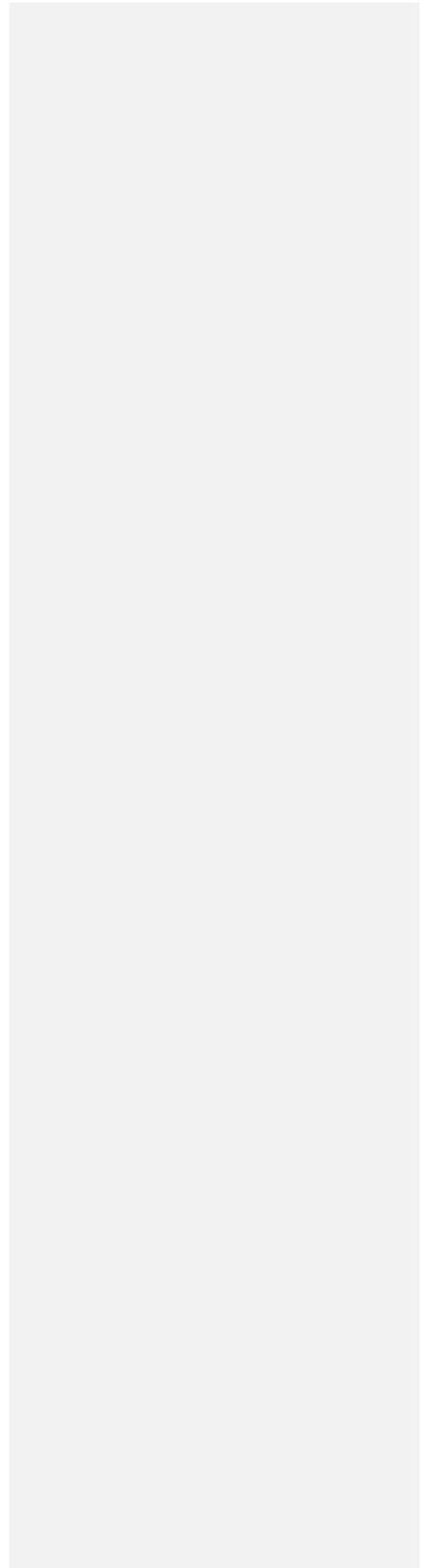


Prepared for Clallam County, Jefferson County  
and the WRIA 20 Implementation Body

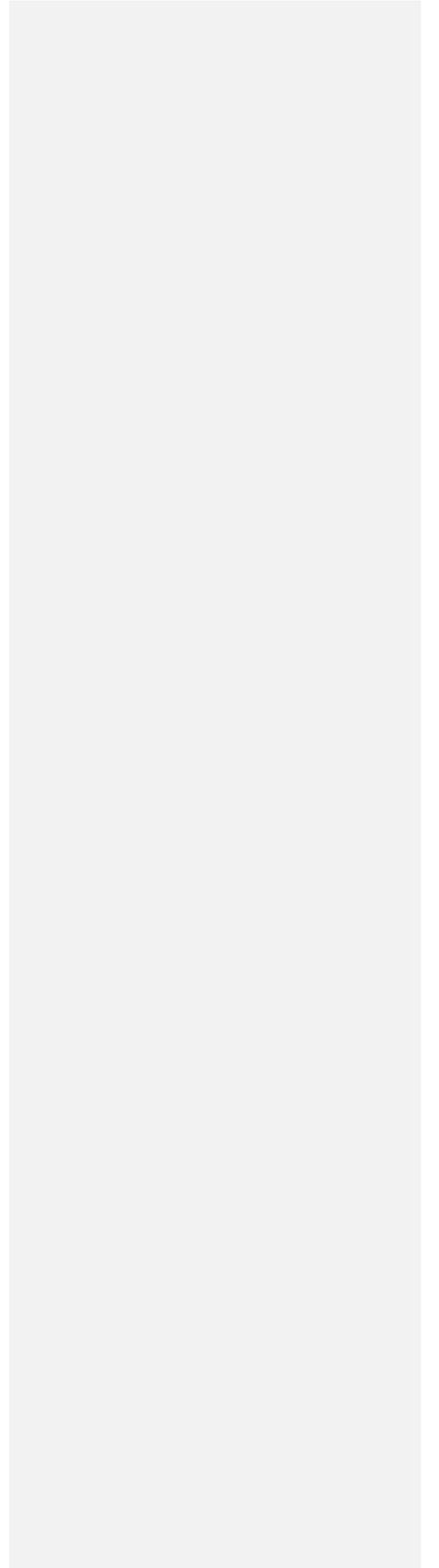
# **Water Resource Inventory Area (WRIA) 20 Detailed Implementation Plan**

Implementation Body Final for Public Review

March 24, 2010



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# Water Resource Inventory Area (WRIA) 20

## DETAILED IMPLEMENTATION PLAN

Approved by the Implementation Body

### Initiating Governments:

City of Forks  
Clallam County  
Hoh Tribe  
Jefferson County  
Makah Tribe  
Quileute Tribe

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Vision Statement for WRIA 20 Watershed Planning

*The water resources of WRIA 20 are a natural treasure to be protected. These resources sustain natural habitat function, self-maintaining ecosystem processes, and a wide range of physical and biological resources used by society. The WRIA 20 Planning Unit is committed to protect, preserve, and/or restore these resources so current and future residents, businesses, and governments may benefit from and enjoy a biologically diverse, prolific, and robust natural ecosystem. Our plan strives for sustainable commerce, residential, recreational and natural resource uses within WRIA 20 while recognizing Native American treaty uses of natural resources. This watershed plan is intended to be a living document that is based on agreements regarding desired future resource conditions and the means of achieving them over time.*

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## Executive Summary

The WRIA 20 Watershed Management Plan was initiated in 2001 and approved in November of 2008 by unanimous consensus of six initiating governments – Clallam and Jefferson Counties, the City of Forks, the Hoh, Makah, and Quileute Indian Tribes – and Washington State as represented by the Department of Ecology (Ecology). Stakeholder groups represented on the Planning Unit and citizens also approved the watershed plan (WSP) by majority vote.

Development of this detailed implementation plan (DIP) began officially in the summer of 2009 with the approval of a six-party intergovernmental agreement to establish an Implementation Body (IB) as a successor group to the WRIA 20 Planning Unit. The final draft DIP was approved on February 16, 2010 by consensus of the IB including many of the same stakeholder groups and citizen members of the Planning Unit as well as new members.

The implementation actions and sub-actions of the DIP are organized into the following categories consistent with the WSP: Water Quantity, Instream Flows, Water Quality, Fish Habitat, and Additional Recommendations.

Watershed planning legislation (RCW 90.82.043) requires that this plan contain strategies to provide sufficient water for out-of-stream uses and instream flows. Actions to achieve these strategies including interim milestones to measure progress are listed in anticipated chronological order. Coordination and oversight responsibilities and specific funding mechanisms are described within the actions and sub-actions themselves as often as possible. At the beginning of each action category, anticipated inter-local agreements, rules or ordinances, state or local administrative approvals and permits are listed.

Overlapping activities of other entities in the WRIA are frequently described in the “implementation action overview” sections. Throughout the plan, partnerships are acknowledged and proposed. They are considered essential to most implementation actions and for efficient use of limited resource dollars. An inchoate water rights assessment follows the implementation actions. Appendices include tables of implementation actions by priority level and many other reference materials.

### Water Quantity

Stream gages and gage data for rivers and major tributaries are among the highest priorities of the WSP and this detailed implementation plan. Gage data with a period of record of at least three years is strongly favored by the IB to support future water management decisions. The IB will take action to defend and secure additional funding for existing gages. The IGs and stakeholders will work independently and at the basin or sub-basin level to identify new sources of funds to install and operate priority gages identified in the WSP. Annually, the IB or a successor group will review the status of the stream gage program as part of the DIP update process.

The IB will continue to provide input to Ecology and other interested parties on the needs and priorities for watershed planning in the WRIA and to provide outreach and education on water rights actions, changes to water laws, and opportunities offered through the Trust Water Rights Act. A study of surface and groundwater exchanges in the Sol Duc River basin is considered important to ensuring adequate water to support future development and instream flows. This section of the plan also makes recommendations to Ecology on informing the public and providing opportunity for involvement in pending water rights actions in WRIA 20.

Water storage and supply actions include pursuing additional water rights and water storage for the City of Forks and, over time, enhancing water conservation measures WRIA-wide. Water conservation actions designed to reduce agency, visitor and residential water consumption are needed in order to provide sufficient water for out-of-stream uses while protecting instream flows, especially during late summer and

early fall when stream flows tend to diminish substantially, or in some places cease altogether. It's anticipated that Ozette and some Lake Pleasant/Sappho area residents may particularly benefit from collecting and storing rainwater. Additional drought contingency planning by water purveyors may also prove beneficial for WRIA 20 residents, visitors, and agencies.

#### Instream Flows

The Implementation Body recommends that, in the development of all instream flow rules for WRIA 20, Ecology and any IB successor group(s) consider the policy components detailed on pages 36 and 37 of the WSP such as basin closures, mitigation strategies, storage strategies, and future water reservations for domestic, municipal, industrial and agricultural use. Transfer of water outside of WRIA 20 and, with one exception, between watershed sub-areas, is strongly discouraged by the IB. The IB and its membership will take immediate action to contact legislators and Ecology to oppose water rights applications involving the transfer of water outside of the WRIA or between sub-areas.

Instream flow studies are another topmost priority of the IB consistent with the Planning Unit's desire that Ecology use technically defensible methods in developing any future ISF rule. The IB understands that given current economic circumstances ISF development will likely not begin prior to the year 2015. Consequently the next several years are an opportune time for developing and funding instream flow studies that will have the support and confidence of the IB. Studies such as IFIM are expensive and will likely involve a number of partner organizations, especially the North Pacific Coast Lead Entity (NPCLE). In the event that the IB is unable to meet on a regular basis due to lack of funding, the IGs, stakeholders and like-minded organizations may need to take (additional) independent action to support gage data, instream flow studies, and to ensure that the policy components of the WSP (ISF-3) are well-considered, especially in relation to ISF rule development.

#### Water Quality

Water quality implementation actions address data collection and management, water quality programs, and education and outreach. Primary actions include eliminating data gaps and fostering communication and collaboration between water quality programs. There is a desire to establish and fund an independent Streamkeepers organization in the WRIA to perhaps include science students from local schools. Education efforts will include informing residents about appropriate on-site system installation and maintenance in the form of "Septic 101" classes as well as options for manure management. The IB will actively pursue partnerships and projects to protect and restore water quality by, for example, removing trash and debris from riparian areas, evaluating the need for more human waste disposal options, and helping organize hazardous waste collection events. Many projects are proposed to involve the conservation districts, the NRCS, and others. The counties and the City of Forks will engage WRIA 20 businesses in Ecology's Local Source Control (LSC) and/or similar programs to reduce risks to water quality. The IB encourages all agencies and governments in the WRIA to lead by example by incorporating strategies and BMPs from LSC, EnviroStars, and/or similar programs into their operations. In the future, the IB will identify actions to address the presence of mercury in WRIA 20 watersheds as well as the threat of oil spills to marine and coastal environments.

#### Fish Habitat

Fish habitat recommendations in the DIP include several requests to include specific projects in the NPCLE strategy for salmon recovery. The IB also recognizes that some restoration projects can influence aquifer recharge, wetland function, or stream bank storage and suggests that such projects be considered

from the perspective of water supply as well. The IB would like co-managers to consider the feasibility of reintroducing extirpated chum and chinook to the Ozette watershed. The IB is also interested in projects less directly related to habitat restoration such as the possibility of storing trees for LWD installations at local gravel pits and encouraging new businesses to supply restoration materials locally.

The IB supports outreach and education to inform residents, realtors, permit applicants, and newcomers about local regulations concerning critical areas, low impact development, shoreline master programs and basic watershed functionality. An important action in the near-term is hosting a “Shoreline Symposium” or similar event to inform human interactions with shorelines and riparian areas. Where code enforcement is necessary to protect habitat areas, the IB supports training for government staff designed to specifically address natural resource issues. The IB would welcome the opportunity to participate in Clallam County’s development of a comprehensive stormwater management plan to include removing disincentives to Low Impact Development (LID) in the permitting process.

Preventing and controlling noxious weeds is a top priority and related implementation actions include workshops or other opportunities for restoration practitioners to exchange information on weed control efforts, enhance local awareness of noxious weed BMPs, and build support for limited chemical control of certain weeds.

An overarching goal of the WSP is the maintenance of forest cover to benefit fish habitat, water quantity and water quality and to provide additional ecosystem services such as carbon sequestration. Several DIP actions support zoning, programs, and pilot projects that help reduce the risk of conversion of forest lands to non-forest uses. The IB also identified opportunities to improve sediment control through information exchanges, WRIA-appropriate BMPs, a nonpoint source assessment for the Hoh basin (one has already been done for the Quillayute) and partnerships to address habitat restoration projects for sediment control and to resolve fish passage issues.

#### Additional Recommendations

The DIP also includes recommendations for completing special projects such as further study of fish genetics, prey and/or predator species. In its ranking of implementation actions, the IB gave strong support to the City of Forks in its pursuit of a septage dump or transfer station as well as the siting of additional RV dump stations at campgrounds and/or at the West Waste Recycling and Disposal facility. Low flows in WRIA streams are a growing concern in light of climate change and aggradation of stream channels due to high sediment inputs. The IB proposes continued monitoring and mapping of low flow reaches, the development of one or more response plans as well as projects to stabilize refugia until conditions can improve naturally.

In the management actions section and elsewhere in the DIP, the IB identifies new organizational approaches to plan implementation in order to help compensate for anticipated funding cuts. Over the past decade, the work of watershed planning units has been directly tied to outside funding sources. Without a dedicated source of funding, implementation of the WRIA 20 watershed management plan will likely be more challenging and require more time. The IB addresses the future of the organization and watershed planning by proposing integration with the NPCLE and/or the North Pacific Coast Marine Resource Committee (NPC MRC). Other opportunities to maintain the functions of the IB exist and include serving as an advisory board for the Clallam County Shoreline Master Program. Clallam County has also expressed a willingness to host periodic meetings, in the absence of a successor group, to help keep the IB progressing towards plan implementation. In the section entitled “ecologically sustainable water management”, the IB proposes a workshop to consider and explore this concept further as it applies to circumstances within WRIA 20. The final implementation actions listed in the DIP are in response to climate change science that indicates the need to plan for more frequent extreme flow events, both high and low.

Access more information about WRIA 20 and watershed planning at:  
<http://www.ecy.wa.gov/apps/watersheds/wriapages/20.html>

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## Acronyms

|            |   |
|------------|---|
| ACOE       | Army Corps of Engineers   |
| AMP        | Ambient Monitoring Program  |
| BIA        | Bureau of Indian Affairs  |
| BMP        | Best Management Practice  |
| BOR        | United States Bureau of Reclamation   |
| CAO        | Critical Areas Ordinance  |
| CCC        | Clallam County Code   |
| CCD        | Clallam Conservation District   |
| CREP       | Conservation Reserve Enhancement Program (EPA)                                  |
| CMER       | Cooperative Monitoring, Evaluation, and Research (Committee)                    |
| CWA        | Clean Water Act (federal)   |
| CWSP       | Comprehensive Water System Plan   |
| DIP        | Detailed Implementation Plan  |
| DNR        | Washington State Department of Natural Resources                                |
| EAP        | Environmental Assessment Program (Ecology)                                      |
| Ecology    | Washington Department of Ecology  |
| EIM        | Environmental Information Management (Ecology system)                           |
| ELJ        | Engineered Log Jam  |
| EPA        | Environmental Protection Agency   |
| EQIP       | Environmental Quality Incentives Program  |
| ESA        | Endangered Species Act (federal)  |
| ESU        | Evolutionarily Significant Units  |
| FFR        | Forests and Fish Report   |
| FPA        | Forest Practices Act  |
| FPR        | Forest Practices Rules  |
| GIS        | Geographic Information Systems  |
| GMA        | Growth Management Act   |
| HCP        | Habitat Conservation Plan   |
| HPA        | Hydraulic Project Approval  |
| IFIM       | Instream Flow Incremental Methodology   |
| IB         | Implementation Body   |
| IG         | Initiating Government   |
| ISF        | Instream Flows  |
| JCCD       | Jefferson County Conservation District  |
| LiDAR      | Light Detection and Ranging   |
| LFA        | Limiting Factors Analysis (by the Washington Conservation Commission or others) |
| LID        | Low Impact Development  |
| LSC        | Local Source Control  |
| LWD        | Large Woody Debris  |
| MOA        | Memorandum of Agreement   |
| MOU        | Memorandum of Understanding   |
| NOAA       | National Oceanic and Atmospheric Administration                                 |
| NOPL       | North Olympic Peninsula Lead Entity   |
| NOP RC & D | North Olympic Resource Conservation and Development Council                     |
| NPCLE      | North Pacific Coast Lead Entity   |
| NPC MRC    | North Pacific Coast Marine Resources Committee                                  |

NPS National Park Service  
 NWIFC Northwest Indian Fisheries Commission  
 OCNMS Olympic Coast National Marine Sanctuary  
 ONF Olympic National Forest  
 ONP Olympic National Park  
 ONRC Olympic Natural Resource Center (University of Washington)  
 NRCS Natural Resources Conservation Service  
 PHabSim Physical Habitat Simulation (computer program)  
 PSEG Pacific Salmon Enhancement Group  
 QAPP Quality Assurance Project Plan  
 QA/QC Quality Assurance/Quality Control Plan  
 RCO Recreation and Conservation Office (state)  
 RCW Revised Code of Washington  
 RM River Mile  
 RMAP Road Maintenance and Abandonment Plan  
 RMZ Riparian Management Zone  
 SASSI Salmon and Steelhead Stock Inventory (tribes with WDFW)  
 SG Stakeholder Group  
 SMA Shorelines Management Act  
 SMP Shoreline Master Program  
 SRFB Salmon Recovery Funding Board  
 SWAC Solid Waste Advisory Committee  
 SWSL Surface Water Source Limitation  
 TNC The Nature Conservancy  
 TMDL Total Maximum Daily Load  
 U&A Usual and Accustomed Fishing and Hunting Grounds (treaty tribes)  
 UDC Unified Development Code (Jefferson County)  
 USDA United States Department of Agriculture  
 USFS United States Forest Service  
 USGS United States Geological Service  
 USFWS United States Fish and Wildlife Service  
 USGS United States Geological Survey  
 UW University of Washington  
 WAC Washington Administrative Code  
 WCC Washington Conservation Commission  
 WCSSP Washington Coast Sustainable Salmon Partnership  
 WDFW Washington Department of Fish and Wildlife  
 WMP Watershed Management Plan  
 WPA Watershed Planning Act  
 WQMA Water Quality Management Area  
 WRATS Water Rights Application Tracking System  
 WRIA Water Resources Inventory Area  
 WSDA Washington State Department of Agriculture  
 WSDOT Washington State Department of Transportation  
 WSP Watershed Management Plan  
 WSU Washington State University

Regulations Referenced in the Plan

|   |                                   |
|---|-----------------------------------|
| Growth Management .....   | RCW 36.70A                        |
| Administrative Procedure .....  | RCW 34.05                         |
| Forest Practices .....  | RCW 76.09                         |
| Salmon Recovery .....   | RCW 77.85                         |
| Water Code .....  | RCW 90.03                         |
| Minimum Water Flows and Levels .....  | RCW 90.22                         |
| Federal Clean Water Act – Department Designated as State Agency,<br>Authority – Delegation of Authority – Powers, Duties, and Functions ..... | RCW 90.48.260                     |
| General Declarations of Fundamentals for Utilization and Management of<br>Waters of the State.....  | RCW 90.54.020                     |
| Shoreline Management Act of 1971.....   | RCW 90.58                         |
| Watershed Planning Act.....   | RCW 90.82                         |
| Water resources management program established pursuant to the Water<br>Resources Act of 1971.....  | WAC 173-500                       |
| Instream resources protection program -- Water resource inventory area<br>(WRIA) 20. (Does not currently exist – possible future rule.).....  | WAC 173-520                       |
| Federal Water Power Act.....  | 16 U.S.C. Sec 791 <i>et seq.</i>  |
| Congressional Declaration of Goals and Policy.....  | 33 U.S.C. Sec 1251 <i>et seq.</i> |

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## Acknowledgements

This plan was prepared by the WRIA 20 Implementation Body with funding from Washington State Department of Ecology grants #G0900214 and #G0900215 and matching contributions from WRIA 20 Implementation Body members and volunteers.

Volunteerism by interested citizens was vital to the success of the watershed planning effort in WRIA 20. The WRIA 20 IGs would like to thank the citizens of WRIA 20 who participated in developing the DIP as well as all of the interested parties who provided comments. Thanks also to the Washington Department of National Resources Office in Forks and the Forks Community Center for meeting space.

WRIA 20 meetings were facilitated by Rich Osborne of Clallam County Department of Community Development. The DIP was drafted by Tami Pokorny of Jefferson County Water Quality Division. The inchoate water rights analysis was prepared by Laila Parker of Cascadia Consulting.

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Map of WRIA 20



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## Introduction

*WRIA 20 watersheds....represent perhaps the greatest hope for meaningful rehabilitation and recovery of depleted stocks as anywhere in Washington State and elsewhere in the world...”<sup>1</sup>*

The “West End” rivers and streams of the WRIA 20 watershed management area span a uniquely dynamic and diverse natural environment. Linking snowfields and glaciers of the Olympic Mountains with the open Pacific Ocean, WRIA 20 hosts prolific temperate rainforests, historic ranches, extensive private and public timberlands, the City of Forks, tribal and rural communities, wild salmonids, and high annual rainfall. However, chronic low summer stream flows in some areas of WRIA 20 can lessen survival rates of juvenile salmon that rear in fresh water and impede upstream migration of returning adult fish. Such low flows can sometimes be linked to water quality impairments and the availability of water for out-of-stream uses.

In 2003, the legislature reaffirmed that a core principle of chapter 90.82 RCW, the Watershed Planning Act (WPA; RCW 90.82), is for state agencies to work cooperatively with local citizens to plan for future uses of water. It also provided a process for watershed plan implementation (Findings - 2003 1<sup>st</sup> sp.s. c 4).

RCW 90.82.043 Implementation plan – Report to the legislature.

*Within one year of accepting funding under RCW 90.82.040 (2) (e), the planning unit must complete a detailed implementation plan. Submittal of a detailed implementation plan to the department is a condition of receiving grants for the second and all subsequent years of the phase four grant.*

RCW 90.82.043 requires implementation plans to contain strategies to provide sufficient water for production agriculture as well as commercial, industrial, and residential use, and instream flows. Each plan must also contain timelines to achieve these strategies and interim milestones to measure progress. Coordination and oversight responsibilities must be clearly defined and any needed inter-local agreements, rules or ordinances, state or local administrative approvals and permits that must be secured; and specific funding mechanisms identified. The IB must consult with other entities in the WRIA to identify and seek to eliminate activities or policies that are duplicative or inconsistent.

The detailed implementation plan must “...address the planned future use of existing water rights for municipal water supply purposes, as defined in RCW 90.03.015, that are inchoate, including how these rights will be used to meet the projected future needs identified in the watershed plan, and how the use of these rights will be addressed when implementing instream flow strategies identified in the watershed plan.”<sup>2</sup>

This WRIA 20 Detailed Implementation Plan (DIP) was developed by an implementation body consisting of stakeholders and the six governments responsible for watershed planning for the streams and rivers of the Olympic Peninsula’s north Pacific coast. These “initiating governments” are Clallam County,

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<sup>1</sup> Excerpt from a letter dated March 10, 2008 from Quileute Council Chair Carol Hatch to Jay Manning of the Washington State Department of Ecology.

<sup>2</sup> In June 2008, the King County Superior Court struck down key portions of the 2003 Municipal Water Bill and private water system developments/owners that were previously considered as municipal systems for purposes of statewide water management and regulatory programs are no longer considered as municipal systems. This decision is being appealed.

Jefferson County, the City of Forks, and the Makah, Hoh and Quileute Tribes. The WRIA 20 Implementation Body (IB) is a successor group to the WRIA 20 Planning Unit, which completed a Watershed Management Plan (WSP) in 2008 consistent with the Watershed Planning Act (Chapter 90.82 RCW). Clallam County served as the lead agency in both efforts.

Representatives of the six governments, the Washington State Department of Ecology, industry, other agencies, non-profit groups, and citizens met in 2009 and early 2010 to develop the DIP to address all components of watershed planning identified in Chapter 90.82 RCW including water quantity, instream flows, water quality and fish habitat. The WRIA 20 Planning Unit directed the IB to consider the concept and implementation of “ecologically sustainable water management,” factors related to climate change, as well as special projects, and management recommendations. These are contained in a fifth section of the DIP entitled “Additional Recommendations.”

Like the watershed plan itself, the DIP has been prepared in recognition that it has no jurisdiction with respect to tribal rights, tribal reservations, tribal water law, Olympic National Park, and the state Forest Practices Act (FPA). The state legislature established several requirements for the DIP. The plan must include strategies to provide sufficient water for instream flows and production agriculture as well as commercial, industrial, and residential use. It must contain timelines for implementation and milestones for measuring progress. It must also define coordination and oversight responsibilities and describe any needed agreements, rules or ordinances.

Each numbered action or strategy of the WRIA 20 WSP is summarized in bold text. This summary statement is followed by lists of related milestones, agreements, rules, ordinances and permits as well as sub-actions intended to help provide sufficient water. In the appendices, tables organize the sub-actions by priority level. The IB has chosen not to pursue implementation of some actions due to new information or changing circumstances since the WSP was written.

In addition to the IB membership, supporting information and comments for this DIP were received from the following agencies and organizations involved in WRIA 20 including:

- Clallam Conservation District (CCD)
- Clallam County Weed Board
- Hoh River Trust
- Jefferson County Conservation District (JCCD)
- Jefferson County Weed Board
- National Park Service (NPS)
- North Pacific Coast Lead Entity (NPCLE)
- Olympic Coast National Marine Sanctuary (OCNMS)
- Olympic Natural Resources Center (ONRC)
- Northwest Indian Fisheries Commission (NWIFC)
- Forks Chamber of Commerce
- 10,000 Years Institute
- US Geological Survey (USGS)
- WA Coast Sustainable Salmon Partnership (WCSSP)
- WA Department of Ecology (Ecology)
- WA Department of Natural Resources (WDNR)
- WA Department of Fish and Wildlife (WDFW)
- Wild Salmon Center

Like the IGs, many of these agencies and organizations have a long history of implementing projects to benefit water and fish resources in the WRIA. For example, the Olympic National Park fisheries program

conducts fish surveys on the Sol Duc and Bogachiel Rivers and the South Fork of the Hoh River; and has identified habitat improvement projects in WRIA 20. Ongoing communication and coordination between the IGs and these groups will enhance the combined capacity to carry out DIP actions and address new challenges.

#### Climate change

Current climate change science from the Climate Impacts Group<sup>3</sup> predicts increased temperatures and altered precipitation patterns for the western Olympic Peninsula to include reductions in springtime snowpack, longer periods of low flows, and increased flooding. In addition to stream flows, climate change will have implications for plant communities, soils, sediment delivery, the life histories of fish, fish size and diversity, and the frequency of catastrophic events such as wildfire.<sup>4</sup> There will also be less water available to plants even though more water will be available to the system overall.<sup>5</sup> Both summer highs and winter low temperatures are expected to rise<sup>6</sup> increasing evapotranspiration rates. Warming will be fastest over land, so fog may develop in WRIA 20 more frequently than in the past. Bull trout are considered most susceptible to impacts from climate change. Fall chinook, pinks and chum will be least susceptible.<sup>7</sup>

#### Funding

This plan was developed during a time of greater than normal economic uncertainty. The state legislature is curtailing its watershed planning program and funding for most DIP activities. There is reduced support for stream gages, instream flow studies and other natural resource stewardship activities. Funding for the WRIA 20 IB itself will likely cease in June 2010 unless new sources are identified.

The declining status of state, as well as federal and local, funding sources used previously to implement watershed plans means that the IGs are less inclined to take independent responsibility for specific DIP actions and sub-actions. For the plan's highest and most time sensitive priorities, lead IGs are identified to coordinate implementation. The IGs have otherwise preferred to assign the IB responsibility for carrying out much of the DIP in order to maximize the plan's flexibility and the ability of IGs to pursue new opportunities as they arise.

Despite difficult economic circumstances, the IB membership is committed to protecting and enhancing WRIA 20 water resources and will, insofar as funding permits, seek out new partnerships and sources of financial support for watershed management. It is anticipated that Clallam County, as lead agency, and the North Pacific Coast Lead Entity (NPCLE) will assist with the coordination and tracking of DIP activities in the absence of an IB or an officially sanctioned successor group. The IB looks forward to the possibility of the NPCLE incorporating a number of DIP actions directly into its strategy for salmon recovery, under Chapter 77.85 RCW and/or future legislation. The IB is also enthusiastic about NPCLE and Washington Coast Sustainable Salmon Partnership (WCSSP) efforts to characterize the watershed using advanced GIS technologies to support the efficient and cost-effective use of limited restoration funds. And, the IB looks forward to interacting with the North Pacific Coast Marine Resources

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<sup>3</sup> See <http://cses.washington.edu/cig>.

<sup>4</sup> Nate Mantua, UW Climate Impacts Group, Olympia, WA 11/20/09

<sup>5</sup> Jeremy Littell, UW Climate Impacts Group, Olympia, WA 11/20/09

<sup>6</sup> Jeremy Littell, UW Climate Impacts Group, Olympia, WA 11/20/09

<sup>7</sup> Gordie Reeves UW Climate Impacts Group, Olympia, WA 11/20/09

Committee (NPC MRC) on projects to benefit the coastal resources on which WRIA 20 fish stocks also depend.<sup>8</sup>

In an improved economy, the IB would welcome a renewed focus by the state legislature and local governments on watershed planning and funding to carry out the DIP. The IB places particular importance on the WRIA 20 DIP actions, such as stream gaging, that are designed to prepare for instream flow setting. To the degree feasible, the IGs, stakeholders, citizens and organizations in WRIA 20 should coordinate their DIP funding strategies with the IB membership, either through Clallam County Department of Community Development and/or the NPCLE.

#### Evolving opportunities

WRIA 20 is home to the Olympic Experimental State Forest and the University of Washington's Olympic Natural Resource Center, and its geography includes large portions of Olympic National Park, Olympic National Forest, and WA Department of Natural Resources lands. The Pacific coast of WRIA 20 overlaps with the Olympic Coast National Marine Sanctuary. Federal agencies with interests in the watershed include:

- Army Corps of Engineers (ACOE)
- Bureau of Indian Affairs (BIA)
- Bureau of Reclamation (BOR)
- Environmental Protection Agency (EPA)
- National Oceanic and Atmospheric Administration (NOAA)
- United States Fish and Wildlife Service (USFWS)
- United States Geological Survey (USGS)

The forest, water and fish resources of WRIA receive attention and involvement of numerous NGOs. Private funding for watershed projects is gaining importance, and this will likely continue. Some NGOs involved in resource protection also support new markets for alternative energy sources, carbon sequestration and other ecosystem services, such as aquifer recharge, that would generally support DIP strategies and priorities. In addition to those mentioned in the plan, NGOs with current or potential interest in the WRIA may be identified through grant-related websites, the IGs and agencies, citizens and stakeholders.

While identifying new sources of funds to address DIP actions is essential, the IB also recognizes new opportunities to reduce or eliminate some traditional costs. For example, although face-to-face meetings are preferred, on-line meeting technologies consistent with the Open Public Meetings Act (RCW 42.30) are being employed to reduce travel related time commitments, expense, and vehicle emissions. Consequently, it is anticipated that all of the meetings listed in this plan could potentially occur electronically consistent with legal requirements. Likewise, the IB intends to seek funds to help integrate DIP activities with other natural resources planning processes, especially the NPCLE and the NPC MRC.

#### Development of the DIP

After WSP approval, the Planning Unit met as a working group until July of 2009 when the Implementation Body was formed through an intergovernmental agreement signed by all six initiating

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<sup>8</sup> Appendix A of the WSP, Deferred Actions, includes recognition of the limited data associated with 'Nearshore and Marine' water-related issues.

governments. A first draft of the DIP was developed in September 2009 from discussions of WSP actions at meetings of the IB held in Forks. A second draft was developed in December incorporating feedback from other planning processes. This version was discussed at two meetings in January. That month, the implementation actions of the DIP were also prioritized by the IB and the inchoate water rights analysis drafted based on information from Ecology and the two holders of municipal water rights, the City of Forks and the Quileute Tribe. On February 16, the IB met and approved a final draft plan. The DIP was provided electronically to Ecology and interested parties on February 26. Changes proposed by Ecology and a number of other refinements were incorporated by the IB as an update to the final draft on March 24, 2010. Informational workshops on the DIP were presented to the Clallam and Jefferson Boards of County Commissioners on ~~x~~ and ~~x~~, 2010.

#### Permits and agreements

Each implementation action described in the DIP is followed by a list of permits and agreements likely to be necessary. Permit requirements are often contingent upon project type, timing, location and many other factors. More information on listed permits can be found in Appendix I. At the state level, permit requirements are listed at Ecology's website and indexed by topic at <http://apps.ecy.wa.gov/permithandbook/index.asp>. The Clallam County Code (<http://www.clallam.net>) and the Jefferson County Code (<http://www.co.jefferson.wa.us>) incorporate requirements of Shoreline Master Programs (SMPs), Critical Areas Ordinances (CAOs), unified development codes and other legislation.

The signing of intergovernmental agreements initiated both the watershed and detailed implementation planning in WRIA 20. The current agreement (Appendix E) expires in July of 2013 may be amended by unanimous written consent of the Initiating Governments. Grant agreements are the foundation for most project-level activities in the WRIA. All of the IGs have consistently entered into grant agreements with state and/or federal agencies for watershed planning and management activities, especially the WA Department of Ecology, Recreation and Conservation Office (RCO), WDFW, USGS, BIA, and EPA. Agreements may also include purchase and sale or access agreements with landowners. Such agreements are essential to implementing projects involving private or tribal lands.

#### Indicators and deliverables

Most DIP actions and strategies are designed to be implemented as a series of specific stand alone sub-actions. These actions are assigned a three-letter code derived from the WSP and a priority ranking of highest, high or moderate based upon scoring by the IB in January of 2010. Sub-actions are listed by lower case letter in anticipated chronological order under three timeframe categories: immediate and ongoing, near-term and long-term. The implementation overview sections include background information acquired since the WSP and statements intended to help clarify IB understanding and intent. Milestones and/or indicators that will result from the completion of constituent sub-actions are also listed with each action.

#### Project costs

Many of the actions described in this DIP involving meetings and events, or other routine activities of the IB such as letter- and grant-writing, that would likely have been covered by implementation or planning unit support funds formerly available through Ecology in Phase IV of watershed planning. Without this funding, it is difficult to estimate the cost of these actions individually. Specific projects however, such as new stream gages or instream flow studies, educational products, and specific workshops can be

estimated from similar efforts. Whenever possible, cost estimates for highest and high priority actions are provided in Appendices B and C. Cost estimates for moderate priority and longer-term actions may be less reliable and are not provided at this time. The IB and successor groups are encouraged to include these estimates in future updates of the DIP.

#### Strategies to provide sufficient water

In accord with Chapter 90.82.043 RCW, strategies to provide sufficient water for out-of-stream uses are listed, as appropriate, under each watershed action and in Appendix A. These actions include developing water conservation education messages and programs and employing water conservation and rain and stormwater collection technologies. They also include restoration projects and land use strategies that support flows through enhanced natural forest, soil, channel, and aquifer processes.

#### DIP recommended actions and strategies

Like the WSP, the DIP actions are divided into five categories: Water Quantity, Instream Flows, Water Quality, Fish Habitat and Additional Recommendations. The latter category addresses specific special projects and management recommendations of the WSP as well as actions developed from plan language related to climate change and ecologically sustainable water management.

With regard to instream flow setting in WRIA 20, the Implementation Body recommends that Ecology and any IB successor group(s) consider the policy components detailed on pages 36 and 37 of the WSP such as basin closures, mitigation strategies, storage strategies, and future water reservations for domestic, municipal, industrial and agricultural use. Transfer of water outside of WRIA 20 and, with one exception, between watershed sub-areas are strongly discouraged by the IB. The IB and its membership will take immediate action to contact legislators and Ecology to oppose water rights applications involving the transfer of water outside of the WRIA or between sub-areas.

The DIP is intended to be updated annually to reflect changing circumstances in the watershed and the current priorities of governments and stakeholders.<sup>9</sup> Management recommendations also include possible approaches to amending the WSP.

#### Disclaimer

The actions and strategies listed in this plan which extend beyond existing legal mandates are entirely voluntary and contingent upon available funding.<sup>10</sup> DIP actions and sub-actions will be accomplished only insofar as funding permits. All of the actions assigned to the IB are also intended to apply to any successor organization. The Watershed Planning Act, Chapter 90.82 RCW, creates no new legal authorities.

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<sup>9</sup> See [http://wcssp.org/WCSSP\\_library/wria20/wria20.htm](http://wcssp.org/WCSSP_library/wria20/wria20.htm) for the Coastal Lead Entities WRIA 20 bibliography for more information on watershed conditions.

<sup>10</sup> “The Implementation Body has no ability to implement any recommendation, program, existing law, or ordinance. Implementation of the WRIA 20 Watershed Plan recommendations is the responsibility of the individual governments and jurisdictions that have jurisdictional authority in the WRIA 20.” (WSP p. 72)

## Water Quantity

The following recommended actions identified by the Implementation Body are offered in light of funding discussions on page 16.

### Stream Flow Data Actions (QTD 1-4)

Permits and agreements necessary to implement actions in this section:

- Grant agreements
- Landowner access agreements
- Cooperative agreements
- Hydraulic Project Approval (HPA)
- Shoreline Conditional Use Permit
- Shoreline Variance Permit
- Wetlands Permit

Indicators and deliverables for actions in this section:

- Letters to Ecology
- Letters to legislative delegations
- Maintenance of “permanent” gages
- Upgrade of the Bogachiel gage
- Additional gages on priority streams
- Annual updates to list of priority gages
- Confirmation of ISF effectiveness
- Study of surface and groundwater exchanges for the Sol Duc River
- Additional spot water quantity data
- Coordinated use of databases

Strategies to provide sufficient water:

- None

### Recommend stream flow gaging locations (QTD-1) (WSP pp. 25, 53-55)

#### QTD-1.1

The Implementation Body will proactively oppose and prevent funding cuts and other potential threats to the four active gages.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

Maintaining and upgrading existing stream gages is the *highest priority* of the WRIA 20 IB. In large part due to the current economic recession, gages are being removed from many watersheds across the state. All gages are potentially vulnerable to further cuts. However,

Robert M. Hirsch, former USGS chief hydrologist and associate director,<sup>11</sup> is among the scientists who stress the importance of gaging streams now to account for environmental variability and to inform adaptation planning.

The IB membership is committed to doing everything within its power to ensure the perpetuation of critically important gages.

Insofar as funding permits, the Quileute Tribe will buy or maintain gages in its Usual & Accustomed Area. Currently, Quileute funds the Bogachiel gage in cooperation with the USGS and plans to work with Ecology and the EPA to gage the Sol Duc on a year-to-year basis for now. For several years, the Hoh Tribe has provided ongoing financial and field support for the Hoh River gage in cooperation with USGS. The total fixed annual cost to operate this gage is \$16,870.

The IB considers the following gages absolutely essential to watershed management:

- 1.) Sol Duc at RM 13.8 by Washington Department of Ecology
- 2.) Calawah near Forks at RM 6.6 by US Geological Survey
- 3.) Bogachiel near La Push at RM 0.8 by US Geological Survey/Quileute Tribe  
(currently continuous stage only)
- 4.) Hoh at HWY 101 at RM 15.4 by US Geological Survey

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ At least annually, the IB will discuss the status, needs, and findings of its stream gaging program. Recommendations will be incorporated into annual DIP updates.
- b. \_\_\_ The IB will request the stream gage ranking criteria from Ecology and may provide comments on it.
- c. \_\_\_ The IB membership will send letters to its state and federal legislative delegation and relevant agencies on the importance of stream gaging to WRIA 20.
- d. \_\_\_ The IB will request that the Quileute Tribe identify and secure funding to upgrade the Bogachiel gage to continuous stage/discharge for a period of at least three years.

Near-term Actions: 2012-2014

- a. \_\_\_ The IB membership will solicit direct appropriations from the Washington State Legislature and the U.S. Congress for specific gage needs.
- b. \_\_\_ The IB will solicit the Washington State Legislature and the U.S. Congress for ongoing funding to support stream gaging programs.

Long-term Actions: 2015 and beyond

None identified

#### **QTD-1.2**

The Implementation Body will seek funds to gage priority tributaries and other high priority streams.

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<sup>11</sup> Keynote address, Water and Land Use of the Pacific Northwest Conference, Stevens, WA, November 5, 2009.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

The goal of the IB is to have “a more complete data set with which to make more informed decisions about water use and water quality.”<sup>12</sup>

The WSP also states that, “For rivers and their major tributaries, the setting of any ISF rule must be based on adequate data and technically defensible methods. It’s a very high priority of the Planning Unit to use gage data with a period of record of at least three years (but preferably five) whenever possible prior to setting of ISFs.”<sup>13</sup> Funding for additional gages will likely be difficult to secure given current economic realities; however, the IB is strongly committed to this effort.

The IB encourages federal agencies, the Olympic National Park and the National Park Service Water Resources Division<sup>14</sup> in particular, to take a more active role in water resources management in WRIA 20 to include collaborations with the IB.

The following streams are considered top priorities for gaging in the WSP: Umbrella Creek and Big River in the Ozette watershed; and Bear Creek, Lake Creek, and Elk Creek in the Quillayute Basin. Ecology has gaged the Sol Duc River since 2005. The IB suggests amending this list to include the following Hoh basin tributaries: South Fork, Winfield, Nolan, Elk, and Owl Creeks.<sup>15</sup>

The Makah Tribe currently supports temporary gages in the Ozette watershed on Big River and Umbrella Creek and may choose to pursue a cooperative agreement with the USGS or Ecology for them and the Ozette River. Of the remaining top priority sites listed in Table 3.2 of the WSP, Lake Creek of the Sol Duc River near Beaver, WA has been identified by the IB as potentially threatened by future water withdrawals.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_The IB membership will send letters to its legislative delegation at the local, state and federal levels to request funds for additional stream gaging in WRIA 20 to benefit both listed and non-listed fish stocks.
- b. \_\_\_The IB will send a letter to ask Olympic National Park to take a more active role in water resources management and stream gaging in WRIA 20 and to request assistance from the NPS Water Resources Division to address low flows that affect wild fish stocks.
- c. \_\_\_The IB will request that Clallam County and the Quileute Tribe identify and secure funding to install and operate continuous stream gages at Lake Creek (Sol Duc) and Bear Creek (Sol Duc) for a period of at least three years.
- d. \_\_\_The IB will send letters requesting that the Hoh Tribe and Jefferson County collaborate to identify and secure funding to install and operate continuous stream gages in the Hoh watershed to include one or more of the following tributaries: South Fork, Winfield, Nolan, Elk and Owl Creeks for a period of at least three years.

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<sup>12</sup> WSP pg. 26

<sup>13</sup> WSP pg. ES-2

<sup>14</sup> See <http://www.nature.nps.gov/water>.

<sup>15</sup> See also McMillan, J. R., and J. C. Starr. 2008. *Identification and Prioritization of Salmon Tributaries for Conservation in the Hoh River Basin*, Washington State. June 2008 available at: [http://wildsalmoncenter.org/pdf/WSC\\_Hoh\\_Tributary\\_Report.pdf](http://wildsalmoncenter.org/pdf/WSC_Hoh_Tributary_Report.pdf).

e. The IB will request that the City of Forks identify and secure funding to install and operate continuous stream gage for Elk Creek (Calawah) for a period of at least three years.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

### QTD-1.3

To complement the existing gage, the Implementation Body will seek funding to more fully characterize the geohydrology of the Sol Duc basin to assess the vulnerability of flows and temperatures<sup>16</sup> to groundwater withdrawals.

PRIORITY LEVEL: High

Implementation Actions Overview:

The Sol Duc River basin has been identified by the IB as an area of existing and potential future development. The IB seeks to better understand groundwater/surface water exchanges for the Sol Duc River and the degree to which its flow levels and patterns are vulnerable to permit exempt well and other withdrawals.<sup>17</sup>

Immediate (2010-2011) and Ongoing Actions:

a. The IB will invite USGS staff to a meeting of the IB to discuss a framework and possible funding approaches for one or more hydrogeological studies for the Sol Duc River.

Near-term Actions: 2012-2014

a. The IB will seek funding for the desired study or studies.

b. The IB will present study findings to the Clallam County Board of Commissioners and other interested local and/or tribal governments.

c. The IB will use results from the Sol Duc investigation to inform its vision for water use in the drainage, the setting of instream flows and a reserve, and to educate the public.

Long-term Actions: 2015 and beyond

None identified

### Track stream gage funding opportunities (QTD-2) (WSP pp. 28, 53-55)

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<sup>16</sup> River temperatures in the Sol Duc reach as high as 28 °C (82 °F) in summer (Climate Impacts Group, Olympia, WA, November 2009 - John McMillan, NOAA/NW Fisheries Science Center).

<sup>17</sup> A possible model for this study is the 2003 USGS Report, *Hydrology of the Unconsolidated Sediments, Water Quality, and Ground-Water/Surface-Water Exchanges in the Methow River Basin, Okanogan County, WA*.

**QTD-2.1**

The Implementation Body will track funding opportunities to add or upgrade stream gages in WRIA 20 with the goal of establishing additional permanent flow gages.

PRIORITY LEVEL: High

Implementation Actions Overview:

As preparation for its annual meeting, in-person or electronic, to discuss stream gaging the IB will track existing and potential sources of funding for water quantity data collection in the WRIA. Current sources of funds include Ecology’s Environmental Assessment Program (EAP), USGS Coop Program, Title II, and Tribal Water Resources.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will develop a strategy for long-term gage funding for new and existing priority gages.
- b. The IB will track funding opportunities for climate change studies to include stream gaging.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Refine stream gage candidate list (QTD-3) (WSP pp. 28, 53-55)**

**QTD-3.1**

The Implementation Body will refine the list of candidate stream gaging sites.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

This action will be the primary outcome of the annual meeting, in-person or electronic, of the IB to evaluate the WRIA 20 stream gaging program. Current lists of candidate sites will be included in annual DIP updates.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB recommends expanding the list of top priority locations in the WSP to include the following Hoh Tributaries: South Fork of the Hoh River, Winfield, Nolan, Elk, and/or Owl Creeks.
- b. The IB will inform Ecology, the USGS, elected representatives, and other interested parties of updates to its gage priorities.
- c. The IB will send letters to the USGS and Ecology recommending that they consider and pursue all available alternatives before discontinuing any existing stream gage under their jurisdiction.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Compile spot measurements of stream flows and/or stage in a central location (QTD-4)**  
(WSP pp. 28, 53-55)

**QTD-4.1**

The Implementation Body membership will, whenever feasible, collect spot water quantity data, especially in conjunction with water quality measurements, and compile it in an existing central location.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Although more comprehensive data collection programs are preferred, spot flow measurements associated with a QA/QC, QAPP, or similar protocol, and other spontaneous water quality data can provide important information about ungaged streams and tributaries to complement other data. In the past, spot measurements have generated interest on the part of agencies to look more closely at potential water quality problems. Member tribes of the NWIFC, and other entities, are currently collecting this data for upload into EPA's STORET database. There is a need for parties conducting spot measurements in the WRIA to agree on a central location (See also QLM 1-4.1).

A study consisting of periodic (monthly or every two weeks perhaps) and simultaneous spot water quantity measurements might involve multiple tributary flows to develop relationships with main stem flows. Or, spot flows can be measured and related to biological information collected at the same location or nearby.<sup>18</sup> Ecology and WDFW could provide assistance in study design and locations for discharge measurements.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a. \_\_\_The IB will invite parties collecting data in the WRIA to present information on their use of databases and to identify opportunities and approaches to obtaining additional water quantity spot measurements.

b. \_\_\_The IB will send letters encouraging parties collecting data to collect spot water quantity measurements in conjunction with water quality and habitat monitoring and to collaborate on a study of tributary flows. The IB will write letters in support of grants to accomplish this work.

Long-term Actions: 2015 and beyond

a. \_\_\_On an ongoing basis, the IB will use water quantity data to confirm the effectiveness of the future instream flow rule.

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<sup>18</sup> See, for example, *River and Stream Impairment Analysis -WRIA 16 and 14b*, Skokomish-Dosewallips Planning Area Aspect Consulting at <http://www.ecy.wa.gov/programs/eap/wrias/Planning/16-14b.html>.

## Water Rights Processing Actions (QTR 1-4)

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

Funds, strategy, and tools to continue to inform and involve citizens in water quantity and water quality issues

Strategies to provide sufficient water:

None

**Timely processing of water right applications (QTR-1)** (WSP pp. 29, 55)

### QTR 1.1

The Implementation Body recommends that Ecology diligently address backlogs of unprocessed water right applications, subject to provisions of RCW 90.03.

**Pre-submittal consultation with water right applicants (QTR-2)** (WSP pp. 29, 55)

### QTR 2.1

The Implementation Body recommends that Ecology provide for pre-submittal consultation between potential water right applicants and Ecology Water Resources Program staff.

**Public notice of water right applications (QTR-3)** (WSP pp. 29, 55)

### QTR-3.1

The Implementation Body recommends that Ecology prepare a public notice of water right application for use and publication by applicants in WRIA 20.

### QTR-3.2

The Implementation Body recommends that Ecology maintain a website containing detailed water rights application information for WRIA 20.

### QTR-3.3

The Implementation Body will provide ongoing outreach and education to citizens on water rights law, applications and processing.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The Implementation Body views itself as a resource to area communities on water matters. Through its list serve, regular meetings (in-person or electronic), periodic educational events, outreach materials and collaborations with the NPCLE and NPC MRC, it seeks to enhance community appreciation and understanding of natural resources in WRIA 20. Such activities have been funded by Ecology in the past, unless new sources of funding are identified by June of 2010, may need to be discontinued or merged with other programs (See also QTR-8.2).

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a. The IB will identify funds and a strategy to continue to involve citizens in meetings, projects and activities that address water quantity and water quality issues. Possible tools to support this outreach strategy may include:

- press releases, radio interviews and public service announcements, and posters
- distribution of materials at fairs, IB, and community events
- distribution of fact sheets and power point presentation to the IB membership, resource managers, project sponsors, conservation districts, ONRC, UW, WSU, and other interested parties

Long-term Actions: 2015 and beyond

None identified

**Ecology permit processing (QTR-4) (WSP pp. 29, 55)**

**QTR-4.1**

The Implementation Body recommends that Ecology process permits commensurate with funding, staffing and legislative direction.

**Tribal Consultation Actions (QTR 5-6)**

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

- Updated tribal contact information
- Feedback to Ecology on implementation of the Centennial Accord

Strategies to provide sufficient water:

None

**Consult with tribes on substantive water resource plans and actions (QTR-5)** (WSP pp. 29-30, 56)

**QTR-5.1**

The Implementation Body recommends that the Tribes of WRIA 20 inform state agencies of updates to the WRIA 20 Watershed Management Plan list of tribal contacts for notification on water resource management.

**QTR-5.2**

The Implementation Body recommends that the Tribes of WRIA 20 provide regular feedback to Ecology on the local implementation the Centennial Accord.

**Tribal inclusion in applicant pre-submittal scoping (QTR-6)** (WSP pp. 29, 56)

**QTR-6.1**

The Implementation Body recommends that Ecology facilitate scheduling of government-to-government consultations, to accommodate tribal requests, well in advance of scoping.

**Citizen Consultation with Water Rights Processing Actions (QTR 7-9)**

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

Distribution of important information on water rights actions in WRIA 20 to interested citizens

Information on Trust Water Rights Act and opportunities

Strategies to provide sufficient water:

QTR-12.2

**Maintain a website of water right actions and provide newspaper notice (QTR-7)** (WSP pp. 30, 56)

**QTR-7.1**

The Implementation Body recommends that Ecology provide information on water rights applications and the status of proposed regulations on the Water Resources Program web page.

**QTR-7.2**

The Implementation Body recommends that, in public notices on pending water rights applications, Ecology, and/or the applicant, explain the difference between a public comment and a formal protest (\$50 fee required per RCW 90.03.470 (12) RCW) and that only protests are necessarily included in the Report of Examination for that application.

**QTR-7.3**

The Implementation Body recommends that Ecology also develop a fact sheet for the public explaining ways to effectively comment on pending water rights applications (in WRIA 20) and to encourage productive public involvement.

**Monitor state actions on behalf of stakeholders (QTR-8) (WSP pp. 30, 56)**

**QTR-8.1**

The Implementation Body recommends that Ecology develop other useful information on its website about planned water rights actions and the status of pending and processed water right applications.

**QTR-8.2**

The Implementation Body will inform citizens of water rights actions and developments by monitoring Ecology website(s) and emails and conveying the most important information via appropriate means.

**PRIORITY LEVEL:** High

**Implementation Actions Overview:**

The Implementation Body seeks a more interactive and public approach to water rights noticing and processing to supplement the Washington State Register. Providing water rights information to interested parties via the WRIA 20 list serve is an immediate and ongoing priority. Other actions are necessary on a periodic basis and whenever there are changes to water laws. The IB acknowledges, as an example, the assistance of the Quileute Tribe in alerting interested parties about pending water rights legislation and related matters. The IGs may consider rotating this role over time to help inform and involve citizens, especially with regard to any potential out-of-basin transfers.

**Immediate (2010-2011) and Ongoing Actions:**

- a. \_\_\_The IB, or a designated IG, will develop and maintain a contact list of interested parties for water rights actions noticing purposes.
- b. \_\_\_The IB coordinator, or an IG, will monitor the Ecology website and server lists for information and pending actions that pertain to WRIA 20 and forward this information to interested parties.

**Near-term Actions: 2012-2014**

- a. \_\_\_The IB will identify funds and a strategy to continue to involve citizens in meetings, projects and activities that address water quantity and water quality issues.

b.\_\_\_\_The IB will identify funds and a strategy for maintaining a WRIA 20 oriented to water resources

Long-term Actions: 2015 and beyond

None identified

**Consider e-mail list serve (QTR-9)** (WSP pp. 31, 56)

**QTR-9.1**

The Implementation Body recommends that Ecology maintain a water resources e-mail list serve for WRIA 20.

**Water Rights Database Cleanup (QTR 10-13)**

**Identify possible duplicate and unused water right records (QTR-10)** (WSP pp. 31, 56-57)

No implementation actions are planned.

**Confirm status of possible duplicate and unused water rights (QTR-11)** (WSP pp. 31, 56-57)

No implementation actions are planned.

**Facilitate voluntary relinquishment (QTR-12)** (WSP pp. 31, 56-57)

**QTR-12.1**

The Implementation Body, insofar as Ecology allows, will identify those records that the registered water right/claim owner is willing to voluntarily relinquish, and facilitate voluntary relinquishment through Ecology.

No implementation actions are planned.

**QTR-12.2**

The Implementation Body will increase awareness of trust water rights (RCW 90.42.080, Trust Water Rights – acquisition, donation, exercise and transfer).

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The intent of QTR-12 in the WSP is to improve water rights information for WRIA 20 to support water use decisions. The Trust Water Rights Act provides an avenue for this while offering alternatives to voluntary relinquishment and, potentially, making additional water

available to streams. Ecology maintains a Water Market website<sup>19</sup> with information about trust rights, the water acquisition program and water banking.

Water rights voluntarily relinquished to Ecology may then be allocated to water rights applicants for out-of-stream uses. Trust water allows for the donation or lease of ground or surface water rights to the state on a temporary or permanent basis. Water rights holders may be eligible for compensation or tax benefits in exchange for placing all or a portion of their rights into trust. This is true even for rights transferred expressly to benefit instream flows. Trust water rights acquired by the state on a temporary basis revert back to the previous owner undiminished. The *Phase II Technical Assessment for WRIA 20* estimates that water use for irrigation, the most likely source for trust water, is between 393 and 554 acre feet per year.<sup>20</sup>

See Ecology guidance at:

<http://www.ecy.wa.gov/programs/wr/rules/images/pdf/guid1220.pdf>

Washington Water Trust: <http://washingtonwatertrust.org/>

Washington Rivers Conservancy: <http://www.warivers.org/>

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will invite the agricultural community of WRIA 20 to a public presentation on the state's Trust Water Right Program by Ecology, Washington Water Trust and/or Washington Rivers Conservancy.

Near-term Actions: 2012-2014

- a. The IB will assist irrigators in identifying programs to increase efficiencies such as the Agricultural Watershed Enhancement Program (AWEP).<sup>21</sup> Under this program, the Natural Resources Conservation Service (NRCS) enters into partnership agreements with eligible entities that want to promote ground and surface water conservation or improve water quality on agricultural lands. Program applicants must meet eligibility requirements of the Environmental Quality Incentives Program (EQIP).

Long-term Actions: 2015 and beyond

None identified

### **QTR-12.3**

The Implementation Body will explore the potential of water banking in WRIA 20 (RCW 90.42.100).

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Water banking may be used for mitigation of water resource impacts, future water supply needs, or any beneficial use. Water banks are commercial exchanges utilizing the trust water rights program. The legislation is flexible enough to enable water banks to link water sellers and buyers of water, including purchasers of water for instream uses. A water bank in WRIA

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<sup>19</sup> See <http://www.ecy.wa.gov/programs/wr/market/market.html>.

<sup>20</sup> p. 34

<sup>21</sup> See <http://www.nrcs.usda.gov/Programs/awep/2009projects.html>.

20 will likely only be viable when and if 1) available permit exempt water is inadequate to meet demand; and 2) adequate “wet” water exists to make the effort worthwhile through existing water rights or reservation(s).

Immediate Actions: 2010-2011

a. \_\_\_\_ The IB will ask Ecology, or hire a consultant, to review the *Phase II Technical Report for WRIA 20* and assess the potential for water banking in the WRIA.

b. \_\_\_\_ The IB will invite Ecology to discuss the Trust Water Rights Program at a meeting, in-person or electronic, including water banks or exchanges to support both instream and out-of-stream uses. Topics could include water shortages, storage options, and efficiencies used elsewhere in western Washington to benefit flows.

c. \_\_\_\_ The IB will invite representatives from areas that have completed instream flow rules to present water reservation tracking and accounting systems used in their watershed.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Oppose condemnation of valid water rights (QTR-13) (WSP pp. 31, 56-57)**

No implementation actions by the IB are planned at this time.

**Storage and Supply Actions (QTS 1-4)**

Permits and agreements potentially necessary to implement actions in this section:

- Water certificate(s)
- Deeds and easements
- Building and development permits
- Operations and maintenance permits and agreements
- Resolutions and ordinances

Indicators and deliverables for actions in this section:

- Additional water rights and storage for the City of Forks
- Reduced per capita water consumption in the WRIA
- Reduced water consumption by public facilities
- Strategies to protect groundwater quality, aquifers, and baseflows
- Rainwater collection instruction and activities
- Information to lessen impacts of water withdrawals in Lake Pleasant/Sappho area and Ozette watershed
- Increased certainty for well drillers in Lake Pleasant/Sappho area
- Improvements to natural processes in Ozette watershed
- Letters
- Drought contingency planning by purveyors

Strategies to provide sufficient water:

- QTS-1.1
- QTS-1.3
- QTS-1.4
- QTS-2.1
- QTS-3.1

**Replace and diversify aging municipal infrastructure; propose water rights as needed (QTS-1) (WSP pp. 31, 58)**

**QTS-1.1**

The Implementation Body will support efforts by the City of Forks to increase the security and reliability of its municipal water supply.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

The Implementation Body proposes actions designed to protect and enhance the City of Forks' capacity to deliver water and fire flow to its customers while protecting the aquifers and the Calawah and Bogachiel Rivers. The city recently acquired property for the construction of a proposed one-million gallon above-ground storage tank to serve its residential, commercial and industrial water needs north of the Calawah River. The IB supports these efforts and the city's pursuit of additional water rights through its comprehensive water system planning process in 2014. The IB also encourages water conservation efforts by all IGs to inform citizens and visitors about ways to use water more efficiently.

Immediate (2010-2011) and Ongoing Actions

- a. \_\_\_The IB will seek funding to commission a study of the hydrogeology and groundwater/surface water exchanges of the Forks Prairie aquifer and to identify and map critical aquifer recharge areas. A component of this study could be a hydrological investigation of groundwater in the vicinity of the Quillayute Prairie.<sup>22</sup>
- b. \_\_\_The IB will send letters to encourage the City of Forks, other area purveyors, and government agencies operating in the WRIA to prepare and implement (additional) water conservation plans and programs for their water systems, to possibly include:
  - system water audits
  - wellhead protection plans
  - identifying and protecting critical aquifer recharge areas
  - supporting riparian function
  - leak detection and repair
  - source metering
  - consumer metering
  - consumption/seasonal rates
  - bills with consumption history

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<sup>22</sup> See *Multi-Purpose Storage Assessment for WRIA 20* (p.44): <http://www.ecy.wa.gov/programs/eap/wrias/Planning/20.html>.

- reuse of reclaimed water
- plumbing retrofit kits
- user water audits
- landscaping/irrigation guidelines
- rainwater catchment
- water conservation kits (see the City of Forks CWSP p. 4-8)
- distribution of Water Conservation information (see DOH publications)
- conservation pricing
- water surveys
- education programs
- technological advances.

c.\_\_\_\_The IB will organize a meeting, in-person or electronic, with the Forks Chamber of Commerce and area lodging providers to discuss ways to encourage visitors to conserve water during their stays.

d.\_\_\_\_The IB will organize a meeting, in-person or electronic, with the City of Forks and other interested water purveyors to discuss regional drought contingency and system security planning.<sup>23</sup>

e.\_\_\_\_The IB recommends that the City of Forks consider ways to improve water use efficiencies at its facilities through the use of, for example, rainwater catchment, drip irrigation, and additional low flow fixtures.

Near-term Actions: 2012-2014

a.\_\_\_\_The IB recommends that the City of Forks assess the costs and benefits of pursuing additional water rights as part of its water system comprehensive planning update process scheduled for 2014.

b.\_\_\_\_The IB will send letters to Ecology and others in support of the City of Forks' efforts to increase the security and reliability of its municipal water supply.

c.\_\_\_\_The IB will send a letter requesting that the City of Forks provide written notice of the update process to the identified initiating governments within the WRIA and keep them informed of progress towards development of water resources such as storage.

d.\_\_\_\_The IB will provide the City of Forks with information and assessments, as available, to inform their comprehensive water system update in 2014.

e.\_\_\_\_Based on the results of the aquifer characterization study, the IB will consider and recommend additional strategies to protect and/or enhance flows in the Calawah and Bogachiel Rivers and recharge of the Forks Prairie aquifer.

Long-term Actions: 2015 and beyond

a.\_\_\_\_The City of Forks will construct and begin operations of the one-million gallon water storage tank north of the Calawah River.

b.\_\_\_\_The IB will implement strategies to protect and/or enhance baseflows in the Calawah and Bogachiel Rivers and recharge of the Forks Prairie aquifer.

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<sup>23</sup> One example is Department of Health's *Emergency Response Planning Guide for Public Drinking Water Systems* or similar (DOH PUB. #331-211).

### QTS-1.2

The Implementation Body recommends that Ecology and the Washington State Department of Health encourage applicants, such as the City of Forks, to provide timely notice of their intentions to seek expansion of existing systems to the participating governments, including tribal governments, in the WRIA 20 watershed plan.

### QTS-1.3

The Implementation Body will provide education and outreach to interested parties on rainwater collection to supplement water supply and to reduce stormwater runoff.

PRIORITY LEVEL: High

Implementation Actions Overview:

In October 2009, after WSP approval, Washington Ecology Director Jay Manning issued a policy statement allowing the collection and storage of rainwater for on-site use without a water right. Rainwater collection is potentially an important mechanism for reducing stormwater and its adverse affects, especially in urban areas. It may also provide needed drinking water in some areas of WRIA 20. Information about the use of rain barrels and technologies to collect and utilize rainwater for potable use is available from the Departments of Ecology<sup>24</sup> and Health, on the Internet, in articles, books, and workshops.<sup>25</sup> The average annual precipitation in Forks is about 100 inches. Although late summer and early fall can be very dry, most summer months receive at least an inch of rain. One inch of rain falling on a 1000 square foot roof may generate over 600 gallons of water.<sup>26</sup> (See also QTS-3.1)

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_ The IB will work with the City of Forks, conservation districts, ONRC, WSU and/or UW and others to seek funds for a rainwater collection system demonstration project at a public facility in the City of Forks.

Near-term Actions: 2012-2014

a. \_\_\_ During its scheduled update in 2014, the City of Forks will update its Water System Comprehensive Plan to include the support of rainwater collection and storage by residents, businesses, and the City itself.<sup>27</sup>

Long-term Actions: 2015 and beyond

None identified

### QTS-1.4

The Implementation Body will research opportunities to support the appropriate use of greywater.

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<sup>24</sup> Department of Ecology rainwater collection webpages: <http://www.ecy.wa.gov/programs/wr/hq/rwh.html> including links to information sources at: [http://www.ecy.wa.gov/programs/wr/hq/rwh\\_info.html](http://www.ecy.wa.gov/programs/wr/hq/rwh_info.html).

<sup>25</sup> See, for example, Harvest H2O: <http://www.harvesth2o.com/about.shtml> and the American Rainwater Capture Association <http://www.arcsa.org/resources.html> or the <http://www.rain-barrel.net/rainwater-calculator.html>.

<sup>26</sup> See, for example, <http://www.smiffysplace.com/mss/raincalc>.

<sup>27</sup> See Ecology's Rainwater Collection website and links: <http://www.ecy.wa.gov/programs/wr/hq/rwh.html>.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Greywater use is one way to reduce the demand for fresh water for some uses such as subsurface irrigation.<sup>28</sup> The Washington Department of Health, in coordination with the Department of Ecology, is in the process of developing rules for outdoor reuse of greywater for subsurface dispersal and irrigation by the end of 2010 (RCW 90.46.015).<sup>29</sup>

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_The IB will write a letter to legislators commenting on the Office of Shellfish and Water Protection's Greywater Reuse Rule, now under development.

Near-term Actions: 2012-2014

a. \_\_\_The IB will host a meeting, in-person or electronic, to discuss the potential of greywater to help meet the water needs of the community for some uses.

Long-term Actions: 2015 and beyond

None identified

**Conduct a geophysical survey of the Lake Pleasant/Sappho area (QTS-2) (WSP pp.32, 58)**

**QTS-2.1**

The Implementation Body will work with area landowners to assess the need for a geophysical survey to characterize the geology of the Lake Pleasant/Sappho area and locate aquifer recharge areas.

PRIORITY LEVEL: High

Implementation Actions Overview:

The Implementation Body is a potential resource to the Lake Pleasant/Sappho community in addressing its drinking water supply needs. The purpose of this action is potentially twofold: 1) determine the availability of groundwater, particularly on the southeast side of the lake<sup>30</sup>; and 2) protect surface waters and aquifer recharge areas.

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_Based on a review of existing information, the IB will host a meeting, in-person or electronic, of area landowners to discuss a project to improve the probability of siting productive wells in the Lake Pleasant/Sappho area.

b. \_\_\_The IB will partner with the conservation districts to seek funding to promote water conservation and protection of water resources in the Lake Pleasant/Sappho area and Sol Duc watershed generally.

c. \_\_\_If there is sufficient interest and community appreciation to move forward, the IB will seek funding to develop and implement a geophysical survey of the area.

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<sup>28</sup> See [http://www.doh.wa.gov/ehp/Ts/WW/greywater/greywater.htm#Benefits\\_of\\_Using](http://www.doh.wa.gov/ehp/Ts/WW/greywater/greywater.htm#Benefits_of_Using) for informative fact sheets.

<sup>29</sup> See <http://www.doh.wa.gov/ehp/Ts/WW/greywater/greywater-rac.htm>.

<sup>30</sup> See *Multi-Purpose Storage Assessment for WRIA 20* (p.13): <http://www.ecy.wa.gov/programs/eap/wrias/Planning/20.html>.

Near-term Actions: 2012-2014

- a. The IB will send letters to WRIA 20 communities and water purveyors at risk of water shortages encouraging them to prepare and implement water conservation and drought contingency plans.

Long-term Actions: 2015 and beyond

- a. The IB will write letters in support of the efforts of Lake Pleasant/Sappho area residents and businesses to site, fund and develop wells, and/or rainwater catchment systems, based on survey and/or study results and to adequately protect aquifer recharge and wellheads.

**Identify ecologically sustainable drinking water sources for the Lake Ozette Watershed (QTS-3) (WSP pp.32, 58)**

**QTS-3.1**

The Implementation Body will identify next steps to ensure the long-term reliability and ecological sustainability of drinking water supplies, to further the conservation of native fish in the Ozette watershed.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

The Implementation Body is a potential resource to the Ozette watershed community in addressing its drinking water supply needs. The *Lake Ozette Sockeye Recovery Plan* and draft strategy for the NPCLE do not have drinking water as a focused priority although the availability of drinking water may be influenced by projects designed to benefit fish stocks. The *Multi-Purpose Storage Assessment for WRIA 20*<sup>31</sup> proposes that source water for drinking may be maintained or enhanced through efforts to halt or reverse downcutting of stream channels and to augment bank storage, but this approach is controversial.

Rainwater catchment and storage may provide a viable option for drinking water in this area given adequate roof area, but expertise is needed. If groundwater wells are pursued, they should ideally be located to prevent connectivity with surface flows. Other options may be available.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will partner with the Clallam Conservation District, the Makah and Quileute Tribes, WDFW and other interested parties to host a discussion on the science and issues of Ozette water availability and to consider possible next steps such as rainwater collection or informed siting of additional wells.
- b. The IB will send a letter to Olympic National Park requesting that they communicate with visitors (prior to their arrival at Lake Ozette) about the potable water availability issue at the lake, with potential impacts to the fishery that are influenced by the use of water by

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<sup>31</sup> See p. 15 of the assessment at <http://www.ecy.wa.gov/programs/eap/wrias/Planning/20.html>.

campers and backpackers. Visitors should be encouraged to conserve water and, if possible, fill their tanks or bottles prior to arrival in the basin.

Near-term Actions: 2012-2014

a. \_\_\_Based upon the outcome of the workshop, the IB will write letters to potential funders to support the efforts of interested parties to fund and implement steps and/or studies.

Long-term Actions: 2015 and beyond

None identified

**Evaluate where in-channel LWD would improve sub-basin storage potential in the Big River Area (QTS-4) (WSP pp.32, 58)**

**QTS-4.1**

The Implementation Body will gather input from stakeholders and governments in the Ozette watershed including but not limited to the Makah and Quileute Tribes, Olympic National Park, WDNR and WDFW, on ideas for low impact improvements to floodplain processes and “natural” water storage and recharge.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The IB is particularly interested in fostering better coordination and appreciation of groundwater/surface water exchanges in the Ozette watershed to support informed discussion about potential in-channel LWD to improve sub-basin storage potential.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a. \_\_\_The IB will ask the NPCLE to include projects in its strategy for salmon recovery to acquire conservation easements or timber rights (including time-limited) from large forest landowners for land within channel migration zones and along stream reaches with ESA-listed species or other important considerations.

b. \_\_\_The IB will invite large forest landowners (harvesting more than two million board feet) to consider opportunities to enhance natural water storage on a voluntary basis in the Ozette watershed.

c. \_\_\_The IB will request that the NPCLE include in its strategy for salmon recovery a study/report to 1) Identify and assess locations where in-channel LWD would best improve sub-basin storage potential in the Big River area; 2) for those reaches with the greatest potential for enhanced storage, estimate likely impacts to area landowners of LWD placement; 3) identify potential opportunities to mitigate project impacts to area landowners; and 4) provide a range of recommended options.

Long-term Actions: 2015 and beyond.

None identified

# Instream Flows

The following recommended actions identified by the Implementation Body are offered in light of funding discussions on page 16.

## Instream Flow Actions (ISF 1-4)

Permits and agreements necessary to implement actions in this section:

- Landowner agreements

Indicators and deliverables for actions in this section:

- Funding for strategy to conduct additional instream flow studies in WRIA 20
- Strategy for instream flow studies
- Funding for studies
- Conduct studies
- Monitoring flows of key biological sites
- Water law/ISF outreach
- Water uses inventory and prioritization
- Contingency plan in case of no IB or successor group

Strategies to provide sufficient water:

- None

**WDOE early inclusion of affected parties, explain data and methods to be used (ISF-1)**  
(WSP pp. 36, 59-60)

### ISF-1.1

The Implementation Body recommends that Ecology make all reasonable efforts to timely invite affected parties to discuss instream flow setting, preferably 180 days prior to initiating the process of instream flow rule-making.

**Support of numeric instream flow rule pending adequate data (ISF-2)** (WSP pp. 36, 60)

### ISF-2.1

The Implementation Body recommends that Ecology base the setting of any ISF rule on adequate data and technically defensible methods.<sup>32</sup> ISF rule development by Ecology is not anticipated for at least five years (2015), so the IB will pursue a strategy for instream flow studies in the meantime and seek funds to implement the studies.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

According to Ecology's *A Guide to Instream Flow Setting in Washington State*,<sup>33</sup> one of the primary purposes of watershed planning is determining how to achieve instream flows. The WRIA 20 WSP includes policy-based considerations rather than specific flow recommendations. It states that "time should be afforded for grants to be developed for detailed studies, before the most cost-efficient means of developing evidence for ISF rules development are selected as definitive." It also states that "Once data are available, the Planning Unit is supportive of numerical ISF development."<sup>34</sup>

In Mr. Manning's response to Chair Hatch, he says, "If the WRIA 20 planning unit secures funding for a more intensive instream flow study, [Ecology] will most certainly help with the planning and analysis and will eagerly use the new results to develop our instream flows."

After stream gaging, the topmost priority of the IB is to define relationships between flow and habitat through IFIM,<sup>35</sup> or comparable approaches at the sub-reach scale, particularly for large rivers such as the Sol Duc and Hoh.<sup>36</sup> Recent studies<sup>37</sup> indicate that variations in flow may be as important to fish populations as flow volumes. WCSSP is applying TNC's Conservation Action Planning process and "environmental flows"<sup>38</sup> to address this.

The IB recognizes that data and studies to support a future WRIA 20 ISF rule are essential to the legal defense of flow requirements of fish. The rule and possible basin closures will also help to ensure that any water available for out-of-stream uses will be retained in WRIA 20.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ The IB will ask the NPCLE to add to its strategy for salmon recovery, as a top priority, an assessment to develop a strategy for instream flow studies in WRIA 20.
- b. \_\_\_ The IB will write letters to support the NPCLE and others in securing funding to develop a strategy and conduct instream flow studies in WRIA 20.
- c. \_\_\_ The IB will support efforts to secure funding for studies or assessments to determine the relative value of flows to be protected.

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<sup>32</sup> WSP (p. ES-2) and discussed in the Quileute Tribe's letter of March 10, 2008 to Jay Manning of Ecology and in his response on March 28.

<sup>33</sup> See <http://www.ecy.wa.gov/biblio/0311007.html>.

<sup>34</sup> WSP p. 59-60

<sup>35</sup> See <http://www.fort.usgs.gov/Products/Software/ifim/5phases.asp>.

<sup>36</sup> In 2008 the WRIA 20 Planning Unit submitted an unsuccessful application to Ecology to fund IFIM studies for the Sol Duc and Hoh watersheds.

<sup>37</sup> Variable regime of flow, rather than just a minimum low flow, is required to sustain freshwater ecosystems according to Poff et al., 1997; Bunn & Arthington, 2002; Postel & Richter, 2003; Annear et al., 2004; Biggs, Nikora & Snelder, 2005; Poff, 2009. See the bibliography at <http://conserveonline.org/workspaces/eloha/documents/bibliography> for these and other references.

<sup>38</sup> See <http://conserveonline.org/workspaces/eloha>.

d. The IB membership will ask the NPCLE in its strategy for salmon recovery to continue to identify, map, and monitor locations of particular importance for fish life histories and to adjust water quantity (and quality) monitoring efforts to focus on these sites.<sup>39</sup>

e. The IB will ask the NPCLE to include studies, such as “critical riffle studies” to characterize how different flow levels affect the connectivity of side channels to the main river channels in its strategy for salmon recovery.

#### Near-term Actions: 2012-2014

a. The IB will write letters in support of efforts by its members and cooperators to inventory wildlife, aesthetic and scenic values, recreation, navigation, riparian stockwatering, water quality and other environmental values within WRIA 20 needed to inform instream flow setting.

b. The IB will proactively host one or more meetings, in-person or electronic, to prioritize the uses for future water allocations in WRIA 20<sup>40</sup> and assess the degree of competition for available water supplies.

c. The IB may request that it be kept informed of pending water rights applications, participate in any Ecology Surface Water Source Limitation (SWSL) efforts or similar initiated by WDFW, and submit comments or concerns on such applications directly to Ecology.<sup>41</sup>

#### Long-term Actions: 2015 and beyond

a. If the IB or a successor group does not exist at the time that Ecology seeks to initiate ISF rule development, Clallam County will organize a meeting, in-person or electronic, to coordinate the involvement of IGs and interested stakeholders as a coordinated group.

b. If an initiating government of the WRIA 20 IB believes that conditions within the WRIA are such that adoption of instream flows is necessary to protect fish and wildlife or to preserve water quality, Clallam County will organize a meeting, in-person or electronic, of the IGs and interested parties to coordinate with the tribes, WDFW, and Ecology to promote the need for rulemaking.

### **ISF-2.2**

The Implementation Body recommends that Ecology consider water quality data in developing instream flow rules.

### **ISF-2.3**

The Implementation Body recommends that Ecology design ISF rules to protect high (channel forming) flows.

### **ISF-2.4**

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<sup>39</sup> This action is repeated in the water quality section.

<sup>40</sup> Such as: small (5-20) acreages/lots, centralized vs. scattered use, domestic, agriculture, stock water, hatcheries, industrial, and commercial water needs

<sup>41</sup> See par. 9.5 at [http://www.asotinpod.org/msww/documents/Section\\_9\\_New.pdf](http://www.asotinpod.org/msww/documents/Section_9_New.pdf) for more information on SWSLs.

The Implementation Body recommends that, in developing instream flow rules, Ecology address how the expansion of municipal water rights may affect baseflows.

**Policy components for instream flow rule where Planning Unit approved such (ISF-3)** (WSP pp. 36, 61)

### **ISF-3.1**

The Implementation Body recommends that, in the development of all ISF rules for WRIA 20, Ecology and any IB successor group(s) consider the policy components detailed on pages 36 and 37 of the WSP such as basin closures; mitigation strategies; storage strategies; future reservations for domestic, municipal, industrial and agricultural use; transfer of water outside of WRIA 20 is strongly discouraged by the IB; and transfer of water between watershed sub-areas, except groundwater exchange under the Forks Municipal Water Plan, is strongly discouraged by the IB.

**PRIORITY LEVEL:** Highest

**Implementation Actions Overview:**

The IB feels that an ISF rule that combines these policy components will create a foundation for ecologically sustainable water management in WRIA 20. The time being afforded now to collect data prior to rule development may also be used to anticipate how these policy components might play out after rule adoption. The intent of the ISF rule is to protect instream flows. But local governments must also provide for the population growth allocations mandated by the GMA. Governments also have an obligation to ensure adequate water for subdivisions (RCW 58.17 - counties) and for buildings (RCW 19.27.097). There is no regulatory interface between permit exempt wells and the state currently in WRIA 20.

**Immediate (2010-2011) and Ongoing Actions:**

a. The IB and its membership will take immediate action to contact legislators and Ecology to oppose water rights applications involving the transfer of water outside of the WRIA or between sub-areas.

**Near-term Actions: 2012-2014**

a. The IB will review mitigation strategies used in other WRIsAs to allow for the allocation and exercise of water rights during low flow periods for possible application to WRIA 20.

**Long-term Actions: 2015 and beyond.**

None identified

**Prioritization of streams for rule-making (ISF-4)** ((WSP pp. 36, 62)

### **ISF-4.1**

The Implementation Body recommends that, when prioritizing streams for rule-making, Ecology give due weight to WSP priorities, including streams where sufficient flow data is available, where allocations are being considered for transfer, where threatened and endangered salmonid stocks are present, and where there may be an existing or impending impact to stream flows. Any

stream closures or reservations by policy should consider recommendations of governments, agencies and stakeholder groups.

## WATER QUALITY

The following recommended actions identified by the Implementation Body are offered in light of funding discussions on page 16.

### Water Quality Data Management Actions (QLM 1-5)

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

- Periodic review of database use
- Improved access to reports and data
- “State of the Watershed” fact sheets and indicators
- Letters
- Review of 303(d) list
- Application(s) for TMDL(s) development and/or implementation
- WRIA 20 water quality distribution list
- Water quality monitoring blog
- Presentation on mercury in WRIA 20
- Presentation on oil spills

Strategies to provide sufficient water:

None

**Participate in a water quality database program (QLM-1)**

**Commission ONRC to update metadata (QLM-2)**

**Develop a GIS database of water quality monitoring locations (QLM-3)**

**Develop a water quality database to track parameters (QLM-4)**

(WSP pp. 41-42, 62)

#### QLM 1-4.1

The Implementation Body will periodically review the use of databases by its members, partner organizations and agencies with the goal of improving data accessibility.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Since the WSP was written, the capabilities and use of Ecology's EIM and other publically accessible databases have expanded rapidly. The IB no longer feels that a database specific to WRIA 20 is needed. Rather, information on the availability of existing databases, and how they are used by monitoring entities for WRIA 20, should be disseminated.

Databases containing information from WRIA 20 include:

- Pacific Water Quality Exchange, an EPA-funded prototype for data sharing in WA, OR, ID and AK: <http://deq12.deq.state.or.us/pnwwqx/>
- EPA's Water Quality Exchange: <http://www.exchangenetwork.net/exchanges/water/wqx.htm>, developed for getting data into STORET: <http://www.epa.gov/STORET/wqx/index.html>
- King County Puget Sound Stream Benthos for benthic macro-invertebrate data (may be renamed as it is expanded beyond the region): <http://www.pugetsoundstreambenthos.org/>
- Ecology's Status and Trends supporting the SRFB and watershed metrics data (final metrics will be in EIM): <http://www.ecy.wa.gov/programs/eap/stsmf/index.html>
- USGS Water Data: <http://waterdata.usgs.gov/nwis/rt>
- CMER database(s)<sup>42 43</sup>
- Clallam County Water Resource Database, accessible through Streamkeepers of Clallam County website: <http://www.clallam.net/streamkeepers>.
- Other databases or data and analysis systems to potentially involve WRIA 20 watersheds include Netmap, Ecosystem Diagnosis and Treatment (EDT) and Aquarius.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will ask Ecology, Clallam County, as lead agency, NPCLE and WCSSP to provide links to these and other relevant databases on their WRIA 20 websites and to keep the list of links updated.

Near-term Actions: 2012-2014

- a. Periodically, the IB will contact monitoring entities in WRIA 20 requesting that they provide (updated) information on how to access or request data and reports.

Long-term Actions: 2015 and beyond

None identified

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<sup>42</sup> From the 2009 Clean Water Act Assurances Review of Washington's Forest Practices Program p. 24: (d) Past and ongoing CMER studies and their associated data are not readily available or housed in any defined location. This puts this information at risk of being lost, and makes it largely inaccessible to the public as well as to AMP participants who could otherwise use the information to improve the efficiency of ongoing and planned studies. To help ensure the availability of reports and data generated through the AMP, the current efforts by DNR to scan all CMER reports into digital formatting should be supported. The effort of CMER and the Northwest Indian Fisheries Commission to develop an archival and GIS-based data acquisition system should be similarly supported.

<sup>43</sup> Personal communications, 12/21/09, with Jim Hotvedt of the AMP, indicate that CMER currently has no treatments located in WRIA 20.

**Review/analyze data, fill gaps, and eliminate overlap (QLM-5) (WSP pp. 42, 62-63)**

**QLM-5.1**

The Implementation Body will identify and address important gaps in water data for the WRIA.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Data are needed to characterize baseline conditions and changes in the WRIA, identify existing water quality impairments, assess restoration efforts, and maximize stock resiliency despite climate change impacts. The county shoreline master programs and stormwater monitoring programs may offer additional opportunities to collect water quality data in the WRIA. The event described in QLM-5.3 would be a component of this action. Funding for several actions in this section could be sought from the Northwest Fund for the Environment.<sup>44</sup>

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

- a. \_\_\_\_ The IB will identify partners and funds to conduct a review of water data and data collection efforts in WRIA 20 with the goal of identifying and addressing gaps and eliminating overlaps.
- b. \_\_\_\_ In addressing data gaps, the IB will consider what flows may be necessary to protect identified stream values in addition to fish.<sup>45</sup>
- c. \_\_\_\_ The IB will develop a “State of the Watershed” fact sheet for inclusion in annual DIP updates. Preferred indicators will be selected and tracked over time.
- d. \_\_\_\_ The IB will send an open letter to area airports requesting donations of dated aerial images for WRIA 20 watersheds, especially after storms.
- e. \_\_\_\_ The IB will write letters to seek funding for, and/or donations of, professional orthophotos of WRIA 20 stream valleys (e.g. Lighthawk<sup>46</sup>).
- f. \_\_\_\_ The IB will request that appropriate agencies pursue analyses of such matters as biological indicators and agents (fish pathogens) and the use of chemicals and hormonal effluents that impact water quality and/or fish health.

Long-term Actions: 2015 and beyond

None identified

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<sup>44</sup> See [http://new.nwfund.org/index.php?option=com\\_content&view=article&id=52&Itemid=87](http://new.nwfund.org/index.php?option=com_content&view=article&id=52&Itemid=87).

<sup>45</sup> From *A Guide to Instream Flow Setting in Washington State* (2003): “As groups develop instream flows recommendations, they will need to determine if a recommendation developed for one resource adequately protects other instream resources that are present in the identified stream. For example, a stream may have a threatened species of fish that is the focus of an instream flow recommendation from a planning unit. Even though the stream may not have a water quality problem that warrants detailed review, the planning unit must consider whether the recommended flow for fish adequately protects water quality...” (p. 13-14) available at <http://www.ecy.wa.gov/biblio/0311007>.

<sup>46</sup> See <http://www.lighthawk.org>.

## QLM-5.2

The Implementation Body will perform an in-depth review of the current 303(d) listings to consider which of them may not be addressed in the forest practices AMP.

**PRIORITY LEVEL:** High

**Implementation Actions Overview:**

Currently there are sixty-six 303(d) listings for WRIA 20 (Appendix F), of which up to thirty-nine might be linked to human-related factors other than forest practices (Appendix G) according to a preliminary review by an Ecology staff person. Such listings may rank as higher priorities for TMDL projects.

According to Ecology's Water Quality Assessment database, in the Quillayute system, temperature issues were observed at RMs 0, 8.7, 9, 9.8, 12.6, 15.7, and 20 of the Bogachiel River. Maxfield Creek, a tributary of the Bogachiel, has temperature exceedances at T28N, R14W Section 28. Dissolved oxygen and temperature were exceeded in Lake Creek at RM 2. Streamkeepers identified additional exceedances for Lake Creek for both temperature and dissolved oxygen as well. The Sol Duc River had all temperature exceedances at RMs 6.5, 13, 19, 22.1, 23.75, and 44.9. In 1994, Beaver Creek, a tributary of the Sol Duc, had temperature exceedances at T30N, R12W Section 30 near the mouth. A test near Forks in 2001 by an Ecology contractor came up with no excursions, however. The West Fork of the Dickey River at T29N R14W Section 30 has had numerous temperature excursions. Coal Creek, a tributary of the Dickey, had numerous temperature excursions in 1992. All measurements were done in the 1990s by Quileute staff, with the exceptions of Streamkeepers and an Ecology contractor.

For the Hoh River watershed, fecal coliform exceedances were detected by Ecology at the DNR campground near the Hwy 101 bridge at T 27N, R12W Section 33 in 2004, 2005 and 2006. Temperature exceedances were documented for the following tributaries to the main stem:

- Maple Creek (T27N, R11W Section 35)
- Owl Creek (T27N, R12W Section 34)
- Winfield Creek (T27N, R12W Section 25)
- Willoughby Creek (T27N, R12W Section 25)
- Anderson Creek (T26N, R13W Section 12)
- Nolan Creek (T26N, R13W Section 24)
- Alder Creek (T27N, R12W Section 27)
- Elk Creek (T27N, R12W Section 35)

Temperature exceedances were also observed for the following tributaries of the South Fork Hoh River:

- Fisher Creek, also known as McQuarry Creek (T27N, R10W Section 34)
- Split Creek (T27N, R10W Section 34)
- Line Creek (T26N, R10W Section 3)

Hoh system data were collected by Hatten in 1991, the Hoh Tribe in 1992, and Horrocks and Lombard in 1995.

**Immediate (2010-2011) and Ongoing Actions:**

a.\_\_\_\_Annually, the IB will review any changes to the 303(d) listings and consider causes for these changes and possible responses.

b.\_\_\_\_The IB will perform a more in-depth review of the sixty-six 303(d) listings to determine if they might be linked to human-related factors other than forest practices and will revise the table in Appendix G to reflect this review.

c.\_\_\_\_The IB, in partnership with conservation districts, will apply as appropriate for grants for TMDL development and/or implementation of BMPs and monitoring for selected 303(d) listings.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

### **QLM-5.3**

The Implementation Body will partner with the ONRC to host a workshop for water quality monitoring field staff and program managers from across the WRIA to brainstorm improvements to data collection efforts by eliminating overlap, closing data gaps, and extending complementary analyses.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

A goal of the IB with respect to water quality is to “integrate and coordinate the management, collection and dissemination of water quality data among agencies and other interests in WRIA 20.” More opportunities for monitoring practitioners to exchange information about the WRIA are needed.

Immediate Actions: 2010-2011

a.\_\_\_\_ The IB will develop a distribution list for entities (many listed in the WSP on page 41 under 3.3.2 “Motivation”) collecting water quality data in WRIA 20.

b.\_\_\_\_ The IB will consider how best to interface this action with WCSSP’s TNC Technical Advisory Committee, Sharepoint, and Netmap projects.

c.\_\_\_\_ The IB will ask Streamkeepers to initiate a blog or other appropriate means for monitoring entities to share information about ongoing studies, resource conditions, open requests for information or assistance, and other topics.

Near-term Actions: 2012-2014

a.\_\_\_\_ The IB membership will seek funding to (continue to) identify and monitor locations of particular importance for fish life histories.

b.\_\_\_\_ The IB membership will adjust (water quantity) and quality monitoring efforts to include the locations of particular importance for fish life histories as they are identified.<sup>47</sup>

c.\_\_\_\_ The IB will request a presentation on the presence and sources of mercury in the WRIA.

Long-term Actions: 2015 and beyond

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<sup>47</sup> Repeated in ISF-2.1.

a. \_\_\_As appropriate the IB will identify actions to address the presence of mercury in WRIA 20 watersheds.

#### QLM-5.4

The IB will support efforts to study the potential impacts of oil spills (both marine and terrestrial) and stream pollution on fish in the marine environment.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Estuaries and freshwater plumes have importance for the survival of anadromous fish.<sup>48</sup> With the exception of sediment loads, the IB feels that in WRIA 20 the effects of stream pollution on salmonids in the marine environment are currently minimal. The IB is concerned about the vulnerability of salmonids and prey species to oil spills.<sup>49 50</sup> There have been two big spills off the outer coast, in 1988 (*Nestucca*) and 1991 (*Tenyo Maru*). The IB seeks additional information on how fresh and marine water interactions influence fish populations.

Immediate Actions: 2010-2011

None identified

Near-term Actions: 2012-2014.

a. \_\_\_The IB will ask the NPC MRC to partner with NOAA to host a public workshop on oil spill impacts, prevention and response plans in WRIA 20.

Long-term Actions: 2015 and beyond

a. \_\_\_During instream flow setting, the IB will ask Ecology to consider how nonpoint pollution from freshwater sources also affects salmonids and other organisms in the marine environment.

### Water Quality Program Actions (QLP 1-4)

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

Meeting on water quality monitoring consistent with HCPs  
Funding to support monitoring  
Monitoring consistent with ratified HCPs  
Requests for monitoring funds  
Grant proposals

Strategies to provide sufficient water:

None

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<sup>48</sup> See, for example, <http://www.psmfc.org/habitat/intro.html>.

<sup>49</sup> WSP p. 40

<sup>50</sup> For information on oil spill response see <http://www.ecy.wa.gov/programs/spills/spills.html> and geographic response plans <http://www.ecy.wa.gov/programs/spills/preparedness/GRP/introduction.htm>.

**Establish water quality monitoring stations (QLP-1)**

**Request staff and funds assistance to monitor from local governments (QLP-2)**

**Support Streamkeepers of Clallam County monitoring and similar (QLP-3)**

**Participate in Ecology's Water Quality Management Area (WQMA) program (QLP-4)**

(WSP pp. 42, 62-63)

#### **QLP-1-4.1**

The Implementation Body will foster an integrated and coordinated approach to water quality monitoring in WRIA 20 with special regard to TMDLs, and ratified Habitat Conservation Plans (HCPs).

PRIORITY LEVEL: High

Implementation Actions Overview:

The IB supports water quality monitoring consistent with ratified HCPs within WRIA 20. However, water quality has been less well studied in WRIA 20 than elsewhere. Even in good economic times, monitoring activities are difficult to fund on an ongoing basis. More collaboration and better communication between monitoring entities is desired in order to reduce costs and prevent overlap.

Under Washington state law (Chapter 90.48 RCW) forest practices rules are intended to achieve compliance with the state water quality standards and the federal Clean Water Act (CWA). The WRIA 20 WSP<sup>51</sup> notes that TMDL development for 303(d) listed waterbodies, where impairment might be attributed to forest practices, had been deferred to 2009 in accordance with the state Forest Practices Act.

Table 4-3 of the WSP lists 49 stream segments on the draft 2002/2004 303(d) list. This list was updated in 2008 to now include 66 listings<sup>52</sup> of which 89 percent exceeds standards for temperature or dissolved oxygen. The remaining 11 percent is listed for fecal coliform, pH, or mercury.

Ecology published the *2009 Clean Water Act Assurances Review of Washington's Forest Practices Program* as a basis for determining whether or not to extend the CWA assurances into the future (Chapter 173-201A WAC). According to the report, Ecology may continue to rank conducting TMDLs on forest lands as a low priority. The tribes are evaluating this assertion.

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_\_ The IB will host a meeting, in-person or electronic, to discuss establishment of water quality monitoring consistent with ratified HCPs to include Streamkeepers, Ecology, USGS, tribes, ONRC and others. Outcomes for the meeting could include:

- identifying areas and entities for further collaboration and integration
- identifying temporal, spatial and parameter data gaps
- identifying needed research and/or studies

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<sup>51</sup> p. 62

<sup>52</sup> See <http://www.ecy.wa.gov/Programs/wq/303d/index.html>.

- identifying needed restoration projects with a significant water quality monitoring component

Near-term Actions: 2012-2014

- \_\_\_\_ The IB will solicit funds for water quality monitoring in the WRIA from local, state, and federal legislators.
- \_\_\_\_ The IB, in partnership with the ONRC, will invite college and university water quality programs in the Pacific Northwest to conduct water quality studies or projects in WRIA 20.
- \_\_\_\_ The IB will send a letter to Ecology's EAP<sup>53</sup> to request that its workplan include technical support and/or specific research and data analysis projects in WRIA 20 (to be conducted on a WQMA basis).
- \_\_\_\_ The IB, in collaboration with, for example, Streamkeepers of Clallam County and local schools, will seek funding to develop and establish a Streamkeepers organization specific to WRIA 20 that includes trainings for citizen scientists and strategies for long-term funding.
- \_\_\_\_ Clallam and Jefferson Counties will collaborate as needed to seek funding for projects to address the most urgent water quality impairment(s) in the WRIA as identified in the gap analysis in QLM-5.1 and 5.3.

Long-term Actions: 2015 and beyond

None identified

## Water Quality Data Collection Actions (QLD 1-5)

Permits and agreements necessary to implement actions in this section:

Grant agreement(s)

Indicators and deliverables for actions in this section:

Letters and logistics in support of grant applications  
 Request to CMER  
 Septic 101 classes  
 Presentation from ShoreBank Cascadia  
 Testing to confirm exceedance sources  
 On-line information on caring for on-sites  
 Guidance for pet waste disposal  
 Welcome to Your West End Watershed brochure  
 Additional fecal coliform monitoring

Strategies to provide sufficient water

None

**Support monitoring activities (QLD-1) (WSP pp. 43, 64)**

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<sup>53</sup> See <http://www.ecy.wa.gov/programs/eap>.

### **QLD-1.1**

The Implementation Body will facilitate communications and coordination of water quality monitoring activities.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The IB supports the independent efforts of IGs and stakeholders to monitor water quality parameters in the WRIA including but not limited to Streamkeepers and analogous groups.

Immediate Actions: 2010-2011

- a. \_\_\_The IB will provide logistical support and write letters on behalf of members and partners seeking funds for water quality monitoring in WRIA 20.
- b. \_\_\_The IB will request that CMER establish treatments in WRIA 20 whenever there is an option to do so.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Consider wild fecal coliform sources; care for home sewage systems (QLD-2)** (WSP pp. 43, 64)

### **QLD-2.1**

The Implementation Body, in collaboration with Clallam and Jefferson Counties, will promote proper installation and maintenance of on-site systems.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Financial assistance for repair or replacement of on-site systems has been available in the Hood Canal area since 2007 through the successful ShoreBank Cascadia program funded by the state Centennial Clean Water Fund and private foundation funds. This program applies to all of Jefferson County.

Both Jefferson and Clallam Counties also conduct “Septic 101” type classes to community organizations and individuals by request. The classes offer tips on caring for, and extending the life of, on-site systems and include topics such as choosing household cleaners, laundry practices, use of garbage disposals, proper disposal of medications (do not flush), and care of the drainfield. Trainings are offered now through Jefferson County by calling (360) 385-9444 and/or Clallam County by calling (360) 417-2593. Individuals and/or groups may arrange for presentations. No minimum number of participants required. It is not necessary for participants to identify themselves or provide addresses or other contact information.

Manure from livestock and pet wastes are particularly difficult to manage in wet climates and in floodplains. Landowners are encouraged to seek out assistance from conservation district staff on options for manure management.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ The IB will provide logistical support for area specific “Septic 101” classes.
- b. \_\_\_ The IB will request a presentation by ShoreBank Cascadia about their low interest loan programs for on-site repairs and any possibilities for expanding into Clallam County.
- c. \_\_\_ Before taking any enforcement action for fecal coliform pollution, Clallam and Jefferson Counties, and others responsible for water quality violations, will utilize dye tests or other approved method(s) to identify source(s) of fecal coliform exceedances.

Near-term Actions: 2012-2014

- a. \_\_\_ Clallam and Jefferson County will distribute information on ways to prevent fecal coliform pollution through their websites.<sup>54</sup>
- b. \_\_\_ The City of Forks, Clallam County and Jefferson County will develop and distribute educational messages (via Forks radio perhaps) for WRIA 20 residents on the appropriate disposal of pet wastes in urban and riparian areas.
- c. \_\_\_ The IB will invite the Forks Chamber of Commerce and local realtors to collaborate on a brochure: “Welcome to Your West End Watershed” on protecting water quality, quantity and habitat.

Long-term Actions: 2015 and beyond.

None identified

**Conduct fecal coliform studies in proposed locations (QLD-3) (WSP pp. 43, 64)**

**QLD-3.1**

The Implementation Body will seek funding to study fecal coliform, and identify its sources, in water bodies considered to be at-risk.

PRIORITY LEVEL: High

Implementation Actions Overview:

The WSP<sup>55</sup> identified several water bodies as at-risk for fecal coliform pollution. The Hoh River and Dickey River are listed for fecal coliform under Section 303(d) of the Clean Water Act.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ The IB membership will include monitoring for fecal coliform pollution, to include source identification, consistent with established protocols, in its applications for water quality funding for Big River, Lower Lake Creek of the Sol Duc, cattle grazing areas of the

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<sup>54</sup> See <http://www.clallam.net/HHS/EnvironmentalHealth/onsite.html> or <http://www.jeffersoncountypublichealth.org/index.php?id=41.0.0.1.0.0>.

<sup>55</sup> p. 43.

Sol Duc, Bogachiel and Hoh drainages (including Taft Cree of the Hoh). This action is ongoing.

b.\_\_\_\_Where regulatory limits are exceeded, the IB membership will seek funds to implement best management practices and to monitor their effectiveness at reducing sources of pollution.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Consider recommendations from campground stream study in Sol Duc (QLD-4)** (WSP pp. 43, 64)

#### **QLD-4.1**

The Implementation Body will review Clallam County’s recent study of fecal coliform in streams near campgrounds and pursue funding to correct problems.

**PRIORITY LEVEL:** Moderate

**Implementation Actions Overview:**

In 2007-2008, Streamkeepers volunteers sampled for fecal coliform bacteria above and below the following campgrounds in western Clallam County for a study funded by the Centennial Clean Water Fund:

- Bogachiel State Park (Bogachiel River and side channel)
- Klahanie Campground (Calawah River, south fork)
- Tumbling Rapids Campground (Sol Duc River)
- Bear Creek Campground (Sol Duc River)
- Klahowya Campground (Sol Duc River)

Test results were all below state water quality criteria for contact recreation. The study involved a limited sample size however and was not considered to be a comprehensive analysis for fecal coliform bacteria in these areas.

**Immediate (2010-2011) and Ongoing Actions:**

None identified

**Near-term Actions: 2012-2014**

a.\_\_\_\_The IB will consider resampling the sites above to identify any change in status with regard to fecal coliform pollution. See also QLM-5.

**Long-term Actions: 2015 and beyond**

None identified

**Conduct database queries for available fecal coliform data (QLD-5)** (WSP pp. 43, 64)

See QLM-5.

## Water Quality Education and Outreach Actions

Permits and agreements necessary to implement actions in this section:

None

Indicators and deliverables for actions in this section:

- Letters
- Businesses achieving LSC standards
- Additional hazardous waste disposal options
- Additional recycling options
- Consistent water quality messages
- Riparian cleanups
- Expanded water quality education in schools
- Consistent water conservation messaging
- Support for conservation districts and NRCS efforts
- Status of hazardous waste collections in the WRIA
- Best practices for safe storage and proper disposal of hazardous materials
- More hazardous waste collection and recycling options
- Reduced use of hazardous chemicals

Strategies to provide sufficient water:

- QLE-1.1
- QLE-1.2

**Develop general education/outreach to public (QLE-1) (WSP pp. 43, 64-65)**

### QLE-1.1

The IB supports new and existing programs to provide education and outreach that motivates voluntary actions to protect and improve water quality.

PRIORITY LEVEL: High

Implementation Actions Overview

The IB favors an educational approach to protecting and restoring water quality in the WRIA. Various entities have experience in particular aspects of this outreach.<sup>56</sup> The IB supports independent and collaborative efforts to foster appreciation of the generally excellent water quality in the WRIA and actions to prevent degradation.

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_\_The IB will ask the NPC MRC to partner in a cleanup of trash and fishing waste from fresh water beaches and riparian areas during low water periods.

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<sup>56</sup> See WSP pp. 64-65 for a list of entities involved in components of water quality education in WRIA 20.

b.\_\_\_\_The IB will partner with the NPC MRC to develop additional recycling and hazardous waste (vehicle fluids) disposal options.

c.\_\_\_\_The IB will ask Peninsula Guide Association and other groups to help identify sites in the WRIA that are in need of new approaches to human and pet waste management and to provide portable toilet information consistent with high use rivers elsewhere.<sup>57</sup>

d.\_\_\_\_The IB, possibly in partnership with the NPC MRC and WDFW, will identify projects to expand ongoing water quality educational (K-12) efforts in local schools.

#### Near-term Actions: 2012-2014

a.\_\_\_\_The IB, in partnership with the NPC MRC, will host a meeting, in-person or electronic, of educators interested in promoting water quality to develop educational messages tailored to WRIA 20. Outcomes would integrate invasive species information into an outreach and education plan that may include:

- an inventory of existing water-quality educational materials
- a list of 10 things that residents can do to protect water resources in WRIA 20
- a list of 10 things that fishermen can do to protect water resources in WRIA 20 (human waste, monofilament, ...)
- a list of 10 things RV-ers can do to protect water resources in WRIA 20
- a list of 10 things boaters can do to protect water resources in WRIA 20
- text for a reduce, reuse, recycling brochure and contacts
- text for a brochure on storm and flood preparedness (well, on-site, other water quality related)
- a strategy for disseminating educational messages including a water quality booth at an existing event
- initiate a water quality event or festival to celebrate area rivers (and groundwater too)
- a list of contacts (e.g. resource managers, scientists, etc.) to conduct water quality monitoring field trips for interested groups including school children
- alternatives to using pesticides and herbicides and, also, when these chemicals are absolutely necessary
- alternatives to household chemicals, recipes and demonstration event
- a list of volunteers who would be interested in training to provide “Enviroscape” demonstrations at educational events and gatherings

b.\_\_\_\_The IB will review this list for consistency with other programs.

c.\_\_\_\_The IB will provide a portion of its available funding to promote water quality education in WRIA 20.

#### Long-term Actions: 2015 and beyond

None identified

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<sup>57</sup> An example can be found at <http://www.blm.gov/or/resources/recreation/johnday/toilets.php>.

### **QLE-1.2**

The Implementation Body membership will foster consistent messaging on water use and conservation in WRIA 20.

**PRIORITY LEVEL:** Moderate

Implementation Actions Overview:

Recent summer droughts have increased the perceived need for water conservation in some communities of WRIA 20. When necessary, the City of Forks uses mass mailings, the local newspaper and radio station to encourage the public to conserve water and avoid watering lawns and washing cars, for example. Drought has impacted tribal reservations and smaller communities as well. Climate change studies indicate that droughts may become more frequent or more severe. More consistent messaging across the WRIA is needed to build an appreciation for the need to conserve water. The Clallam Conservation District is, for example, conducting natural landscaping workshops to reduce or eliminate the need for irrigation.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

- a. The IB plans to review water conservation materials and messages from other areas for possible use in WRIA 20, including information on natural landscaping.
- b. The IB will work with tribes, the City of Forks, area land managers, and local businesses to promote water conservation by citizens and visitors during periods of low flow or as needed.
- c. The City of Forks, in partnership with the IB, may plan to use the occasion of a new million-gallon storage tank to educate residents about the area's water resources and promote protection of water sources.

Long-term Actions: 2015 and beyond

None identified

**Direct education/outreach to land owners regarding water quality and fecal matter (QLE-2)**  
(WSP pp. 44, 64-65)

### **QLE- 2.1**

The Implementation Body will work with the conservation districts, the NRCS, and local and tribal governments to educate residents and visitors about the causes of water quality problems.

**PRIORITY LEVEL:** High

Implementation Actions Overview:

In 2007, the Clallam Conservation District ([ccd-info@conservewa.net](mailto:ccd-info@conservewa.net)) received Ecology funds to inventory potential impacts to water quality from livestock and rated farms using aerial photos and windshield surveys. There are estimated to be at least 1250 farms in Clallam County. Of these, 116 were rated high priority for educational outreach. Eleven of these were in the Clallam County portion

of WRIA 20. Invitations to workshops were sent to all inventoried farms and in the district newsletter. About ten landowners from WRIA 20 participated in a subsequent horse and livestock management workshop held in Forks.

In WRIA 20, the Jefferson County Conservation District (<http://www.jeffersoncd.org>) is also landowner-driven (i.e., assistance is provided in response to landowner requests). Some WRIA landowners receive the annual tree sale flyer.

The NRCS has incentive programs and answers questions from landowners from both counties.<sup>58</sup> See also QLE-1.1.

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_\_The IB will continue to support the efforts of conservation districts, the NRCS, local and tribal governments in assisting landowners with projects to protect water quality through better manure management and other methods. The IB will write letters in support of continued and enhanced outreach and education efforts in WRIA 20.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Offer general education on septic systems to the public via counties (QLE-3)**

**Target education for septic system owners (QLE-4)**

**Provide a hazardous waste education program regarding illegal dumping, toxics (QLE-5)**

(WSP pp. 43-44, 64-65)

#### **QLE-5.1**

The Implementation Body will request written support from the Solid Waste Advisory Committees of Clallam, Jefferson and Grays Harbor Counties, Tribes, conservation districts, the City of Forks and West Waste Recycling and Disposal for hazardous waste education and collection events in WRIA 20 including education on illegal dumping and the potential toxic effects of hazardous waste in the watershed.

PRIORITY LEVEL: High

Implementation Actions Overview

The Local Source Control Partnership<sup>59</sup> assists small businesses in preventing polluted stormwater runoff through proper disposal of hazardous wastes and other BMPs. Businesses that typically generate small quantities of hazardous wastes include automotive and boat repair shops, dental and veterinary clinics. Clallam County is currently initiating its own LSC program. Jefferson County participates in LSC and also has an EnviroStars<sup>60</sup> program.

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<sup>58</sup> See <http://www.nrcs.usda.gov>.

<sup>59</sup> See <http://www.ecy.wa.gov/programs/hwtr/lsp/index.html>.

<sup>60</sup> See <http://www.envirostars.org/index.cfm>.

EnviroStars is a certification program that gives small businesses incentives and recognition for reducing hazardous materials and waste.

Information on hazardous waste disposal, and alternatives for many hazardous chemicals, already exists on county websites. Collection events (for solvents, oil-based paints, pesticides, lead acid and rechargeable batteries, for example) have been promoted successfully using lighted highway construction signs and could also utilize public service announcements (on Forks radio), but a hazardous waste collection event was most recently held on the West End in 2000. Clallam County has expressed interest in working with the IB to develop and promote a future collection event, perhaps in partnership with the City of Forks.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_The IB will contact the Forks Chamber of Commerce and others for recommendations on businesses that may have an interest in BMPs for hazardous and non-hazardous waste management and disposal from the local source control specialist.
- b. \_\_\_The IB will ask Jefferson and Clallam County Departments of Environmental Health to make a presentation to the IB, NPCLE and/or NPC MRC on options and opportunities for improving hazardous and solid waste management in WRIA 20 and the need to address illegal solid waste dumps and abandoned vehicle sites.
- c. \_\_\_The IB will write letters to the City of Forks, DNR, NPS, Clallam and Jefferson County, and other agencies, to encourage their vehicle shops to employ local source control or Envirostars standards and/or BMPs.

Near-term Actions: 2012-2014

- a. \_\_\_The IB will coordinate with the emergency management departments of both counties to facilitate communications with communities on best practices for safe storage and disposal of hazardous materials.
- b. \_\_\_The IB will send a letter thanking the NPS and the state for efforts in the Ozette watershed to inform the public about the presence of mercury as a public health issue and requesting that they continue educational outreach
- c. \_\_\_An IB representative will attend meetings in-person or electronically, of the SWACs to request specific types of support for enhanced hazardous wastes collection in the WRIA.
- d. \_\_\_The IB will periodically distribute updates of best practices for addition to agency, organization and business websites.

Long-term Actions: 2015 and beyond

None identified

## Fish Habitat

The following recommended actions identified by the Implementation Body are offered in light of funding discussions on page 16.

## Fish Habitat Actions (HBR 1-5)

Permits and agreements necessary to implement actions in this section:

- Grant agreements
- Landowner access agreements
- Cooperative agreements
- Hydraulic Project Approval (HPA)
- Shoreline Conditional Use Permit
- Shoreline Variance Permit
- Wetlands Permit

Indicators and deliverables for actions in this section:

- Review of NPCLE from ESWM perspective
- Letters
- Assess influence of large in-channel projects on bank storage
- Multi-community one-screen moveable outdoor “ESWM” film festival
- Salmon stream ID signs
- Lists of restoration programs
- Conservation district outreach to landowners
- Presentation and pilot on flood fencing
- Project to store trees for restoration at gravel pits and conduct weed control
- Streamside stabilization workshop using vegetation
- Locally produced native plant and weed-free materials
- Studies on salmonid predation by marine mammals

Strategies to provide sufficient water:

HBR-1

**Identify reaches and funding for LWD introduction, off/in-channel work (HBR-1)** (WSP pp. 44-46, 65-66)

### HBR-1.1

The Implementation Body endorses NPCLE efforts to identify and pursue priority LWD projects.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

In the WSP, the Planning Unit identifies potential locations for LWD installations.<sup>61</sup> The NPCLE strategy for the restoration of salmon habitat in WRIA 20 is being developed independently of NOPL. The same six IGs participate in both the NPCLE and WRIA 20 IB as do many of the same citizens and stakeholder groups. It may be helpful for the IB to provide input on NPCLE priorities from the perspective of “ecologically sustainable water management.”

Immediate (2010-2011) and Ongoing Actions:

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<sup>61</sup> p. 46

a.\_\_\_\_The IB will review the draft NPCLE strategy and provide comments from the perspective of “ecologically sustainable water management” at one of its meetings, in-person or electronic, in 2010.

b.\_\_\_\_The IB will pursue funds to provide a geohydrological evaluation of top priority reach-scale, or larger, NPCLE restoration projects to assess their potential benefits to bank storage, aquifer recharge, baseflows, and/or other water quantity or water quality benefits.

c.\_\_\_\_The IB will write letters to funding agencies and groups in support of NPCLE priorities.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Use conservation easements and programs to protect and restore riparian and adjacent channel migration zones, where clearings exist for agriculture (HBR-2)** (WSP pp. 44-46, 65-66)

### **HBR-2.1**

In partnership with the NPCLE, conservation districts, PSEG and landowners, the Implementation Body will collaborate to enhance two-way communications on the potential costs and benefits of salmon habitat restoration projects to area landowners and explore options for mitigating adverse impacts.

**PRIORITY LEVEL:** Moderate

Implementation Actions Overview:

The geographically dispersed communities of WRIA 20 lack opportunities to exchange ideas and information on improving salmon habitat. This is particularly important here in light of the area’s unique geology and climate.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a.\_\_\_\_The IB, in coordination with the NPCLE, will invite WRIA 20 communities to collaborate to secure arts funding for WRIA-wide outdoor-oriented one-screen moveable film festival for WRIA 20 (loosely on the theme of ESWM).

b.\_\_\_\_The IB will collaborate with area schools to solicit locally produced videos about WRIA 20’s outdoor environment and its future.

Long-term Actions: 2015 and beyond

None identified

### **HBR-2.2**

The Implementation Body will write letters to support NPCLE efforts to secure funding or in-kind assistance to develop, install, and maintain salmon stream identification at roadway bridges and at major river basin boundaries in WRIA 20.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Some stream identification signs were installed by Clallam Conservation District and WSDOT in the mid-1990s but many were vandalized and not all fish-bearing streams were identified

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_ The IB will endorse NPCLE efforts to pursue non-profit funding for river basin and stream signs.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

### **HBR-2.3**

Jefferson County and Clallam Conservation Districts will continue to contact owners of agricultural properties in WRIA 20 to offer assistance to them.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The WSP identifies stream reaches where agricultural activities are preventing the growth of recruitment materials for large woody debris. Many programs and funding opportunities exist as incentives for landowners to develop riparian buffers, protect existing forests, and conduct other activities to benefit salmon habitat. Landowners may benefit from the summary of available programs in Appendix H and an opportunity to ask questions. Currently, two landowners in WRIA 20 participate in CREP.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a. \_\_\_ The IB, in coordination with partners and cooperators, will develop and distribute a comprehensive list of government and NGO programs to benefit landowners who participate in projects to benefit salmonids.

b. \_\_\_ Beginning with the Big River, and lower reaches of the Sol Duc, Calawah and Bogachiel Rivers, the IB will work with the Clallam Conservation District to distribute customized versions of the salmon recovery project assistance list to owners of agricultural properties.

c. \_\_\_ The IB will ask the conservation districts to continue to answer landowner questions, help determine which programs might be a good fit and to provide assistance in completing applications. The conservation districts will solicit information about landowner desires to

restore habitat that may not be met by existing programs (such as fencing to prevent browsing, installation of larger trees, maintenance of plantings).

Long-term Actions: 2015 and beyond

None identified

**Find funding for riparian restoration where banks destabilized or buffers degraded (HBR-3) (WSP pp. 45-47, 66, 67)**

**HBR-3.1**

The Implementation Body will support conservation district, and cooperator efforts to actively pursue funding for consultation and design, acquisition of seedlings and plugs, and public outreach/community development of riparian zone restoration and bank stabilization projects.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The IB seeks opportunities to encourage and assist owners of residential and agricultural properties to install riparian buffers with native species suited to the site.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will invite the Jefferson County and Clallam Conservation Districts or the NRCS to present information on conservation programs available to landowners, in particular incentives to protect and restore riparian areas (See a listing of examples of such programs in Appendix H).
- b. The IB will invite Snohomish County Public Works or other entities with similar experience to present information flood fencing to protect agricultural fields from flood debris and to support the development of mixed species riparian forests.
- c. The IB will ask the NPCLE to include in its strategy a pilot project to install flood fencing (live cottonwood bolts), larger balled & burlapped trees, and or high tensile elk exclusion fencing on agricultural land.
- d. The IB will ask the NPCLE to include in its strategy a project to fund the storage of suitable trees and large woody debris, cleared from public (roadway) and private properties, in gravel pit waste areas and/or other suitable sites in WRIA 20 for use in salmon restoration projects. This grant request could also include weed control at gravel pits.
- e. The IB will solicit the Clallam Economic Development Council, the North Olympic Peninsula Resource Conservation & Development Council, and/or Team Jefferson for funds or a volunteer to draft a business plan for one or more WRIA 20 farms or entities to provide native plant and weed free materials to restoration, bank stabilization and road projects.<sup>62</sup>

Near-term Actions: 2012-2014

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<sup>62</sup> See <http://www.pacrimrkd.org>.

- a.\_\_\_\_The IB, in cooperation with the NPCLE and the conservation districts will host a workshop on approaches to stabilizing riparian banks with vegetation and related topics.
- b.\_\_\_\_The IB will ask the conservation districts to identify agricultural producers and/or other entities in WRIA 20 who may be interested in pursuing a business to provide native plants and/or weed-free restoration materials.

Long-term Actions: 2015 and beyond

None identified

**Restore threatened sockeye and promote reintroduction of extirpated chum and chinook to the Ozette drainage (HBR-4) (WSP pp. 46, 66-67)**

**HBR-4.1**

The Implementation Body will ask the NPCLE to consider including the reintroduction of extirpated chum and chinook to the Ozette watershed in its new draft of the NPCLE strategy for salmon recovery. See SP-2.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Chum and chinook salmon runs in the Ozette drainage have been extirpated and could potentially be re-established through the introduction of hatchery stocks or wild stocks from other river systems. The WRIA 20 IB is supportive of restoring these runs but would rely upon co-managers to determine the appropriateness and feasibility of this action.

Immediate (2010-2011) and Ongoing Actions:

- a.\_\_\_\_The IB will request that the NPCLE Technical Advisory Committee include this action in its strategy.

Near-term Actions: 2012-2014

- a.\_\_\_\_If re-introductions of chum and/or chinook are scientifically recommended by NPCLE, the IB will write letters of support for the funding opportunities required to implement re-introductions.
- b.\_\_\_\_The IB will write letters requesting that WDFW or NOAA conduct additional studies of predation by marine mammals on salmonids in the Ozette watershed.

Long-term Actions: 2015 and beyond

- a.\_\_\_\_If re-introductions of chum and/or chinook are scientifically recommended by NOAA, WDFW and the tribes, the IB will write letters of support for the funding opportunities that provide long term monitoring of the success of the re-introductions.

**Conduct assessments and consider role of genetically sensitive hatchery reintroduction efforts (HBR-5) (WSP pp. 46, 66-67)**

**HBR-5.1**

The IB will ask the NPCLE and the WCSSP to include the following in their strategies for salmon recovery:

- 1) Assessments to determine the status of fish populations in WRIA 20 watersheds
- 2) Genetic stocks studies for fish populations in WRIA 20 watersheds
- 3) An assessment of the potential role of hatchery supplementation as a tool for restoration and/or reintroduction of species to the system.

**PRIORITY LEVEL:** Highest

**Implementation Actions Overview:**

Complete salmonid stock assessments in terms of annual production, and in many cases genetic identity of wild coastal salmon runs, are still needed for much of the Washington Coast. This needs to be comprehensively completed. Once accomplished, in some circumstances hatchery supplementation could be successfully used as a tool to recover these stocks, but it requires complete preliminary stock assessments and genetic identification in order to allow hatchery supplements to be helpful rather than competitive with the recovering of wild stocks. It is not considered the purview of this watershed group to assess the role of hatchery supplementation. However, the WRIA 20 IB supports the efforts of co-managers and applicable federal agencies to do so.

**Immediate (2010-2011) and Ongoing Actions:**

- a. \_\_\_ The IB will request the NPCLE and WCSSP to include these projects in their strategy documents.
- b. \_\_\_ The IB will write a letter to promote WDFW objectives to identify the primary populations for both listed and non-listed Evolutionarily Significant Units (ESUs).<sup>63</sup>

**Near-term Actions: 2012-2014**

- a. \_\_\_ If these actions are scientifically supported by NOAA and WDFW and supported as well by NPCLE and WCSSP, the IB will write letters of support for the funding opportunities required to implement these actions.

**Long-term Actions: 2015 and beyond**

- a. \_\_\_ If these actions are scientifically supported by NOAA and WDFW and supported as well by NPCLE and WCSSP, the IB will write letters of support for the funding opportunities required to monitor the long-term effects of these actions.

## **Critical Areas Ordinances Actions (HBO 1-5)**

Permits and agreements necessary to implement actions in this section:

Resolution/ordinances

Indicators and deliverables for actions in this section:

County trainings on natural resources regulations  
Watershed Stewardship Resource Center  
Shoreline Symposium

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<sup>63</sup> See, for example, <http://wdfw.wa.gov/fish/papers/steelhead>.

Compliance training for officers  
WRIA 20 IB participation in Clallam County's Comprehensive Stormwater Management Plan (CSMP)  
Dollar figure for ecosystem services of an acre of typical WRIA 20 riparian forest  
Letters  
Adoption of drainage manual  
Funding to update stream types where needed

Strategies to provide sufficient water:

None

**Conduct public education on Critical Areas Ordinances CAOs (HBO-1)** (WSP pp. 47, 67-69)

### **HBO-1.1**

Clallam and Jefferson Counties will seek funds to provide education, in-person and online, to support permitting processes linked to CAOs, stormwater and LID, SMP and other natural resources-related code requirements.

PRIORITY LEVEL: High

Implementation Actions Overview:

Existing permit office budgets do not allow for technical assistance to property owners and visitors needing to navigate natural resources regulations and identify appropriate BMPs. However the conservation districts have provided stormwater management guidance for several years.

Jefferson County and Clallam County are collaborating on a grant proposal to EPA's Puget Sound Watershed Management Assistance Program to fund a "Watershed Stewardship Resource Center" to facilitate integration of BMPs while reducing permitting inefficiencies. The center would also promote awareness of ecosystem services with respect to residential developments through a team approach. Phase I of this project would be considered a pilot to be later extended into Clallam County and other parts of the Olympic Peninsula.

Jefferson County recently received local approval of its Shoreline Master Program update. Clallam County and the City of Forks plan to update their SMPs over the next two to three years. The IB could potentially play an important role in this effort.

Immediate (2010-2011) and Ongoing Actions:

a. The IB will ask representatives from Clallam and Jefferson County Departments of Community Development to provide in-person training to realtors, potential permit applicants, and other interested parties on their respective:

- 1) Critical Areas Ordinances
- 2) Low Impact Development (LID) guidance and incentives
- 3) Shoreline Master Programs
- 4) Instruction in basic watershed functionality

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Encourage riparian zone stewardship, restoration and enhancement through education (HBO-2)** (WSP pp. 47, 67-69)

**HBO-2.1**

The IB will collaborate with the ONRC to organize one or more events or outreach tools designed to inform local public agencies and/or the public of opportunities to enhance their stewardship of riparian areas and water resources.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

In addition to the ONRC, WRIA 20 organizations already involved in similar outreach and education efforts in this area include, but are not limited to, the conservation districts, the NRCS, NPCLE and PSEG, federal, tribal and local governments, and NGOs including numerous habitat restoration and monitoring practitioners. This action overlaps with HBR and HBI actions.

Immediate Actions: 2010-2011

None identified

Near-term Actions: 2012-2014

a. \_\_\_The IB will collaborate with the NPCLE and the NPC MRC to host a “Shoreline Symposium” or similar event to inform interactions with shorelines and riparian areas.

Long-term Actions: 2015 and beyond

None identified

**Enforce CAO compliance (HBO-3)** (WSP pp. 47, 67-69)

**HBO-3.1**

The Implementation Body will send letters to Clallam and Jefferson County discussing code compliance issues in WRIA 20 and requesting that enforcement staff receive training specific to natural resource regulations.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Given limited financial resources, Clallam and Jefferson County have not been able to provide extensive code compliance training. Clallam County is fortunate to have, as of this writing, the management expertise of a retired law enforcement officer, who manages the efforts of more than ten county-trained volunteers to do code compliance. Jefferson County would likely welcome such assistance if a similarly experienced individual stepped forward!

Encouraging voluntary compliance may be the best strategy in the long run.<sup>64</sup>

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a. \_\_\_\_The IB will look into natural resources oriented code compliance trainings and the potential to collaborate with other jurisdictions.

a. \_\_\_\_In its letter, the IB will include research into the true costs, in terms of the value of ecosystem services, for clearing and grading infractions in riparian areas.

Long-term Actions: 2015 and beyond

None identified

**Encourage low-impact development (LID) (HBO-4)** (WSP pp. 47, 67-69)

#### **HBO-4.1**

Clallam and Jefferson Counties and the City of Forks will identify and, to the extent possible, recommend policies to remove disincentives to LID in the permitting process and explore ways to incentivize LID.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Clallam County has EPA West Coast Estuaries Initiatives funding to develop a comprehensive stormwater management plan to include stormwater ordinance, LID and BMPs. The second phase of the project will develop monitoring program and education/outreach elements.

As a component of the Watershed Stewardship Resource Center (see HBO-1.1) grant, Jefferson and Clallam County Departments of Community Development are collaborating to, in part, apply the Clallam County Small Project Drainage Requirements and Technical Guidance Manual,<sup>65</sup> to Jefferson County. The manual provides optional BMPs for alternatives to dry wells. Proscriptive engineering expertise will be incorporated into the revised manual specific to Jefferson County landscape, climate and soil characteristics, and consistency with the Department of Ecology's 2005 Stormwater Management Manual for Western Washington.

Immediate and Ongoing Actions: 2010-2011

a. \_\_\_\_The IB will welcome a request from Clallam County Department of Community Development to involve the IB in developing its CSMP and Technical Guidance Manual.

Near-term Actions: 2012-2014

None identified

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<sup>64</sup> See <http://www.cbsm.com/public/world.lasso> for examples of the community-based social marketing techniques.

<sup>65</sup> See [http://www.clallam.net/RealEstate/assets/applets/FINAL\\_BMP\\_Manual\\_Draft.pdf](http://www.clallam.net/RealEstate/assets/applets/FINAL_BMP_Manual_Draft.pdf).

Long-term Actions: 2015 and beyond

None identified

**Validate stream locations and type (HBO-5) (WSP pp. 47, 67-69)**

**HBO-5.1**

The Implementation Body will support efforts that allow the DNR to completely update their hydrography (water typing) database.

PRIORITY LEVEL: High

Implementation Actions Overview:

Accurate stream type and location information, particularly where growth is projected, is considered essential to determining whether water is available for withdrawal.<sup>66</sup> The Quileute and Hoh Tribes in particular have submitted numerous water type modification forms to DNR for incorporation into their hydrography database. In 2009, Clallam County remapped streams in the portion of WRIA 20 for which they have LiDAR – primarily a triangular block of land centered on Forks, extending from the county line on the Bogachiel to La Push, to include all of the main stem Quillayute and north on the Sol Duc for about six miles. There is some LiDAR for Ozette. They are also remapping all of the double line streams from aerial photos as part of the SMP update, even where they don't have LiDAR.

The IB is willing to go on record that it will oppose cuts to funding for maintenance of the DNR hydrography database.

Immediate and Ongoing Actions: 2010-2011

- a. \_\_\_Jefferson County will query and print (to PDF) a map of stream type updates since 2005 in WRIA 20 from the DNR hydrography database.
- b. \_\_\_The IB will seek funds when necessary to update stream types in WRIA 20 where development is anticipated.
- c. \_\_\_ There is incomplete LiDAR for the Ozette watershed and a need to reconcile various databases. The IB will write letters of support to provide more complete LiDAR coverage for the Ozette and Hoh watersheds.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Invasive Weeds Actions (HBI 1-9)**

Permits and agreements necessary to implement actions in this section:

Grant agreements

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<sup>66</sup> WSP p. 25

Landowner access agreements  
Resolutions/ordinances  
Community notification  
Applicator license

Indicators and deliverables for actions in this section:

Spray control of specific weeds in certain areas  
Letters  
Weeds in WRIA 20 brochure  
Weed website for WRIA 20  
Info exchange on weeds for construction and road crews  
Meeting on native plant nursery and/or weed free materials business concept  
Noxious weed control for gravel pits  
Noxious weed trainings  
Information exchange for restoration practitioners  
Weed wrenches for loan  
Mapping of infestations

Strategy to provide sufficient water:

None

**Support current noxious weed programs (HBI-1)**

**Obtain state and federal noxious weed control funding (HBI-2)**

**Provide letters of support on behalf of grant applicants (HBI-3)**

**Conduct education outreach in schools and to landowners (HBI-4)**

**Assess WRIA rivers to determine where remaining knotweed eradication is needed (HBI-5)**

(WSP pp. 47-48, 69)

#### **HBI 1-5.1**

The Implementation Body endorses the efforts of the Olympic Knotweed Working Group, the Clallam and Jefferson County Noxious Weed Control Boards and other efforts to prevent and control noxious weeds in WRIA 20.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

State law requires landowners to control all Washington State listed Class A and Class B designate noxious weeds. In Jefferson County, tansy ragwort, Scotch broom, poison hemlock and butterfly bush were selected for mandatory control.

Knotweed control in WRIA 20 has made great progress thanks to the Olympic Knotweed Working Group (comprised of federal, state, local, tribal, non-profit, and commercial entities, as well as individuals), which provides an excellent model to address other noxious species as

well. The WSP<sup>67</sup> lists a number of funding sources for future control efforts. Although weeds such as knotweed require treatment with herbicides, others such as tansy ragwort can be removed by workers with minimum training or materials (gloves needed) and without chemicals. Brush pickers could possibly be employed to remove such weeds over large areas over a short time period.

Immediate Actions: 2010-2011

- a. \_\_\_ Jefferson County will allow licensed weed board employees to chemically control selected weeds on specific county roads.
- b. \_\_\_ Clallam County will seek to allow licensed Public Works and weed board employees to chemically control selected weeds on specific county roads and to continue to ask volunteers to control weeds along the Olympic Discovery Trail in WRIA 20.
- c. \_\_\_ The IB will write a letter to the NPS requesting that they treat the Hoh River population of Herb Robert in the park.
- d. \_\_\_ The IB will integrate the recommendations of existing noxious weed programs in WRIA 20 when implementing relevant actions contained in this DIP.

Near-term Actions: 2012-2014

- a. \_\_\_ The IB will write letters to state and federal legislators in support of the missions of the Olympic Knotweed Working Group and the Clallam and Jefferson Counties' Noxious Weed Control Boards.
- b. \_\_\_ The IB will write letters to potential funders in support of the Noxious Weed Control Board, member and NGO efforts to fund noxious weed prevention and control efforts in WRIA 20.
- c. \_\_\_ In partnership with the weed boards and NGOs, the Implementation Body will develop an educational brochure about noxious weeds and best management practices in the WRIA. The brochure will include a map that indicates who to contact by area. The IB will announce the brochure with public service radio announcements and presentations in area schools.

Long-term Actions: 2015 and beyond

- a. \_\_\_ In partnership with the weed boards, conservation districts, UW, WSU and/or NGOs, the Implementation Body will seek funds to develop a noxious weeds website for WRIA 20 to include best management practices, upcoming workshops and trainings, maps of roadside weed species that should not be mowed and other information.<sup>68</sup>

**Incorporate noxious weed control into maintenance/debris activities (HBI-6)**

**Incorporate noxious weed monitoring into restoration activities (HBI-7)**

**Facilitate/expedite administrative procedure for noxious weed control projects (HBI-8)**

**Promote coordination and data-sharing for noxious weed control projects among landowners, operators, and governments (HBI-9)**

(WSP pp. 48, 69)

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<sup>67</sup> Pp. 47-48.

<sup>68</sup> View weed control fact sheets at <http://www.co.jefferson.wa.us/WeedBoard/FactSheets.asp> and additional information at <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds.aspx>.

### **HBI 6-9.1**

The Implementation Body will work with the weed board and partner agencies to develop recommendations for incorporating noxious weed prevention and treatment measures into road, forestry, restoration, construction and maintenance activities in WRIA 20.

**PRIORITY LEVEL** Highest

Implementation Actions Overview:

Clallam and Jefferson County road crews work as closely as possible with their respective weed boards to reduce the spread of noxious weeds along roadways. However, mechanical spraying of herbicides is not generally allowed along public roads although in some cases it is the only effective method of control. In December of 2009, Jefferson County weed board received limited authorization to spray certain roadside areas. Clallam County code does not allow for the use of herbicides along county roadways. They retain some equipment but employee applicator licenses have been allowed to lapse. Volunteers do handspray along sections of the Olympic Discovery Trail. Both counties routinely mow roadsides to maintain visibility.

Improved information exchange about noxious weed prevention and control is needed among the restoration and maintenance community of WRIA 20. The USFS has been a leader in the use of weed-free materials and its guidelines could provide a model for other agencies and groups.<sup>69</sup> A local market for certified weed free materials could evolve with associated economic benefits for the agricultural community. Shade-tolerant noxious plants are a particular threat to WRIA 20. Those currently on the peninsula include ivy, holly, garlic mustard, and Herb Robert. Other species of concern include hairy willow herb, policeman's helmet, spartina (three places on the West End), and reed canary grass as well as hedge bindweed, non-native blackberries and Scotch broom.

Immediate Actions: 2010-2011

- a. The IB will invite the county weed boards to co-host an information exchange and demonstration event for timber and construction crews, and possibly state and county road departments/mowing crews and the Olympic Corrections Center on best management practices for weed prevention and treatment. Information would include the economic benefits of weed prevention and descriptions of the types and sources of certified weed-free (free of propagation parts) materials.
- b. The IB will invite North Olympic Peninsula RC & D and the conservation districts to co-host a meeting, in-person or electronic, with WRIA 20 agricultural producers to discuss funding options to support the production of weed free hay and/or straw (with USFS standards as a starting place) and native plant materials locally.

Near-term Actions: 2012-2014

- a. The IB and partners will seek funding to offer noxious weed control to gravel pit owners/operators.

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<sup>69</sup> See <http://www.fs.fed.us/r6/weeds>.

b. \_\_\_ Clallam and Jefferson Counties, and partners, will explore options for requiring noxious weed training and certification for road maintenance and hauling crews including information on the availability of weed free materials and checking for and removing noxious plant materials from vehicles and equipment.

c. \_\_\_ The IB will partner with the NPCLE to host an information exchange for salmon restoration practitioners in WRIA 20 in order to better communicate lessons learned about incorporating noxious weed control, monitoring, and reporting into restoration projects.

d. \_\_\_ The IB will partner with the weed boards to seek funding to purchase weed wrenches that may be borrowed by landowners to remove weeds, especially Scotch broom, from their properties.

e. \_\_\_ The IB will work with the weed boards to request that information about the locations of noxious weed infestations be shared with the county GIS staff and also posted to Ecology's EIM database.

Long-term Actions: 2015 and beyond

None identified

## Maintain Forest Land in the Watershed Actions (HBC 1-7)

Permits and agreements necessary to implement actions in this section:

County comprehensive plan updates

Indicators and deliverables for actions in this section:

Report on streams of concern

Monitor comprehensive plan amendments

Fact sheet for realtors and developers

Letters

Information on programs to benefit forest lands

Pilot project to benefit forest lands

Resource sheet for landowners on secondary and value-added forest products, ecotourism

Presentation on the need for capital investment in infrastructure

Identify possible responses to catastrophic wildfire

Information on innovative forest products and processes

Involvement in community forest management systems

Strategies to provide sufficient water

HBC-1.1

HBC-2.1

HBC-3-7.1

**Require full assessment of county zoning changes and/or exceptions (HBC-1)** (WSP pp. 49, 69-70)

### HBC-1.1

The IB will inform county decision makers and staff about changing water quantity and water quality conditions in basins or reaches of WRIA 20, especially those that may be adversely affecting fish.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

The stated goal of the HBC actions is to find ways to protect, encourage and maintain forest land in the watershed. The WSP action for HBC-1 says to “discourage conversion of forest land to non-forest uses” while respecting “property rights and fiduciary obligations of forest land owners.”

In both Clallam and Jefferson Counties, land use conversion from forestry to other uses is discouraged by their respective county comprehensive plans and also property tax rate structures that favor resource lands. The Jefferson County Comprehensive Plan (JCC 18.15.150(1)) prevents subdivision of commercial forest or rural forest for residential purposes. Under certain circumstances, the Clallam County Comprehensive Plan Policy CCC 31.02.140 (23) allows rezone of commercial forestry (CF) parcels in the 20-80 acre range.

Immediate and Ongoing Actions: 2010-2011

a. \_\_\_The IB, if possible jointly with the NPCLE, will report to the tribes, City of Forks and the counties on the existence of water quantity concerns for specific segments or reaches of WRIA 20 rivers and streams, especially in terms of potential adverse affects on fish life stages from additional water withdrawals. The intent is to inform future comprehensive plan updates and decisions on land use changes. The IB will also report on the most suitable locations for industrial development, from water and habitat perspectives, and possible mitigation measures to be considered in advance of proposals. This approach will provide for a more predictable, efficient, and timely processing and environmental review when a project is submitted. The priority should be to do it right (not fast) the first time, for the long-term sustainability of the facility.

b. \_\_\_The IB will monitor county comprehensive plan amendment cycles and open space taxation programs in order to provide comments on applications that may have a bearing on water quantity and quality in the WRIA.

Near-term Actions: 2012-2014

a. \_\_\_The IB, if possible jointly with the NPCLE, will develop a fact sheet for realtors and developers on the existence of water quantity and quality conditions in basins or reaches of WRIA 20 which may be adversely affecting fish life stages.

b. \_\_\_The IB will write letters to the Jefferson County commissioners and Department of Community Development requesting that barriers to forestry designation for smaller parcels (under 20 acres for Jefferson County) be reduced and that conversion to forestry designation for these parcels be administered by the Assessor’s Office.<sup>70</sup>

Long-term Actions: 2015 and beyond

None identified

**Encourage zoning practices to preserve working forests (HBC-2) (WSP pp. 49, 69-70)**

**HBC-2.1**

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<sup>70</sup> Currently the conversion costs \$1311 and must go before a hearing examiner.

The Implementation Body will identify areas in WRIA 20 that may become vulnerable to land use conversion from commercial forestry and support efforts for maintaining economic viability.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

HBC-2 of the WSP encourages consideration “of additional uses associated with secondary forest uses (recreation, low-impact development, etc.) as a means of providing additional economic incentive to slow conversions.” Parcel size, location and ownership characteristics can influence the degree to which commercial forestry parcels are vulnerable to conversion for residential purposes.

County departments of community development periodically develop analyses of cumulative impacts and other reports that may help direct Implementation Body outreach efforts in support of working forests.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a.\_\_\_\_The IB will send a letter to Clallam County requesting language be added to the Clallam County Comprehensive Plan indicating that conversion from commercial forest designation, particularly in river valleys, has the potential to degrade water quantity and increase the possibility of summer low flows. The IB will request that future updates to the plan address water quantity issues as reflected in the WRIA 20 WSP and DIP.

b.\_\_\_\_The IB will write a letter in support of changes to the CC Subdivision Code (Title 29) proposed in the draft Clallam County Community Wildfire Protection Plan (p. 56)<sup>71</sup> to enhance wildfire safety [such as requiring adequate fire flows (1,000 gpm for < 3,600 ft<sup>2</sup> of landscape and structure and 1,500 gpm for landscape and structure over 3,600 ft<sup>2</sup>)].

Long-term Actions: 2015 and beyond

None identified

**Develop list of strategies and available programs to protect forest lands (HBC-3)**

**Encourage leadership in innovative forest projects (HBC-4)**

**Allow financial, environmental and mitigation credits (HBC-5)**

**Facilitate and expedite zoning and permitting of forest products facilities in a manner consistent with existing adopted plans and regulations (HBC-6)**

**Develop financial incentives (HBC-7)**

(WSP pp. 49-50, 69-70)

### **HBC 3-7.1**

The Implementation Body will identify, support and implement novel approaches and possible pilot projects to conserve forest lands in WRIA 20.

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<sup>71</sup>See <http://www.pc.ctc.edu/coe/pdfs/DraftCWPPClallamCounty.pdf>.

PRIORITY LEVEL: High

Implementation Actions Overview:

New financing and incentive programs may enable smaller acreage landowners or communities to manage their forests in a cooperative fashion for sustainability and profitability. Increasingly land trusts and conservation organizations are turning their attention to “working lands” to maintain ecological services. The Jefferson County Conservation Futures Program is a county property tax program to protect open spaces including timber, agricultural, and cultural/historic lands. New ecosystem services and carbon offset programs combine with established agency programs, such as DNR’s Forest Legacy, to provide forest landowners with a range of opportunities. The WSP recommends exploring, developing and promoting non-traditional income sources to support forested lands combined with equally innovative use of available water.

The IB encourages analysis and prioritization of developable areas, particularly for industry, from the perspectives of water quantity and water quality to provide for a more predictable, efficient, and timely environmental review process when future projects are submitted for permitting, and to support the long-term sustainability of new facilities.

Immediate (2010-2011) and Ongoing Actions:

a. The IB will support DNR efforts to conduct a forest biomass energy demonstration project west of the Olympic Mountains.<sup>72 73</sup>

b. The IB would actively assess and participate in discussions, as well as feasibility studies, on the establishment of community forest management systems. One option for such an approach can be found within S. 1501, the Community Forest Conservation Act of 2009. This bill, which is still in the senate finance committee, provides a federal tax exemption for forest conservation bonds and for other purposes. In such a system, the goal is to integrate objectives such as:

- 1) forest management
- 2) regulatory requirements and obligations (e.g. RMAPs)
- 3) a net rate of return different than that associated with traditional forest industry approaches
- 4) additional community objectives

c. The IB will invite NGOs to a meeting, in-person or electronic, to present information on their respective programs to benefit forested and agricultural lands. Innovative partnerships, including cooperative stewardship agreements across ownerships, should be included in the discussion.

Near-term Actions: 2012-2014

a. The IB will develop a project proposal for an innovative pilot project to retain land in forestry and solicit corporate charitable giving programs to provide funds to support it.

b. The IB will generate a resource sheet for landowners on considerations and opportunities for sustainable harvest of secondary forest products, ecotourism and value-added specialty forest products.

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<sup>72</sup> The Forest Guild has an informative policy statement and fact sheet on biomass <http://www.forestguild.org>.

<sup>73</sup> This bill passed in 2009 (Chapter 163, 2009 Laws); <http://apps.leg.wa.gov/documents/billdocs/2009-10/Pdf/Bills/House%20Passed%20Legislature/2165.PL.pdf>.

c.\_\_\_\_ The IB will write letters in support of the concept of a joint Governor-Legislative Task Force on strategic retention of Washington's working forests and forest industry and providing specific recommendations for WRIA 20 forests.<sup>74</sup>

d.\_\_\_\_The IB will write a letter to commissioner of public lands and Ecology director informing them that WRIA 20 is weaving ecosystem services principles into our DIP.

e.\_\_\_\_The IB will develop a presentation for state and county officials on the need for alternative funding options designed to develop capital investment in infrastructure.<sup>75</sup>

f.\_\_\_\_The IB will host a workshop of forestry professionals to develop a contingency plan for replanting, and other possible restoration actions, in the event of catastrophic wildfire in WRIA 20.

g.\_\_\_\_The IB will identify sources of information about innovative forest products and processes such as fast pyrolysis for use in potential pilot projects.<sup>76</sup>

h.\_\_\_\_ The IB will report to the City of Forks and the counties on water quantity and quality considerations for industrial site development and possible mitigation measures to be considered in advance of proposals.

Long-term Actions: 2015 and beyond

None identified

## Sediment Control Actions (HBS 1-4)

Permits and agreements necessary to implement actions in this section:

Grant agreement

Indicators and deliverables for actions in this section:

Funding for sediment control program

Sediment control advisory board

Program to control sediment including trainings and materials

Study of upland stabilization practices in relation to sediment and storage

Funding and partnerships for Section 319 projects

Study of sediment influences on alluvial aquifers

Strategies to provide sufficient water:

None

**Conduct education program for land managers and contractors (HBS-1) (WSP pp. 50, 70)**

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<sup>74</sup> Brian Boyle article provided by John Miller:

[http://seattletimes.nwsourc.com/html/opinion/2009664868\\_guest17boyle.html](http://seattletimes.nwsourc.com/html/opinion/2009664868_guest17boyle.html) and

<http://coenv.washington.edu/institute.shtml>.

<sup>75</sup> See WSP (HBC-7) p. 50 for details on this idea.

<sup>76</sup> See, for example, <http://www.fsee.org/forestmag/1201carbzaft.shtml>.

### HBS-1.1

The Implementation Body, in cooperation with tribes, ONRC, conservation districts, agencies (WDFW, WDNR, WSDOT), and area businesses, will develop sediment control educational materials and events tailored to the needs of land managers, contractors, and other interested parties in WRIA 20.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Due to higher rainfall, conditions in WRIA 20 are different from those found in drier areas of western Washington. Use of vehicles on or adjacent to riparian areas may seriously impact salmon habitat and riparian aquifers. More WRIA-specific information is needed from agencies, contractors and workers to differentiate between avoidable and unavoidable impacts due to forestry, agriculture, development and recreation.<sup>77</sup> In providing educational materials through this sediment control education program, there may be sources of practical information to be shared with WRIA 20 residents.<sup>78</sup> With such information the IB could work with applicable land owners, managers, and regulators to develop strategies and best practices for these areas.

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_Jefferson County will make a flyer for contractors and crews with links to sources of information on BMPs to control sediment.

Near-term Actions: 2012-2014

a. \_\_\_The IB will work with the conservation districts and ONRC to identify an advisory group for this project and seek funding to review and revise existing materials,<sup>79</sup> sponsor trainings, and possibly certify developers.

Long-term Actions: 2015 and beyond

None identified

### Prepare compilation of completed restoration and [road] decommissioning projects (HBS-2) (WSP pp. 50, 70)

### HBS-2.1

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<sup>77</sup> See Tread Lightly and Leave No Trace programs for materials and trainings to supplement sources listed on p. 50 of the WSP.

<sup>78</sup> See for example, existing materials from southwest Washington or some of the Cascades foothills may be identified and incorporated into the program and supplemented by WRIA- and community-specific information. A good place to start is the Regional Road Maintenance Guidelines developed in response to the ESA listing of bull trout and Puget Sound Chinook available through the Pierce County Public Works website ([http://www.co.pierce.wa.us/pc/abtus/ourorg/pwu/roadops/ESA\\_Manual.htm](http://www.co.pierce.wa.us/pc/abtus/ourorg/pwu/roadops/ESA_Manual.htm)) especially Part 2, Best Management Practices. Clallam County is a member of the Tri-County Regional Road Maintenance Group that created the Regional Road Program.

<sup>79</sup> See for example, DNR materials, WSDOT road maintenance for ESA BMP guidelines, Forks, Jefferson and Clallam road maintenance guidelines.

The Implementation Body will develop a report on completed habitat restoration and road decommissioning projects, with before and after conditions and lessons learned.

PRIORITY LEVEL: High

Implementation Actions Overview:

The NPCLE strategy may include listings of past projects by any party in the WRIA. This would be a good intern or student project. Information may be gathered from RMAP DNR records, the SRFB, RCO, WA Forest and Paper Association, and other sources. The report could be organized by basin, watershed or region. RMAP projects have now been dated and prioritized in cooperation with WDFW. This project need may be supported by the Habitat Work Schedule of the Recreation and Conservation Office<sup>80</sup> and proceedings from the Society for Ecological Restoration.<sup>81</sup>

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ The IB will ask the DNR, NPCLE, the ONRC and others to assist in developing a list of completed habitat restoration and road decommissioning projects in WRIA 20 to include project sponsors and contact information.
- b. \_\_\_ The IB will encourage USFS to utilize existing forums to meet its focus group requirements in allocating legacy road dollars in the Calawah-Sitkum watershed.

Near-term Actions: 2012-2014

- a. \_\_\_ The IB will invite project sponsors to contribute before and after photos and lessons learned to a report or other media developed from the list.
- b. \_\_\_ The IB will host a meeting with the NPCLE, WCSSP and/or NPC MRC to present the draft report for comment.

Long-term Actions: 2015 and beyond

None identified

**Develop a catalogue of grants for landowners and facilitate applications (HBS-3) (WSP pp. 50, 70)**

### **HBS-3.1**

The Implementation Body, in partnership with other interested parties, will develop a reference tool for grants applicable to WRIA 20 that landowners may pursue in order to conduct desirable habitat restoration and/or road abandonment projects.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

Grant programs and opportunities change on an ongoing basis. The WRIA 20 IB and NPCLE coordinator and granting agencies typically distribute grant notices via email to list serve members. Citizens interested in identifying funds for restoration, road abandonment, and

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<sup>80</sup> See <http://hws.ekosystem.us>.

<sup>81</sup> See <http://www.ser.org>.

other projects are encouraged to inquire with conservation districts, the IB and/or the NPCLE for information on additional sources of grant information.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_The IB will survey agencies and NGOs to request links to funding opportunities for possible inclusion on conservation district/county websites.
- b. \_\_\_The IB will periodically update and expand the list of grant opportunities available to support habitat restoration and/or road abandonment projects in Appendix H of this plan.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Encourage research into causes, natural and anthropogenic, of sediment loads with goal of designing response actions to reduce sediment loads (HBS-4) (WSP pp. 50, 70)**

#### **HBS-4.1**

The IB will encourage additional research and comprehensive approaches to nonpoint sediment source management in WRIA 20 watersheds.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Additional studies of natural and anthropogenic causes of sediment loading are needed.

In its *Nonpoint Source Assessment* and *Nonpoint Source Management Reports* of 2009, the Quileute Tribe identified potential programs, BMPs and other measures for reducing nonpoint sediment source pollution in the Quillayute Basin. These include knotweed removal efforts and continued habitat restoration partnerships in the watershed, and dredging of sediments from the mouth of the Quillayute River to help maintain estuarine ecology.<sup>82</sup>

It's anticipated that the Clallam County Comprehensive Stormwater Management Plan will include a monitoring program for non-point source pollution.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_The IB will request that the NPCLE include the development of a nonpoint source assessment and management report for the Hoh basin in its strategy to recover salmon.
- b. \_\_\_The IB will support partnerships and grants involving the Quileute Tribe's efforts to monitor water quality and control sediment loads in the Quillayute watershed under grants through Treatment as a State for Water Quality (CWA §106) and Nonpoint Source Pollution (CWA §319), respectively.
- c. \_\_\_The IB will contribute to and review Clallam County's CSMP including its monitoring program and outreach/education elements.

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<sup>82</sup> See <http://www.quileutenation.org/programs/salmon-restoration>.

d. The IB will ask the NPCLE to include in its strategy for salmon recovery efforts to identify and inventory sites for potential slides and other large scale sediment sources due to natural conditions. Also desired are such things as a literature review and listing of potential resources.

Near-term Actions: 2012-2014

- a. The IB will request that CMER, or other organization, study the effects of upland stabilization practices on sediment loads and water storage to evaluate tradeoffs.
- b. The IB will support studies and projects to identify and protect alluvial aquifers of the Hoh, and other watersheds, from alterations and sedimentation that prevents infiltration of groundwater on hill slopes and floodplains.<sup>83</sup>
- c. The IB will seek funds to support additional studies of sediment inputs to the WRIA.

Long-term Actions: 2015 and beyond

None identified

#### **HBS-4.2**

The Implementation Body will pursue an assessment of the unranked habitat restoration projects in the WRIA to determine which would have the greatest benefits for fish.

**PRIORITY LEVEL:** Moderate

**Implementation Actions Overview:**

The DNR evaluates and approves RMAPs for landowners required to develop them. Periodic reviews of habitat restoration projects are being conducted by fisheries co-managers and landowners across the WRIA. Several high priority restoration projects have been proposed in recent years through partnerships to involve tribes, the Pacific Coast Salmon Coalition (PCSC), and/or timber companies. A formal ranking of potential restoration projects in the Quillayute basin was completed as part of the *Quillayute Watershed Prioritized Salmon Restoration Projects* report in 2006<sup>84</sup> and in the Hoh watershed in 2008-9 through the lead entity. If agreeable ranking criteria could be developed, a WRIA-wide ranking of habitat restoration projects could help focus available funding across the WRIA in the most cost-effective manner. Clallam and Jefferson Counties maintain six-year road plans which are regularly updated.

**Immediate (2010-2011) and Ongoing Actions:**

None identified

Near-term Actions: 2012-2014

- a. The IB will request that NPCLE consider developing a WRIA-wide ranking of habitat restoration projects.

Long-term Actions: 2015 and beyond

None identified

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<sup>83</sup> WRIA 20 Phase I Technical Report p. 56.

<sup>84</sup> See [http://www.quileutenation.org/images/stories/govt/qnr/quileute\\_reach\\_assessment\\_final\\_rept.pdf](http://www.quileutenation.org/images/stories/govt/qnr/quileute_reach_assessment_final_rept.pdf).

### **HBS-4.3**

The Implementation Body will pursue funds for highly ranked habitat restoration projects, including those located on commercial timberlands.

**PRIORITY LEVEL:** High

#### **Implementation Actions Overview:**

Funds for habitat restoration projects are needed across all ownerships. Currently the Pacific Coast Salmon Recovery Fund (PCSRF) is one of numerous sources of funding. Many other federal, state, and private sources of funding are available as well. The IB supports collaborations to address sediment as well as fish passage issues in the WRIA.

#### **Immediate (2010-2011) and Ongoing Actions:**

To be identified in first update of the DIP.

#### **Near-term Actions: 2012-2014**

None identified

#### **Long-term Actions: 2015 and beyond**

None identified

## **Additional Recommendations**

The following recommended actions identified by the Implementation Body are offered in light of funding discussions on page 16.

### **Special Projects Actions (SP 1-5)**

#### **Permits and agreements necessary to implement actions in this section:**

- Grant agreements
- ILAs
- Easements
- Permits for septage facilities

#### **Indicators and deliverables for actions in this section:**

- Letters to support salmon studies and recovery projects
- Genetic studies for independent coastal drainages
- Plan to recover chinook and chum salmon in Ozette watershed
- Study of marine mammal predation on salmonids
- Study of smelt and other prey species
- Study of water needs for sea run cutthroat
- Septage transfer or dump station
- RV dumps
- Signage
- Map of limiting low flows

Strategies to provide sufficient water:

None

**Support completion of fish habitat [restoration] projects recommended by other processes (e.g., LFAs) (SP-1) (WSP pp. 51, 70)**

**SP-1.1**

The Implementation Body will continue to review drafts and updates to the NPCLE and WCSSP strategies in light of other plans including, but not limited to, those of the WCC, NOAA, DNR and USFS, NOPLA, and new information.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Coordination between planning entities is an ongoing priority of the Implementation Body.

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

- a. The IB will send letters in support of funding efforts to recover Lake Ozette sockeye and to support implementation of projects identified as a result of completed assessments, such as may be identified in a Lake Ozette Sockeye Implementation Plan.
- b. The IB will encourage the continuation of genetic stock inventories for salmonid stocks in WRIA 20 and assist in determining where additional genetic inventories may be needed.
- c. The IB will ask the NPCLE to pursue additional baseline studies of prey species, including but not limited to macroinvertebrates and forage fish.
- d. The IB will ask applicable local, state, federal and tribal entities to study the habitat and water needs of WRIA 20 sea run cutthroat, particularly in independent drainages.

Long-term Actions: 2015 and beyond

None identified

**Support the recovery of threatened sockeye and extirpated chum and chinook in the Ozette drainage (SP-2) (WSP pp. 51, 70-71)**

**SP-2.1**

The Implementation Body requests that the NPCLE add projects to restore extirpated salmonids (chum and chinook) to the Ozette drainage and consider the potential needs of these fish while pursuing QTS-3 actions.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

An assessment is needed of potential habitat for chum and chinook in the Ozette watershed that also identifies and discusses the relevant actions in the Lake Ozette Sockeye Recovery Plan<sup>85</sup>. Within the drainage, sockeye are present in the Ozette River, two tributaries, and Lake Ozette. Other species, including Kokanee and sea run cutthroat, may also occupy additional areas.

Immediate (2010-2011) and Ongoing Actions:

See HBR-4.

Near-term Actions: 2012-2014

a.\_\_\_\_The IB will request that applicable entities pursue an updated stock assessment of these species.

Long-term Actions: 2015 and beyond

None identified

**Support a septage transfer station near the City of Forks (SP-3) (WSP pp. 51, 71)**

**SP-3.1**

The Implementation Body will support City of Forks' efforts to develop a septage dump or transfer station.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

The nearest septage transfer station is near Port Angeles – too far to adequately serve the needs of residents and visitors in WRIA 20, especially given recent increases in visitation to the Forks area.

Immediate (2010-2011) and Ongoing Actions:

a.\_\_\_\_The IB will send letters in support of grants to fund completion of a new septage facility in WRIA 20.

b.\_\_\_\_Where funds are available, the Quileute Tribe will work with the City of Forks to address septage transfer needs.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Support RV dump stations at RV parks throughout the WRIA (SP-4) (WSP pp. 51, 71)**

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<sup>85</sup> See <http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Puget-Sound/Lake-Ozette-Plan.cfm>.

#### SP-4.1

The Implementation Body will foster collaboration to provide dump stations at RV parks throughout the WRIA.

PRIORITY LEVEL: Highest

Implementation Actions Overview:

In many riparian corridors popular with recreationists, inappropriate human waste disposal practices by RV-ers, boaters and others are potentially causing water quality and aesthetic problems. The WSP identifies the need for additional RV dump stations. In considering options for these, it may also be worthwhile to assess the unmet disposal needs of other groups. There are many types of dump stations designed to receive waste from boaters, for example.<sup>86</sup>

The cost of providing sanitary facilities for tourists and recreationists can be prohibitive. In the Hoh valley and Ozette basin for example, tourists without adequate access to public toilets use facilities intended for business customers or pick a spot on the ground nearby.

Existing educational programs may be a resource. Tread Lightly™ and Leave No Trace™ are NGOs dedicated to minimizing the avoidable impacts of motorized and non-motorized recreation, respectively. They encourage preparedness, best practices for human waste disposal and minimizing impacts to water quality. Local outdoor organizations, businesses and scout groups may also provide training in low impact techniques.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_The City of Forks will undertake an update of its sewer plan.
- b. \_\_\_The City of Forks will consider the use of a lodging tax to help support new septage facilities.
- c. \_\_\_The IB will host a public workshop to consider options for management of septage in the WRIA and to identify possible locations for additional facility(ies) (e.g. West Waste Recycling and Disposal, Bogachiel State Park, Mora Campground, Salt Creek State Park, and Kalaloch), costs, education, outreach and related issues.

Near-term Actions: 2012-2014

- a. \_\_\_The Implementation Body will develop and post signage at campgrounds providing information on the location of the nearest septage dump station and will also provide this information through the Forks Chamber and partner websites, area businesses and in brochures distributed at laundry mats and visitor centers.
- b. \_\_\_The IB will write letters in support of grants to fund additional RV dump sites.

Long-term Actions: 2015 and beyond

None identified

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<sup>86</sup> See for example the coin-operated Scat Machine: <http://www.thewireroller.com/scatmachine.htm>.

**Find alternatives/recommendations to support salmonid reproduction; e.g., in Hoh, Ozette, Big, and Quillayute Rivers (SP-5) (WSP pp. 51, 71-72)**

**SP-5.1**

The IB will ask the NPCLE to include a review of alternatives and recommendations to support salmonid reproduction during extended low flow periods.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Rivers of concern for low flows that impede migration are the Hoh, Ozette, Big and Quillayute. A strategy for responding to lengthy low flow periods may be needed until natural conditions improve in response to restoration projects and regulatory changes, for example. The Hoh Tribe has completed and has funding for future habitat restoration projects that enhance access into spring-fed, off-channel refugia (ponds, side channels, etc.) on systems that go completely or intermittently subsurface during summer low flow periods. Design and implementation of ELJs in main stem rivers and tributaries would potentially increase storage and sorting of bed load, promote hyporheic flow and help to scour and maintain migration channels for adults and juveniles during low water conditions.

Immediate (2010-2011) and Ongoing Actions:

- a. The IB will continue to monitor and document locations of flows that impede migration.
- b. The IB will ask the NPCLE to coordinate and develop a response plan to address critical low flows on an emergency basis in WRIA 20.
- c. The IB will ask the NPCLE to include projects in its strategy for salmon recovery to stabilize refugia (through enhanced connectivity, manipulation of hydraulic controls, and LWD) designed specifically to enhance hyporheic flows or to provide or maintain suitable flows to essential habitat areas.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Management Actions (MGT 1-9)**

Permits and agreements necessary to implement actions in this section:

Interlocal agreement and amendments

Indicators and deliverables for actions in this section:

- WRIA 20 Detailed Implementation Plan and update strategy
- WRIA 20 Watershed Management Plan amendment strategy
- Grant applications for pilot/merger
- Contingency plans

Strategy to provide sufficient water:

None

**Determine if to form Implementation Body (MGT-1) (WSP pp. 51, 72)**

Task completed: An interlocal agreement was signed by the six IG's on July 28, 2009 and expires four years later on July 28, 2013.

**MGT-1.1**

The Implementation Body will define a strategy for updating the DIP and revising the WRIA 20 Watershed Management Plan.

PRIORITY LEVEL: High

Implementation Actions Overview:

As of this writing, the state's watershed planning program has been curtailed, and the IB may not continue regular meetings and activities beyond June of 2010. The IB anticipates that, when and if funding for watershed planning is reinstated, the IGs, citizens and stakeholders will resume coordinated efforts to implement and update this DIP and to amend the WRIA 20 WSP as needed.

Immediate (2010-2011) and Ongoing Actions:

- a. \_\_\_ The IB will continue to pursue merging with the NPCLE and/or the NPC MRC in the absence of specific funding to support watershed planning.<sup>87</sup>
- b. \_\_\_ The IB will also discuss the potential of serving as an advisory board for the Shoreline Master Program update for Clallam County due in the summer of 2012.
- c. \_\_\_ Annually and ideally quarterly, the IB membership will meet, in-person or electronically, to update each other on efforts to implement the DIP and coordinate potential grant opportunities.
- d. \_\_\_ Insofar as funding permits, the IB will update the DIP in the form of a list of accomplishments and needs in every year that it, or a successor group, meets.
- e. \_\_\_ The IB will ask the NPCLE, at one of its upcoming meetings, to consider assuming responsibility for one or more DIP actions in the event that the IB is suspended or dissolved.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**MGT-1.2**

Insofar as funding permits, the IB, or its successor group, will amend the WRIA 20 Watershed Management Plan when requested by the original initiating governments (WSP p. 72) in response

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<sup>87</sup> See <http://www.ecy.wa.gov/watershed/workshop.html>.

to, for example, the availability of new scientific information, unforeseen water-related issues (WSP p. 52), or in response to petition(s) from citizens and/or stakeholders.

**PRIORITY LEVEL:** Moderate

**Implementation Actions Overview:**

Clallam County is committed to perpetuating the WRIA 20 IB to endorse watershed planning activities as a consistent mandate and for ad hoc purposes. If watershed planning in WRIA 20 is officially merged with salmon recovery, this action may no longer be necessary.

**Immediate (2010-2011) and Ongoing Actions:**

a. \_\_\_ Clallam and Jefferson Counties will meet to consider continuation of the watershed planning program in WRIA 20 in the absence of state funding and a possible agreement or MOU. The counties will include the other IGs in the discussion as applicable.

**Near-term Actions: 2012-2014**

- a. \_\_\_ The IB will draft an interlocal agreement between the IGs to initiate the plan update process.
- b. \_\_\_ The IB may refer an update of the WSP to the boards of county commissioners at any time by consensus of the six original IGs.

**Long-term Actions: 2015 and beyond**

None identified

### **Develop a Detailed Implementation Plan (MGT-2) (WSP pp. 52, 72)**

Task completed: The DIP was approved as a final draft by the IB on February 16 and provided to Ecology on February 26, 2010. Subsequent modifications were made on March 16 and 24, 2010 to the habitat section in particular and this Implementation Body Final version was approved by four of the six IGs and forwarded to Ecology in fulfillment of the conditions of the DIP grant. The IB intends to seek further public input on the DIP and to present it as a work session discussion item to the respective boards of county commissioners. Feedback from these processes will be addressed by the IB.

### **Plan revision process and schedule (MGT-3) (WSP pp. 52, 72)**

#### **MGT-3.1**

The Implementation Body will seek means for merging parallel processes where functions overlap regarding watershed planning, including updates.

**PRIORITY LEVEL:** High

**Implementation Actions Overview:**

This may be underway prior to DIP completion.

**Immediate (2010-2011) and Ongoing Actions:**

a. \_\_\_\_\_As soon as possible after the grant details are announced, the IB will meet, in-person or electronically, to discuss an application to the RCO to merge the IB and NPCLE.

b. \_\_\_\_\_The IB will recommend to the NPCLE and/or WCSSP that they annually review the most recent version of the DIP to inform their own activities.

Near-term Actions: 2012-2014

None identified

Long-term Actions: 2015 and beyond

None identified

**Prioritize actions for implementation (MGT-4) (WSP pp. 52, 72)**

Task completed on January 26, 2010 and reflected in the DIP by “priority levels”.

**Draft agreements for implementation (MGT-5) (WSP pp. 52, 72)**

Agreements necessary for implementation of this DIP will be drafted by interested parties insofar as funding permits.

**Exchange water resources program information through regular forums (MGT-6) (WSP pp. 52, 72)**

Water resources programs will participate in forums described elsewhere in this plan insofar as funding permits. Annual forums to update the DIP are a priority under MGT-1.1 and 1.2. Forums will also coincide with ISF rulemaking.

**Provide data oversight and management (MGT-7) (WSP pp. 52, 72)**

The IB intends to coordinate with the ONRC and/or WCSSP, through its NetMap<sup>88</sup> program, to manage metadata and reports for WRIA 20.

**Identify alternate funding (MGT-8) (WSP pp. 52, 72)**

Alternative funding sources are identified, as feasible, under headings for specific actions.

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<sup>88</sup> See [www.netmaptools.org](http://www.netmaptools.org).

**Obtain available Phase II funding in Phase IV through legislative action (MGT-9)** (WSP pp. 52, 72)

No implementation actions are planned.

## **Ecologically Sustainable Water Management (ESWM 1)**

Permits and agreements necessary to implement actions in this section:

Resolutions/ordinances regarding water transfers

Indicators and deliverables for actions in this section:

ESWM workshop

List and summary of ESWM concepts for WRIA 20

Performance measures, goals and milestones for ESWM in WRIA 20

Strategies for providing adequate water:

None

### **ESWM-1.1**

The Implementation Body will organize a workshop on the topic of Ecologically Sustainable Water Management (ESWM) in WRIA 20.

**PRIORITY LEVEL:** Moderate

Implementation Actions Overview:

The concept of ESWM is complex<sup>89</sup> and may necessitate reconsideration over time to develop a common vocabulary. For example, the word “conserve” likely means different things to different groups in WRIA 20. A phrase other than “ecologically sustainable water management” may ultimately better reflect the commonly held values of the watershed. By providing an overarching goal, ESWM or analogs developed through discussions in WRIA 20, could be used to focus and improve watershed management activities.<sup>90</sup>

Immediate (2010-2011) and Ongoing Actions:

None identified

Near-term Actions: 2012-2014

a.\_\_\_\_The IB will develop a list of maps, documents, contacts and other information to support discussions of ESWM in WRIA 20.

b.\_\_\_\_The IB will identify one or more parties to maintain existing WRIA 20 map sets, such as those of Dr. Tim Abbe, and host them for download from the Internet.

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<sup>89</sup> Richter (<http://www.nature.org/initiatives/freshwater/files/eswm.pdf>), for example, is mentioned in the WSP (p. ES-1).

<sup>90</sup> Invited speakers from the University of Washington, for example, could include economists knowledgeable about ecosystem services valuations and offsets as well as experts in the realms of ecological integrity, intergenerational equity, and cultural and economic needs.<sup>90</sup>

c. \_\_\_\_ The IB will consider the question, “If you were to visit the watershed 100 years from now, what would you look for to know whether surface and groundwater had been well-managed?”

d. \_\_\_\_ The IB will identify new science, performance measures, goals and milestones to support ESWM.

Long-term Actions: 2015 and beyond

None identified

### ESWM-1.2

The IB will support the efforts of governments and organizations to plan for climate change and to conduct related analyses and develop response strategies for WRIA 20.

PRIORITY LEVEL: Moderate

Implementation Actions Overview:

Jefferson County participates in a Climate Action Committee with the City of Port Townsend<sup>91</sup>. Its mission is to develop a climate action plan to provide recommendations for cutting greenhouse gas emissions to 80% of 1990 levels by 2050. The plan will include a monitoring program and stream flows to sustain salmonids could be identified as one indicator of success of plan implementation. Clallam County has a Climate Advisory Group authorized by its board of county commissioners. University of Washington Climate Impacts Group is the primary source of climate change information for the peninsula but the NPS is also developing an independent Climate Change Response Program at the national level.

Funding for restoration activities could be influenced by analyses of the sensitivity and adaptability of stocks to climate change with the goal of building resilience.<sup>92</sup>

Immediate (2010-2011) and Ongoing Actions:

a. \_\_\_\_ Jefferson County will request that the Jefferson County Climate Action Committee’s monitoring program include stream flows as one indicator of plan implementation success and language to support funding of high priority stream gage sites in Jefferson County in WRIA 20.

Near-term Actions: 2012-2014

a. \_\_\_\_ The IGs will monitor regional climate change discussions and processes involving the WRIA when asked to be involved or when relevant to those objectives found within the WRIA 20 WSP.

b. \_\_\_\_ The IB will request that outdated FEMA flood insurance rate maps be revised for WRIA 20 watersheds to reflect recent flow levels.

Long-term Actions: 2015 and beyond

None identified

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<sup>91</sup> See <http://www.co.jefferson.wa.us> and click on Climate Change.

<sup>92</sup> Amy Snover, UW 11/09.

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## Assessment of Inchoate Municipal Water Rights in WRIA 20 (RCW 90.82.048 (1))

### Introduction and Background

This inchoate water rights assessment was conducted as required by RCW 90.82. However, following Ecology's guidance, private water systems which would have fit the definition of "municipal" prior to the 2008 trial court ruling regarding the tribes' challenge of the municipal water law (see below) were not included in this assessment.

Under Washington water law as of this writing, municipal water systems have been allowed to use less water than the quantity allotted in their water right, without being subject to relinquishment provisions. Such unused water rights in good standing, held by municipal water systems, are defined as "inchoate".

In 2003 the legislature amended the Watershed Planning Act to require Detailed Implementation Plans to "address the planned future use of existing water rights for municipal water supply purposes, as defined in RCW 90.03.015, that are inchoate, including how these rights will be used to meet the projected future needs identified in the watershed plan, and how the use of these rights will be addressed when implementing instream flow strategies identified in the watershed plan" (RCW 90.82.048(1)).

Subsequently, in 2008, a judge in King County Superior Court ruled that the definition of "municipal" used in RCW 90.03.015 was unconstitutional (U.S. ex rel Lummi Indian Nation v. Washington, Cause No. 06-2-40103-4 SEA). This decision was appealed to the Washington Supreme Court, argued on January 12, 2010, and as of this writing, no order has been issued. The case covers several issues and the holding will be complex.

Jefferson County, on behalf of the Implementation Body, contracted with Cascadia Consulting Group to analyze water right and water use data to identify inchoate water rights. The Implementation Body can use this information to address the planned future of municipal inchoate water rights. The estimates of inchoate water rights are based on information obtained from databases maintained by Ecology and the Department of Health and from information provided by water systems. The estimates do not constitute a definitive examination of the entity's water right or water use, and do not indicate the availability of inchoate water rights today or in the future. This assessment only addresses municipal water rights, as originally defined in 90.03.015 and with the exception of private water systems formerly defined as municipal. It does not address domestic wells, in-stream flows, irrigation water rights, most tribal water rights, hydropower water rights, or any other water rights in the watershed.

### Data Collection

Using the Department of Health's Sentry database, Cascadia developed a list of all Group A systems in WRIA 20.<sup>93</sup> Cascadia consulted with Jefferson County, the Implementation Body, and Ecology to trim the list to the two systems which hold water rights for municipal purposes: the City of Forks and the Quileute Tribe.<sup>94</sup>

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<sup>93</sup> Chapter 70.119A RCW defines Group A public water systems as those that have fifteen or more service connections, regardless of the number of people served, or those that serve an average of 25 or more people per day for 60 or more days within a calendar year, regardless of the number of service connections.

<sup>94</sup> The Olympic Corrections Center was initially included in this list due to information provided in Sentry, but later removed when closer examination of its location revealed that it is just south of WRIA 20, in WRIA 21.

Cascadia used data exported from Ecology’s WRTS database to identify water rights held by each system. The WRTS data included information on the instantaneous and annual water right, the right’s priority date, the location of diversion or withdrawal, and the source.

Cascadia asked water systems to confirm or update this water right information, through a survey form sent by mail and subsequent email and phone contacts. Water use estimates for the City of Forks are drawn directly from demand projections for the year 2010, shown in Tables 2-11 and 2-12 of the City of Forks Water System Comprehensive Plan. Water use estimates for the Quileute Tribe are from 2009 data, as provided by Dan Hinchey, Director of Quileute Utilities/Public Works.<sup>95</sup>

Finally, Cascadia used maps from the Department of Health’s Source Water Assessment Program and from the WRIA 20 Phase II Technical Assessment to identify withdrawal and use locations by sub-basin. The City of Forks draws water from the Calawah sub-basin, which is put to use in the Calawah, Bogachiel, and Sol Duc sub-basins. The Quileute Tribe draws water from an aquifer near the intersections of the Sol Duc and Bogachiel sub-basins, which is put to use on the reservation in La Push.

### Results

Cascadia compiled water right and water use data, and calculated both annual and instantaneous inchoate water rights by subtracting current water use estimates from water right amounts, as shown in the table below. The annual inchoate portions for the two water systems represent 351 AF/YR (acre-feet per year), or approximately 30% of the total annual municipal water rights issued in the watershed. The instantaneous inchoate portion is estimated at 278 gpm (gallons per minute) in total, or roughly 16% of the instantaneous municipal water rights in the watershed.

| System Name           | Water right control number(s)         | Annual water right (AF/YR) | Estimated annual use (AF/YR) | Estimated inchoate portion (AF/YR) | Instantaneous water right (gpm) | Estimated peak instantaneous use (gpm) | Estimated inchoate portion (gpm) |
|-----------------------|---------------------------------------|----------------------------|------------------------------|------------------------------------|---------------------------------|--|----------------------------------|
| <b>City of Forks</b>  | G2-24829C, Cert. 2108-A, Cert. 4120-A | 950                        | 712                          | <b>238</b>                         | 1430                            | 1304                                   | <b>126</b>                       |
| <b>Quileute Tribe</b> | G2-28044                              | 232                        | 119                          | <b>113</b>                         | 300                             | 148 <sup>959595</sup>                  | <b>152</b>                       |

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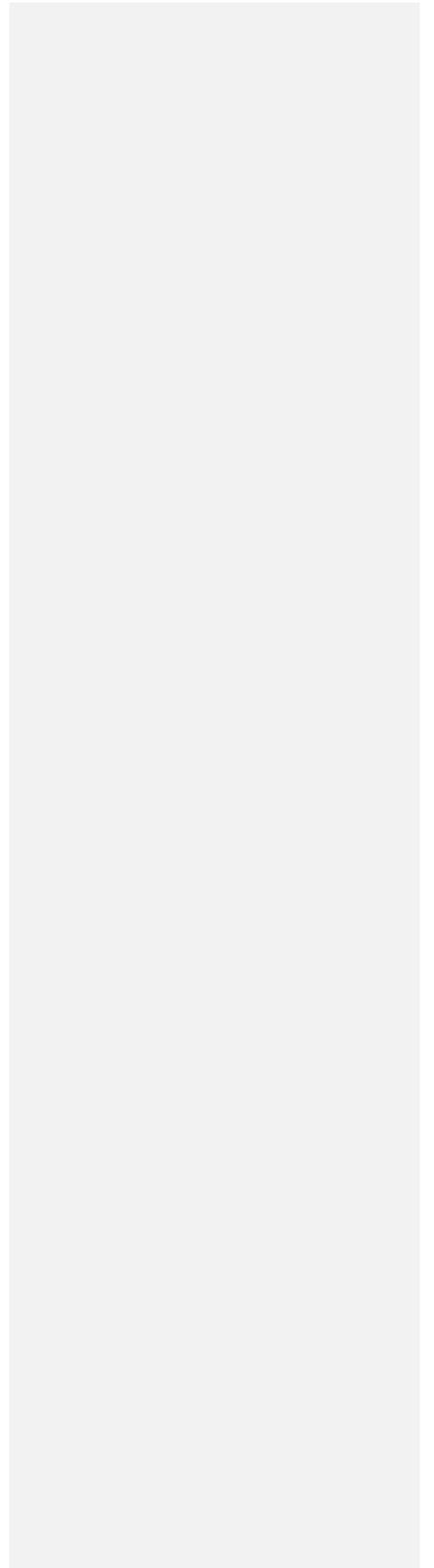
The existence of inchoate water rights does not guarantee that the water will be available. Furthermore, inchoate water rights do not indicate whether the water is accessible by a system of wells, pumps, and

<sup>95</sup> This estimate of peak instantaneous use for the Quileute system is likely low compared to actual peak instantaneous use, as it was calculated from use for an entire day of peak use in late July 2009.

pipes that can withdraw the quantity granted in the water right. Water quality and potability are also not considered in this assessment.

The Implementation Body may wish to conduct further analysis of the projected growth and water demand within the watershed. For example, the Implementation Body could conduct a build-out analysis for specific water systems or for the entire watershed. A build-out analysis looks at current and projected zoning and calculates the number of new residential, commercial, and industrial uses that could be developed in currently vacant parcels. These numbers are used to estimate future water demand. This can be compared to the inchoate water rights to determine whether existing water rights are adequate to meet future demand.

APPENDICES



## Appendix A: Strategies to Provide Sufficient Water

Detailed Implementation Plans must identify “strategies to provide sufficient water for: (a) production agriculture; (b) commercial, industrial, and residential use; and (c) instream flows”. “Instream flows,” in this case, is interpreted to mean strategies that augment stream flow, with the specific purpose of aiding instream uses. These may include improving habitat for fish and other aquatic biota, as well as recreational and aesthetic uses (RCW 90.82.043(2)).

| Strategies to Provide Sufficient Water   | Rationale  |
|--|--|
| <p><b>ISF-3.1</b> The Implementation Body recommends that, in the development of all ISF rules for WRIA 20, Ecology and any IB successor group(s) consider the policy components detailed on pages 36 and 37 of the WSP such as basin closures; mitigation strategies; storage strategies; future reservations for domestic, municipal, industrial and agricultural use; transfer of water outside of WRIA 20 is strongly discouraged by the IB; and transfer of water between watershed sub-areas, except groundwater exchange under the Forks Municipal Water Plan, is strongly discouraged by the IB.</p> | <p>Strongly discourages out-of-basin transfers.</p>  |
| <p><b>QTR-12.2</b> The Implementation Body will increase awareness of trust water rights (RCW 90.42.080, Trust Water Rights – acquisition, donation, exercise and transfer).</p>   | <p>Provides incentives for water conservation.</p>   |
| <p><b>QTS-1.1</b> The Implementation Body will support efforts by the City of Forks to increase the security and reliability of its municipal water supply.</p>  | <p>Additional water rights and storage.<br/>Enhances water use efficiencies to conserve water.</p> |
| <p><b>QTS-1.3</b> The Implementation Body will provide education and outreach to interested parties on rainwater collection to supplement water supply and to reduce stormwater runoff.</p>  | <p>Supports rainwater collection and use.<br/>Supports stormwater collection and use.</p>          |
| <p><b>QTS-3.1</b> The Implementation Body will identify next steps to ensure the long-term reliability and ecological sustainability of drinking water supplies that ensure the conservation of native fish in the Ozette watershed.</p>   | <p>Informs well-drilling and/or supplementation of bank storage.</p>                               |
| <p><b>QLE-1.1</b> The IB supports new and existing programs to provide education and outreach that motivates voluntary actions to protect and improve water quality.</p>   | <p>Enhances water conservation.</p>  |
| <p><b>QLE-1.2</b> The Implementation Body membership will foster consistent messaging on water use and conservation in WRIA 20.</p>  | <p>Enhances water conservation.</p>  |

| Strategies to Provide Sufficient Water  | Rationale   |
|---|---|
| <p><b>HBC-2.1</b> The Implementation Body will identify areas in WRIA 20 that may become vulnerable to land use conversion from commercial forestry and support efforts for maintaining economic viability.</p> | <p>Reduces land use conversion out of forestry.</p> |
| <p><b>HBC 3-7.1</b> The Implementation Body will identify, support and implement novel approaches and possible pilot projects to conserve forest lands in WRIA 20.</p>  | <p>Conserves forest lands and water resources.</p>  |
| <p><b>HBR-1.1</b> The Implementation Body endorses NPCLE efforts to identify and pursue priority LWD projects.</p>  | <p>Increases wetland and bank storage.</p>          |
| <p><b>HBC-1.1</b> The IB will inform county decision makers and staff about changing water quantity and water quality conditions in basins or reaches of WRIA 20.</p>   | <p>Prevents inappropriate development.</p>          |

Appendix B: Highest Priority Immediate and Ongoing Actions

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding  | Initiated | Completed |
|--|--|-----------|-----------|
| <b>QTD-1.1</b> The Implementation Body will proactively oppose and prevent funding cuts and other potential threats to the four active gages.  |  |           |           |
| a.____ At least annually, the IB will discuss the status, needs, and findings of its stream gaging program. Recommendations will be incorporated into annual DIP updates.  | Negligible with IB support   | 8/09      | 2/10      |
| b.____ The IB will request the stream gage ranking criteria from Ecology and may provide comments on it.   | Negligible with IB support   | 12/09     |           |
| c.____ The IB membership will send letters to its state and federal legislative delegation and relevant agencies on the importance of stream gaging to WRIA 20.  | Negligible with IB support   | 3/10      |           |
| d.____ The IB will request that the Quileute Tribe identify and secure funding to upgrade the Bogachiel gage to continuous stage/discharge for a period of at least three years.   | \$60,000<br>For Bogachiel gage upgrade and three years' data<br><br>USGS, NPS, NOAA, DNR, state, county, city/PUD, tribal, private | 3/10      |           |
| <b>QTD-1.2</b> The Implementation Body will seek funds to gage priority tributaries and other high priority streams.   |  |           |           |
| a.____ The IB membership will send letters to its legislative delegation at the local, state and federal levels to request funds for additional stream gaging in WRIA 20 to benefit both listed and non-listed fish stocks.                          | Negligible with IB support   |           |           |
| b.____ The IB will send a letter to ask Olympic National Park to take a more active role in water resources management and stream gaging in WRIA 20 and to request assistance from the NPS Water Resources Division to address low flows that affect | Negligible with IB support   | 4/10      |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding  | Initiated                   | Completed |
|---|--|-----------------------------|-----------|
| wild fish stocks.   |  |                             |           |
| c.____The IB will request that Clallam County and the Quileute Tribe identify and secure funding to install and operate continuous stream gages at Lake Creek (Sol Duc) and Bear Creek (Sol Duc) for a period of at least three years.  | \$120,000<br>For installation of Lake and Bear Creek gages and three years' data<br><br>USGS, NPS, NOAA, DNR, state, county, tribal, private | 3/10                        |           |
| d.____The IB will send letters requesting that the Hoh Tribe and Jefferson County collaborate to identify and secure funding to install and operate continuous stream gages in the Hoh watershed to include one or more of the following tributaries: South Fork, Winfield, Nolan, Elk and Owl Creeks for a period of at least three years. | \$120,000<br>For installation of two new gages and three years' data<br><br>USGS, NPS, NOAA, DNR, state, county, tribal, private             | 3/10                        |           |
| e.____The IB will request that the City of Forks identify and secure funding to install and operate continuous stream gage for Elk Creek (Calawah) for a period of at least three years.  | \$60,000<br>For Elk Creek gage and three years' data<br><br>USGS, NPS, NOAA, DNR, state, county, city/PUD, tribal, private                   | 3/10                        |           |
| <b>QTS-1.1</b> The Implementation Body will support efforts by the City of Forks to increase the security and reliability of its municipal water supply.  |  |                             |           |
| a.____The IB will seek funding to commission a study of the hydrogeology and groundwater/surface water exchanges of the Forks Prairie aquifer and to identify and map critical aquifer recharge areas. A component of this study could be a hydrological investigation of groundwater in the vicinity of the Quillayute Prairie.            | \$300-600,000<br>USGS, UW, WSU, ONRC, Ecology, City of Forks, Clallam County   | 4/10<br>(discuss with USGS) |           |
| b.____The IB will send letters to encourage the City of Forks, other area purveyors, and government agencies operating in the WRIA to prepare and implement (additional) water  | Varies by water conservation project. Meetings negligible with IB support  | 4/10                        |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding                                | Initiated | Completed |
|--|--|-----------|-----------|
| conservation plans and programs for their water systems, to possibly include: (see page 33 of this plan for list).   |  |           |           |
| c.____The IB will organize a meeting, in-person or electronic, with the Forks Chamber of Commerce and area lodging providers to discuss ways to encourage visitors to conserve water during their stays.   | Negligible with IB support   | 4/10      |           |
| d.____The IB will organize a meeting, in-person or electronic, with the City of Forks and other interested water purveyors to discuss regional drought contingency and system security planning.   |  |           |           |
| e.____The IB recommends that the City of Forks consider ways to improve water use efficiencies at its facilities through the use of, for example, rainwater catchment, drip irrigation, and additional low flow fixtures.  |  | 4/10      |           |
| <b>QTS-3.1</b> The Implementation Body will identify next steps to ensure the long-term reliability and ecological sustainability of drinking water supplies, to further the conservation of native fish in the Ozette watershed.  |  |           |           |
| a.____The IB will partner with the Clallam Conservation District, the Makah and Quileute Tribes, WDFW and other interested parties to host a discussion on the science and issues of Ozette water availability and to consider possible next steps such as rainwater collection or informed siting of additional wells   | Up to \$5,000<br>Could be combined with webinar on rainwater catchment | 5/10      |           |
| b.____The IB will send a letter to Olympic National Park requesting that they communicate to visitors (prior to their arrival at Lake Ozette) about the potable water availability issue at the lake, with potential impacts to the fishery that are influenced by the use of water by campers and backpackers. Visitors should be encouraged to conserve water and, if possible, fill their tanks or bottles prior to | Negligible with IB support   | 3/10      |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated | Completed |
|--|---|-----------|-----------|
| arrival in the basin.  |   |           |           |
| <b>ISF-2.1</b> The Implementation Body recommends that Ecology base the setting of any ISF rule on adequate data and technically defensible methods. ISF rule development by Ecology is not anticipated for at least five years (2015), so the IB will pursue a strategy for instream flow studies in the mean time and seek funds to implement the studies. |   |           |           |
| a.____The IB will ask the NPCLE to add to its strategy for salmon recovery, as a top priority, an assessment to develop a strategy for instream flow studies in WRIA 20.   | Negligible with IB support              | 2/10      |           |
| b.____The IB will write letters to support the NPCLE and others in securing funding to develop a strategy and conduct instream flow studies in WRIA 20.  | Negligible with IB support              | As needed |           |
| c.____The IB will support efforts to secure funding for studies or assessments to determine the relative value of flows to be protected.   |   | As needed |           |
| d.____The IB membership will ask the NPCLE in its strategy for salmon recovery to continue to identify, map, and monitor locations of particular importance for fish life histories and will adjust water quantity (and quality) monitoring efforts to focus on these sites.   | Negligible with IB support              | 3/10      |           |
| e.____The IB will ask the NPCLE to include studies, such as “critical riffle studies” to characterize how different flow levels affect the connectivity of side channels to the main river channels in its strategy for salmon recovery.   | Negligible with IB support              | 3/10      |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated  | Completed |
|--|---|------------|-----------|
| <b>ISF-3.1</b> The Implementation Body recommends that, in the development of all ISF rules for WRIA 20, Ecology and any IB successor group(s) consider the policy components detailed on pages 36 and 37 of the WSMP such as basin closures; mitigation strategies; storage strategies; future reservations for domestic, municipal, industrial and agricultural use; transfer of water outside of WRIA 20 is strongly discouraged by the IB; and transfer of water between watershed sub-areas, except groundwater exchange under the Forks Municipal Water Plan, is strongly discouraged by the IB. |   |            |           |
| a. The IB and its membership will take immediate action to contact legislators and Ecology to oppose water rights applications involving the transfer of water outside of the WRIA or between sub-areas.   | Negligible with IB support              | As needed  |           |
| <b>HBR-1.1</b> The Implementation Body endorses NPCLE efforts to identify and pursue priority LWD projects.  |   |            |           |
| a. The IB will review the draft NPCLE strategy and provide comments from the perspective of “ecologically sustainable water management” at one of its meetings, in-person or electronic, in 2010.  | Negligible with IB support              | 3/10       |           |
| b. The IB will pursue funds to provide a geohydrological evaluation of top priority reach-scale, or larger, NPCLE restoration projects to assess their potential benefits to bank storage, aquifer recharge, baseflows, and/or other water quantity or water quality benefits.   | Up to \$100,000                         | 5/10       |           |
| c. The IB will write letters to funding agencies and groups in support of NPCLE priorities.  | Negligible with IB support              | As needed. |           |
| <b>HBR-5.1</b> The IB will ask the NPCLE and the WCSSP to include the following in their strategies for salmon recovery:<br>1.) Assessments to determine the status of   |   |            |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated  | Completed |
|--|---|------------|-----------|
| fish populations in WRIA 20 watersheds<br>2.) Genetic stocks studies for fish populations in WRIA 20 watersheds<br>3.) An assessment of the potential role of hatchery supplementation as a tool for restoration and/or reintroduction of species to the system. |   |            |           |
| a.____The IB will request the NPCLE and WCSSP to include these projects in their strategy documents.   | Negligible with IB support              | 2/10       |           |
| b.____The IB will write a letter to promote WDFW objectives to identify the primary populations for both listed and non-listed Evolutionarily Significant Units (ESUs).  |   |            |           |
| <b>HBI 1-5.1</b> The Implementation Body endorses the efforts of the Olympic Knotweed Working Group, the Clallam and Jefferson County Noxious Weed Control Boards and other efforts to prevent and control noxious weeds in WRIA 20.                             |   |            |           |
| a.____Jefferson County will allow licensed Weed Board employees to chemically control selected weeds on specific county roads.   |   |            | 12/09     |
| b.____Clallam County will seek to allow licensed Public Works and Weed Board employees to chemically control selected weeds on specific county roads and to continue to ask volunteers to control weeds along the Olympic Discovery Trail in WRIA 20.            |   | 2010       |           |
| c.____The IB will write a letter to the NPS requesting that they treat the Hoh River population of Herb Robert in Olympic National Park.   |   | 4/10       |           |
| d.____The IB will integrate the recommendations of existing noxious weed programs in WRIA 20 when implementing relevant actions contained in this DIP.   | Negligible with IB support              | As needed. |           |
| <b>HBI 6-9.1</b> The Implementation Body will work with the Weed Board and partner   |   |            |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding                        | Initiated          | Completed |
|---|--|--------------------|-----------|
| agencies to develop recommendations for incorporating noxious weed prevention and treatment measures into road, forestry, restoration, construction and maintenance activities in WRIA 20.  |  |                    |           |
| a.____The IB will invite the Noxious Weed Boards to co-host an information exchange and demonstration event for timber and construction crews, and possibly state and county road departments/mowing crews and the Olympic Corrections Center, on best management practices for weed prevention and treatment. Information would include the economic benefits of weed prevention and descriptions of the types and sources of certified weed-free (free of propagation parts) materials. | Up to \$2,000<br><br>IGs, especially public works departments. | Winter/Spring 2011 |           |
| b.____The IB will invite North Olympic Peninsula RC & D and the conservation districts to co-host a meeting, in-person or electronic, with WRIA 20 agricultural producers to discuss funding options to support the production of weed free hay and/or straw (with USFS standards as a starting place) and native plant materials locally.  | Up to \$5,000  | 2/11               |           |
| <b>HBS-3.1</b> The Implementation Body, in partnership with other interested parties, will develop a reference tool for grants applicable to WRIA 20 that landowners may pursue in order to conduct desirable habitat restoration and/or road abandonment projects.   |  |                    |           |
| a.____The IB will survey agencies and NGOs to request links to funding opportunities for possible inclusion on conservation district/county websites.   | Negligible with IB support                                     | 3/10               |           |
| b.____The IB will periodically update and expand the list of grant opportunities available to support habitat restoration and/or road abandonment projects in Appendix H of this plan.  | Negligible with IB support                                     |                    |           |

| Highest Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated | Completed |
|--|---|-----------|-----------|
| <b>SP-3.1</b> The Implementation Body will support City of Forks' efforts to develop a septage dump or transfer station.   |   |           |           |
| a.____ The IB will send letters in support of grants to fund completion of a new septage facility in WRIA 20.  | Negligible with IB support              | As needed |           |
| b.____ Where funds are available, the Quileute Tribe will work with the City of Forks to address septage transfer needs.   |   | As needed |           |
| <b>SP-4.1</b> The Implementation Body will foster collaboration to provide dump stations at RV parks throughout the WRIA.  |   |           |           |
| a.____ The City of Forks will undertake an update of its sewer plan.   |   |           |           |
| b.____ The City of Forks will consider the use of a lodging tax to help support new septage facilities.  |   |           |           |
| c.____ The IB will host a public workshop to consider options for management of septage in the WRIA and to identify possible locations for additional facility(ies) (e.g. West Waste Recycling and Disposal, Bogachiel State Park, Mora Campground, Salt Creek State Park, and Kalaloch), costs, education, outreach and related issues. | Up to \$5,000                           | Fall 2010 |           |

Appendix C: High Priority Immediate and Ongoing Actions

| High Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding   | Initiated | Completed |
|--|---|-----------|-----------|
| <b>QTD-1.3</b> To complement the existing gage, the Implementation Body will seek funding to more fully characterize the geohydrology of the Sol Duc basin to assess the vulnerability of flows and temperatures to groundwater withdrawals. | \$500,000<br>USGS, NOAA, NPS, ONRC, UW, WCSSP, NPCLE, Ecology, BOR, tribes, county, private |           |           |
| a.____The IB will invite USGS staff to a meeting of the IB to discuss a framework and possible funding approaches for one or more hydrogeological studies for the Sol Duc River.   | Negligible with IB support  |           |           |
| <b>QTD-2.1</b> The Implementation Body will track funding opportunities to add or upgrade stream gages in WRIA 20 with the goal of establishing additional permanent flow gages.   |   |           |           |
| a.____The IB will develop a strategy for long-term gage funding for new and existing priority gages.   | Negligible with IB support  | 2/10      |           |
| b.____The IB will track funding opportunities for climate change studies to include stream gaging.   | Negligible with IB support  | 2/10      |           |
| <b>QTR-8.2</b> The Implementation Body will inform citizens of water rights actions and developments by monitoring Ecology website(s) and emails and conveying the most important information via appropriate means.                         |   |           |           |

| High Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding  | Initiated | Completed |
|--|--|-----------|-----------|
| a.____The IB, or a designated IG, will develop and maintain a contact list of interested parties for water rights actions noticing purposes.   | Negligible with IB support   | Ongoing   |           |
| b.____The IB coordinator, or an IG, will monitor the Ecology website and server lists for information and pending actions that pertain to WRIA 20 and forward this information to interested parties.                                | Negligible with IB support   | Ongoing   |           |
| <b>QTS-1.3</b> The Implementation Body will provide education and outreach to interested parties on rainwater collection to supplement water supply and to reduce stormwater runoff.   |  |           |           |
| a.____The IB will work with the City of Forks, conservation districts, ONRC, WSU and/or UW and others to seek funds for a rainwater collection system demonstration project at a public facility in the City of Forks.               | \$10,000 - \$20,000<br><br>Conservation district, City of Forks/PUD, ONRC, WSU, UW, rainwater system purveyors               | 6/10      |           |
| <b>QTS-2.1</b> The Implementation Body will work with area landowners to assess the need for a geophysical survey to characterize the geology of the Lake Pleasant/Sappho area and locate aquifer recharge areas.                    |  |           |           |
| a.____Based on a review of existing information, the IB will host a meeting, in-person or electronic, of area landowners to discuss a project to improve the probability of siting productive wells in the Lake Pleasant/Sappho area | \$1000 -\$2,500<br><br>County, city and USGS for review of information and meeting<br><br>Project phase dependent upon scope | 7/10      |           |

| High Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding   | Initiated | Completed |
|---|---|-----------|-----------|
| b.____The IB will partner with the conservation districts to seek funding to promote water conservation and protection of water resources in the Lake Pleasant/Sappho area and Sol Duc watershed generally.                                       | Negligible with IB and existing conservation district support   | 6/10      |           |
| c.____If there is sufficient interest and community appreciation to move forward, the IB will seek funding to develop and implement a geophysical survey of the area.   |   |           |           |
| <b>QLM-5.2</b> The Implementation Body will perform an in-depth review of the current 303(d) listings to consider which of them may not be addressed in the forest practices AMP.   |   |           |           |
| a.____Annually, the IB will review any changes to the 303(d) listings and consider causes for these changes and possible responses.   | Negligible with IB support  | Ongoing   |           |
| b.____The IB will perform a more in-depth review of the sixty-six 303(d) listings to determine if they <u>might</u> be linked to human-related factors other than forest practices and will revise the table in Appendix G to reflect this review |   |           |           |
| c.____The IB, in partnership with conservation districts, will apply as appropriate for grants for TMDL development and/or implementation of BMPs and monitoring for selected 303(d) listings.  | Negligible with IB support<br><br>TMDLs dependent on scope<br><br>Centennial Clean Water, IGs, conservation districts | 10/10     |           |
| <b>QLP-1-4.1</b> The Implementation Body will foster an integrated and coordinated approach to water quality monitoring in WRIA 20 with special regard to TMDLs, and ratified HCPs.   |   |           |           |

| High Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding  | Initiated                            | Completed |
|--|--|--------------------------------------|-----------|
| <p>a.____ The IB will host a meeting, in-person or electronic, to discuss establishment of water quality monitoring consistent with ratified HCPs to include Streamkeepers, Ecology, USGS, Tribes, ONRC and others. Outcomes for the meeting could include:</p> <ul style="list-style-type: none"> <li>• identifying areas and entities for further collaboration and integration</li> <li>• identifying temporal, spatial and parameter data gaps</li> <li>• identifying needed research and/or studies</li> <li>• identifying needed restoration projects with a significant water quality monitoring component</li> </ul> | <p>\$1,000-\$10,000 for facilitated meeting or meetings</p> <p>ONRC, NPS, NOAA, Streamkeepers, conservation districts, Ecology, USGS, IGs and stakeholders</p> | 2/11                                 |           |
| <p><b>QLD-3.1</b> The Implementation Body will seek funding to study fecal coliform, and define its sources, in water bodies considered to be at-risk.</p>   |  |                                      |           |
| <p>a.____ The IB membership will include monitoring for fecal coliform pollution, to include source identification, consistent with established protocols, in its applications for water quality funding for Big River, Lower Lake Creek of the Sol Duc River, cattle grazing areas of the Sol Duc, Bogachiel and Hoh drainages (including Taft Creek of the Hoh). This action is ongoing.</p>   | Negligible with IB support   | Ongoing                              |           |
| <p>b.____ Where regulatory limits are exceeded, the IB membership will seek funds to implement best management practices and to monitor their effectiveness at reducing sources of pollution.</p>  |  | Ongoing                              |           |
| <p><b>QLE-1.1</b> The IB supports new and existing programs to provide education and outreach that motivates voluntary actions to protect and improve water quality.</p>   |  |                                      |           |
| <p>a.____ The IB will ask the NPC MRC to partner in a clean up of trash and fishing waste from fresh water beaches and riparian areas during low water periods.</p>  | \$1,000 -\$3,000   | 2/10<br>Cleanup at summer low flows. |           |

| High Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding | Initiated | Completed |
|--|---|-----------|-----------|
| b.____The IB will partner with the NPC MRC to develop additional recycling and hazardous waste (vehicle fluids) disposal options.  |   | 8/10      |           |
| c.____The IB will ask Peninsula Guide Association and other groups to help identify sites in the WRIA that are in need of new approaches to human and pet waste management and to provide portable toilet information consistent with high use rivers elsewhere.   | Negligible with IB support              | 4/10      |           |
| d.____The IB, possibly in partnership with the NPC MRC and WDFW, will identify projects to expand ongoing water quality educational (K-12) efforts in local schools.   | Negligible with IB support              | 3/10      |           |
| <b>QLE- 2.1</b> The Implementation Body will work with the conservation districts, the NRCS, and local and tribal governments to educate residents and visitors about the causes of water quality problems.  |   |           |           |
| a.____The IB will continue to support the efforts of conservation districts, the NRCS, local and tribal governments in assisting landowners with projects to protect water quality through better manure management and other methods. The IB will write letters in support of continued and enhanced outreach and education efforts in WRIA 20.   | Negligible with IB support              | 4/10      |           |
| <b>QLE-5.1</b> The Implementation Body will request written support from the Solid Waste Advisory Committees of Clallam, Jefferson and Grays Harbor Counties, Tribes, conservation districts, the City of Forks and West Waste Recycling and Disposal for hazardous waste education and collection events in WRIA 20 including education on illegal dumping and the potential toxic effects of hazardous waste in the watershed. |   |           |           |
| a.____The IB will contact the Forks Chamber of Commerce and others for recommendations on businesses that may have an interest in BMPs for hazardous and non-hazardous waste management and disposal from the local source control   | Negligible with IB support              | 4/10      |           |

| High Priority Action and Immediate and Ongoing Sub-actions   | Estimated Costs and Sources for Funding | Initiated | Completed |
|--|---|-----------|-----------|
| specialist.  |   |           |           |
| b.____The IB will ask Jefferson and Clallam County Departments of Environmental Health to make a presentation to the IB, NPCLE and/or NPC MRC on options and opportunities for improving hazardous and solid waste management in WRIA 20 and the need to address illegal solid waste dumps and abandoned vehicle sites.  | Negligible with IB support              | 6/10      |           |
| c.____The IB will write letters to the City of Forks, DNR, NPS, Clallam and Jefferson County, and other agencies, to encourage their vehicle shops to employ local source control or Envirostars standards and/or BMPs.  | Negligible with IB support              | 6/10      |           |
| <b>HBO-1.1</b> Clallam and Jefferson Counties will seek funds to provide education, in-person and online, to support permitting processes linked to CAOs, stormwater and LID, SMP and other natural resources-related code requirements.   |   |           |           |
| a.____The IB will ask representatives from Clallam and Jefferson County Departments of Community Development to provide in-person training to realtors, potential permit applicants, and other interested parties on their respective:<br><br>1.) Critical Areas Ordinances<br>2.) Low Impact Development (LID) guidance and incentives<br>3.) Shoreline Master Programs<br>4.) Instruction in basic watershed functionality | Negligible with IB support              | 6/10      |           |
| <b>HBO-5.1</b> The Implementation Body will seek funding to complete updates for the DNR hydrography (water typing) database.  |   |           |           |

| High Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated   | Completed         |
|---|---|-------------|-------------------|
| a.____Jefferson County will query and print (to PDF) a map of stream type updates since 2005 in WRIA 20 from the DNR hydrography database.  | Negligible with IB support              | On-gong     | First query: 2/10 |
| b.____The IB will seek funds when necessary to update stream types in WRIA 20 where development is anticipated.   |   | DIP Updates |                   |
| c.____ There is incomplete LiDAR for the Ozette watershed and a need to reconcile various databases. The IB will write letters of support to provide more complete LiDAR coverage for the Ozette and Hoh watersheds.  | Negligible with IB support              |             |                   |
| <b>HBC 3-7.1</b> The Implementation Body will identify, support and implement novel approaches and possible pilot projects to conserve forest lands in WRIA 20.   |   |             |                   |
| a____ The IB will support DNR efforts to conduct a forest biomass energy demonstration project west of the Olympic Mountains.   |   | Ongoing     |                   |
| b.____The IB would actively access and participate in discussions, as well as feasibility studies, on the establishment of community forest management systems. One option for such an approach can be found within S. 1501, the Community Forest Conservation Act of 2009. This bill, which is still in the senate finance committee, provides a federal tax exemption for forest conservation bonds and for other purposes. In such a system, the goal is to integrate objectives such as:<br><br>1) forest management<br>2) regulatory requirements and obligations (e.g. RMAPs)<br>3) a net rate of return different than that associated with traditional forest industry approaches<br>4) additional community objectives | Negligible with IB support              | 3/10        |                   |

| High Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated | Completed |
|---|---|-----------|-----------|
| c.____The IB will invite NGOs to a meeting, in-person or electronic, to present information on their respective programs to benefit forested and agricultural lands. Innovative partnerships, including cooperative stewardship agreements across ownerships, should be included in the discussion. | Negligible with IB support              | 5/11      |           |
| <b>HBS-2.1</b> The Implementation Body will develop a report on completed restoration and road decommissioning projects, with before and after conditions and lessons learned.  |   |           |           |
| a.____The IB will ask the DNR, NPCLE, the ONRC and others to assist in developing a list of completed restoration and road decommissioning projects in WRIA 20 to include project sponsors and contact information.   | Negligible with IB support              | 2/11      |           |
| b.____The IB will support a USFS focus group to allocate legacy road dollars in the Calawah-Sitkum watershed.   | Negligible with IB support              | 1/10      |           |
| <b>MGT-1.1</b> The Implementation Body will define a strategy for updating the DIP and revising the WRIA 20 Watershed Management Plan.  |   |           |           |
| a.____The IB will continue to pursue merging with the NPCLE and/or the NPC MRC in the absence of specific funding to support watershed planning.  | Negligible with IB support              | 12/09     |           |
| b.____The IB will also discuss the potential of serving as a advisory board for the Shoreline Master Program update for Clallam County due in the summer of 2012.   | Negligible with IB support              | 2/10      |           |
| c.____Annually and ideally quarterly, the IB membership will meet, in-person or electronically, to update each other on efforts to implement the DIP and coordinate potential grant opportunities.  | Negligible with IB support              | Ongoing   |           |
| d.____Insofar as funding permits, the IB will update the DIP in the form of a list of accomplishments and needs in every year   | Negligible with IB support              | Ongoing   |           |

| High Priority Action and Immediate and Ongoing Sub-actions  | Estimated Costs and Sources for Funding | Initiated | Completed |
|---|---|-----------|-----------|
| that it, or a successor group, meets.   |   |           |           |
| e.____The IB will ask the NPCLE, at one of its upcoming meetings, to consider assuming responsibility for one or more DIP actions in the event that the IB is suspended or dissolved. |   | 6/10      |           |
| <b>MGT-3.1</b> The Implementation Body will seek means for merging parallel processes where functions overlap regarding watershed planning, including updates.                        |   |           |           |
| a.____As soon as possible after the grant details are announced, the IB will meet, in-person or electronically, to discuss an application to the RCO to merge the IB and NPCLE.       | Negligible with IB support              | Unknown   |           |
| b.____The IB will recommend to the NPCLE and/or WCSSP that they annually review the most recent version of the DIP to inform their own activities.                                    |   | 12/09     |           |

Appendix D: Moderate Priority Immediate and Ongoing Actions

| Accessible Moderate Priority Action and Immediate and Ongoing Subactions  | Initiation      | Completed |
|---|-----------------|-----------|
| <b>QTD-3.1</b> The Implementation Body will refine the list of candidate stream gaging sites.   |                 |           |
| a.____The IB recommends expanding the list of top priority locations in the WSMP to include the following Hoh Tributaries: South Fork of the Hoh River, Winfield, Nolan, Elk, and/or Owl Creeks.  | 2011 DIP Update |           |
| b.____The IB will inform Ecology, the USGS, elected representatives, and other interested parties of updates to its gage priorities.  | Ongoing         |           |
| c.____The IB will send letters to the USGS and Ecology recommending that they consider and pursue all available alternatives before discontinuing any existing stream gage under their jurisdiction.  | Ongoing         |           |
| <b>QTR-12.2</b> The Implementation Body will increase awareness of trust water rights (RCW 90.42.080, Trust Water Rights – acquisition, donation, exercise and transfer).   |                 |           |
| a.____The IB will invite the agricultural community of WRIA 20 to a public presentation on the state’s Trust Water Right Program by Ecology, Washington Water Trust and/or Washington Rivers Conservancy.   |                 |           |
| <b>QTR-12.3</b> The Implementation Body will explore the potential of water banking in WRIA 20 (RCW 90.42.100).   |                 |           |
| a.____The IB will ask Ecology, or hire a consultant, to review the <i>Phase II Technical Report for WRIA 20</i> and assess the potential for water banking in the WRIA.   |                 |           |
| b.____The IB will invite an Ecology to discuss the Trust Water Rights Program at a meeting, in-person or electronic, including water banks or exchanges to support both instream and out-of-stream uses. Topics could include water shortages, storage options, and efficiencies used elsewhere in western Washington to benefit flows. |                 |           |
| c.____The IB will invite representatives from areas that have completed instream flow rules to present water reservation tracking and accounting systems used in their watershed.   |                 |           |
| <b>QTS-1.4</b> The Implementation Body will research opportunities to support the appropriate use of greywater.   |                 |           |
| a.____The IB will write a letter to legislators commenting on the Office of Shellfish and Water Protection’s Greywater  |                 |           |

| Accessible Moderate Priority Action<br>and Immediate and Ongoing Subactions  | Initiation | Completed |
|--|------------|-----------|
| Reuse Rule, now under development.   |            |           |
| <b>QLM 1-4.1</b> The Implementation Body will periodically review the use of databases by its members, partner organizations and agencies with the goal of improving data accessibility.   |            |           |
| a.____The IB will ask Ecology, Clallam County as lead agency, NPCLE and WCSSP to provide links to these and other relevant databases on their WRIA 20 websites and to keep the list of links updated.  |            |           |
| <b>QLM-5.3</b> The Implementation Body will partner with the ONRC to host a workshop for water quality monitoring field staff and program managers from across the WRIA to brainstorm improvements to data collection efforts by eliminating overlap, closing data gaps, and extending complementary analyses. |            |           |
| a.____ The IB will develop a distribution list for entities (many listed in the WSMP on page 41 under 3.3.2 “Motivation”) collecting water quality data in WRIA 20.  |            |           |
| b.____ The IB will consider how best to interface this action with WCSSP’s TNC TAC, Sharepoint, and Netmap projects.   |            |           |
| c.____ The IB will ask Streamkeepers to initiate a blog or other appropriate means for monitoring entities to share information about ongoing studies, resource conditions, open requests for information or assistance, and other topics.   |            |           |
| <b>QLD-1.1</b> The Implementation Body will facilitate communications and coordination of water quality monitoring activities.   |            |           |
| a.____ The IB will provide logistical support and write letters on behalf of members and partners seeking funds for water quality monitoring in WRIA 20.   |            |           |
| b.____ The IB will request that CMER establish treatments in WRIA 20 whenever there is an option to do so.   |            |           |
| <b>QLD-2.1</b> The Implementation Body, in collaboration with Clallam and Jefferson Counties, will promote proper installation and maintenance of on-site systems.   |            |           |
| a.____ The IB will provide logistical support for area specific “Septic 101” classes.  |            |           |
| b.____ The IB will request a presentation by ShoreBank Cascadia  |            |           |

| Accessible Moderate Priority Action<br>and Immediate and Ongoing Subactions   | Initiation | Completed |
|---|------------|-----------|
| about their low interest loan programs for on-site repairs and possible opportunities to expand into Clallam County.  |            |           |
| c.____ Before taking any enforcement action for fecal coliform pollution, Clallam and Jefferson Counties, and others responsible for water quality violations, will utilize dye tests or other approved method(s) to identify source(s) of fecal coliform exceedances.  | Ongoing    |           |
| <b>HBR-2.2</b> The Implementation Body will write letters to support NPCLE efforts to secure funding or in-kind assistance to develop, install, and maintain salmon stream identification at roadway bridges and at major river basin boundaries in WRIA 20.  |            |           |
| a.____ The IB will endorse NPCLE efforts to pursue non-profit funding for river basin and stream signs.   |            |           |
| <b>HBR-3.1</b> The Implementation Body will support conservation district, and cooperator efforts to actively pursue funding for consultation and design, acquisition of seedlings and plugs, and public outreach/community development of riparian zone restoration and bank stabilization projects.   |            |           |
| a.____ The IB will invite the Jefferson County and Clallam Conservation Districts and the NRCS to present information on conservation programs available to landowners, in particular incentives to protect and restore riparian areas (See a listing of examples of such programs in Appendix H).  | Fall 2010  |           |
| b.____ The IB will invite Snohomish County Public Works or other entities with similar experience to present information flood fencing to protect agricultural fields from flood debris and to support the development of mixed species riparian forests.   | Fall 2010  |           |
| c.____ The IB will ask the NPCLE to include in its strategy a pilot project to install flood fencing (live cottonwood bolts), larger balled & burlapped trees, and or high tensile elk exclusion fencing on agricultural land.  | 3/10       |           |
| d.____ The IB will ask the NPCLE to include in its strategy a project to fund the storage of suitable trees and large woody debris, cleared from public (roadway) and private properties, in gravel pit waste areas and/or other suitable sites in WRIA 20 for use in salmon restoration projects. This grant request could also include weed control at gravel pits. | 3/10       |           |
| e.____ The IB will solicit the Clallam Economic Development Council, The North Olympic Peninsula Resource Conservation & Development Council, or Team Jefferson for funds or a volunteer to   | 3/10       |           |

| Accessible Moderate Priority Action<br>and Immediate and Ongoing Subactions   | Initiation | Completed |
|---|------------|-----------|
| draft a business plan for one or more WRIA 20 farms to provide native plant and weed free materials to restoration, bank stabilization and road projects.   |            |           |
| <b>HBR-4.1</b> The Implementation Body will ask the NPCLE to consider including the reintroduction of extirpated chum and chinook to the Ozette watershed in its new draft of the NPCLE strategy for salmon recovery. See SP-2.   |            |           |
| a.____The IB will request that the NPCLE Technical Advisory Committee include this action in the its strategy.  | 3/10       |           |
| <b>HBO-4.1</b> Clallam and Jefferson Counties and the City of Forks will identify and, to the extent possible, recommend policies to remove disincentives to LID in the permitting process and explore ways to incentivize LID.   |            |           |
| a.____The IB will welcome a request from Clallam County Department of Community Development to involve the IB in developing its CSMP and Technical Guidance Manual.   | 2010-12    |           |
| <b>HBC-1.1</b> The IB will inform county decision makers and staff about changing water quantity and water quality conditions in basins or reaches of WRIA 20, especially those that may be adversely affecting fish.   |            |           |
| a.____ The IB, if possible jointly with the NPCLE, will report to the tribes, City of Forks and the counties on the existence of water quantity concerns for specific segments or reaches of WRIA 20 rivers and streams, especially in terms of potential adverse affects on fish life stages from additional water withdrawals. The intent is to inform future comprehensive plan updates and decisions on land use changes. The IB will also report on the most suitable locations for industrial development, from water and habitat perspectives, and possible mitigation measures to be considered in advance of proposals. This approach will provide for a more predictable, efficient, and timely processing and environmental review when a project is submitted. The priority should be to do it right (not fast) the first time, for the long-term sustainability of the facility. |            |           |
| b.____The IB will monitor county comprehensive plan amendment cycles and open space taxation programs in order to provide comments on applications that may have a bearing on water quantity and quality in the WRIA.   | Ongoing    |           |
| <b>HBS-1.1</b> The Implementation Body, in cooperation with tribes, ONRC, conservation districts, agencies (WDFW, WDNR, WSDOT), and area businesses, will develop   |            |           |

| Accessible Moderate Priority Action and Immediate and Ongoing Subactions  | Initiation | Completed |
|---|------------|-----------|
| sediment control educational materials and events tailored to the needs of land managers, contractors, and workers in WRIA 20.  |            |           |
| a.____Jefferson County will make a flyer for contractors and crews with links to sources of information on BMPs to control sediment.  | 4/10       |           |
| <b>HBS-4.1</b> The IB will encourage additional research and comprehensive approaches to nonpoint sediment source management in WRIA 20 watersheds.   |            |           |
| a.____ The IB will request that the NPCLE include the development of a nonpoint source assessment and management report for the Hoh basin in its strategy to recover salmon.  |            |           |
| b.____ The IB will support partnerships and grants involving the Quileute Tribe’s efforts to monitor water quality and control sediment loads in the Quillayute watershed under grants through Treatment as a State for Water Quality (CWA §106) and Nonpoint Source Pollution (CWA §319), respectively.        |            |           |
| c.____ The IB will contribute to and review Clallam County’s CSMP including its monitoring program and outreach/education elements.   |            |           |
| d.____ The IB will ask the NPCLE to include in its strategy for salmon recovery efforts to identify an inventory sites for potential slides and other large scale sediment sources due to natural conditions. Also desired are such things as a literature review and listing of potential resources.           |            |           |
| <b>SP-5.1</b> The IB will ask the NPCLE to include a review of alternatives and recommendations to support salmonid reproduction during extended low flow periods.  |            |           |
| a.____The IB will continue to monitor and document locations of flows that impede migration.  |            |           |
| b.____The IB will ask the NPCLE to coordinate and develop a response plan to address critical low flows on an emergency basis in WRIA 20.   |            |           |
| c.____The IB will ask the NPCLE to include projects in its strategy for salmon recovery to stabilize refugia (through enhanced connectivity, manipulation of hydraulic controls, and LWD) designed specifically to enhance hyporheic flows or to provide or maintain suitable flows to essential habitat areas. |            |           |

| Accessible Moderate Priority Action<br>and Immediate and Ongoing Subactions  | Initiation | Completed |
|--|------------|-----------|
| <b>MGT-1.2</b> Insofar as funding permits, the IB, or its successor group, will amend the WRIA 20 Watershed Management Plan when requested by the original initiating governments (WSP p. 72) in response to, for example, the availability of new scientific information, unforeseen water-related issues (WSP p. 52), or in response to petition(s) from citizens and/or stakeholders. |            |           |
| a.____ Clallam and Jefferson Counties will meet to consider continuation of the watershed planning program in WRIA 20 in the absence of state funding and a possible agreement or MOU. The counties will include the other IGs in the discussion as applicable.  |            |           |
| <b>ESWM-1.2</b> The IB will support the efforts of governments and organizations to plan for climate change and to conduct related analyses and develop response strategies for WRIA 20.   |            |           |
| a.____ Jefferson County will request that the Jefferson County Climate Action Committee’s monitoring program include stream flows as one indicator of plan implementation success and language to support funding of high priority stream gage sites in Jefferson County in WRIA 20.   | Ongoing    |           |

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Appendix E: Intergovernmental Agreement Regarding Phase IV

332.09.043 07/28/09 <sup>2F</sup>

**INTERGOVERNMENTAL AGREEMENT  
REGARDING PHASE IV WATERSHED PLAN  
IMPLEMENTATION FOR WRIA 20**

**Preliminarily Approved by the WRIA 20  
Initiating Governments Representatives on:  
April 21st, 2009**

WHEREAS Jefferson and Clallam County approved a Watershed Plan for WRIA 20 on November 5<sup>th</sup>, 2008; and the Initiating Governments under said plan now desire to form an Implementation Body and establish an Intergovernmental Agreement to further such implementation;

WHEREAS, coordinated efforts for watershed plan implementation in WRIA 20 are a priority; in part because it contains some of the last runs of wild salmonids in Washington State that are not ESA-listed, and

WHEREAS, Chapter 90.82 RCW, Watershed Planning, provides authority for local watershed implementation of approved plans for waters and water rights under State jurisdiction and directions for the initiation of planning and eligibility for grant funds, and

WHEREAS the Interlocal Cooperation Act (Chapter 39.34 RCW) provides authority for governmental entities to exercise their respective powers jointly through intergovernmental agreements; and

WHEREAS, watershed planning and implementation of WRIA 20 under Chapter 90.82 RCW included representation by a wide range of water resource interests in the investigation and planning of actions relating to water quantity, water quality, fish habitat restoration and preservation, and instream flows, and the identification of projects and activities to protect water resources and improve natural resource management; and

WHEREAS, Chapter 90.82.060(2) provides that watershed planning and implementation may only be undertaken with the concurrence of the following entities:

1. All counties in the Water Resource Inventory Area (WRIA); and
2. The largest city or town within the WRIA; and
3. The water supply utility obtaining the largest quantity of water from the WRIA; and

WHEREAS, under Chapter 90.82.060 (4&5), the initiating entities after deciding to proceed, must invite each tribe with reservation lands within the management area to participate as an Initiating Government; and

WHEREAS, the following Indian Tribes have been invited and have agreed to participate as initiating governments: Makah Tribe, Quileute Tribe, and Hoh Tribe--and by their acceptance, the Initiating Governments now consist of these tribes, the City of Forks, Jefferson County and Clallam County, and

WHEREAS, the initiating governments will invite into the Implementation Body (IB) other interested parties, including but not limited to, federal and State government agencies or services, interest groups and individuals to be stakeholders in the process and form caucuses; and

WHEREAS, under Chapter 90.82 RCW, after the Initiating Governments approve the Watershed Plan and commence implementation and invite the Tribes to participate, they must designate a lead agency and indicate how the Implementation Body will be staffed,

NOW, THEREFORE, the Initiating Governments agree to make this Interlocal Agreement (“Agreement”) as follows:

**1. Formation of the WRIA 20 Initiating Governments**

The Initiating Governments are Clallam County, Jefferson County, City of Forks, Makah Tribe, Quileute Tribe, and Hoh Tribe. Clallam County serves as lead agency for Phase IV implementation of the watershed planning process. The Initiating Governments shall provide for staffing of the watershed planning effort, management of grant funds, resolution of disputes regarding interim decisions, and a public hearing process. The representatives of the Initiating Governments shall consist of one elected or appointed individual and one alternate from each of the six (6) Initiating Governments from WRIA 20. The recognized representative shall be the voting members of the Initiating Governments, provided that a designated, duly authorized alternate representative may vote in their absence.

**2. Funding and Accounting**

- a. The Initiating Governments are authorized to apply for and accept grants in the name of the WRIA 20 Initiating Governments and to use existing grant funds and appropriations for the purposes specified herein.
- b. The Initiating Governments’ funds shall be retained in a special account established by the Clallam County Treasurer to be known as the “WRIA 20 Watershed Planning & Implementation Account”. All sums received by the Initiating Governments shall be placed in and disbursed from that account. The Clallam County Treasurer shall be the custodian of the account and the Clallam County Auditor shall keep a record of the receipts and disbursements. The Clallam County Auditor shall draw and the Clallam County Treasurer shall honor and pay all warrants, which shall be approved before issuance and payment as directed by the Initiating Governments.
- c. The Clallam County Department of Community Development is hereby designated as the fiscal agent for watershed planning funds from the Dept. of Ecology and will perform certain tasks related to the proper administration of funds, and shall keep full and complete accounts of the costs incurred in connection with the planning and implementation process and shall report to the Initiating Governments on a quarterly basis regarding the accounting of revenues and expenditures.
- d. The Initiating Governments shall not acquire real or personal property in the name of the Implementing Body.

- e. The Initiating Governments agree to disbursement and expenditure of funds as set forth by grant contracts and associated budgets.

### **3. Staffing for Planning and Implementation Purposes**

The Initiating Governments may utilize their staff and resources to organize and administer the planning and implementation processes for WRIA 20 and may hire consultants or additional staff to perform various functions related to the watershed planning process.

### **4. Scope of Planning and Implementation**

- a. The Initiating Governments agree that effective watershed planning and implementation cannot take place without sufficient scientific data to support informed decision-making. To achieve this, the Initiating Governments, with technical assistance from tribal, federal, state and local natural resources agencies, will scope, design and include in the scope of work, scientific studies which provide an acceptable level of certainty concerning all the surface and ground water quality and quantity requirements of the ecosystems and water users in the affected watershed.
- b. It is expected that the water quantity assessment shall comply with the requirements of RCW 90.82/ESHB 2514. Water quality, instream flows and habitat studies may be incorporated into the scope of work subject to the unanimous consent of the Initiating Governments and to the extent funds are made available for this purpose.
- c. Watershed planning and implementation under this Agreement for any waters lying wholly within the Makah Indian Reservation, shall occur outside of the framework of Chapter 90.82 RCW, and shall not extend the jurisdiction of the state of Washington over on-reservation water resources. Waters wholly within the Makah Indian Reservation include but are not limited to the following:
  - i) Tsoo-yess River and its tributaries from their headwaters to the river mouth.
  - ii) Archawat Creek and its tributaries from their headwaters to the river mouth.
  - iii) Hobuck Creek, including Hobuck Lake and its tributaries from their headwaters to the river mouth.
  - iv) Ocean Creek and its tributaries from their headwaters to the river mouth.
  - v) Waatch Creek and its tributaries from their headwaters to the river mouth.
- d. Watershed planning and implementation under this Agreement for any waters lying wholly within the Quileute Indian Reservation, including but not limited to Lonesome Creek, Smith Slough, and their tributaries, shall occur outside of the framework of Chapter 90.82 RCW, and shall not extend the jurisdiction of the state of Washington over on-reservation water resources.
- e. Watershed planning and implementation under this Agreement for any waters lying wholly within the Hoh Indian Reservation, including but not limited to Chalaat Creek, Fletcher Creek and their tributaries, shall occur outside of the framework of Chapter

90.82 RCW, and shall not extend the jurisdiction of the state of Washington over on-reservation water resources.

- f. Where the federal government has exclusive jurisdiction this ILA will not apply.

## 5. Organization of Implementation Body

The Initiating Governments shall cause to be organized a comprehensive public outreach program for the purpose of soliciting all parties of interest to participate in the watershed implementation process as stakeholders of the Implementation Body (IB).

- a. The Implementation Body shall consist of:
  - 1. Initiating Governments, which include Clallam County, Jefferson County, the City of Forks, the Makah Tribe, the Quileute Tribe, and the Hoh Tribe, and
  - 2. Stakeholder Groups, approved by the Initiating Governments, representing broad interests from government, private, and nonprofit sectors.
  - 3. Participating State agencies will have an ex-officio status and be able to participate in discussions on the IB.
- b. Each Stakeholder Group, approved by the Initiating Governments, shall provide a representative and an alternate to represent their Stakeholder Group at the Implementation Body.
- c. "Ground rules" and "Bylaws" for the Implementation Body will be established by cooperation between the Initiating Governments and the approved Stakeholder Groups and will define voting rules for the stakeholders.
- d. All meetings of the Implementation Body are open meetings to the public, pursuant to RCW 42.30 et seq.
- e. Concurrence to Obligation: The parties of this contract hereby incorporate herein the entirety of RCW 90.82.130 (3), as it may be amended in the future.

## 6. Water Rights Disclaimer

Nothing in this Agreement nor any report, study, or other product resulting from the watershed implementation process or any other activity under this Agreement shall impair any treaty, water or other right of an Indian Tribe or its members, and/or any water or other rights of any other entity or person under any applicable law. Water quantity estimates generated in this watershed planning and implementation process are only estimates and are not intended to formally determine or resolve any legal dispute about water rights under state or federal law or Indian Treaties. These estimates cannot be used to limit, prejudice, or in any way impact, the legal rights or obligations of any parties to this Agreement.

7. No real property will be acquired within the framework of this Agreement. Any other property or equipment purchased under this Agreement, which is funded by grants from the Washington Department of Ecology (DOE), will be disposed of according to the guidelines set forth in DOE publication 91-18 (rev. 9/05), "Administrative Requirements For Ecology Grants And Loans".
8. This Agreement constitutes the entire understanding of the parties and supersedes any prior oral or written understandings of the parties, regarding the local watershed planning for WRIA 20, but does not supersede any Indian Treaties.
9. Any signatory parties to this Agreement may terminate their participation with written notice of intent to terminate by a formal termination letter, which gives no less than forty-five (45) days notice. Within such period, the Initiating Governments shall convene a meeting. Unless the withdrawal of such party terminates the process by law, the remaining Initiating Governments shall continue to operate as the WRIA 20 Initiating Governments under this Agreement.
10. This Agreement may be amended by unanimous written consent of the Initiating Governments.

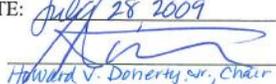
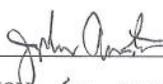
**11. Effective Date and Term of Agreement**

- a. This Agreement, established with six (6) original copies (one for each of the signatory Initiating Governments) shall be effective immediately upon its execution by the final signatory Initiating Government, Clallam County.
- b. This Agreement shall terminate four (4) years from the last date of execution unless otherwise extended by written amendment of all of the Initiating Governments prior to such date. The Agreement may be terminated earlier upon mutual consent of the Initiating Governments. Upon termination, all unexpended funds shall be disbursed as decided in writing by the Initiating Governments, provided that Clallam County shall first certify to the Initiating Governments that such disbursement complies with the terms of all applicable grants, laws, and accounting principles relating to the expenditure of public funds.

**12. Signatures:**

This document may be executed in counterparts, each of which will have the same force and effect of the original.

**SIGNATURE PAGES (2)**

|   |   |
|---|---|
| <b>CLALLAM COUNTY</b>   |   |
| DATE: <u>July 28, 2009</u>  | BY: <u></u> Approved as to form only by: _____ |
| BY: <u></u>  | POSITION: <u>Douglas E. Jensen</u>  |
| POSITION: <u>Board of Commissioners</u>   | Chief Civil Deputy Prosecuting Attorney   |
| BY: _____   | APPROVED AS TO FORM: _____  |
| POSITION: _____   | BY: _____   |
| POSITION: _____   | POSITION: _____   |
| <b>JEFFERSON COUNTY</b>   |   |
| DATE: <u>5/26/09</u>  | BY: <u></u>                                    |
| BY: <u></u>  | POSITION: <u>Commissioner</u>   |
| POSITION: <u>Commissioner</u>   | APPROVED AS TO FORM: _____  |
| BY: <u></u> | BY: <u>See Below</u>  |
| POSITION: <u>COMMISSIONER</u>   | POSITION: _____   |
| <b>MAKAH TRIBE</b>  |   |
| DATE: _____   | BY: _____   |
|   | POSITION: _____   |
| <b>QUILEUTE TRIBE</b>   |   |
| DATE: _____   | BY: _____   |
|   | POSITION: _____   |
| <b>HOH TRIBE</b>  |   |
| DATE: _____   | BY: _____   |
|   | POSITION: _____   |

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Approved as to form only:  
 5/11/09  
 Jefferson Co. Prosecutor's Office

**SIGNATURE PAGES (2)**

|                         |                               |
|-------------------------|-------------------------------|
| <b>CLALLAM COUNTY</b>   |                               |
| DATE: _____             | BY: _____                     |
| BY: _____               | POSITION: _____               |
| POSITION: _____         | APPROVED AS TO FORM:          |
| BY: _____               | BY: _____                     |
| POSITION: _____         | POSITION: _____               |
| <b>JEFFERSON COUNTY</b> |                               |
| DATE: _____             | BY: _____                     |
| BY: _____               | POSITION: _____               |
| POSITION: _____         | APPROVED AS TO FORM:          |
| BY: _____               | BY: _____                     |
| POSITION: _____         | POSITION: _____               |
| <b>MAKAH TRIBE</b>      |                               |
| DATE: <u>6-17-09</u>    | BY: <u><i>[Signature]</i></u> |
|                         | POSITION: <u>chairman</u>     |
| <b>QUILEUTE TRIBE</b>   |                               |
| DATE: _____             | BY: _____                     |
|                         | POSITION: _____               |
| <b>HOH TRIBE</b>        |                               |
| DATE: _____             | BY: _____                     |
|                         | POSITION: _____               |

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**SIGNATURE PAGES (2)**

|                         |   |
|-------------------------|---|
| <b>CLALLAM COUNTY</b>   |   |
| DATE: _____             | BY: _____   |
| BY: _____               | POSITION: _____                                     |
| POSITION: _____         | APPROVED AS TO FORM: _____                          |
| BY: _____               | BY: _____   |
| POSITION: _____         | POSITION: _____                                     |
| <b>JEFFERSON COUNTY</b> |   |
| DATE: _____             | BY: _____   |
| BY: _____               | POSITION: _____                                     |
| POSITION: _____         | APPROVED AS TO FORM: _____                          |
| BY: _____               | BY: _____   |
| POSITION: _____         | POSITION: _____                                     |
| <b>MAKAH TRIBE</b>      |   |
| DATE: _____             | BY: _____   |
|                         | POSITION: _____                                     |
| <b>QUILEUTE TRIBE</b>   |   |
| DATE: _____             | BY: _____   |
|                         | POSITION: _____                                     |
| <b>HOH TRIBE</b>        |   |
| DATE: <u>4/30/09</u>    | BY: <u>[Signature]</u>                              |
|                         | POSITION: <u>Chair Hoh Tribe Business Committee</u> |

Continued on next page

| CITY OF FORKS          |                      |
|------------------------|----------------------|
| DATE: <u>4/22/09</u>   | BY: _____            |
| BY: <u>[Signature]</u> | POSITION: _____      |
| POSITION: <u>Mayor</u> | APPROVED AS TO FORM: |
| BY: _____              | BY: _____            |
| POSITION: _____        | POSITION: _____      |

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## Appendix F: All 303(d) Listings in WRIA 20

The current Washington Department of Ecology water quality assessment listings for WRIA 20 may be viewed at <http://www.ecy.wa.gov/programs/wq/303d/index.html>. Water quality assessment policy information including a description of the 303d categories is available at: <http://www.ecy.wa.gov/programs/wq/303d/wqp01-11-ch1Final2006.pdf>.

Below is a table of 303d listings for WRIA 20 at the time this report was prepared.

| Listing Detail        | Category | WRIA | Water Body Name     | Parameter        | Medium | Map Link              |
|-----------------------|----------|------|---------------------|------------------|--------|-----------------------|
| <a href="#">35023</a> | 5        | 20   | SITKUM RIVER        | Temperature      | Water  | <a href="#">35023</a> |
| <a href="#">35026</a> | 5        | 20   | SITKUM RIVER        | Temperature      | Water  | <a href="#">35026</a> |
| <a href="#">35021</a> | 5        | 20   | CALAWAH RIVER, S.F. | Temperature      | Water  | <a href="#">35021</a> |
| <a href="#">16744</a> | 5        | 20   | HOH RIVER           | Fecal Coliform   | Water  | <a href="#">16744</a> |
| <a href="#">16743</a> | 5        | 20   | DICKEY RIVER        | Fecal Coliform   | Water  | <a href="#">16743</a> |
| <a href="#">14131</a> | 5        | 20   | SIWASH CREEK        | Dissolved Oxygen | Water  | <a href="#">14131</a> |
| <a href="#">7696</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7696</a>  |
| <a href="#">5824</a>  | 5        | 20   | SOLEDUCK RIVER      | pH               | Water  | <a href="#">5824</a>  |
| <a href="#">7693</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7693</a>  |
| <a href="#">6892</a>  | 5        | 20   | MAPLE CREEK         | Temperature      | Water  | <a href="#">6892</a>  |
| <a href="#">7728</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7728</a>  |
| <a href="#">6742</a>  | 5        | 20   | BIG RIVER           | Dissolved Oxygen | Water  | <a href="#">6742</a>  |
| <a href="#">7697</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7697</a>  |
| <a href="#">5815</a>  | 5        | 20   | CROOKED CREEK       | pH               | Water  | <a href="#">5815</a>  |
| <a href="#">5813</a>  | 5        | 20   | COAL CREEK          | pH               | Water  | <a href="#">5813</a>  |
| <a href="#">6896</a>  | 5        | 20   | WINFIELD CREEK      | Temperature      | Water  | <a href="#">6896</a>  |
| <a href="#">6754</a>  | 5        | 20   | BIG RIVER           | pH               | Water  | <a href="#">6754</a>  |
| <a href="#">6890</a>  | 5        | 20   | OWL CREEK           | Temperature      | Water  | <a href="#">6890</a>  |
| <a href="#">6889</a>  | 5        | 20   | WILLOUGHBY CREEK    | Temperature      | Water  | <a href="#">6889</a>  |
| <a href="#">6893</a>  | 5        | 20   | ANDERSON CREEK      | Temperature      | Water  | <a href="#">6893</a>  |
| <a href="#">6763</a>  | 5        | 20   | COAL CREEK          | Temperature      | Water  | <a href="#">6763</a>  |
| <a href="#">6897</a>  | 5        | 20   | NOLAN CREEK         | Temperature      | Water  | <a href="#">6897</a>  |
| <a href="#">7701</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7701</a>  |
| <a href="#">7692</a>  | 5        | 20   | BEAVER CREEK        | Temperature      | Water  | <a href="#">7692</a>  |
| <a href="#">6891</a>  | 5        | 20   | SPLIT CREEK         | Temperature      | Water  | <a href="#">6891</a>  |
| <a href="#">6894</a>  | 5        | 20   | LINE CREEK          | Temperature      | Water  | <a href="#">6894</a>  |
| <a href="#">6895</a>  | 5        | 20   | ALDER CREEK         | Temperature      | Water  | <a href="#">6895</a>  |
| <a href="#">7710</a>  | 5        | 20   | DICKEY RIVER, M.F.  | Temperature      | Water  | <a href="#">7710</a>  |
| <a href="#">7712</a>  | 5        | 20   | DICKEY RIVER, W.F.  | Temperature      | Water  | <a href="#">7712</a>  |
| <a href="#">7724</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7724</a>  |
| <a href="#">6752</a>  | 5        | 20   | SOUTH CREEK         | Dissolved Oxygen | Water  | <a href="#">6752</a>  |
| <a href="#">7725</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7725</a>  |
| <a href="#">7698</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7698</a>  |
| <a href="#">7699</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7699</a>  |
| <a href="#">7714</a>  | 5        | 20   | LAKE CREEK          | Temperature      | Water  | <a href="#">7714</a>  |
| <a href="#">7708</a>  | 5        | 20   | DICKEY RIVER, E.F.  | Temperature      | Water  | <a href="#">7708</a>  |
| <a href="#">7718</a>  | 5        | 20   | MAXFIELD CREEK      | Temperature      | Water  | <a href="#">7718</a>  |

| Listing Detail        | Category | WRIA | Water Body Name               | Parameter        | Medium | Map Link              |
|-----------------------|----------|------|-------------------------------|------------------|--------|-----------------------|
| <a href="#">7717</a>  | 5        | 20   | LAKE CREEK                    | Temperature      | Water  | <a href="#">7717</a>  |
| <a href="#">7727</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7727</a>  |
| <a href="#">7709</a>  | 5        | 20   | DICKEY RIVER, M.F.            | Temperature      | Water  | <a href="#">7709</a>  |
| <a href="#">7703</a>  | 5        | 20   | COAL CREEK                    | Temperature      | Water  | <a href="#">7703</a>  |
| <a href="#">7711</a>  | 5        | 20   | DICKEY RIVER, W.F.            | Temperature      | Water  | <a href="#">7711</a>  |
| <a href="#">7715</a>  | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">7715</a>  |
| <a href="#">7713</a>  | 5        | 20   | ELK CREEK                     | Temperature      | Water  | <a href="#">7713</a>  |
| <a href="#">7723</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7723</a>  |
| <a href="#">7716</a>  | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">7716</a>  |
| <a href="#">7707</a>  | 5        | 20   | DICKEY RIVER, E.F.            | Temperature      | Water  | <a href="#">7707</a>  |
| <a href="#">7705</a>  | 5        | 20   | CROOKED CREEK, N.F.           | Temperature      | Water  | <a href="#">7705</a>  |
| <a href="#">7726</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7726</a>  |
| <a href="#">7704</a>  | 5        | 20   | COAL CREEK                    | Temperature      | Water  | <a href="#">7704</a>  |
| <a href="#">7700</a>  | 5        | 20   | BOGACHIEL RIVER               | Temperature      | Water  | <a href="#">7700</a>  |
| <a href="#">42844</a> | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">42844</a> |
| <a href="#">42889</a> | 5        | 20   | BEAR CREEK                    | Dissolved Oxygen | Water  | <a href="#">42889</a> |
| <a href="#">48295</a> | 5        | 20   | SOOES RIVER                   | Temperature      | Water  | <a href="#">48295</a> |
| <a href="#">48910</a> | 5        | 20   | TROUT CREEK                   | Temperature      | Water  | <a href="#">48910</a> |
| <a href="#">48911</a> | 5        | 20   | CROOKED CREEK                 | Temperature      | Water  | <a href="#">48911</a> |
| <a href="#">48912</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48912</a> |
| <a href="#">48913</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48913</a> |
| <a href="#">48914</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48914</a> |
| <a href="#">48915</a> | 5        | 20   | UMBRELLA CREEK                | Temperature      | Water  | <a href="#">48915</a> |
| <a href="#">48916</a> | 5        | 20   | UMBRELLA CREEK                | Temperature      | Water  | <a href="#">48916</a> |
| <a href="#">48917</a> | 5        | 20   | SOOES RIVER                   | Temperature      | Water  | <a href="#">48917</a> |
| <a href="#">48918</a> | 5        | 20   | OZETTE RIVER                  | Temperature      | Water  | <a href="#">48918</a> |
| <a href="#">48919</a> | 5        | 20   | OZETTE RIVER                  | Temperature      | Water  | <a href="#">48919</a> |
| <a href="#">52620</a> | 5        | 20   | OZETTE LAKE                   | Mercury          | Tissue | <a href="#">52620</a> |
| <a href="#">52884</a> | 5        | 20   | FISHER CREEK (MCQUARRY CREEK) | Temperature      | Water  | <a href="#">52884</a> |
| <a href="#">14113</a> | 4C       | 20   | OZETTE LAKE                   | Fish Habitat     | Water  | <a href="#">14113</a> |
| <a href="#">21512</a> | 2        | 20   | LAKE CREEK                    | Temperature      | Water  | <a href="#">21512</a> |
| <a href="#">14130</a> | 2        | 20   | SIWASH CREEK                  | pH               | Water  | <a href="#">14130</a> |
| <a href="#">10964</a> | 2        | 20   | DICKEY RIVER                  | Dissolved Oxygen | Water  | <a href="#">10964</a> |
| <a href="#">11537</a> | 2        | 20   | UNNAMED CREEK                 | pH               | Water  | <a href="#">11537</a> |
| <a href="#">11532</a> | 2        | 20   | QUINN CREEK                   | Temperature      | Water  | <a href="#">11532</a> |
| <a href="#">11539</a> | 2        | 20   | BIG RIVER                     | Dissolved Oxygen | Water  | <a href="#">11539</a> |
| <a href="#">10962</a> | 2        | 20   | DICKEY RIVER                  | pH               | Water  | <a href="#">10962</a> |
| <a href="#">10963</a> | 2        | 20   | DICKEY RIVER                  | Temperature      | Water  | <a href="#">10963</a> |
| <a href="#">35031</a> | 2        | 20   | SOLEDUCK RIVER, S.F.          | Temperature      | Water  | <a href="#">35031</a> |
| <a href="#">35027</a> | 2        | 20   | SITKUM RIVER                  | Dissolved Oxygen | Water  | <a href="#">35027</a> |
| <a href="#">6900</a>  | 2        | 20   | UNNAMED CREEK                 | Temperature      | Water  | <a href="#">6900</a>  |
| <a href="#">6899</a>  | 2        | 20   | MOSQUITO CREEK                | Temperature      | Water  | <a href="#">6899</a>  |
| <a href="#">7695</a>  | 2        | 20   | BOGACHIEL RIVER               | Dissolved Oxygen | Water  | <a href="#">7695</a>  |
| <a href="#">5821</a>  | 2        | 20   | SIWASH CREEK                  | pH               | Water  | <a href="#">5821</a>  |
| <a href="#">7694</a>  | 2        | 20   | BOGACHIEL RIVER               | Dissolved Oxygen | Water  | <a href="#">7694</a>  |
| <a href="#">5828</a>  | 2        | 20   | SOUTH CREEK                   | pH               | Water  | <a href="#">5828</a>  |
| <a href="#">5827</a>  | 2        | 20   | ELLEN CREEK, SOUTH BRANCH     | pH               | Water  | <a href="#">5827</a>  |

| Listing Detail        | Category | WRIA | Water Body Name     | Parameter        | Medium | Map Link              |
|-----------------------|----------|------|---------------------|------------------|--------|-----------------------|
| <a href="#">6762</a>  | 2        | 20   | BIG RIVER           | Temperature      | Water  | <a href="#">6762</a>  |
| <a href="#">6755</a>  | 2        | 20   | CANYON CREEK        | pH               | Water  | <a href="#">6755</a>  |
| <a href="#">11536</a> | 2        | 20   | UNNAMED CREEK       | Dissolved Oxygen | Water  | <a href="#">11536</a> |
| <a href="#">5818</a>  | 2        | 20   | OZETTE RIVER        | pH               | Water  | <a href="#">5818</a>  |
| <a href="#">5819</a>  | 2        | 20   | PETROLEUM CREEK     | pH               | Water  | <a href="#">5819</a>  |
| <a href="#">5816</a>  | 2        | 20   | ELLEN CREEK         | pH               | Water  | <a href="#">5816</a>  |
| <a href="#">7702</a>  | 2        | 20   | CALAWAH RIVER, N.F. | Temperature      | Water  | <a href="#">7702</a>  |
| <a href="#">6743</a>  | 2        | 20   | COAL CREEK          | Dissolved Oxygen | Water  | <a href="#">6743</a>  |
| <a href="#">6580</a>  | 2        | 20   | HOH RIVER           | Temperature      | Water  | <a href="#">6580</a>  |
| <a href="#">6744</a>  | 2        | 20   | CROOKED CREEK       | Dissolved Oxygen | Water  | <a href="#">6744</a>  |
| <a href="#">6758</a>  | 2        | 20   | UNNAMED CREEK       | pH               | Water  | <a href="#">6758</a>  |
| <a href="#">6759</a>  | 2        | 20   | WEST TWIN CREEK     | pH               | Water  | <a href="#">6759</a>  |
| <a href="#">6764</a>  | 2        | 20   | CROOKED CREEK       | Temperature      | Water  | <a href="#">6764</a>  |
| <a href="#">6901</a>  | 2        | 20   | KAHKWA CREEK        | Temperature      | Water  | <a href="#">6901</a>  |
| <a href="#">6748</a>  | 2        | 20   | SOLEDUCK RIVER      | Dissolved Oxygen | Water  | <a href="#">6748</a>  |
| <a href="#">6746</a>  | 2        | 20   | SIWASH CREEK        | Dissolved Oxygen | Water  | <a href="#">6746</a>  |
| <a href="#">6753</a>  | 2        | 20   | UMBRELLA CREEK      | Dissolved Oxygen | Water  | <a href="#">6753</a>  |
| <a href="#">6757</a>  | 2        | 20   | UMBRELLA CREEK      | pH               | Water  | <a href="#">6757</a>  |
| <a href="#">6745</a>  | 2        | 20   | OZETTE RIVER        | Dissolved Oxygen | Water  | <a href="#">6745</a>  |
| <a href="#">6765</a>  | 2        | 20   | OZETTE RIVER        | Temperature      | Water  | <a href="#">6765</a>  |
| <a href="#">6761</a>  | 2        | 20   | WILLOUGHBY CREEK    | pH               | Water  | <a href="#">6761</a>  |
| <a href="#">6756</a>  | 2        | 20   | CEDAR CREEK         | pH               | Water  | <a href="#">6756</a>  |
| <a href="#">6768</a>  | 2        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">6768</a>  |
| <a href="#">7720</a>  | 2        | 20   | SOLEDUCK RIVER      | Dissolved Oxygen | Water  | <a href="#">7720</a>  |
| <a href="#">7721</a>  | 2        | 20   | SOLEDUCK RIVER      | Dissolved Oxygen | Water  | <a href="#">7721</a>  |
| <a href="#">7719</a>  | 2        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7719</a>  |
| <a href="#">7722</a>  | 2        | 20   | SOLEDUCK RIVER      | Dissolved Oxygen | Water  | <a href="#">7722</a>  |
| <a href="#">7729</a>  | 2        | 20   | UPPER COOL CREEK    | Temperature      | Water  | <a href="#">7729</a>  |
| <a href="#">7706</a>  | 2        | 20   | DEVILS CREEK        | Temperature      | Water  | <a href="#">7706</a>  |
| <a href="#">40702</a> | 2        | 20   | BEAR CREEK          | Bioassessment    | Other  | <a href="#">40702</a> |
| <a href="#">42843</a> | 2        | 20   | LAKE CREEK          | Bioassessment    | Other  | <a href="#">42843</a> |
| <a href="#">42846</a> | 2        | 20   | LAKE CREEK          | Dissolved Oxygen | Water  | <a href="#">42846</a> |
| <a href="#">42847</a> | 2        | 20   | LAKE CREEK          | Fecal Coliform   | Water  | <a href="#">42847</a> |
| <a href="#">42873</a> | 2        | 20   | COAL CREEK          | Dissolved Oxygen | Water  | <a href="#">42873</a> |
| <a href="#">42877</a> | 2        | 20   | UMBRELLA CREEK      | Dissolved Oxygen | Water  | <a href="#">42877</a> |
| <a href="#">42887</a> | 2        | 20   | BEAR CREEK          | Bioassessment    | Other  | <a href="#">42887</a> |
| <a href="#">42888</a> | 2        | 20   | BEAR CREEK          | Dissolved Oxygen | Water  | <a href="#">42888</a> |
| <a href="#">42892</a> | 2        | 20   | ELK CREEK           | Dissolved Oxygen | Water  | <a href="#">42892</a> |
| <a href="#">42893</a> | 2        | 20   | CEDAR CREEK         | Dissolved Oxygen | Water  | <a href="#">42893</a> |
| <a href="#">42910</a> | 2        | 20   | CAMP CREEK          | Dissolved Oxygen | Water  | <a href="#">42910</a> |
| <a href="#">42911</a> | 2        | 20   | CAMP CREEK          | Temperature      | Water  | <a href="#">42911</a> |
| <a href="#">42945</a> | 2        | 20   | OZETTE RIVER        | Dissolved Oxygen | Water  | <a href="#">42945</a> |
| <a href="#">45221</a> | 2        | 20   | ELK CREEK           | Fecal Coliform   | Water  | <a href="#">45221</a> |
| <a href="#">47022</a> | 2        | 20   | MINK LAKE CREEK     | Bioassessment    | Other  | <a href="#">47022</a> |
| <a href="#">48137</a> | 2        | 20   | ELK CREEK           | Dissolved Oxygen | Water  | <a href="#">48137</a> |
| <a href="#">48139</a> | 2        | 20   | BEAR CREEK          | Dissolved Oxygen | Water  | <a href="#">48139</a> |
| <a href="#">48152</a> | 2        | 20   | BIG CREEK           | Dissolved Oxygen | Water  | <a href="#">48152</a> |

| Listing Detail        | Category | WRIA | Water Body Name                    | Parameter           | Medium | Map Link              |
|-----------------------|----------|------|------------------------------------|---------------------|--------|-----------------------|
| <a href="#">48153</a> | 2        | 20   | UMBRELLA CREEK                     | Dissolved Oxygen    | Water  | <a href="#">48153</a> |
| <a href="#">51430</a> | 2        | 20   | BEAR CREEK                         | pH                  | Water  | <a href="#">51430</a> |
| <a href="#">51620</a> | 2        | 20   | OZETTE LAKE                        | 2,3,7,8-TCDD TEQ    | Tissue | <a href="#">51620</a> |
| <a href="#">21501</a> | 1        | 20   | BEAR CREEK                         | Fecal Coliform      | Water  | <a href="#">21501</a> |
| <a href="#">16745</a> | 1        | 20   | SOLEDUCK RIVER                     | Fecal Coliform      | Water  | <a href="#">16745</a> |
| <a href="#">10956</a> | 1        | 20   | SOLEDUCK RIVER                     | pH                  | Water  | <a href="#">10956</a> |
| <a href="#">10958</a> | 1        | 20   | HOH RIVER                          | Ammonia-N           | Water  | <a href="#">10958</a> |
| <a href="#">10960</a> | 1        | 20   | HOH RIVER                          | pH                  | Water  | <a href="#">10960</a> |
| <a href="#">35029</a> | 1        | 20   | SNIDER CREEK                       | Temperature         | Water  | <a href="#">35029</a> |
| <a href="#">35020</a> | 1        | 20   | BEAR CREEK                         | Temperature         | Water  | <a href="#">35020</a> |
| <a href="#">35032</a> | 1        | 20   | UNNAMED CREEK                      | Temperature         | Water  | <a href="#">35032</a> |
| <a href="#">35019</a> | 1        | 20   | ALKEE CREEK                        | Temperature         | Water  | <a href="#">35019</a> |
| <a href="#">6887</a>  | 1        | 20   | CANYON CREEK                       | Temperature         | Water  | <a href="#">6887</a>  |
| <a href="#">6888</a>  | 1        | 20   | TOWER CREEK                        | Temperature         | Water  | <a href="#">6888</a>  |
| <a href="#">6886</a>  | 1        | 20   | HOOT CREEK                         | Temperature         | Water  | <a href="#">6886</a>  |
| <a href="#">40700</a> | 1        | 20   | BEAR CREEK                         | Bioassessment       | Other  | <a href="#">40700</a> |
| <a href="#">40703</a> | 1        | 20   | BEAR CREEK, S.F.                   | Bioassessment       | Other  | <a href="#">40703</a> |
| <a href="#">40705</a> | 1        | 20   | UNNAMED CREEK (TRIB TO LAKE CREEK) | Bioassessment       | Other  | <a href="#">40705</a> |
| <a href="#">40710</a> | 1        | 20   | HOH RIVER                          | Arsenic             | Water  | <a href="#">40710</a> |
| <a href="#">51567</a> | 1        | 20   | OZETTE LAKE                        | 2,3,7,8-TCDD        | Tissue | <a href="#">51567</a> |
| <a href="#">51680</a> | 1        | 20   | OZETTE LAKE                        | 4,4'-DDD            | Tissue | <a href="#">51680</a> |
| <a href="#">51741</a> | 1        | 20   | OZETTE LAKE                        | 4,4'-DDE            | Tissue | <a href="#">51741</a> |
| <a href="#">51801</a> | 1        | 20   | OZETTE LAKE                        | 4,4'-DDT            | Tissue | <a href="#">51801</a> |
| <a href="#">51862</a> | 1        | 20   | OZETTE LAKE                        | Aldrin              | Tissue | <a href="#">51862</a> |
| <a href="#">51923</a> | 1        | 20   | OZETTE LAKE                        | Alpha-BHC           | Tissue | <a href="#">51923</a> |
| <a href="#">51984</a> | 1        | 20   | OZETTE LAKE                        | Beta-BHC            | Tissue | <a href="#">51984</a> |
| <a href="#">52045</a> | 1        | 20   | OZETTE LAKE                        | Dieldrin            | Tissue | <a href="#">52045</a> |
| <a href="#">52097</a> | 1        | 20   | OZETTE LAKE                        | Endosulfan I        | Tissue | <a href="#">52097</a> |
| <a href="#">52143</a> | 1        | 20   | OZETTE LAKE                        | Endosulfan II       | Tissue | <a href="#">52143</a> |
| <a href="#">52197</a> | 1        | 20   | OZETTE LAKE                        | Endosulfan Sulfate  | Tissue | <a href="#">52197</a> |
| <a href="#">52257</a> | 1        | 20   | OZETTE LAKE                        | Endrin              | Tissue | <a href="#">52257</a> |
| <a href="#">52317</a> | 1        | 20   | OZETTE LAKE                        | Endrin Aldehyde     | Tissue | <a href="#">52317</a> |
| <a href="#">52377</a> | 1        | 20   | OZETTE LAKE                        | Gamma-bhc (Lindane) | Tissue | <a href="#">52377</a> |
| <a href="#">52438</a> | 1        | 20   | OZETTE LAKE                        | Heptachlor          | Tissue | <a href="#">52438</a> |
| <a href="#">52499</a> | 1        | 20   | OZETTE LAKE                        | Heptachlor Epoxide  | Tissue | <a href="#">52499</a> |
| <a href="#">52559</a> | 1        | 20   | OZETTE LAKE                        | Hexachlorobenzene   | Tissue | <a href="#">52559</a> |
| <a href="#">52677</a> | 1        | 20   | OZETTE LAKE                        | PCB                 | Tissue | <a href="#">52677</a> |
| <a href="#">52740</a> | 1        | 20   | OZETTE LAKE                        | Total Chlordane     | Tissue | <a href="#">52740</a> |
| <a href="#">52801</a> | 1        | 20   | OZETTE LAKE                        | Toxaphene           | Tissue | <a href="#">52801</a> |

## Appendix G: Selected 303(d) Listings in WRIA 20

A cursory GIS review by an Ecology staff member of the 2008 Category 5 (303d) listings in Appendix F found that 39 of the 66 listings likely are adjacent or downstream of land uses other than forestry. These listings are highlighted in yellow and referenced in QLM-5.2 of this plan. This cursory list is intended to support future discussions on water quality monitoring efforts only.

| Listing Detail        | Category | WRIA | Water Body Name     | Parameter        | Medium | Map Link              |
|-----------------------|----------|------|---------------------|------------------|--------|-----------------------|
| <a href="#">35023</a> | 5        | 20   | SITKUM RIVER        | Temperature      | Water  | <a href="#">35023</a> |
| <a href="#">35026</a> | 5        | 20   | SITKUM RIVER        | Temperature      | Water  | <a href="#">35026</a> |
| <a href="#">35021</a> | 5        | 20   | CALAWAH RIVER, S.F. | Temperature      | Water  | <a href="#">35021</a> |
| <a href="#">16744</a> | 5        | 20   | HOH RIVER           | Fecal Coliform   | Water  | <a href="#">16744</a> |
| <a href="#">16743</a> | 5        | 20   | DICKEY RIVER        | Fecal Coliform   | Water  | <a href="#">16743</a> |
| <a href="#">14131</a> | 5        | 20   | SIWASH CREEK        | Dissolved Oxygen | Water  | <a href="#">14131</a> |
| <a href="#">7696</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7696</a>  |
| <a href="#">5824</a>  | 5        | 20   | SOLEDUCK RIVER      | pH               | Water  | <a href="#">5824</a>  |
| <a href="#">7693</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7693</a>  |
| <a href="#">6892</a>  | 5        | 20   | MAPLE CREEK         | Temperature      | Water  | <a href="#">6892</a>  |
| <a href="#">7728</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7728</a>  |
| <a href="#">6742</a>  | 5        | 20   | BIG RIVER           | Dissolved Oxygen | Water  | <a href="#">6742</a>  |
| <a href="#">7697</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7697</a>  |
| <a href="#">5815</a>  | 5        | 20   | CROOKED CREEK       | pH               | Water  | <a href="#">5815</a>  |
| <a href="#">5813</a>  | 5        | 20   | COAL CREEK          | pH               | Water  | <a href="#">5813</a>  |
| <a href="#">6896</a>  | 5        | 20   | WINFIELD CREEK      | Temperature      | Water  | <a href="#">6896</a>  |
| <a href="#">6754</a>  | 5        | 20   | BIG RIVER           | pH               | Water  | <a href="#">6754</a>  |
| <a href="#">6890</a>  | 5        | 20   | OWL CREEK           | Temperature      | Water  | <a href="#">6890</a>  |
| <a href="#">6889</a>  | 5        | 20   | WILLOUGHBY CREEK    | Temperature      | Water  | <a href="#">6889</a>  |
| <a href="#">6893</a>  | 5        | 20   | ANDERSON CREEK      | Temperature      | Water  | <a href="#">6893</a>  |
| <a href="#">6763</a>  | 5        | 20   | COAL CREEK          | Temperature      | Water  | <a href="#">6763</a>  |
| <a href="#">6897</a>  | 5        | 20   | NOLAN CREEK         | Temperature      | Water  | <a href="#">6897</a>  |
| <a href="#">7701</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7701</a>  |
| <a href="#">7692</a>  | 5        | 20   | BEAVER CREEK        | Temperature      | Water  | <a href="#">7692</a>  |
| <a href="#">6891</a>  | 5        | 20   | SPLIT CREEK         | Temperature      | Water  | <a href="#">6891</a>  |
| <a href="#">6894</a>  | 5        | 20   | LINE CREEK          | Temperature      | Water  | <a href="#">6894</a>  |
| <a href="#">6895</a>  | 5        | 20   | ALDER CREEK         | Temperature      | Water  | <a href="#">6895</a>  |
| <a href="#">7710</a>  | 5        | 20   | DICKEY RIVER, M.F.  | Temperature      | Water  | <a href="#">7710</a>  |
| <a href="#">7712</a>  | 5        | 20   | DICKEY RIVER, W.F.  | Temperature      | Water  | <a href="#">7712</a>  |
| <a href="#">7724</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7724</a>  |
| <a href="#">6752</a>  | 5        | 20   | SOUTH CREEK         | Dissolved Oxygen | Water  | <a href="#">6752</a>  |
| <a href="#">7725</a>  | 5        | 20   | SOLEDUCK RIVER      | Temperature      | Water  | <a href="#">7725</a>  |
| <a href="#">7698</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7698</a>  |
| <a href="#">7699</a>  | 5        | 20   | BOGACHIEL RIVER     | Temperature      | Water  | <a href="#">7699</a>  |
| <a href="#">7714</a>  | 5        | 20   | LAKE CREEK          | Temperature      | Water  | <a href="#">7714</a>  |
| <a href="#">7708</a>  | 5        | 20   | DICKEY RIVER, E.F.  | Temperature      | Water  | <a href="#">7708</a>  |
| <a href="#">7718</a>  | 5        | 20   | MAXFIELD CREEK      | Temperature      | Water  | <a href="#">7718</a>  |
| <a href="#">7717</a>  | 5        | 20   | LAKE CREEK          | Temperature      | Water  | <a href="#">7717</a>  |

| Listing Detail        | Category | WRIA | Water Body Name               | Parameter        | Medium | Map Link              |
|-----------------------|----------|------|-------------------------------|------------------|--------|-----------------------|
| <a href="#">7727</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7727</a>  |
| <a href="#">7709</a>  | 5        | 20   | DICKEY RIVER, M.F.            | Temperature      | Water  | <a href="#">7709</a>  |
| <a href="#">7703</a>  | 5        | 20   | COAL CREEK                    | Temperature      | Water  | <a href="#">7703</a>  |
| <a href="#">7711</a>  | 5        | 20   | DICKEY RIVER, W.F.            | Temperature      | Water  | <a href="#">7711</a>  |
| <a href="#">7715</a>  | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">7715</a>  |
| <a href="#">7713</a>  | 5        | 20   | ELK CREEK                     | Temperature      | Water  | <a href="#">7713</a>  |
| <a href="#">7723</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7723</a>  |
| <a href="#">7716</a>  | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">7716</a>  |
| <a href="#">7707</a>  | 5        | 20   | DICKEY RIVER, E.F.            | Temperature      | Water  | <a href="#">7707</a>  |
| <a href="#">7705</a>  | 5        | 20   | CROOKED CREEK, N.F.           | Temperature      | Water  | <a href="#">7705</a>  |
| <a href="#">7726</a>  | 5        | 20   | SOLEDUCK RIVER                | Temperature      | Water  | <a href="#">7726</a>  |
| <a href="#">7704</a>  | 5        | 20   | COAL CREEK                    | Temperature      | Water  | <a href="#">7704</a>  |
| <a href="#">7700</a>  | 5        | 20   | BOGACHIEL RIVER               | Temperature      | Water  | <a href="#">7700</a>  |
| <a href="#">42844</a> | 5        | 20   | LAKE CREEK                    | Dissolved Oxygen | Water  | <a href="#">42844</a> |
| <a href="#">42889</a> | 5        | 20   | BEAR CREEK                    | Dissolved Oxygen | Water  | <a href="#">42889</a> |
| <a href="#">48295</a> | 5        | 20   | SOOES RIVER                   | Temperature      | Water  | <a href="#">48295</a> |
| <a href="#">48910</a> | 5        | 20   | TROUT CREEK                   | Temperature      | Water  | <a href="#">48910</a> |
| <a href="#">48911</a> | 5        | 20   | CROOKED CREEK                 | Temperature      | Water  | <a href="#">48911</a> |
| <a href="#">48912</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48912</a> |
| <a href="#">48913</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48913</a> |
| <a href="#">48914</a> | 5        | 20   | BIG RIVER                     | Temperature      | Water  | <a href="#">48914</a> |
| <a href="#">48915</a> | 5        | 20   | UMBRELLA CREEK                | Temperature      | Water  | <a href="#">48915</a> |
| <a href="#">48916</a> | 5        | 20   | UMBRELLA CREEK                | Temperature      | Water  | <a href="#">48916</a> |
| <a href="#">48917</a> | 5        | 20   | SOOES RIVER                   | Temperature      | Water  | <a href="#">48917</a> |
| <a href="#">48918</a> | 5        | 20   | OZETTE RIVER                  | Temperature      | Water  | <a href="#">48918</a> |
| <a href="#">48919</a> | 5        | 20   | OZETTE RIVER                  | Temperature      | Water  | <a href="#">48919</a> |
| <a href="#">52620</a> | 5        | 20   | OZETTE LAKE                   | Mercury          | Tissue | <a href="#">52620</a> |
| <a href="#">52884</a> | 5        | 20   | FISHER CREEK (MCQUARRY CREEK) | Temperature      | Water  | <a href="#">52884</a> |

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## Appendix H: Conservation-type Programs for Landowners

### CLALLAM AND JEFFERSON COUNTIES

#### **Conservation District Programs:**

Clallam Conservation District  
1601 E. Front St., Bldg/Suite A  
Port Angeles, WA 98362  
Ph: (360) 452-1912 ext. 5  
[ccd-info@wa.nacdnet.org](mailto:ccd-info@wa.nacdnet.org)

Jefferson County Conservation District  
205 W. Patison  
Port Hadlock, WA 98339  
Ph: (360) 385-4105  
Fx: (360) 385-4823  
<http://www.jeffersoncd.org>

#### Education Programs on:

Farmland Stewardship  
Natural Landscaping

#### Annual Native Tree and Shrub Sales each January and February

#### Technical and Financial Assistance:

Farm Conservation Planning  
Manure management  
Pasture Management  
Roof Runoff Management and Rainwater Collection catchment  
Fish Barrier Removal  
Fish habitat enhancement  
Irrigation Water Management  
Irrigation Water Conservation  
Low Impact Development  
Stormwater Management  
Forest resource planning and management

The USDA Conservation Reserve Enhancement Program (CREP) is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water.

The USDA Biomass Crop Assistance Program (BCAP) provides financial assistance to producers or entities that deliver eligible biomass material to designated biomass conversion facilities for use as heat, power, biobased products or biofuels. Initial assistance will be for the Collection, Harvest, Storage and Transportation (CHST) costs associated with the delivery of eligible materials.

The USDA Emergency Forest Restoration Program, through the Emergency Conservation Program (ECP), provides emergency funding and technical assistance for farmers and ranchers [and foresters] to rehabilitate farmland damaged by natural disasters and for carrying out emergency water conservation measures in periods of severe drought.

**Washington State Programs:** <http://www.rco.wa.gov/grants/index.shtml>

Local contact information (salmon, farmland and watershed projects):

North Pacific Lead Entity (NPCLE)  
WRIA 20 Implementation Body (WRIA 20 IB)  
North Pacific Coast Marine Resources Committee (NPC MRC)

c/o Rich Osborne, Coordinator  
Clallam County Department of Community Development  
1601 E. Front St., Bldg/Suite A  
Port Angeles, WA 98362  
Ph: (360) 417-2569  
Fx: (360) 417-2443  
[rosborne@co.clallam.wa.us](mailto:rosborne@co.clallam.wa.us)

or

Jefferson County Water Quality Division  
c/o Tami Pokorny  
615 Sheridan Street  
Port Townsend, WA 98368  
Ph: (360) 379-4498  
Fx: (360) 385-9401

#### **NRCS Programs**

Port Angeles Service Center  
1601 E. Front Street, Suite A  
Port Angeles, WA 98362-4646  
Phone: (360) 452-8994  
Fx: (360) 452-5088  
<http://www.wa.nrcs.usda.gov/programs>

The Environmental Quality Incentives Program (EQIP) provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.

The Conservation Innovation Grants (CIG) is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program (EQIP) funds are used to award competitive grants to non-Federal governmental or non-governmental organizations, Tribes, or individuals.

The Conservation of Private Grazing Land Initiative (CPGL) ensures that technical, educational, and related assistance is provided to those who own private grazing lands.

Conservation Stewardship Program (CSP) is a voluntary conservation program that encourages producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities; and improving, maintaining, and managing existing conservation activities.

The program is now available on Tribal and private agricultural lands, as well as all nonindustrial private forest lands in Washington. CSP is also available to assist producers with a transition to organic production.

See [http://www.nrcs.usda.gov/programs/new\\_csp/2009\\_jobsheets.html](http://www.nrcs.usda.gov/programs/new_csp/2009_jobsheets.html) for information on the types of activities the CSP program may support.

The Farm and Ranch Land Protection Program (FRPP) provides matching funds to help purchase development rights to keep productive farm and rangeland in agricultural uses. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement.

The Healthy Forests Reserve Program (HFRP) is a voluntary program established for the purpose of restoring and enhancing forest ecosystems to: 1) promote the recovery of threatened and endangered species; 2) improve biodiversity; and 3) enhance carbon sequestration.

The Wetlands Reserve Program is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to establish long-term conservation and wildlife practices and protection.

The Wildlife Habitat Incentive Program (WHIP) is a voluntary program for conservation-minded landowners who want to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and Indian land.

#### **WA Dept. of Natural Resources Landowner Assistance Programs**

Small Forest Landowner Office  
PO BOX 47012  
Olympia, WA 98504-7012  
Ph: (360) 902-1400  
Fx: (360) 902-1428  
[sflo@dnr.wa.gov](mailto:sflo@dnr.wa.gov)

#### **Forest Stewardship Program:**

DNR provides onsite forest management consultation from DNR foresters, wildlife biologists, and fish biologists, including information on improving forest health and reducing wildfire risk. Learn if you qualify for programs to reduce taxes, access financial assistance, and get recognition for your stewardship. Learn how to develop and implement a multi-resource Forest Stewardship Plan customized to your individual objectives.

Family Forest Fish Passage Program:

Get advice and financial assistance to help restore fish populations by removing fish passage barriers on your forestland. This program pays 75 percent to 100 percent of the cost to replace a fish barrier with a fully passable structure.

Forestry Riparian Easement Program:

Help provide fish habitat and receive compensation in exchange for a 50-year conservation easement to maintain trees in riparian (streamside) areas on your land. Wetlands, seeps, springs, and unstable slopes are also eligible. You will still own the property, have full access, and do not have to allow public access after leasing the qualifying trees and riparian function to the state.

**Federal Programs**

The Landowner Incentive Program (LIP) is a competitive grant program to provide financial assistance to private landowners for the protection and restoration of habitat to benefit species-at-risk on privately owned lands. Funds are a direct appropriation from Congress that are passed through the US Fish and Wildlife Service (USFWS) to state fish and wildlife agencies in a nationally competitive process.

Contact information (through WDFW):

WDFW LIP Coordinator  
Ginna Correa  
Ph: (360) 902-2478  
[corregcc@dfw.wa.gov](mailto:corregcc@dfw.wa.gov)

Catalog of Federal Funding Sources for Watershed Protection (for clubs and organizations, businesses, watershed groups, farmers and others in addition to landowners): <http://cfpub.epa.gov/fedfund>

Carbon:

Northwest Neutral is a forest- based carbon offset program developed for small landowners.

Northwest Natural Resources Group  
P.O. Box 1067, Port Townsend, WA 98368  
Ph: (360) 379-9421  
<http://www.nnrg.org/NW-Neutral>

JEFFERSON COUNTY ONLY:

The Conservation Futures Program (CF) is a competitive grant program to support the protection of open spaces in Jefferson County, including habitat and working forest and farmland.

Jefferson County Conservation Futures Program  
615 Sheridan Street  
Port Townsend, WA 98368  
Ph: (360) 385-9444  
Fx: (360) 385-9401  
tpokorny@co.jefferson.wa.us  
<http://www.co.jefferson.wa.us/commissioners/default.asp>

ShoreBank Septic Loans are offered by ShoreBank Cascadia, a non-profit lender, to Jefferson County residents to get help with septic repair costs.

ShoreBank Cascadia  
221 W. Railroad Ave., Suite 12  
Shelton, WA  
Ph: (360) 427-2875  
[sbseptic@sbpac.com](mailto:sbseptic@sbpac.com)  
<http://www.sbpac.com/bins/site/templates/splash.asp>

## Appendix I: Permitting Resources

This table includes permits likely to be needed for DIP implementation. Additional permits or approvals may be necessary. Contact the Washington State Governor's Office of Regulatory Assistance for additional information at [help@ora.wa.gov](mailto:help@ora.wa.gov), Ph: (360) 407-7037 or write ORA Information Center at 300 Desmond Drive SE, Lacey, WA 98503 PO Box 47600, Olympia WA, 98504-6700. The online Environmental Permit Handbook is available at <http://apps.ecy.wa.gov/permithandbook/index.asp>.

| Permit Type(s):  | Projects or activities involving:  | Contact:  |
|--|--|---|
| Hydraulic Project Approval   | Construction or other activity below the ordinary high water mark.   | Department of Fish and Wildlife<br>Region No. 6 - Peninsula<br>48 Devonshire Road<br>Montesano, WA 98563-9618<br><a href="http://wdfw.wa.gov/">http://wdfw.wa.gov/</a><br>Ph: (360) 249-4628<br>Fx: (360) 664-0689  |
| Shoreline Conditional Use Permit<br><br>Shoreline Exemption<br><br>Shoreline Variance Permit | Projects or activities within 200 feet landward of the ordinary high water mark.   | Clallam County Land Use and Development Department<br>223 East Fourth Street,<br>Port Angeles, WA 98362<br><a href="http://www.clallam.net/RealEstate">http://www.clallam.net/RealEstate</a><br>Ph: (360) 417-2420<br><br>OR<br><br>Jefferson County Community Development<br>621 Sheridan Street<br>Port Townsend, WA 98368<br><a href="http://www.co.jefferson.wa.us/commdevelopment/AboutDCD.htm">http://www.co.jefferson.wa.us/commdevelopment/AboutDCD.htm</a><br>Ph: (360) 379-4450 |
| Wetlands   | Projects or activities that involve working in or near wetlands, areas that are transitional between open water and uplands or areas that are periodically inundated or saturated. | Department of Ecology<br>Headquarters<br>300 Desmond Drive<br>PO Box 47600<br>Olympia, WA 98504-7600<br><a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a><br>Ph: (360) 407-6000   |

| Permit Type(s):   | Projects or activities involving:   | Contact:   |
|---|---|--|
| Air Quality Permits                                     | ORCAA enforces federal, state and local clean air laws. Request ORCAA's air permits and permit requirements.  | Olympic Region Clean Air Agency<br>Port Angeles Office<br>116 W. 8 <sup>th</sup> Street, Suite 113<br>Port Angeles, WA 98362<br><a href="http://www.orcaa.org">http://www.orcaa.org</a><br>Ph: 1-800-422-5623  |
| Archaeology and Historic Preservation Permits           | Excavating, altering, defacing, or removing archeological objects or resources.   | Department of Archaeology & Historic Preservation<br>Headquarters<br>Suite 106<br>1063 South Capitol Way<br>Olympia, WA 98501<br>Ph: (360) 586-3065<br><a href="http://www.dahp.wa.gov">http://www.dahp.wa.gov</a>   |
| Forest Practices Permit                                 | Forest practices on private and state forest land including installing and replacing water crossings on forest roads.                                     | Department of Natural Resources<br>Forest Practices Division<br>Headquarters<br>1111 Washington Street SE<br>PO Box 47012<br>Olympia, WA 98504-7012<br>Ph: (360) 902-1400<br><a href="http://www.dnr.wa.gov/forestpractices">http://www.dnr.wa.gov/forestpractices</a>   |
| NPDES Aquatic Noxious Weed Control NPDES General Permit | Discharge of products used to control noxious weeds in waters of Washington state.  | John Jennings<br>Water Quality Program<br>Department of Ecology<br>PO Box 47600<br>Olympia, WA 98504<br>Ph: (360) 407-6283<br>Register online at:<br><a href="http://www.ecy.wa.gov/programs/wq/pesticides">http://www.ecy.wa.gov/programs/wq/pesticides</a>   |
| Water System Construction and Operation Approval        | To obtain DOH approval of an existing public water system, a proposed extension of an existing public water system, or a proposed new public water system | Department of Health<br>Southwest Regional Office<br>Clark, Halvorson, Southwest Regional Manager<br>Ph: (360) 236-3025<br><a href="mailto:clark.halvorson@doh.wa.gov">clark.halvorson@doh.wa.gov</a><br><a href="http://www.doh.wa.gov/ehp/dw/fact_sheets/oper-permits.htm">http://www.doh.wa.gov/ehp/dw/fact_sheets/oper-permits.htm</a> |

| Permit Type(s):                          | Projects or activities involving:  | Contact:   |
|--|--|--|
| Water Rights Change                      | Changes to the place of use, point of diversion or withdrawal, additional point(s) of diversion or withdrawal, or purpose of use of existing water rights. | Download the application at <a href="http://www.ecy.wa.gov/biblio/ecy040197.html">http://www.ecy.wa.gov/biblio/ecy040197.html</a><br>Department of Ecology<br>Water Resources Program<br>Headquarters<br>300 Desmond Drive<br>PO Box 47600<br>Olympia, WA 98504-7600<br>Ph: (360) 407-7162   |
| New Water Right                          | To withdraw or divert surface or ground water.   | Download the application at <a href="http://www.ecy.wa.gov/biblio/ecy040114.html">http://www.ecy.wa.gov/biblio/ecy040114.html</a><br>Department of Ecology<br>Water Resources Program<br>Headquarters<br>300 Desmond Drive<br>PO Box 47600<br>Olympia, WA 98504-7600<br>Ph: (360) 407-7162   |
| Well Construction and Operator's License | Construction and road decommissioning activities for water wells and many other categories of wells.   | Download the application at <a href="http://www.ecy.wa.gov/biblio/ecy050121a.html">http://www.ecy.wa.gov/biblio/ecy050121a.html</a><br>Department of Ecology<br>Water Resources Program<br>Headquarters<br>300 Desmond Drive<br>PO Box 47600<br>Olympia, WA 98504-7600<br>Ph: (360) 407-7162 |

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## Appendix J: Noxious Weeds of Concern in WRIA 20

An informal, and not necessarily comprehensive, list developed from information provided by staff for the Clallam County Noxious Weed Control Board in March 2010. Weeds are listed in no particular order.

Poison hemlock  
Garlic mustard  
Giant hogweed  
European hawkweed  
Hoary alyssum  
Tansy ragwort  
Butterfly bush  
Common fennel  
Perennial sow thistle  
Purple loosestrife  
Orange hawkweed  
Scotch broom  
Meadow knapweed  
Spotted knapweed  
Lawn weed  
Himalayan and Evergreen blackberry  
Spurge laurel  
Sulfur cinquefoil  
Common tansy  
Old man's beard  
Yellow arch angel  
Canada thistle  
Reed canary grass  
Bull thistle  
Spartina  
Gorse