas.

In December 2013, the west fish ladder was dewatered, which allowed a modification to the count window area to improve fish count efficiency. Hydromechanics removed a ramp on the upstream side of the count window that was installed during last year's winter fishway maintenance at Wells Dam. The upstream ramps were installed in both ladders to improve lamprey passage and enumeration; however, based on an evaluation conducted by NMFS, it was determined that the upstream ramps may actually be inhibiting the ability to accurately count fish by causing uneven hydraulics and flow separation through the count window area, and subsequently causing smaller fish to repeatedly pass back and forth through the count window area. After review of available data, it was also determined that lamprey were not using the ramps to pass through the count window area. Therefore, the HCP Coordinating Committees approved removing the ramps from both ladders to improve fish count efficiency in future years. The ramp will be removed from the east ladder in February 2014. Other improvements to the count window area to improve fish count efficiency

included improved lighting and camera and recording technology (i.e., installation of a high-definition system that will enable quicker fish identification). These same improvements will be implemented in the east fish ladder before fish counting begins in April 2014.

In September 2013, infrastructure for a new TDG monitoring station was installed in the Wells Reservoir near Washburn Island. The new station will be activated in early 2014, and is located downstream of where Chief Joseph Dam spillway zone and powerhouse flows meet, which will provide a more accurate TDG reading of water entering the Wells Dam forebay.

2.2 Hatchery Compensation

As required by the HCP, Douglas PUD supported hatchery production in 2013 to compensate for unavoidable project mortality and loss of habitat resulting from original inundation by the project. Section 8 of the Wells HCP outlines a Hatchery Compensation Plan with two hatchery objectives for Douglas PUD: 1) to provide hatchery compensation for spring Chinook, summer/fall Chinook, sockeye, and coho salmon; and for summer steelhead; and 2) to implement specific elements of the hatchery program consistent with the overall objectives of rebuilding natural populations and achieving NNI.

In March 2012, the draft 2013 Broodstock Collection Protocols (for Chinook and coho salmon, and steelhead) were distributed to the HCP Hatchery Committees for review. The protocols were finalized in November 2013 and implemented at program hatcheries (Appendix Q); in-season revisions were made as needed in coordination with the Wells Hatchery Committee. As agreed by the HCP Hatchery Committees, a provision was added to the 2013 protocols stipulating that in the event that Carson stock ancestry is detected in natural origin spring Chinook collected for broodstock, those fish may be retained and used for broodstock. The 2013 Broodstock Collection Protocols were intended to guide the collection of salmon and steelhead broodstock in the Methow, Okanogan, Wenatchee, and Columbia River basins. The protocols are consistent with previously defined program objectives such as program operational intent (i.e., conservation and/or harvest augmentation) and mitigation production levels (HCPs, and the Priest Rapids Dam 2008 Biological Opinion), and they comply with Endangered Species Act (ESA) permit provisions.

Hatchery compensation for NNI and inundation compensation in 2013 included the release of 677,094 yearling and 493,451 subyearling salmonids from hatcheries associated with the Wells Project (Tables 4 and 5). These totals do not include the increased production of natural-origin sockeye smolts attributed to Douglas PUD's sockeye NNI compensation—the continued implementation of the Fish-Water Management Tool project administered by the Okanagan Nation Alliance and funded by Douglas PUD. The total also does not include NNI compensation paid by Douglas PUD to the YN for the Coho Enhancement Program in the Methow Basin. Lastly, these totals also do not include the Methow Basin spring Chinook raised by Douglas PUD for Chelan and Grant PUDs or the yearling steelhead produced at the Wells Hatchery by Douglas PUD for Grant PUD.

2.2.1 Hatchery Production Summary

Tables 4 and 5 summarize and compare HCP hatchery production objectives and actual 2013 production levels (release numbers) for both the fixed hatchery compensation for the original Inundation and Harvest Enhancement Programs, and the HCP passage loss (NNI) compensation programs.

2.2.1.1 Inundation Compensation Program

The FERC license to operate the Wells Hydroelectric Project requires Douglas PUD to rear and release fish to compensate for original impacts associated with the development of the Wells Dam and Reservoir. All of the fish for this program are raised at the Wells Hatchery. The number of fish to be released each year for the Inundation and Harvest Enhancement Program can be found in Section 8.4.6 of the Wells HCP Agreement.

Table 4
Production Objectives and Release Numbers for the
Inundation and Harvest Enhancement Programs in 2013

Inundation and Harvest Compensation Program	Numeric Target	Number Released
Yearling Summer/Fall Chinook (2011 BY)	320,000	289,998
Subyearling Summer/Fall Chinook (2012 BY)	484,000	493,451
Yearling Summer Steelhead (2012 BY)	300,000	207,404

2.2.1.2 NNI Compensation Program

Section 8.4.3 of the Wells HCP contains the initial numbers of juvenile HCP Plan Species to be produced to meet Douglas PUD's NNI production levels for unavoidable juvenile losses at the Wells Project. These initial production targets were decreased in 2011, following the demonstration of higher than expected survival through the Wells Project for spring-migrating yearling Chinook and steelhead (per the 2010 Survival Verification Study). The hatchery compensation production targets were also adjusted (Wells HCP Agreement Section 8.4.5), with NNI steelhead releases adjusted starting in 2013 and NNI spring and summer Chinook targets adjusted starting with the 2014 releases. The NNI production goals for the 2013 releases are contained in Table 5 (Numeric Target). Juvenile passage losses are offset through the production of juvenile Plan Species at three facilities (Wells Hatchery, Methow Hatchery, and Eastbank Hatchery) and through the implementation of mitigation options identified in the Sockeye Enhancement Decision Tree.

Table 5
Production Objectives for the
HCP Passage Loss (NNI) Compensation Program in 2013

NNI Compensation Program	Numeric Target	Number Released
Yearling Summer Steelhead (2012 BY)	8,000	8,000[1]
Yearling Summer/Fall Chinook (2011 BY)	105,714	115,253[2]
Yearling Spring Chinook (2011 BY)	59,464	56,439[3]
Yearling Osoyoos Lake Sockeye[4]	NNI achieved by annually funding the Fish-Water Management Tool	
Methow Coho[5]	NNI achieved by payment to the YN for the Coho Enhancement Program in the Methow Basin	

Notes:

1 The total wild X wild production released into the Twisp River was 51,473, including 8,000 NNI fish and 43,473 inundation fish (Table 4, [C. Snow, WDFW 2014, personal communication]).

2 Carlton Pond Summer Chinook are released by Chelan PUD for Douglas PUD as part of the Douglas-Chelan Hatchery Sharing Agreement. 2013 is the final year of releases under this terminated agreement.

3 There were 452,961 spring Chinook smolts released from the Methow Hatchery in 2013 (C. Snow, WDFW 2014, personal communication), and an additional 51,556 spring Chinook from Methow Hatchery were transferred to the YN and released from Heath Pond (Mid-Valley Acclimation Pond). The total Methow Hatchery production target of 548,464 fish is a combination of Wells NNI (59,464) and the sharing agreements with Chelan PUD (288,000) and Grant PUD (201,000). Releases from Heath Pond and Methow Hatchery were combined to determine overall production..

4 Okanogan Sockeye obligation for NNI is covered by Douglas PUD funding of the FWMT program (Wells HCP: Sections 8.4.4 and 14, and Figure 3) managed through the Okanagan Nation Alliance.

5 NNI for Methow coho is achieved through the funding provided to the YN for the Coho Enhancement Program as approved by the HCP Hatchery Committees at the December 12, 2007 meeting.
BY = brood year

2.2.2 Hatchery Planning

2.2.2.1 Monitoring and Evaluation Plan Implementation and 5-year Update

Since 2006, Douglas PUD hatchery programs have been operated in accordance with three documents: 1) the Hatchery Monitoring and Evaluation (M&E) Plan, titled *Conceptual Approach to M&E for Hatchery Programs Funded by Douglas County Public Utility District*, originally developed in 2005 and updated in 2007, addresses the Wells HCP, Section 8.5, and is the guiding document for the M&E program; 2) the Hatchery M&E Analytical Framework, titled *Analytical Framework for M&E PUD Hatchery Programs*, prepared in 2006 and updated in 2007, provides the analysis tools for the Hatchery M&E Plan; and 3) the Douglas PUD Hatchery M&E Implementation Plan, titled *Implementation of Comprehensive M&E of Hatchery Programs funded by Douglas County PUD*, prepared and approved by the Wells HCP Hatchery Committee annually to describe the M&E activities for the next calendar year. The Douglas PUD 2013 Hatchery M&E Implementation Plan was approved by the HCP Hatchery Committees in December 2012, and was appended to the 2012 Wells HCP Annual Report.

The Wells HCP, Section 8.5.1, requires updates to the Hatchery M&E Plan every 5 years. In April 2012, the HCP Hatchery Committees began the process of updating the Hatchery M&E Plan, capitalizing on the lessons learned during the first 5 years of Hatchery M&E Plan implementation; and in June 2012, a Hatchery M&E Workgroup was formed to review and recommend revisions to the Hatchery M&E Plan. In August 2012, with the Wells Hatchery Steelhead and Methow Hatchery Spring Chinook Hatchery and Genetic Management Plan (HGMPs) still pending consultation, the HCP Hatchery Committees agreed to defer implementation of the fully revised Hatchery M&E Program until 2014, and agreed to implement the existing M&E programs with minor updates in 2013. This revised schedule would align new ESA permit deadlines with the proposed schedule for the M&E program updates, and also would allow more time for a thorough review of the existing M&E program and for development of M&E updates.

In January 2013, while updating the Hatchery M&E Plan, for efficiency, the HCP Hatchery Committees agreed to consolidate the Hatchery M&E Plan and the Hatchery M&E Analytical Framework into a single document, simply referred to as the Hatchery M&E Plan. In April 2013, after several meetings of the Hatchery M&E Workgroup and months of revisions and review, the Wells HCP Hatchery Committee approved the 5-year update of the Hatchery M&E Plan, titled *Monitoring and Evaluation for PUD Hatchery Programs: 2013 Update*, with the caveat that any future appendices for the plan will require HCP Hatchery Committee approval (Appendix R and Appendix F).

The Douglas PUD 2012 hatchery M&E Plan report, titled *Monitoring and Evaluation of Wells and Methow Hatchery Programs: 2012 Annual Report,* which documented M&E activities in 2012 (Appendix T), was approved in November 2013. A similar report will be completed in 2014 for 2013 M&E activities of natural production and hatchery operations. In December 2013, the Douglas PUD 2014 Hatchery M&E Implementation Plan (Appendix S) was finalized after a 30-day HCP Hatchery Committees review period.

2.2.2.2 Hatchery and Genetic Management Plans

In October 2008, NMFS requested that the Wells Hatchery Committee prepare updated HGMPs for Douglas PUD hatchery programs, including the Methow Hatchery Spring Chinook and Wells Hatchery Steelhead programs. NMFS is using the HGMPs to conduct ESA consultations, prepare Biological Opinions (BiOps), and issue new 10-year Incidental Take Permits for those programs. In February 2013, NMFS also requested an updated HGMP for Douglas PUD's Wells Hatchery Summer Chinook program.

Methow Hatchery Spring Chinook

The Methow Hatchery Spring Chinook HGMP was developed and refined throughout 2009 and approved by the Wells Hatchery Committee on February 17, 2010, and was then submitted to NMFS for ESA consultation on March 12, 2010. NMFS subsequently requested additional analyses to inform the potential to achieve management objectives of interest to NMFS. Douglas PUD performed these analyses for the Methow Hatchery Spring Chinook Program and submitted them to NMFS in November 2012, in the form of a supplemental information package. In March 2013, Douglas PUD received a letter of scientific sufficiency

for their Methow Hatchery Spring Chinook HGMP, initiating consultation for the Methow Hatchery Spring Chinook program. In August 2013, NMFS alerted the Hatchery Committees that the new permits would not be complete by the expiration of the current permits. Subsequently, on September 20, 2013, Douglas PUD received a letter from NMFS indicating that the existing ESA permits would be extended until consultation is complete and a new permit is issued. Permitting is anticipated to be complete by June 2014.

Wells Hatchery Steelhead

The Wells Hatchery Steelhead HGMP was developed in 2009 and 2010. The extended time required to reach consensus on this HGMP was largely the result of efforts to coordinate federal, state, and tribal interests in the Methow Basin. On March 7, 2011, the Wells Hatchery Committee approved the Wells Hatchery Steelhead HGMP, which was then submitted to NMFS on April 13, 2011, for ESA consultation. In November 2011, NMFS began reviewing the Wells Hatchery Steelhead HGMP and subsequently requested additional analyses to inform the potential to achieve management objectives of interest to NMFS. Douglas PUD performed these analyses for the Wells steelhead program and submitted them to NMFS in October 2012, in the form of a supplemental information package. In March 2013, Douglas PUD received a letter of scientific sufficiency for their Wells Hatchery Steelhead HGMP, initiating consultation for the Wells Hatchery Steelhead program. In August 2013, NMFS alerted the Hatchery Committees that the new permits would not be complete by the October 2, 2013 expiration of the current permits. Subsequently, on September 20, 2013, Douglas PUD received a letter from NMFS indicating that the existing ESA permits would be extended until consultation is complete and a new permit is issued.

Wells Hatchery Summer Chinook

The Wells Hatchery Summer Chinook HGMP was developed in March 2013, and was approved by the Wells Hatchery Committee on May 22, 2013 (Appendix U and Appendix F). In August 2013, NMFS alerted the Hatchery Committees that the new permits would not be complete by the October 23, 2013 expiration of the current permits. Subsequently, on September 20, 2013, Douglas PUD received a letter from NMFS indicating that the existing ESA permits would be extended until consultation is complete and a new permit is issued.

2.2.2.3 2013 to 2023 NNI Recalculation

The Wells HCP, Section 8.4.5, requires that hatchery production, except for original inundation mitigation, be adjusted in 2013 and every 10 years thereafter to achieve and maintain NNI. In September 2010, the process to recalculate hatchery production was initiated by the HCP Hatchery Committees. After first approving a method for recalculating hatchery production on July 20, 2011, the database with the numeric inputs for use in the recalculation efforts was approved as final by the HCP Hatchery Committees on August 17, 2011. The HCP Hatchery Committees then approved the recalculated hatchery production levels for Douglas PUD's NNI supplementation programs for 2013 through 2023 (Table 6) on December 14, 2011. In 2013, the recalculated hatchery production levels were implemented, as required.

Table 6
Douglas PUD's Recalculated (2013 to 2023) NNI Hatchery Obligations by Species

Species	Facility	Release Location	Recalculated 2013-2023 Obligation	Purpose
Spring Chinook	Chief Joseph Hatchery[1]	Okanogan Basin	33,300	NNI
	Methow Hatchery	Methow Basin	29,123	NNI
Summer Chinook[2]	Chief Joseph Hatchery (yearling)	Upper Columbia Mainstem/Okanogan	48,100	NNI
	Chief Joseph Hatchery (subyearling)	Upper Columbia Mainstem/Okanogan	49,000	NNI
Steelhead	Wells Hatchery	Twisp River	8,000	NNI
Sockeye	NNI met through funding of Fish-Water Management Tool			
Coho	NNI met through a funding Agreement for the YN Coho Reintroduction Program			

Notes:
1 Douglas PUD has agreed to provide funding for spring Chinook salmon at Chief Joseph Hatchery.
2 Douglas PUD has agreed to provide funding for summer Chinook salmon at Chief Joseph Hatchery (54,575 yearlings, or 48,100 yearlings plus 49,000 subyearlings). Prior to recalculation, funding was provided for 105,714 yearling Chinook at the Carlton Acclimation Pond.

2.2.2.4 Hatchery Production Management Plan

In 2011, WDFW, in coordination with the HCP Hatchery Committees, drafted a Hatchery Production Management Plan to document criteria, measures, and actions that contribute to better meeting hatchery production targets, and minimize overproduction. Although not finalized in 2011, WDFW began implementing those actions identified in the draft 2011

Hatchery Production Management Plan for which there was support among the fishery co-managers. In 2012, the Hatchery Production Management Plan was finalized and approved and included as an appendix to the Final 2012 Broodstock Collection Protocols. Similarly, in 2013, the Hatchery Production Management Plan was appended to the Final 2013 Broodstock Collection Protocols (Appendix Q) that were submitted to NMFS in November 2013.

2.2.2.5 Objective 10 of the Hatchery M&E Plan – NTTOC

The HCP Hatchery Committees began addressing the interaction of Plan Species with non-target taxa of concern (NTTOC; Objective 10 of the original Hatchery M&E Plan) in early 2008. At the close of 2008, the HCP Hatchery Committees agreed to conduct a review of risks to NTTOC using an expert-panel and a risk-based model that WDFW had previously developed and applied in the Yakima River basin (Ham and Pearsons, 2001, Fisheries 26: 15-23). The HCP Hatchery Committees agreed on the species to be analyzed and containment objective categories for these species, as well as potential panel members for the exercise, in November 2008. The final documentation for this decision was summarized in *Summary and Strategy for Monitoring and Evaluation Plan Objective 10 (NTTOC)*.

In August 2009, the HCP Hatchery Committees directed the Hatchery Evaluation Technical Team (HETT) to conduct the NTTOC assessment. For review, input, and approval by the HCP Hatchery Committees, the HETT developed a list of regional and local ecological experts to invite to serve on a panel to estimate the risk of HCP Plan Species hatchery programs to NTTOC, and developed a strategy and logistics for conducting the assessment panel workshops (by phone, in person, or a combination of the two).

In 2010, the HETT worked on completing the NTTOC risk-assessment template (a dataset structured for modeling and expert panel review) and a draft manuscript describing the risk-assessment approach, with the intentions of providing the template and manuscript to potential panel members, along with a cover letter requesting their participation in a Delphi process.

In May 2011, the risk-assessment manuscript was completed, and in October 2011, the HETT completed the risk-assessment template and developed a database to house the risk-assessment input data and to use as an analytical tool. In November 2011, the HCP Hatchery Committees approved the HETT recommendation to use the recalculated hatchery production numbers in the risk assessment.

In 2012, the HETT began conducting preliminary runs of the risk-assessment model using the recalculated production numbers. In August 2012, the HETT began compiling the results of model runs completed to date into the database for analysis, which would then also be used to assess Delphi panel results in comparison with the model results. The HETT also recommended that the Delphi panel should initially consist of a smaller group of local scientists and that the HETT would produce a report on the NTTOC modeling and the Delphi results for the HCP Hatchery Committees.

By November 2013, all anticipated model runs were complete and those data were entered in the NTTOC database. While running the models, a coding issue was discovered in the model that caused certain runs to fail, and fixing the program could not be resolved easily. In the interest of finalizing the NTTOC study, the HCP Hatchery Committees agreed to move forward and develop a report that summarizes the modeling results, and also acknowledges the limitations of the existing model. This report is expected to be available in early 2014. The content of this report will allow the Hatchery Committee to make an informed decision on whether this effort fulfills Objective 12 of the Hatchery M&E Plan (formerly Objective 10), or if further work is warranted.

2.2.2.6 M&E Program Reference/Control Groups

Between 2007 and 2011, the HETT identified reference populations for the Chiwawa, Methow, Twisp, and Chewuch spring Chinook programs. They also found a suitable reference population for the Wenatchee, Methow, and Okanogan summer Chinook programs. The Methow, Twisp, and Chewuch reference populations were used in analyses for the 5-year M&E report (Section 2.2.2.2). They did not, however, identify suitable reference populations for sockeye or steelhead. Therefore, in 2012, the HETT recommended that prior to the development of the next 5-Year M&E Report (due in 2017), the HCP

Hatchery Committees consider how best to evaluate the effects of supplementation when no reference populations are available (as in the case of steelhead and sockeye).

2.2.2.7 Steelhead Reproductive Success Study

The Wells HCP, Section 8.5.3, requires Douglas PUD to fund and implement a steelhead relative reproductive success study (RSS). On February 1, 2010, the Wells HCP Hatchery Committee approved the Twisp Steelhead Reproductive Success Study plan. The study covers a 12-year period beginning in 2010 (and also includes tissue samples collected in 2009). It focuses on an adult-to-adult assessment of the relative reproductive success of hatchery and wild fish, and includes the measurement of covariates of fitness. The study is designed to provide data to distinguish genetic and environmental influences on reproductive success. Study results will be used in management of summer steelhead in the Methow subbasin.

To date, genetic analyses have been completed by the WDFW Molecular Genetics Laboratory on the first four brood years in the study of adult steelhead returns to the Twisp River, with the fifth year (2013) underway. Fish were genotyped using 192 single nucleotide polymorphism (SNP) loci. The number of adult steelhead genotyped each year has varied, including 361 for brood year 2009, 346 for brood year 2010, 264 for brood year 2011, and 262 for brood year 2012.

In September 2013, WDFW issued the final report for the 2012 samples, titled *Relative reproductive success of Twisp River hatchery and wild steelhead (Oncorhynchus mykiss): Summary report for Single Nucleotide Polymorphism (SNP) genotyping of adult collections – Return Year 2012* (Appendix V). In the 2012 report, WDFW updated the SNP panel that was used for analysis because certain markers were not conforming or meeting genetic statistical expectations with the former panel. Analyses from previous years of the study were rerun with the new SNP panel and no differences from past analyses were observed.

Currently, genotyping of approximately 163 samples from 2013 is in process. For all years completed, the SNP loci are assessed for appropriateness for the Twisp River steelhead population and study goals, and several population genetic analyses are conducted. These

data will be used to conduct parentage analysis in future years. Field work for this study is conducted under the M&E program. A report summarizing findings from the 2013 samples will be available by fall 2014.

2.2.2.8 Multi-Species/Expanded Acclimation

In the interest of developing a long-term multi-species/acclimation plan for Upper Columbia River salmon mitigation programs, the Joint Fisheries Parties (JFP) agreed to develop a draft plan outlining multi-species acclimation options for Upper Columbia River salmon and steelhead mitigation programs. In January 2013, the YN distributed an Expanded Acclimation Plan for review and discussion. In October 2013, the YN further discussed potentially expanding acclimation areas in the Upper Methow, and agreed to develop a document summarizing the details of these plans. Additional discussion is anticipated for 2014.

2.2.2.9 Fish Water Management Tool

In 2013, Douglas PUD continued to fund the Fish Water Management Tool (FWMT) in lieu of providing hatchery-reared sockeye smolts as compensation, as previously agreed upon by the HCP Hatchery Committees in October 2004. The FWMT, developed through a collaborative effort led by Dr. Kim Hyatt of Fisheries and Oceans Canada, is a water management decision model that guides water management in the Canadian Okanagan River basin for the benefit of Okanagan sockeye and Okanagan Lake kokanee. The FWMT is used by water and fisheries managers to minimize flooding, limit desiccation and scouring of salmon redds, and minimize the spatial extent of low oxygen levels in Osoyoos Lake.

2.2.2.10 Confidence in Estimation of Broodstock Numbers

In February 2013, Douglas PUD completed exploratory work on broodstock calculations for managing risk and expectations in broodstock collection, and a white paper was developed summarizing the findings (Appendix W). The analysis provides an approach to estimate the number of broodstock required to meet programmatic goals with a specified level of confidence. This approach would allow managers to balance the potential costs and benefits of collecting a certain number of broodstock for a program. The Hatchery Committee was

undecided as to how this would be implemented in developing the annual Broodstock Protocols. This topic will be addressed again in 2014.

2.2.2.11 Grant PUD Fish Production Request

Each year, Grant PUD submits a request to Douglas PUD to produce fish for Grant PUD programs (Appendix X). The Hatchery Committees have routinely approved these requests after determining that a request would not impact Douglas PUD's HCP production. In June 2013, the Hatchery Committees approved Grant PUD's request that Douglas PUD produce 100,000 steelhead for release in the Okanogan at Wells Hatchery, and 134,126 Methow River spring Chinook at the Methow Fish Hatchery.

2.2.3 Maintenance and Improvements

Several maintenance and improvement activities were completed in 2013 in support of hatchery production under the Wells HCP. These activities included the CCT's completion of the new Chief Joseph Hatchery (where Douglas PUD's NNI production of Okanogan spring Chinook and Upper Columbia River summer Chinook are now produced). Also, progress has been made on plans for the modernization of the Wells Hatchery to meet the new requirements of the steelhead and summer Chinook HGMPs as well as to produce sturgeon and resident trout for the Off-license Settlement Agreement, as further described below.

In September 2012, Phase I of the modernization of Wells Hatchery was completed, which included the initial assessment of all infrastructure in order to identify needed upgrades. Phase I efforts also included useful life facility assessment, surface water and groundwater well field assessments, and bio-programming. Phase II was completed in January 2013, which finalized the bio-programming, addressed handling and management of adult returns, refined programmatic needs including potential changes to the programs in the future, and addressed configuration options for the facility in terms of water needs, rearing vessels, biological logistics, and workflow for Wells Hatchery operations. Phase III focused on creating the Wells Hatchery Modernization Master Plan, which includes all information generated in Phases I and II, and synthesizes that information into a facilities and operation overview. The Master Plan also guides development of bid drawings in Phase IV. The draft

Wells Hatchery Modernization Master Plan was completed in May 2013, provided to the Hatchery Committee for review, and finalized in July 2013 (Appendix Y). In August 2013, Douglas PUD held a Wells Modernization Workshop with the Hatchery Committee to review design aspects of the modernization; HDR Engineering, Inc., the engineering firm developing the plan, also participated. The 30 percent designs were nearly complete in December 2013 (completed in January 2014), and a Hatchery Committee workshop to review the 30 percent design is planned for February 2014. Construction is expected to commence in 2015.

2.3 Tributary Committees and Plan Species Accounts

As outlined in the Wells HCP, the signatory parties designated one member each to serve on the Tributary Committee. The Rock Island, Rocky Reach, and Wells Tributary Committees meet on a regularly scheduled basis as a collective group to enhance coordination and minimize meeting dates and schedules. Subject items requiring decisions are voted on in accordance with the terms outlined in the specific HCPs. During 2013, the Tributary Committees met on eight occasions.

An initial task of the Tributary Committees in 2013 was to review and update their operating procedures, which provide a mechanism for decision-making; these procedures were initially developed in 2005 and were included in that year's annual report (Anchor 2005)[1]. At that time, the Tributary Committees also developed Policies and Procedures for soliciting, reviewing, and approving project proposals (Anchor 2005); this document was last reviewed and updated in January and March 2013. The Policies and Procedures provide formal guidance to project sponsors on submission of proposals for projects to protect and restore habitat of Plan Species within the geographic scope of the HCP. The Tributary Committees established two complementary funding programs: the General Salmon Habitat Program and the Small Projects Program.

[1] Anchor Environmental, L.L.C. 2005. Annual Report, Calendar Year 2005, of Activities Under the Anadromous Fish Agreement and Habitat Conservation Plan. Wells Hydroelectric Project, FERC license no. 2149. Prepared for FERC by Anchor Environmental, L.L.C. and Public Utility District No. 1 of Douglas County.

In 2013, the Tributary Committees updated the membership list in Section III in the Operating Procedures. The WDFW representative was changed from Dennis Beich to Jeremy Cram. In the Policies and Procedures document, under Section 3.4, The General Salmon Habitat Program, the Tributary Committees agreed to increase the minimum size proposal value from $50,000 to $100,000 (total project cost). The Tributary Committees may provide lesser amounts for phased projects. Under Section 4.4, Administrative and Support Costs, the Tributary Committees included language about the use of approved appraisers for evaluating conservation easements and acquisitions funded by the Tributary Committees. Under Section 3.8, Management Guidelines for Conservation Easements/Acquired Lands, the Tributary Committees added language that states that all protection projects funded by the Tributary Committees will have public access except under extraordinary circumstances. In addition, they added language that states that the project sponsor will allow restoration on protection projects if deemed necessary and that the restoration actions must be approved by the Tributary Committees. Under Section 4.2, Eligible Projects and Elements, the Tributary Committees added language that indicates that they may provide a one-time fee for the development of a stewardship plan for acquisition projects. Finally, under Section 4.4, Administrative and Support Costs, the Tributary Committees included by reference the items described in the Salmon Recovery Funding Board (SRFB) document for Architectural and Engineering Services (A&E) and Administrative costs for restoration projects. Thus, the revised language in the Policies and Procedures document reads:

> *Acceptable Architectural and Engineering Services and Administrative costs are provided on pages 11-15 in Section 2 of the SRFB Manual 5 Restoration Projects document (see: http://www.rco.wa.gov/documents/manuals&forms/Manual_5.pdf). A&E costs cannot exceed 15% of the total restoration cost and Administrative costs cannot exceed 15% of the total restoration cost.*

In August 2013, the Wells Tributary Committee voted to retain Tracy Hillman as the Chairperson for the next 3-year period (2014 through 2016). Dr. Hillman is an Ecological Society of America board-certified senior ecologist and CEO of BioAnalysts, Inc. He has 28 years of experience as an ecologist and has chaired the Wells Tributary Committee since 2007.

2.3.1 Regional Coordination

Similar to the Hatchery Committees and to improve coordination, a representative from Grant PUD and the facilitator of the Priest Rapids Coordinating Committees (PRCC) Habitat Subcommittee were invited to the Tributary Committees monthly meetings. In addition, they received meeting announcements, draft agendas, and meeting minutes. This arrangement benefits the Tributary Committees through increased coordination and sharing of expertise. The Grant PUD representative and PRCC Habitat Subcommittee facilitator have no voting authority. The Tributary Committees, through the HCP Coordinating Committees, also invited American Rivers and the Confederated Tribes of the Umatilla Indian Reservation to participate in Tributary Committees meetings. Both parties contributed to the development of the HCP, yet elected not to sign the document. Neither of these parties participated in the deliberations of the Tributary Committees in 2013.

The Tributary Committees also coordinate with the Upper Columbia Salmon Recovery Board (UCSRB). Coordination is typically between the chairperson of the Tributary Committees and the Executive Director or Associate Director of the UCSRB. The Tributary Committees also invite representatives from the UCSRB to at least one meeting per year to update the Tributary Committees on activities proposed by the UCSRB. In addition, some members of the Tributary Committees typically attend the UCSRB meetings to foster coordination in developing and selecting projects for funding. Some members of the Tributary Committees are also members of the UCSRB's Regional Technical Team (RTT), which increases coordination in selecting projects for funding. Many of the policies and procedures of the SRFB and Tributary Committees are complementary, and annual funding rounds by these funding entities have been coordinated over the last several years.

In August 2013, the Wells Tributary Committee received a letter from the UCSRB extending an opportunity for the Tributary Committee to help sponsor the 2013 Upper Columbia Science Conference on November 13 and 14, 2013. The UCSRB asked for a contribution of $500 or more to help organize and implement the event. The Wells Tributary Committee elected to contribute $1,000 from its administrative allowance (no greater than $80,000 per year) of the Plan Species Account.

2.3.2 Fiscal Management of Plan Species Accounts

The Tributary Committees set up methods for the long-term management of the Plan Species accounts for each HCP. The Wells Tributary Committee agreed to have Douglas PUD manage the accounting services internally, and to structure the relationship so that it can invoice these administrative costs to the Wells Plan Species account. The beginning balance of the Wells Plan Species Account on January 1, 2012, was $1,003,713.82; Douglas PUD's annual contribution was $250,729.00; interest accrued during 2013 was $1,478.74; funds disbursed for projects in 2013 totaled $145,998.92; disbursements for administrative costs included $3,882.85 to Chelan PUD for administrative support provided to the Wells Plan Species Account, and $2,272 to Douglas PUD for account administration during 2013; $6,500 was paid for appraisal fees for the *Twisp River-Poorman Creek Habitat Acquisition Project*; and $1,000 was paid to the UCSRB for sponsorship of the 2013 Upper Columbia Science Conference, resulting in an ending balance of $1,096,267.79 on 31 December 2013. The 2013 Annual Financial Report for this Plan Species Account is provided in Appendix Z.

In January 2009, the Wells Tributary Committee recommended to the JFP (via the Wells Coordinating Committee) that Douglas PUD make annual payments to the Wells Plan Species Account beginning in 2010, per Section 7.4.1 of the Wells HCP. The annual contribution would be $176,178 (in 1998 dollars). In February 2009, the Wells Coordinating Committee accepted the recommendation that Douglas PUD make annual payments to the Wells Plan Species Account beginning in January 2010. Accordingly, at the end of each January, Douglas PUD makes an annual payment into the Wells Plan Species Account. In 2013, Douglas PUD deposited $250,729.00 into the Wells Plan Species Account.

The Wells Tributary Committee delegated signatory authority to the Tributary Committees chairperson for processing of payments for invoices approved by the Tributary Committee, with the Coordinating Committees chairperson serving as the alternate. The Tributary Committees chairperson works for a limited liability corporation and the Tributary Committees provide funds for liability insurance.

2.3.3 General Salmon Habitat Program

The Tributary Committees established the General Salmon Habitat Program as the principle mechanism for funding projects. The goal of the program is to fund projects for the protection and restoration of Plan Species habitat. An important aspect of this program is to assist project sponsors in developing practical and effective applications for relatively large projects. Many habitat projects are increasingly complex in nature and require extensive design, permitting, and public participation to be feasible. Often, a reach-level project involves many authorities and addresses more than one habitat factor. Because of this trend, the General Salmon Habitat Program was designed to fund relatively long-term projects. There is no maximum financial request in the General Salmon Habitat Program; the minimum request is $100,000, although the Tributary Committees may provide lesser amounts for phased projects.

In an effort to coordinate with ongoing funding and implementation programs within the region, the Tributary Committees used the previously established technical framework and review process for this geographic area, and worked with the other funding programs to identify cost-sharing procedures (see Section 2.3.1).

2.3.3.1 2013 General Salmon Habitat Projects

The Tributary Committees announced their 2013 funding cycle in March, with pre-proposal applications due on May 7, 2013, and full proposals due on July 12, 2013. The Tributary Committees received and reviewed 13 pre-proposal applications, and identified nine projects that they believed warranted full proposals and dismissed four projects because they did not have strong technical merit.

In July, the Tributary Committees received nine full proposals to the General Salmon Habitat Program, all of which were "cost-shares" with the SRFB or other funding entities. The Tributary Committees approved funding for seven projects. Table 7 identifies the projects, sponsors, total cost of each project, amount requested from Tributary Funds, and, if funded, which Plan Species Account supported the project.

Table 7

General Salmon Habitat Program Projects Reviewed by the Tributary Committees in 2013

Project Name	Sponsor[1]	Total Cost	Request from T.C.	Plan Species Account[2]
Silver Side Channel Design	CCFEG	$183,733	$66,000	RR: $132,000[3]
Chiwawa Nutrient Enhancement	CCFEG	$684,000	$342,000	RI: $342,000
Janis Rapids Side Channel	CCFEG	$98,750	$37,000	Not funded
Twisp to Carlton Reach Assessment	CCFEG	$173,016	$46,500	RI: $46,500
Icicle-Peshastin Irrigation Dist Pump Exchange	CCNRD	$322,000	$25,000	Not funded
Nason Creek RM 4.6 Side Channel Reconnection	CCNRD	$525,030	$88,000	RI: $88,000
CDLT Entiat Stillwaters Gray Reach Acquisition	CDLT	$569,625	$170,000	RR: $170,000
Similkameen RM 3.8 Habitat Design	OCD	$84,640	$21,160	RR: $84,640[4]
MVID Instream Flow Improvement	TU-WWP	$9,747,000	$400,000	W: $400,000

Notes:

1 CCFEG = Cascade Columbia Fisheries Enhancement Group; CCNRD = Chelan County Natural Resource Department; CDLT = Chelan-Douglas Land Trust; Okanogan Conservation District; TU-WWP = Trout Unlimited – Washington Water Project.

2 RI = Rock Island Plan Species Account; RR = Rocky Reach Plan Species Account; W = Wells Plan Species Account.

3 The Silver Side Channel Design did not receive funding from the SRFB; therefore, the Rocky Reach Plan Species Account funded the SRFB and Committee's share of the project ($132,000).

4 The Similkameen RM 3.8 Habitat Design Project did not receive funding from the SRFB; therefore, the Rocky Reach Plan Species Account funded the entire cost of the project ($84,640).

In 2013, the Wells Tributary Committee agreed to fund the following General Salmon Habitat Program project:

- *Methow Valley Irrigation District (MVID) Instream Flow Improvement Project* for the amount of $400,000 (with cost share, the total cost of the restoration project was $9,747,000). The project will: 1) improve instream flows in the lower 4.5 miles of the Twisp River by eliminating the MVID irrigation diversion and returning up to 15 cubic feet per second (cfs), which will be placed in permanent trust; 2) improve instream flow in the Methow River by piping a portion of the east canal and permanently trusting the saved water; 3) improve instream flow (2 cfs) and wetland and side channel habitat by restoring the natural flow in Alder Creek and

permanently trusting the water; and 4) prevent fish injury and mortality associated with MVID's Twisp River pushup dam, fish screen operations, and the stranding of redds and juveniles in the MVID West Canal's intake canal and fish return channel.

2.3.3.2 Modifications to General Salmon Habitat Program Contracts

In 2013, the Wells Tributary Committee received the following requests from sponsors asking for modifications to General Salmon Habitat Program projects funded by the Committee:

- In September, the Okanagan Nation Alliance (ONA) asked the Wells and Rocky Reach Tributary Committees for a time extension on the *Shingle Creek Fish Passage Project*. This was because there were some issues with coordination between ONA and the contractor. Because there was no contract in place, rock from the quarry was not available for the fish passage project. To that end, ONA asked the Wells and Rocky Reach Tributary Committees for a contract extension from December 31, 2013, to December 31, 2014. The Wells and Rocky Reach Tributary Committees approved the time extension.
- In December, WDFW asked the Wells and Rocky Reach Tributary Committees for a time extension on the *Silver Protection Project*. The contracts were scheduled to end on December 31, 2013. The sponsor requested that the contracts be extended to December 31, 2014, because they needed additional time to explore opportunities related to ensuring the permanent preservation and enhancement of salmonid habitat on the properties. The Wells and Rocky Reach Tributary Committees approved the time extension.

2.3.4 Small Projects Program

The Small Projects Program has an application and review process that increases the likelihood of participation by private stakeholders that typically do not have the resources or expertise to go through an extensive application process. The Tributary Committees encourage small-scale projects by community groups, in cooperation with landowners, to support salmon recovery on private property. Project sponsors may apply for funding at any time, and in most cases, will receive a funding decision within three months. The maximum contract allowed under the Small Projects Program is $100,000 (total project cost).

2.3.4.1 2013 Small Projects

In 2013, the Tributary Committees received four requests for funding under the Small Projects Program. The Tributary Committees approved funding for two projects. Table 8 identifies the projects, sponsors, total cost of the projects, amount requested from Tributary Funds, and which Plan Species Accounts supported the projects.

Table 8

Projects Reviewed by the Tributary Committees under the Small Projects Program in 2013

Project Name	Sponsor[1]	Total Cost	Request from T.C.	Plan Species Account[2]
Okanogan Basin Stream Discharge Monitoring	CTCR	$90,954	$74,984	RR
Methow/Chewuch Shallow Groundwater Monitoring	CCFEG	$34,180	$30,580	W
Beaver Creek Late Season Well Installation	TU-WWP	$16,397	$16,397	Not funded
Antoine Creek Feedlot Relocation	TU-WWP	$97,533	$37,533	Not funded[3]

Notes:

1 CTCR = Confederated Tribes of the Colville Reservation; CCFEG = Cascade Columbia Fisheries Enhancement Group; TU-WWP = Trout Unlimited – Washington Water Project.

2 RR = Rocky Reach Plan Species Account; W = Wells Plan Species Account.

3 The sponsor withdrew the project application because the Confederated Tribes of the Colville Reservation elected to fund the entire project.

In 2013, the Wells Tributary Committee agreed to fund the following Small Project:

- *Methow/Chewuch Shallow Groundwater Monitoring Project* for the amount of $30,580 (with cost share, the total cost of the project was $34,180). This project will establish groundwater monitoring sites on three floodplain parcels owned by WDFW to determine if it is feasible to pursue habitat restoration projects in these areas. The three parcels are the Silver Side Channel Complex (Methow River downstream from Twisp), Lewisia Floodplain (middle Methow River), and the Burns-Garrity Floodplain (lower Chewuch River). These sites were selected because they contain remnant channel features and there is evidence of shallow groundwater. The project required the purchase of 12 piezometers equipped with continuously recording water surface elevation and temperature data loggers. The Wells Tributary Committee provided the sponsor with the funding needed to purchase the monitoring equipment. Once

the monitoring work is completed, the sponsor will return the equipment to the Wells Tributary Committee.

2.3.4.2 Modifications to Small Project Contracts

In 2013, the Wells Tributary Committee received the following requests from sponsors asking for modifications to Small Projects funded by the Committee:

- In May, Cascade Columbia Fisheries Enhancement Group (CCFEG) asked the Wells Tributary Committee for a budget amendment on the *Methow/Chewuch Shallow Groundwater Monitoring Project*. The sponsor indicated that a Cultural Resource Survey was not necessary for this project. Therefore, they asked to move the Cultural Resource Survey funds ($4,500) to Sponsor Salaries and Benefits, and Contract Labor. Specifically, they asked to move $3,000 to Sponsor Salaries and Benefits, and $1,500 to Contract Labor. The Wells Tributary Committee approved the budget amendment.
- In June, Trout Unlimited asked the Wells Tributary Committee for a time extension on the *Twisp River Well Conversion Project*. This was because there were unforeseen delays in implementation. Thus, the sponsor asked the Wells Tributary Committee for a contract amendment that would extend the deadline from June 30, 2013, to October 31, 2013. The Wells Tributary Committee approved the time extension.
- In September, Trout Unlimited asked the Wells Tributary Committee for a budget amendment to the *Twisp River Well Conversion Project*. Well testing in the spring indicated that there was adequate water available to run the system (i.e., 150 gallons per minute). However, in August, the system was only able to produce 90 gallons per minute. The driller, hydrogeologist, and water witcher confirmed that the well needed to be drilled deeper to produce the required production. Deepening the well increased costs, which included pulling the pumps, fabrication to lower the pumps, a booster pump, and the well driller costs. In addition, the Natural Resources Conservation Science (NRCS) contribution was less than originally thought. Therefore, the sponsor asked the Wells Tributary Committee if they would provide additional funding for the project. The revised total cost of the project is $99,188.58 (the original cost was $87,738.87). The sponsor asked the Wells Committee if they would increase their contribution to $68,022.58 (the original contribution was

$43,550.27). The Wells Committee approved funding up to $68,022.58, an increase of $24,472.31 from the original contribution.

- In October, Trout Unlimited asked the Wells Tributary Committee for another time extension on the *Twisp River Well Conversion Project*. This was because contractors were unavailable and the irrigation system had been drained and would not be turned on until spring. Thus, the sponsor requested that the contract be extended from October 31, 2013, to June 30, 2014. This extension gives the sponsor time to complete the project when the system is turned on in the spring. The Wells Tributary Committee approved the time extension.
- In November, CCFEG asked the Wells Tributary Committee for a scope change and budget amendment to the *Methow/Chewuch Shallow Groundwater Monitoring Project*. The sponsor wanted to conduct a pump-drawdown test to measure groundwater quantity and recharge on the Burns-Garrity property. Because excavation of the test pits requires the presence of an archeologist, the sponsor asked to move $1,000 from contract labor to professional services. The Wells Tributary Committee approved the scope change and budget modification.

2.3.5 Tributary Assessment Program

In 2008, the ONA responded to the Tributary Committees' request for a proposal to monitor the Okanagan River Restoration Initiative (ORRI) Project. The Wells Tributary Committee agreed to fund three monitoring tasks of ORRI: 1) Fish Holding and Rearing, 2) Channel Morphometry and Hydraulics, and 3) Substrate Composition. As required in the Wells HCP, Douglas PUD provided funding for the approved monitoring tasks through the Wells Tributary Assessment Program, as per Section 7.5 of the Wells HCP, rather than through the Wells Plan Species Account.

In May 2012, the Wells Tributary Committee recommended that Douglas PUD fund the fifth and final year of ORRI monitoring. The cost of the monitoring approved by the Wells Tributary Committee and Douglas PUD during the fifth year was $18,984. ONA proposed to produce a final report that described results from the 5 years of monitoring. The report would also include the many additional data sources and analyses conducted as part of the monitoring program. To that end, in January 2013, the ONA asked the Wells Tributary

Committee for an additional $6,799 to complete the final report. Thus, the total amount for the fifth year would be $25,783. The Wells Tributary Committee approved the increase and directed Douglas PUD to provide via the Tributary Assessment Program (Wells HCP Section 7.5) the additional funding needed to complete the final report. In addition, the Wells Tributary Committee approved a 2-month time extension for the project. Thus, the contract period ended on August 31, 2013. In September 2013, ONA submitted a final report titled *Aquatic Monitoring of the Okanagan River Restoration Initiative—Post Construction 2012* to the Wells Tributary Committee.

3 HCP ADMINISTRATION

This chapter lists events of note that occurred in 2013 related to the administration of the HCPs, and provides a list of reports published in 2013 that relate to the HCPs.

3.1 Mid-Columbia HCP Forums

In 2005 and 2006, Mid-Columbia Forums (Forums) were held as a means of communicating and coordinating with the non-signatories and other interested parties regarding the implementation of the HCPs. Non-signatory parties at the time of the 2006 meeting included the Confederated Tribes of the Umatilla Reservation, and American Rivers. As in 2006 through 2012, these parties were invited by letter in 2013 to attend a Forum, in conformity with the 2005 FERC Order on Rehearing 109 FERC 61208 and in accordance with the offer to non-signatory parties of non-voting membership in HCP Tributary and Hatchery Committees processes. The non-signatory parties again indicated no interest in attending a Forum in 2013, and thus a Forum was not held in 2013.

3.2 Mid-Columbia HCP File Sharing

In January 2013, the HCP Coordinating Committees discussed transitioning HCP file sharing from the historically used ftp site to a more user-friendly platform. One of the primary purposes for transitioning to a new filing system is to facilitate a more efficient process for retrieving historical documents. In May 2013, Douglas PUD presented to the Coordinating Committees an overview of their new SharePoint system, as a potential option for the new HCP document repository. The Coordinating Committees raised no concerns with the proposed SharePoint repository, and Douglas PUD proceeded with the development of the repository. Douglas PUD unveiled the SharePoint Extranet file repository with presentations to the Hatchery Committees on January 15, 2014, and to the Coordinating Committees on January 28, 2014. The Tributary Committees portion of the SharePoint Extranet site will be available in the spring of 2014.

3.3 Mid-Columbia HCP Committees' Chairperson

In 2013, a review was held of the HCP Coordinating Committees', HCP Hatchery Committees', and HCP Tributary Committees' chairpersons and supporting staff, and all three Committees agreed to renew the existing contracts for an additional 3-year term.

3.4 HCP Related Reports and Miscellaneous Documents Published in Calendar Year 2013

The following is a list of reports released in 2013 that are related to the implementation of the Wells HCP:

- Alex, K., C. Louie, Z. Masters, C. Rivard-Sirois, A Stevens, and J. Squakin, 2013. Aquatic monitoring of the Okanagan River Restoration Initiative (ORRI) – Post-construction 2012. Prepared by Okanagan Nation Alliance Fisheries Department. Westbank, BC.
- Anchor QEA, 2013. *Annual Report, Calendar Year 2012, of Activities Under the Anadromous Fish Agreement and Habitat Conservation Plan*. Wells Hydroelectric Project. FERC License No. 2149. Prepared for FERC. March 2013.
- Douglas PUD, 2012. *Wells Dam 2013 Juvenile Fish Bypass Operating Plan*. Prepared for the Wells HCP Coordinating Committee. December 26, 2012.
- Douglas PUD, 2013. *Final 2013 Action Plan Wells HCP*. Prepared for the Wells HCP Coordinating Committee. January 2013.
- Douglas PUD, 2013. *Total Dissolved Gas Abatement Plan*. Wells Hydroelectric Project, FERC Project No. 2149. Prepared for FERC. January 2013.
- Douglas PUD, 2013. *Summary of 2012 Bypass Operations at Wells Dam*. Prepared for the Wells HCP Coordinating Committee. January 17, 2013 (Appendix AA).
- Douglas PUD, 2013. *Final 2013 Comprehensive Progress Report: Status of Achieving NNI Under the Anadromous Fish Agreement and Habitat Conservation Plan*. Wells Hydroelectric Project, FERC Project No. 2149. Prepared for the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington Department of Fish and Wildlife, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes and Bands of the Yakama Nation. March 2013.
- Douglas PUD, 2013. *2012 Subyearling Life History Study: Comparing 2011 and 2012 Results*. Prepared for the Wells HCP Coordinating Committee. March 22, 2013.

- Douglas PUD, 2013. *Wells Project Subyearling Chinook Life History Study Year 3*. Wells Hydroelectric Project. FERC No. 2149. April 2013.
- Douglas PUD, 2013. *Bull Trout Management Plan 2012 Annual Report*. Wells Hydroelectric Project. FERC No. 2149. Prepared for FERC. April 2013.
- Douglas PUD, 2013. *Wells Summer Chinook HGMP*. Wells Hydroelectric Project, FERC Project No. 2149. May 16, 2013.
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