

THE HONORABLE MICHAEL H. SIMON

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Tribes of the Colville Reservation*

UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION,
et al.,

Case No. 3:01-cv-00640-SI

Plaintiffs,

v.

**DECLARATION OF
WILLIAM T. TOWEY**

**NATIONAL MARINE FISHERIES
SERVICE, et al.,**

Defendants.

I, WILLIAM T. TOWEY, hereby declare as follows:

1. I am a Policy Analyst in the Fish and Wildlife Department of the Confederated Tribes of the Colville Reservation (“Colville” or “Tribes”) and have been employed in that capacity since 2004. In my current position, I provide policy recommendations and guidance to

DECLARATION OF WILLIAM T. TOWEY -1

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senior staff within the Fish and Wildlife Department and the chairman of the Colville Business Council's Fish and Wildlife Committee. I am responsible for the oversight and management of Colville's 2008 Columbia Basin Fish Accord Memorandum of Agreement ("Colville MOA"), the Pacific Coastal Salmon Recovery Funding project and Upper Columbia Salmon Recovery Board (UCSRB) programs. In this capacity, I regularly review habitat and other Colville salmonid project summaries and funding information prepared by the Department's habitat biologists and other staff. I am competent to make this declaration based on my personal knowledge.

2. I represent Colville as a member or alternate in various Columbia River Basin policy forums, including the habitat committee of the Grant County PUD Habitat Conservation Plan Committee, Douglas County PUD Aquatic Workgroup, technical committee of the Upper Columbia United Tribes, Mid-Columbia Habitat Conservation Plan Committees, Upper Columbia Salmon Recovery Board (for which I served as Chair in 2006, 2010 and 2014). Chief Joseph Hatchery Steering Committee and the Bonneville Environmental Foundation.

3. I previously testified by written declaration in this proceeding in support of Colville's *amicus* brief in the 2010 supplemental summary judgment briefing. See Declaration of William T. Towey in Support of Colville Tribes' Supplemental *Amicus* Brief (Dkt. 1817) ("2010 Towey Declaration"). In this declaration I focus on Colville habitat projects in the Okanogan River basin and other relevant work to implement the 2008 BiOp's RPA from 2010 through 2014, acknowledging that some of the actions I describe occurred after the current BiOp was issued in early 2014. There is also some overlap with the content of my previous

declaration, but this declaration is generally intended to provide the Court with new and useful information.

4. My primary responsibility for Colville is to manage the implementation of the Colville MOA with the Federal Columbia River Power System (FCRPS) Action Agencies – Bonneville Power Administration (BPA), the U.S. Army Corps of Engineers (“Corps”), and the U.S. Bureau of Reclamation (BOR). In this capacity, I work with the Fish and Wildlife Director and Division and Program Leaders within the Fish and Wildlife Department to plan and allocate MOA funding to numerous anadromous fish, resident fish and wildlife projects to achieve the purposes of the MOA. I am also the Tribes’ primary point of contact for coordination and collaboration with the Action Agencies on issues pertaining to the implementation of the Colville MOA and the FCRPS BiOp, including the latter’s adaptive management provisions. This is accomplished through as-needed emails, conference calls, meetings and participation in the BiOp’s forum for regional sovereigns, the Regional Implementation Oversight Group (RIOG), where I am Colville’s primary representative. My duties also include ensuring that reporting of project implementation and results is completed through data entry in the BPA’s PISCES information system and the Pacific Coastal Salmon Recovery Fund’s maintenance database.

5. The Colville MOA includes a commitment of over \$204 million in federal funding to be spent during the ten-year period, 2008 through 2017, with upwards of \$141 million¹ going toward actions to increase the abundance, productivity, distribution and diversity

¹ This total reflects the entire allocation for the construction, operation and maintenance, and monitoring and evaluation costs of Chief Joseph Hatchery (Item # 8) over the 10-year term of the MOA. Chief Joseph Hatchery is intended to carry-out Hatchery Strategy 2, Action 42 (UCR

of Endangered Species Act (ESA) listed salmon and steelhead in the upper Columbia River (UCR) region. *See* Colville MOA, Attachment A (2008 Corps AR A.394 at A-1 to A-2). These amounts have been increased during the term of the MOA as a result of a cost of living adjustment provision. These ESA-focused projects are largely targeted to recover endangered UCR spring Chinook and threatened UCR steelhead in the Okanogan River by addressing habitat factors limiting their population health and viability.

6. One of the most significant benefits of the Colville MOA is the stable funding source for key salmon and steelhead projects. Prior to the MOA, the entire Upper Columbia province (Columbia Cascade) received less than \$3 million per year for fishery programs. Now, the Okanogan basin alone, which is one of four key sub-basins in the UCR, receives as much or more funding (\$4-7 million) than the entire Columbia Cascade province received prior to the MOA. Since the inception of the MOA in 2008, Colville has contracted over \$135 million towards anadromous fish recovery in the Columbia Cascade province.² In addition to the large increase in funding, the stability of MOA dollars maximizes the focus of the Tribes' staff on meaningful implementation rather than the inordinate amount of time previously spent seeking lesser amounts of funding participation in a myriad of regional processes. Other benefits have also accrued from the new funding regime. First, Colville was able to leverage additional funding for the ongoing costs of the facility through cost-share agreements with Grant, Chelan

Spring Chinook reintroduction in the Okanogan River basin) of the RPA, and will also be used to increase the abundance, productivity, distribution and diversity of naturally spawning unlisted UCR summer/fall Chinook in the Okanogan and Columbia Rivers above Wells Dam. *See* Corps 2008 AR A0001 at 60 (Table 8); Colville MOA at B-6 to B-7.

² This amount includes some non-ESA project implementation.

DECLARATION OF WILLIAM T. TOWEY -4

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and Douglas County Public Utility Districts, which contribute approximately 35% of the operation and maintenance and monitoring and evaluation budget of the hatchery.³ This includes access to important rearing pond infrastructure in the Okanogan River basin. Second, regional awareness of this funding and Colville's habitat restoration objectives has led to opportunistic projects providing significant benefits for fish. *See, e.g.* ¶ 11, below. These projects would never have occurred under the pre-MOA, project-by-project funding approach.

7. The core salmon and steelhead projects that are identified in the MOA were designed to restore healthy, sustainable fish populations to the Upper Columbia River. The projects are necessarily tied to the 2007 Upper Columbia River Spring Chinook Salmon and Steelhead Recovery Plan, 2014 AR at NMFS042311 which established a roadmap to recovery of these species by addressing the limiting factors for each species, in each sub-basin where they are present. The MOA has provided immediate and substantial funding to high priority actions in the areas of habitat restoration, land and water acquisition, monitoring and evaluation, production (Chief Joseph Hatchery), harvest (selective harvest initiatives), and ESA enforcement.

8. The Tribal-Federal partnership represented by the Colville MOA has ensured committed resources to address the ESA requirements for UCR salmon and steelhead associated with the operation of the FCRPS. Implementation in the first seven years of the 10-year MOA has demonstrated the advantages of implementing core recovery projects with a long-term, stable funding approach.

³ In addition, the cost-share agreement with Grant County Public Utility District contributed \$10 million toward capital costs of the hatchery.

9. Within the Tribes' MOA budget, over \$61 million will be spent over the decade on improving the habitat of ESA-listed spring Chinook and steelhead. Colville's habitat restoration and monitoring and evaluation work in the Okanogan has undergone rapid development since 2008 and is now a mature, highly functioning program involving staff with more than a combined four decades of work in the Okanogan sub-basin. Since the early ramp-up phase, Colville has proceeded to implement a number of projects that will immediately improve the viability for UCR steelhead in the Okanogan River. Habitat investments are also being made with the long-term objective of establishing a reintroduced UCR spring Chinook population in the Okanogan basin using Chief Joseph Hatchery, which was constructed between 2010 and 2013 with major funding support from the MOA as the central propagation facility.

10. Since completion of the early habitat restoration projects in Omak Creek under the MOA, which continue to benefit UCR steelhead through correcting the limiting factors of high water temperature and fish passage barriers and protecting key riparian habitat,⁴ Colville work has focused on completing the Mission Falls gorge project. This work, initiated in 1999 under funding from BPA and Natural Resource Conservation Services (NRCS), was completed in 2013 after three years of intense work using MOA funds and recently achieved fish passage through the Mission Falls gorge where more than 10,000 cubic yards of rock and boulder had created a migration barrier. The project required specialized equipment and an 8-person crew in a logistically challenging setting to break up and remove the large quantity of rock in a 200-foot deep gorge. Following removal of the rock, four structures were installed to facilitate fish

⁴ The early phase of Omak Creek projects is described in my 2010 declaration. *See* 2010 Towey Decl. ¶¶ 9-10.

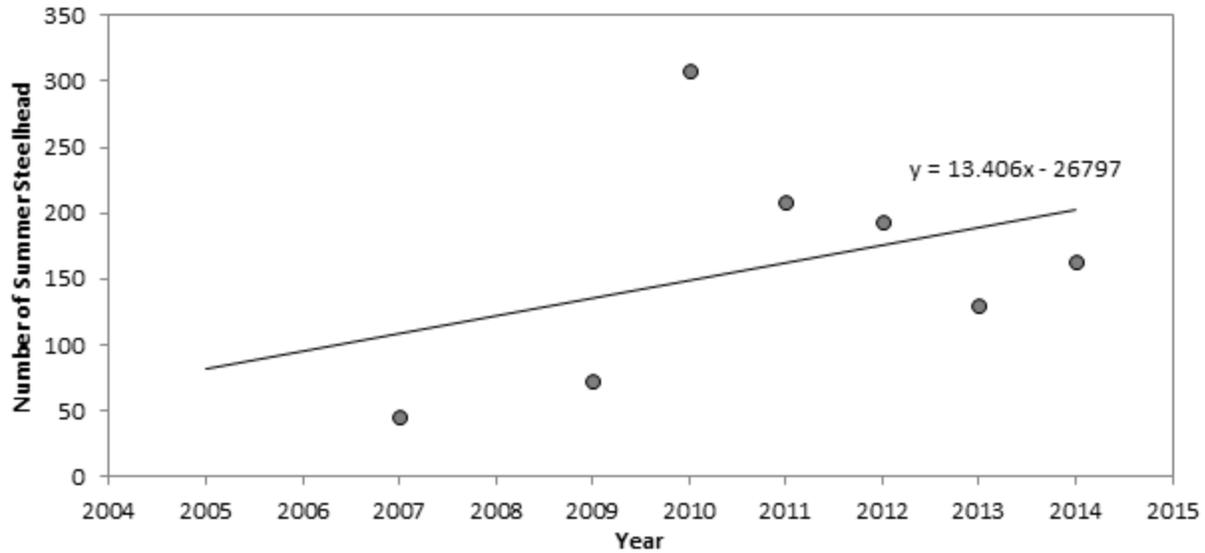
access. The total cost of this project exceeded \$3 million⁵ and cleared access for UCR steelhead to over 15 miles of spawning and rearing habitat. In the spring of 2014, the effort and money expended in Mission Falls gorge were met with positive results. After two Passive Integrated Transponder (PIT) antennas were installed in the gorge, one antenna at the base of the falls and just upstream at the crest of the falls, the first summer steelhead was detected at the crest of the falls in nearly a century. Soon after an additional nine steelhead were recorded passing through the Mission Falls gorge. Although only 10 adult steelhead navigated the Mission Falls gorge in 2014, poor flow conditions from the previous winter's low snowpack (52% of normal) suggest that under spring discharge from a normal snow pack more fish would be capable of migrating through the gorge. Overall in Omak Creek, Colville continues to see very strong steelhead adult returns. In 2014, 200 naturally produced steelhead returned compared to an estimated 20 returning adults in 1997 (all of hatchery origin), when rehabilitation planning began.

11. Benefits to steelhead in Salmon Creek continue to accrue from the long-term lease of 1,200 acre-feet of irrigation water,⁶ which has restored minimum spring flows in the lower 4.3 miles of the creek and reconnected 11 miles of quality steelhead habitat that had been isolated for nearly a century from the Okanogan River by irrigation flow diversions. A recent project on Salmon Creek illustrates the benefits of the large, long-term MOA funding and the often

⁵ Approximately \$1.35 million of MOA funding went toward the project from 2009 through 2013.

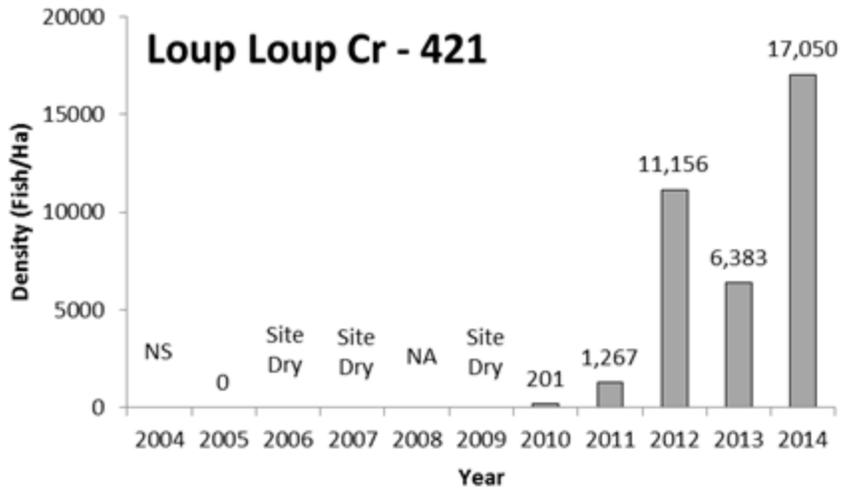
⁶ The lease of 1,200 acre-feet of water has two components: 1) a 12-year lease funded since 2008 by the Colville MOA that has been in effect since approximately 2006 for 700 acre-feet annually; and 2) 500 acre-feet of additional leased water funded by a separate agreement (non-MOA dollars) between Colville and BOR. The latter lease went into effect in 2009. *See* Colville MOA at B-2 to B-3 (describing both components of the 1,200 acre-foot lease).

opportunistic nature of projects in the Okanogan Basin, which unlike the Wenatchee, Entiat and Methow sub-basins of the UCR, has significant private ownership. *See* UCR Recovery Plan at 7-8 (38% private ownership in the Okanogan compared to approximately 10% private ownership in the three other UCR sub-basins). In 2013, Colville used over \$1 million in MOA funds to purchase two parcels totaling 200 acres and approximately 0.85 miles of riparian habitat on Salmon Creek. These purchases were made after willing sellers separately approached the Tribes with awareness of Colville's MOA funding and habitat protection work in the Okanogan River basin. Protecting the larger parcel will provide a stable stream channel that will reduce accelerated stream bank erosion, return stream bed elements to the active stream channel and provide access to an off-channel spring gallery which will increase over-winter survival of salmonids. This project also included removal of a bridge made of creosote-treated timbers. Starting from no returning steelhead in Salmon Creek prior to the 2006 water lease, these efforts resulted in an average of 179 adults entering the creek to spawn from 2009 through 2014, including increasing numbers of naturally produced steelhead. This immediate and substantial improvement in returning steelhead spawners is illustrated in the figure below.

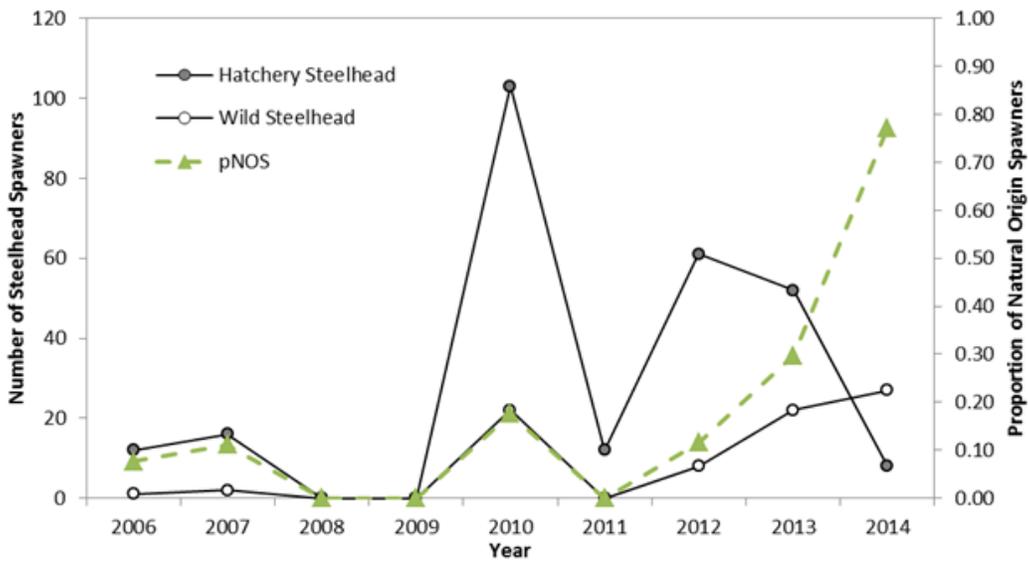


Salmon Creek – Total Spawning Abundance

12. In Loup Loup Creek, Colville provided MOA funding for a 20-year lease agreement which resulted in perennial flow in an accessible 2.2 miles of spawning and rearing habitat. This coincided with the Tribes spearheading efforts to remove two fish passage barriers (undersized and perched culverts) in the creek's lower reach. The barrier removal projects were funded by the Upper Columbia Salmon Recovery Board and Okanogan County, while Colville funded streambank stabilization and a roughened channel for one of the culvert replacements. This work has led to greatly improved juvenile production and returning adults, as illustrated in the figures below from the Tribes' draft monitoring and evaluation annual report. In particular, there has been a dramatic increase in the proportion of natural origin spawners.



Loup Loup Creek – Juvenile Steelhead Production



Loup Loup Creek – Returning Steelhead Spawners

13. In Antoine Creek, Colville has completed a number of smaller projects and is planning more significant work in the remaining term of the MOA. In 2014, Colville addressed barriers in the lower 1.1 miles of the creek by replacing a culvert that was a fish migration

impediment; and 2) removing an irrigation dam that was a complete barrier to fish migration. In 2012, Colville spent \$200,000 to modify a hardened rock chute below the dam to allow unimpeded steelhead passage through the system. All of this has opened up more than 10 miles of migrating, spawning and rearing habitat. Colville has also fenced off a half-mile of each side of the creek protecting riparian areas and assisted a landowner in improving the efficiency of his irrigation with Antoine Creek water. Following an assessment by Colville biologists and engineers, and determination that alluvial deposits from the creek and sand deposits from the Okanogan River have created an unstable area with down cutting through these deposits at the mouth of the creek, Colville has completed a design to create a rock chute to address the “head cut” issue in this area. Implementation of the design will occur in 2015. Planning continues for a potential purchase of water currently being used for irrigation.

14. On Ninemile Creek, Colville funded a large instream water rights transfer, implemented by Trout Unlimited in 2012 at a cost of \$350,000. This removed an instream diversion, returning flow to Ninemile Creek while the landowner was able to irrigate his property with a new ground water source. Irrigated acres were reduced and approximately 150 acres are currently irrigated more efficiently. As a result of these efforts, Ninemile Creek now flows naturally and unhindered on the United States side of the Canadian border and over 2 cubic feet per second of instream flow is permanently protected for fish and wildlife. Colville also supplied engineering designs and oversight on two culvert replacements in the same area of the watershed in 2013. Colville also purchased 10 total acres of property near the mouth of the creek for protection and habitat rehabilitation in 2011 and 2014 at a cost of over \$300,000. Colville is

working through engineering plans to address several issues at the mouth of the creek, including a head cut, a section that is dewatered during the lowest flows, and a bridge which causes a constriction on the creek where streambed gravels have aggraded to the point of causing flooding over the roadway during high spring flows and plans to implement a habitat enhancement project in 2015.

15. As described above, and in my 2010 declaration, Colville's habitat restoration efforts in the Okanogan River basin are wide reaching and substantial. We have, with the funding support of the MOA, completed a significant number of projects and already demonstrated benefits to UCR steelhead. The expert panel review in 2011-2012 confirmed that Colville is fulfilling its responsibility to protect and restore the degraded habitat of the Okanogan as part of the larger basin-wide effort to protect and recover listed salmonids. This review determined that completed projects had achieved half of the expected habitat improvement in the Okanogan and that after implementation of planned and funded projects through 2018, Colville was likely to exceed the BiOp's prescription of 14% habitat quality improvement (HQI) in the Okanogan. *See* 2014 AR at NMFS003518, 003524-003525, NMFS 003530 (2013 Comprehensive Evaluation Section 2 pp. 148, 154-155, 160; 2014 AR at B.239 (Expert Panel analysis spreadsheets for UCR Steelhead 2009-2012 Habitat Actions at NMFS038965-NMFS038972; UCR Steelhead 2009-12 Habitat Functions at NMFS038980-NMFS038982; UCR Steelhead 2013-2018 Habitat Actions at NMFS039028-NMFS039031; UCR Steelhead 2013-2018 Habitat Functions at NMFS039050-NMFS039072). Colville is on track, according to this review by the expert panel, to meet the 120% of the established 14% HQI objective for the

DECLARATION OF WILLIAM T. TOWEY -12

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Okanogan steelhead population, *i.e.* 17%, through implementation of habitat restoration and land and water projects identified in the MOA.

16. After a slow start (1% of HQI achieved through 2009), Colville is making substantial progress in addressing limiting factors for UCR steelhead in the Okanogan Basin. This progress, unsurprisingly, has not been spread evenly across the decade-long term of the BiOp, but it is now firmly on track to achieve, and likely exceed, the BiOp target by 2018.

17. The Colville MOA provides funding for critical monitoring and evaluation (M&E) of important habitat indicators for anadromous fish throughout the Okanogan River basin to establish a long-term status and trend data set and determine responses from habitat restoration carried out by Colville and its partners.⁷ Under the Okanogan Basin Monitoring and Evaluation Program (OBMEP), Colville biologists collect and analyze key ecosystem data relating to anadromous salmonids and their habitat, including adult escapement, juvenile populations, physical habitat, and water quality parameters. OBMEP is designed to monitor status and trends of abundance, productivity, diversity, and spatial structure of adult and juvenile UCR summer steelhead and associated habitat in the Okanogan River and its tributaries. Many of OBMEP's M&E methods were developed to be consistent with existing strategies, including the Monitoring

⁷ See 2008 BiOp RPA table, 2014 AR at NMFS027469-NMFS027470 (RPA 50), *id.* at NMFS027481-NMFS027482 (RPA 56); *id.* at NMFS027495 (RPA 71) and *id.* at NMFS027496 (RPA 72); for more detail about specific projects, see 2013 Comprehensive Evaluation, 2014 AR at NMFS003625 (RPA 50.6); NMFS003721 (RPA 56.3); NMFS003841 (RPA 71.4); and NMFS003846 (RPA 72.1.)

Strategy for the Upper Columbia Basin⁸ developed for the Upper Columbia Salmon Recovery Board, Bonneville Power Administration, and NOAA Fisheries. OBMEP's data are not only used to monitor the status and trends of the Okanogan UCR steelhead population, but are also used in restoration planning and implementation, climate change adaptation planning, and fisheries management decisions.

18. In contrast to other monitoring efforts in the Columbia Basin, OBMEP collects, analyzes, and reports data at a very fine scale. Rather than collecting and reporting information at the regional, population, or sub-basin scales, OBMEP summarizes information at the stream reach and diagnostic-level scale. Habitat degradation, habitat quality improvement projects, and observable fish response occur at the reach level. Collecting and reporting habitat and fish data at a fine scale allows Colville biologists to prioritize habitat project implementation and monitor and report on project effects in a meaningful and comprehensible way.

19. OBMEP utilizes a powerful modeling tool, Ecosystem Diagnosis & Treatment (EDT), to identify restoration priorities, frame current understanding about species-habitat relationships and restoration effectiveness, and prioritize watershed restoration investments.

This model, which Colville began employing in a significant way in 2009,⁹ is a deterministic, life

⁸ Hillman, T.W. 2006. Monitoring strategy for the Upper Columbia Basin. Second Draft Report for the Upper Columbia Salmon Recovery Board, Bonneville Power Administration, and National Marine Fisheries Service.

⁹ Colville began inputting OBMEP data into the EDT model in 2009, shortly after the inception of the Colville MOA. In 2013 OBMEP produced its first full EDT report for the Okanogan River basin. The report is available at http://www.colvilletribes.com/media/files/2013SteelheadHabitatStatusandTrendReport_ElectronicOnly.pdf. Since 2008, the MOA has funded over \$3 million of M&E (collection, management, and evaluation of habitat status and trend data) in the Okanogan River basin. OBMEP uses these

cycle-based habitat model that managers and scientists use to characterize watershed habitat function for a given species at the population and life-stage level at reach to watershed scales. OBMEP use of the EDT model emphasizes evaluating the status of salmonid habitat in the Okanogan River basin, tracking trends in habitat performance, and assessing habitat potential for salmon and steelhead over time at different geographic scales using terms that are compatible with species-conservation planning mandated by the ESA. The goal of OBMEP/EDT integration is to translate the extensive and complex body of habitat monitoring data collected by Colville into information that is useful for decision making, easily communicated to stakeholders and the public, and supports science-based investments in habitat protection and restoration.

20. EDT is uniquely suited to the evaluation of climate change impacts on salmon and steelhead due to its ability to compare different habitat scenarios. Just as the model can be used to compare the change in habitat performance between status and trend monitoring scenarios, the model can also be used to evaluate habitat performance under hypothetical future conditions scenarios that incorporate climate change projections. These alternative future scenarios can be parameterized quantitatively by incorporating downscaled regional climate model outputs into physical landscape models, or more qualitatively by creating hypotheses representative of probable future conditions. The EDT model has been used to evaluate the effects of future climate conditions on salmonids in the Chehalis River basin in Southwest Washington, demonstrating its potential to incorporate climate change data and forecasts in the Okanogan and

data as inputs to the EDT model, which Colville has developed and implemented at a cost of approximately \$500,000 under the MOA.

elsewhere in the UCR to inform Colville implementation and planning habitat restoration strategies.

21. The integrated OBMEP/EDT program results identify the most important diagnostic units and reaches for protecting and restoring salmonid habitat potential, and the survival factors within each diagnostic unit and reach that are having the greatest impact on habitat performance. OBMEP/EDT results, the input data, and supporting level of proof ratings provide a systematic basis for identifying and prioritizing habitat protection and restoration actions. This information is being integrated into a decision-framework that will guide Okanogan restoration professionals in effectively interpreting habitat status and trends, select appropriate restoration actions, and document the rationale used in restoration decision-making. The central component of the decision framework is a project scoring tool that ranks UCSRB habitat action categories based on their likely strength of effect on identified habitat priorities. Colville will use this tool to score each UCSRB action category based on its likely effectiveness on a given survival factor in a given reach, and on the strength of the supporting data for the identified habitat priority. Actions will be prioritized for planning and implementation based on the results of this tool, with additional steps taken on lower scoring projects, including validation of specific model inputs, implementing basis of design studies to establish effectiveness, and/or delaying action and modifying monitoring activities in order to address critical data needs. Collectively, the integrated OBMEP/EDT project provides Colville with a scientific basis for meeting the goals and objectives of the FCRPS BiOp, making defensible restoration decisions,

DECLARATION OF WILLIAM T. TOWEY -16

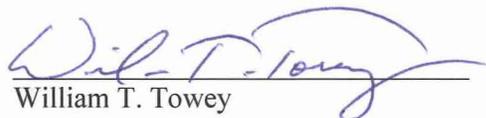
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and providing a documentation and accountability record for future investments in habitat restoration actions.

22. Seven years into the current BiOp, Colville has developed a comprehensive habitat restoration program that has designed, planned, and implemented numerous projects with documented benefits to listed UCR steelhead. Colville's institutional capacity, which was considerably enhanced by the stable, significant funding under the Colville MOA, will continue to provide for the yearly identification, planning, implementation, and monitoring of projects that will increase natural steelhead production and provide a foundation for future reintroduction of spring Chinook in the Okanogan River Basin.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 6 day of March, 2015.


William T. Towey

DECLARATION OF WILLIAM T. TOWEY -17

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CERTIFICATE OF SERVICE

I hereby certify that on March 6, 2015, I electronically filed the foregoing document with the Clerk of the Court using the CM/ECF system which will send notification of such filing to all parties in this matter who are registered with the Court's CM/ECF filing system.

s/ Brian C. Gruber
Brian C. Gruber
Attorney for Amicus Curiae
Confederated Tribes of the Colville
Reservation

DECLARATION OF WILLIAM T. TOWEY -18

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