



North Olympic Peninsula Entity

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North Olympic Lead Entity for Salmon 3-Year Workplan Narrative Report

May 2010 Report of Major Work Funded, Begun & Completed in 2009

1. What are the actions and/or suites of actions needed for the next three years to implement your salmon recovery chapter as part of the regional recovery effort?

See the attached list of prioritized projects, as well as the completed template.

2. What is the status of actions underway per your recovery plan chapter?

Dungeness: There was significant progress made during the last year on the Lower Dungeness Dike Setback, Phase II, which is the top ranked project priority for the N.Olympic Peninsula Lead Entity and is a major action identified in the Dungeness Chapter of the Chinook Recovery Plan. With Clallam County as the project sponsor, two properties located within the floodplain of the east side dike were purchased and the homeowners relocated in 2009. No money for construction has been secured at the present time. Current cost estimates are approximately \$7.5 million, however a better cost estimate will be made after a final design has been selected.

Efforts are now underway to remove the existing buildings and infrastructure so the river can reclaim needed floodplain. Three design options are also now being created. The Washington Department of Fish and Wildlife and the Washington Department of Transportation are working with the project sponsor, Clallam County; on other possible acquisitions needed in the area which would benefit the project. Clallam County was awarded additional PSAR grant funding in late 2009 to complete two other acquisitions, both of which will allow for further increased floodplain in the area.

Another phase of this project requires channel remeandering. The Jamestown

S'Klallam Tribe, which is a major partner on the overall dike setback project; has already submitted one grant application this year to help fund a design phase and was subsequently notified that they are being awarded EPA grant funds to do this work.

Also funded last year was another major phase of piping open irrigation ditches in the Sequim area, which is expected to result in valuable cubic feet per second (cfs) savings, thereby decreasing the amount of water pulled from the Dungeness Rier. This project is lead by the Clallam Conservation District, which partners with various irrigation ditch companies and other funding sources to continue this work. This water conservation measure is a major priority in the Dungeness Chapter of the Chinook Recovery. Low instream flows are a key limiting factor on the Dungeness.

In the project ranking for our 2010 workplan, it was suggested that rather than ranking separate phases of this project, that they be combined and ranked as one project/suite of actions. This allows a greater understanding of the overall size, scope and cost of the project. This combined suite of actions is now our Lead entity's third-ranked project priority in 2010. In our 2009 Workplan ranking, when those projects were parceled out independently, the highest ranked project came in 13th overall.

The Dungeness Estuarine Project was completed by the Jamestown S'Klallam Tribe in 2009 with a marsh connectivity element and a major planting of more than 3,500 trees. The project restored 10 acres of estuary habitat important for salmon spawning and rearing. This project had been funded by the SRFB in late 2006.

Construction also got underway in 2009 and has since been completed on the Pitship Pocket Estuary Restoration. Funded by the SRFB in 2007, this project replaced an undersized culvert with a bridge to restore tidal hydrology and unimpeded fish passage into the Pitship Marsh Pockey estuary which is located within the salmon migratory corridor of Sequim Bay. The project was lead by the North Olympic Salmon Coalition, working in partnership with the City of Sequim which owns the road where the undersized culvert was located. The North Olympic Salmon Coalition is monitoring this newly increased habitat and reports juvenile salmon using this newly opened up habitat.

Elwha: The pace of restoration as outlined in the Elwha Chapter of the Puget Sound Chnook Recovery Plan increased significantly this past year as the Elwha dam removal project gained momentum by initiating and completing several of the key components required prior to removal of two aging dams on the Elwha that were built without fish passage in the early 1900s. Removal of the dams is, of course, a major priority action of the Elwha Chapter of the Puget Sound Chinook Recovery Plan. Construction of a residential and industrial water treatment plants required to be built prior to dam removal were constructed in 2009. The residential and industrial water supply for the City of Port Angeles comes from the Elwha River. Preparations for a new Elwha Klallam fish hatchery also got underway in 2009, with a groundbreaking ceremony in early 2010.

Also completed was construction of a Greenhouse located at Clallam County's Robin Hill Park where Olympic National Park staff will propagate plants needed for the large scale revegetation needed to recover newly-exposed floodplain after dam removal. A revegetation plan has been completed, however, only 50% of this project is funded at this time. An additional \$4 million is needed. The Elwha Klallam Tribe will take the lead in revegetating the Lake Aldwell area, in a joint venture which will include the Elwha Tribal Restoration Crew and Park volunteers.

Federal stimulus money and advocacy from the National Park Service, Puget Sound Partnership and others helped gain the additional federal funding allocation that the National Park Service needed to move actual dam removal up to a much-anticipated start date now expected to be sometime in late 2011.

The Elwha Klallam Tribe was successful in its 2009 grant application to the federal government for stimulus funding targeted towards restoration efforts in the Elwha River Watershed. The Elwha Klallam Tribe was awarded a \$2 million grant which will fund 20 additional engineered log jams which the tribe is constructing in the Elwha floodplain. The Tribe constructed 4 such jams in 2009. Construction of these large-scale jams is the second highest priority project across all watersheds which are part of the North Olympic Peninsula Lead Entity. The Tribe is requesting further funding for additional log jams needed as part of the Elwha restoration efforts in our 2010 grant funding round for SRFB and remaining Puget Sound Acquisition and Restoration dollars (PSAR).

Additional projects funded with stimulus dollars include the relocation of the Elwha Hatchery Outfall and Berm Removal (N.Olympic Workplan Project ID#17) which has been completed, as well as replacing 2 undersized culverts on Boso Creek and Griff Creek (N.Olympic LE Workplan Project ID #19), both of which are Elwha tributaries. The Griff Creek Culvert replacement is currently under construction, which the Bosco Creek replacement is expected to potentially happen this summer.

Some stimulus monies are also helping fund an adult salmon enumeration weir on the Elwha. (N.Olympic LE Workplan Project ID #76) This fish enumeration weir on the river allows fisheries managers to accurately assess recovery rates, and provide an efficient means for broodstock collection and will allow for tagging and collection of other important biological information needed to assess the success of ecosystem recovery on the Elwha River. There is only funding, however, for one year of operations, so additional funding will be needed.

Further exploration was done in 2009 regarding whether fish passage could be increased in the 6.5 acres of Elwha River Estuary which is located on the far west side of the Elwha River Delta. This area is currently blocked to fish and was caused by the impoundment of the Elwha River channel during construction of the Place Road Levee which bisects it. A Fish Passage Feasibility Study was completed in June of 2009 by Coastal Geologic Services, Inc. and funded with PSAR technical support dollars. This report will help inform potential future work in this area.

Restoration work continues on Morse Creek, which is in the eastern portion of the Elwha-Morse Watershed Resource Inventory (WRIA 18) area. Morse Creek is a medium-sized tributary to the Strait of Juan de Fuca. It is used by multiple stocks of imperiled salmon including Strait of Juan de Fuca summer chum, bull trout, pink salmon, coho and winter steelhead. Puget Sound Chinook were recently extirpated in Morse Creek, however, rearing channels were recently constructed there for outplanting of Elwha Chinook as a safeguard measure to preserve the species, should their viability be threatened following dam removal. In 2007 and 2008, the North Olympic Salmon Coalition received PSAR and SRFB funding which will be used to restore high quality mainstem, side channel and off-channel habitat. Work includes removal of 1,100 feet of dike, realignment and restoration of the 1939 stream channel, reconnection of the stream with almost 10 acres of floodplain and construction of two or more engineered log jams. Design plans were nearing completion by the end of 2009 and restoration work is now underway.

The Elwha Nearshore Consortium continues to hold its annual conference in January at Peninsula College where those involved with nearshore restoration efforts along the Elwha gather to collaborate and report on their work and discuss other restoration, monitoring and research which is needed.

STRAITS-WRIA 19:

The pace of recovery efforts has increased during 2009 in Lyre-Hoko WRIA 19. In late 2009, the SRFB awarded PSAR funding for this resulted in the award of PSAR funding for property acquisition along the Pysht River, a project sponsored by the North Olympic Land Trust, in partnership with both the Makah and Elwha Klallam Tribes. The project, when completed, will be acquired and held by the Land Trust and will protect 21 acres fronting both sides of the river in perpetuity.

Also funded was a Western Strait Habitat Conservation Planning Project which will identify and layout protection strategies for critical salmon habitat there. This will result in the identification of additional protection and restoration efforts needed in this area. Efforts will begin in 2010 on this project which is also sponsored by the North Olympic Land Trust, again working in concert with both the Elwha Klallam and Makah Tribes, as well as others.

Having the active support and involvement of the Land Trust and Makah Tribes in these projects has significantly increased the capacity for needed protection work to be completed in this WRIA.

In addition, further restoration actions outlined by the state's Intensively Monitored Watershed located in WRIA 19's East and West Twin Rivers and Deep Creek were also forwarded by the Lead Entity and received SRFB and PSAR funds in late 2009. The IMW is part of a statewide monitoring strategy adopted by the SRFB to assess the

effectiveness of habitat restoration on fish production at the watershed scale. East and West Twin River and Deep Creek are included in the IMW study because of the commitment to watershed restoration and monitoring of salmon production by the Lower Elwha Klallam Tribe. Approximately 300 keys pieces of wood will be added to more than 5.2 miles of stream using helicopter placement techniques at selected reaches in Sadie Creek, East Twin River and Deep Creek.

Work continued in 2009 on a Pysht River Engineering Feasibility Study, a project lead by the Elwha Klallam Tribe and funded by PSAR in 2007 to evaluate restoration scenarios identified in a previous watershed analysis for potential restoration work in the Pysht Estuary which is the second largest estuary in the Strait of Juan de Fuca. Log jams have been constructed and work continues as part of the Pysht River Large Wood Project which was also funded in 2007.

Efforts to correct barrier culverts on Salt Creek also continued in the last year. Funding for this work came from a NOAA's Open Rivers grant, as well as funding from both SRFB and PSAR. The project involved the replacement of 4 culverts on 2 tributaries to Salt Creek as part of an ongoing effort to correct all human-caused barriers in the watershed. Previously, 31 culvert blockages were identified in the Salt Creek Watershed Analysis.

Citizen interest and support for restoration actions in WRIA 19 remains strong. Work has also resumed on completing a WRIA 19 Salmon Restoration Plan. There was some work done on the draft plan in both the beginning and end of 2009. Efforts continue by a subcommittee of our lead entity's Technical Review Group which plans to complete the plan in 2010.

Watershed planning work also continues in this WRIA. A draft plan was unveiled for Initiating Governments in late 2009. It is now up to the Initiating Governments to decide if the plan is ready to be released for public review and comment. If they are not ready, the plan will either be returned to the Watershed Planning Group for more work or work on it will stop.

3. Is this on pace with the goals of your recovery plan?

Our N. Olympic Peninsula salmon recovery plans did not always lay out specific timeframes. However, from the standpoint of increasing and restoring our native salmon runs, we would be behind pace due primarily to lack of funding needed to tackle particularly major, large scale restoration efforts. What has increased the pace of restoration on the N.Olympic Peninsula has been the addition of PSAR funds which were large enough to provide significant funding and jump-start some large-scale restoration efforts such as those along the Dungeness and Pysht.

Capacity is also lacking. We are still trying to do large scale, ecosystem recovery efforts with limited staff and in many cases, limited funding. On some of the larger scale restoration efforts, in a best case scenario you have a handful of people

coordinating recovery actions. And most of those individuals are juggling numerous other obligations as well. Mostly is it one or two people who are leading the planning and design efforts, writing grants to obtain funding, and then overseeing project construction and completion. We would not and do not build a bridge or major highway with this lack of funding and infrastructure. Yet, we keep trying to do large scale recovery in this fashion.

That said, restoration practitioners on the N.Olympic Peninsula have done a very good job using what resources are available and have worked hard to move recovery efforts forward despite the obstacles. An important piece not to be overlooked is the critical role which the Puget Sound Acquisition and Restoration Funds from the Washington State Legislature have played. By providing critically-needed, capital funding, feasibility, design and other work has begun on large-scale needed restoration efforts such as the Dungeness Dike Setback and the Pysht Estuary Restoration. PSAR funding has also enabled smaller projects which link up with larger scale recovery efforts like the Pysht Large Woody Debris Project to move forward as well.

We are mindful that time is of the essence when it comes to salmon survival. In addition, our elders and older generations are waiting to see the fruits of restoration efforts that have been on the drawing boards for years. They are joined by younger people also anxiously awaiting the salmon's return.

What is the general status of the following below:

Note: progress can be tracked in terms of Not Started, Little Progress, Some Progress, Complete, or in more detail if you choose.

Habitat Restoration Implementation:

Dungeness - Progress here has been accelerated thanks to Puget Sound Acquisition & Restoration Funding and ongoing efforts of restoration partners working collaboratively and on behalf of this area. However, approximately \$9 million now needed to pay for construction of dike setback.

Elwha - Progress greatly accelerated due to immediacy of dam removal and better understanding of overall restoration needs. Federal stimulus dollars to The National Park Service to expedite dam removal and federal stimulus funding of a Lower Elwha Klallam Tribe grant request for additional restoration work to maximize the effects of dam removal have helped this acceleration and has the work of restoration partners and others advocating for this work. Further funding is needed and request for such has been made in this 2010 grant round.

Straits- WRIA 19 - Progress has been made with large wood being added to some key sections of the Pysht, completion of the Pysht Estuary Feasibility Study which should lead to restoration actions in the estuary, as well as culvert correction work being

completed on several locations in Salt Creek.

Habitat Protection:

Dungeness - Progress made to further protection efforts done previously in the large-scale Jimmycomelately Restoration with the funding of a proposed key acquisition in that area in the Hood Canal 2009 Grant Round, of which the N.Olympic Peninsula LE participated. The N.Olympic Land Trust partnered with the Jamestown S'Klallam Tribe to propose this acquisition, which was the top ranked project in Hood Canal.

Progress greatly accelerated in 2009 with the purchase by Clallam County of key parcels needed for the Dungeness Dike Setback Project. The County was approved for additional acquisition work needed as part of this project in late 2009. There are also statewide partners now looking into assisting with further protection efforts in this area.

The Jamestown S'Klallam Tribe has proposed additional protection actions in the Lower Dungeness in the N.Olympic LE's 2010 Grant Round for SRFB and remaining PSAR funding.

Elwha - There is a request for funding to complete a Protection Plan for the Elwha River Nearshore pending in N. Olympic's current round for 2010 SRFB and PSAR funding. Significant additional resources would be needed in order to do conservation easements or acquisitions in this area.

Straits-WRIA 19 - Funding for riverbank acquisition along the Pysht was awarded by the SRFB in late 2009. The sponsor for this work is the North Olympic Land Trust, in partnership with the Lower Elwha Klallam and Makah Tribes. The Land Trust is now requesting funding in 2010 to complete further Phase II acquisitions along the Pysht. Additional protection actions are expected to be proposed in this area following completion of the WRIA 19 Salmon Plan and the Straits Conservation Plan which was also approved by the N.Olympic Lead Entity and forwarded to the SRFB for funding in 2009.

Harvest Management:

There are some difficulties with our ability to access and analyze this information for the North Olympic Peninsula Watersheds at this time. We are working to eliminate this data gap and update our report in this area as soon as possible.

Hatchery Management:

Dungeness - We have sought and received some data but we do not have the background information needed to analyze it at the present time. We will work to complete this data gap.

Elwha- Fish Raceways were constructed along Highway 101 east of Port Angeles where Elwha Chinook are being outplanted in an effort to maintain the species should there be a serious problem during dam removal which would threaten the species.

Straits-WRIA 19 - Budget cuts and other recommendations resulted in the suspension of Chambers Creek Steelhead smolt releases in the Lyre River and potentially elsewhere. This is expected to allow for increased restoration opportunities in this area.

4. Sequence/Timing: In order to encourage practitioners to work on high-ranked projects in our three-year workplan, our LEG agreed this year to draw a separation line on our three-year capital workplan. Any projects below the line are not allowed to apply for SRFB or PSAR funding this year. This is a strategic move and meant to send the message that high ranking projects on our three-year capital workplan should be completed before work and funding is directed toward lesser ranking projects.

What are the top implementation priorities in your recovery plans in terms of specific actions or themes/suites of actions?

On the Dungeness, it is the dike setback project. On the Elwha, it is dam removal. Attached find two outlines, one which details recovery priority goals, strategies and actions for the Dungeness Watershed and the other for the Elwha Watershed. These priorities are still being set for the WRIA 19 Salmon Plan which is still being developed, however a draft set of needed actions is included.

How are these top priorities being sequenced in the next three years?

Work is underway on both of these large scale, restoration efforts, with acquisitions occurring in the Dungeness which are part of the dike setback project and design alternatives are currently being drafted. On the Elwha, they continue to seek funding to continue installing additional log jams needed to maximize the use of newly created floodplain area following dam removal. With dam removal imminent, this work is front and central. Both of these projects are the top two ranked projects in our North Olympic Lead Entity Three-Year Workplan.

What do you need to be more successful in implementing these priorities?

More funding and larger amounts of funding are needed to jumpstart and implement these large-scale, ecosystem recovery efforts. For example, an estimated \$7.5 million

is needed to construct the Dungeness Dike Setback project. Another \$9 million is anticipated to fund the Dungeness Corridor Protection Project to acquire key parcels along the river. An additional \$4 million is needed for revegetating the Elwha. There will be a similarly high pricetag to acquire key parcels in the Elwha Nearshore as well as in WRIA 19 watersheds such as the Lyre River.

Capacity remains a challenge, particularly since the size and scale of the work is increasing, as is the pressure to complete these projects more quickly. In addition, there is often little funding for the time it takes to plan and administer large-scale restoration efforts.

5. Next Big Challenges

Some of the next big challenges expected include sediment management in the Elwha, along with Adaptive Management and Monitoring there and in other Olympic Peninsula watersheds.

Have there been any significant changes in the strategy or approach for salmon recovery in your watershed? If so, how & why?

Based on direction from Phil Roni, our former Regional Implementation Technical Team Member; and subsequent support and direction from our Lead Entity Group; we have worked on increasing key acquisitions, easements and other protection measures since there was limited effort put towards such previously.

In terms of strategy, we are trying to take a more strategic approach and are encouraging our restoration practitioners to do the same. This year, the Lead Entity Group, after hearing a recommendation from the Technical Review Group, drew a line on our workplan, below which projects are not eligible to apply for SRFB or PSAR funding. It is fairly low on the list, but this is an evolutionary step towards being more strategic.

6. What is the status or trends of habitat and salmon populations in your watershed?

Our Technical Team updated stock status and trends for our 2008 workplan update.

7. Are there any new challenges associated with implementing salmon recovery actions that need additional support? If so, what are they?

Some believe there are changes needed in near term fish management yet there is resistance due to turf and opportunity towards making these changes. Help in making some of these systems changes would go a long way towards furthering salmon recovery.

Assistance would also be helpful in determining what the next steps are for submitting information to NOAA to consider regarding the finding of ESA-listed juvenile salmonids in the WRIA 19 nearshore, as well as the steps for who and how to have the WRIA 19

Salmon Plan reviewed.

Further work is also needed to better integrate the work of all those involved with salmon -be it on the habitat, harvest, hatchery or hydro side so that one area is understanding how their decisions impact the greater ecosystem.

Dungeness River Restoration Plan
 Puget Sound Partnership Exercise
 10yr Goals

Listing Factor	Goal (Worksheet 1.1)	Strategy (Worksheet 1.2)	Action (worksheet 1.3)
Habitat	1) Restoration of the lower river floodplain and delta to increase the quantity of essential rearing and salt/freshwater transition habitat 2) Floodplain Restoration/Constriction Abatement (RM 2.6 - 11.3) to alleviate channel constrictions, thereby increasing corresponding channel meanders and reducing gradient, velocities, scour and bank erosion	Floodplain Restoration/Constriction Abatement	<p>Army Corps of Engineers and Beebe Dike set-back.</p> <p>Removal of upper Haller Dike at the Weikal property</p> <p>Property will be purchased for the Corps Dike setback. The area will be re-vegetated and engineered log jams will be constructed</p>
	3) Protection of existing functional habitat within the watershed	Regulatory protection measures to be utilized include the Critical Areas Codes, Forests and Fish rules, Department of Natural Resources Habitat Conservation Plan, the Federal Forest Plan, Shorelines Protection Act, the State Hydraulics Code, the WRIA 18 Watershed Plan, and Tribal land use regulations	Riparian corridor protection/restoration to Highway 101 through land acquisition/easement
	4) Water Conservation, Instream Flows, and Water Quality Improvement/Protection to improve summer low flows and alleviate water quality concerns	Water Quantity/Quality	<p>Implement such projects as piping and lining and other conservation strategies, re-regulating reservoir, water rights and leases and trusts, and reduce conveyance through river/creeks</p> <p>Implement other domestic/municipal water conservation projects identified in the WRIA 18 Watershed Plan</p> <p>Restore riparian corridor in Matriotti Creek</p> <p>Restore riparian corridor throughout the lower mainstem (numerous individual projects — see Recommended Land Protection Strategies for the Dungeness, 2003)</p>
	5) Restoration of Functional Riparian and Riverine Habitat to improve the quality of riparian habitat and function, including temperature moderation, long-term recruitment of Large Woody Debris (LWD), cover, food production, etc.	Riparian/Riverine Restoration	Dungeness River Riparian Area in general
	6) Large Woody Debris Placement	Immediate in-stream functional habitat restoration via Large Woody Materials (LWM)	Lower river floodplain restoration, LWD between Schoolhouse Bridge and Woodcock Road Strategically placed LWD between Hurd Creek and Highway 101
	7) Nearshore Habitat Protection and Restoration to improve the quantity and quality of estuarine and nearshore habitat	Nearshore Protection / Restoration	<p>Implement Dungeness Bay Cleanup Plan (Clean Water Workgroup, 2002)</p> <p>High priority restoration, protection and assessment projects along the Strait of Juan de Fuca</p>
	8) Barrier Removal to address passage conditions	remove fish barriers	Improve fish screen/irrigation out-take alignments
	9) Stock Recovery/Rehabilitation hatchery Reform (See Hatchery Strategy, below)	(See Hatchery Strategy, below)	
	10) Sediment Management/Source Control	Control mass wasting	Decommission and stabilize selected roads within the National Forest

Harvest	Currently, there is no fishery for Chinook in the river or bay. The timing of coho fisheries is managed to minimize incidental capture of Chinook adults during the fall. The recreational trout fishery is timed to reduce the chance of intercepting juvenile Chinook salmon out-migrants.		
Hatchery	The DRMT hypothesizes that habitat recovery will be sufficient to support a productive and sustain-able natural Chinook population. Hatchery management strategies are designed to be consistent with recovery goals. A hatchery broodstock supplementation program is being utilized to bolster Chinook production in the watershed. The program will be conducted until the restored habitat can accommodate a robust, naturally sustainable Chinook population. Non-Chinook hatchery programs for coho and steelhead are managed to avoid negative impacts of predation on Chinook.		
Hydro Dam	Not Applicable to Dungeness		
Predation	Not identified as a listing factor for Dungeness Chinook. ???Same for Dungeness????		
Disease	Disease is covered under hatchery and hydro factors. ???Same for Dungeness????		
Natural Factors	Natural factors were not considered???Same for Dungeness????		

No.	Project Type	Plan Category	Project Name	Project Information and How it Relates to the Recovery Plan										Project Planning						Project Cost and Sponsor				
				Project Description (brief description)	Priority tier of project	Limiting Factors	Document Reference for limiting factor (Recovery Plan, Chapter 3 - Habitat Protection)	Habitat Type (HWS items - i.e. riparian, estuary river delta, nearshore, etc.)	Activity Type (HWS items - i.e. fish passage, instream flow, sediment reduction, etc.)	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (Conceptual, Feasibility completed, land acquisition completed, design completed, permitting completed, construction completed)	2010 Activity to be funded	2010 Estimated Cost	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
Capital Projects																								
Habitat																								
1	Restoration	Capital	Little Hoko (RM 0.0-2.0) LWD Restoration	Little Hoko River (RM 0.0-2.0) to install 200 pieces of large woody debris by helicopter.	2	LWD, Side Channel, riparian	WRIA 19 Recovery Plan, chapter 8	Riparian/Floodplain	Instream Habitats, Riparian	30 ac riparian 3 miles of channel treated with LWD	Coho	Steelhead, cutthroat, chum, Chinook	Conceptual				Construction	\$350,000	2012	LEKT	\$350,000	\$50,000	SRFB	
2	Restoration	Capital	Hoko River- Emerson Flats LWD Supplementation	This project will restore spawning and rearing habitat in the Hoko Mainstem	3	Severe Lack of Large Woody Debris (LWD)	Hoko River Fit To Strategy on www.Noplegroup.org and Hoko Watershed Analysis Riparian Function from WDNR	Riparian	Riparian/Instream Habitat Project / Habitat Complexity	Add LWD to the Hoko Mainstem	Chinook	Coho, chum, steelhead and cutthroat	Conceptual	LWD Purchase and ELJ Installation	\$400,000	LWD Purchase and ELJ Installation	\$300,000		2011	Makah	\$700,000	\$105,000	unknown	
3	Restoration	Capital	Lower Hoko River - Riparian Revegetation	This project will restore the riparian zone along the Hoko Mainstem, RM 1-7, known Fall Chinook habitat.	3	Degraded water quality and high stream temperature, and Degraded riparian conditions	WRIA 19 (Lyre-Hoko) Salmonid Restoration Plan, draft dated April 20, 2008, Chapter 5	Riparian revegetation	Riparian Habitat / Riparian Revegetation	Revegetate the Hoko Mainstem (RM 1-7)	Hoko Fall Chinook	Coho, chum, steelhead and cutthroat	Conceptual	order trees, identify areas	\$5,000	plant trees	\$250,000		2011	NOSC & Makah	\$255,000	\$38,250	unknown	
4	Restoration	Capital	Hoko River/ Hermans Creek - Instream LWD Supplementation	The placement of LWD to Herman Ck along with LWD placement within the month as it enters Hoko.	3	Loss of Tributary Habitat Diversity Riparian Areas & LWD Recruitment Stream Substrate	WRIA 19 LFA (chapter on the Hoko references the lack of LWD), and the Water Resource Inventory Area 19 (Lyre-Hoko) Salmonid Restoration Plan (draft dated April 20, 2008)	Instream Riparian	Instream work	9 LWD jams placed within 2,500 meter of stream	Chinook	Coho, Steelhead & Cutthroat	Conceptual	Permitting & design	\$25,000	Construction	\$225,000	2012	Makah	\$250,000	\$60,000	SRFB		
5	Restoration	Capital	Sekiu Mainstem (RM 2-5) LWD Restoration	The placement of LWD in the Sekiu River	3	Channel Structure and Complexity, High Water Temperatures, Riparian Areas & LWD Recruitment	Water Resource Inventory Area 19 (Lyre-Hoko) Salmonid Restoration Plan (draft dated April 20, 2008)	Instream Riparian	Instream work	12 LWD jams in a 3 mile reach	Chinook	Chum, Coho, Steelhead & Cutthroat	Conceptual	Permitting & design	\$25,000	Construction	\$375,000	2012	Makah	\$400,000	\$50,000	SRFB		
6	Restoration	Capital	Sekiu, Clallam, Pysht Riparian Re-vegetation	Restore the riparian zone along the rivers to improve water quality and restore CMZ habitat and function.	3	Channel structure and complexity, Excessive Sediment, and Water Quality	WRIA 19 LFA (chapter on the Pysht and the Clallam reference the lack of LWD), and the Water Resource Inventory Area 19 (Lyre-Hoko) Salmonid Restoration Plan (draft dated April 20, 2008)	Riparian revegetation	Stream bank work & sediment reduction	Replant trees	Chinook	Chum, Coho, Steelhead & Cutthroat	Conceptual	Design & planting	\$130,000	Design & planting	\$125,000	2012	Makah & LEKT	\$255,000	\$10,000	SRFB		
7	Restoration	Capital	South Fork Pysht Floodplain Restoration	Lower SF Pysht River (RM 0.0-3.0) to restore 30 acres of riparian forest and install 500 pieces of large woody debris by helicopter.	2	LWD, Side Channel, riparian	WRIA 19 Recovery Plan, chapter 8	Riparian/Floodplain	Instream Habitats, Riparian	30 ac riparian 3 miles of channel treated with LWD	Coho	Steelhead, cutthroat, chum, Chinook	Conceptual	Permitting & Construction	\$250,000	Construction	\$250,000	Construction	\$250,000	2012	LEKT	\$750,000	\$50,000	SRFB
8	Acquisition for Restoration	Capital	Pysht River Floodplain Acquisition (Phase I)	Acquisition and Removal of infrastructure within 21.59 acres of active floodplain and channel migration zone of the Pysht river.	2	Habitat complexity, floodplain connectivity, LWD, riparian vegetation; alteration of subsurface pathways	WRIA 19 LFA Section E page 43.	Riparian	Sediment reduction, floodplain connectivity, riparian revegetation.	Protect and rehabilitate 21.59 acres of floodplain.	Chinook	Fall chum, Cutthroat, Winter steelhead, & Coho	Conceptual	Acquisition	\$125,000	Infrastructure removal	\$55,000		2010	Makah, LEKT, NOLT	\$180,000	\$27,000	SRFB	
9	Restoration	Capital	Pysht Estuary Restoration (Phase I)	Initiate restoration actions in the Pysht estuary by removing log bays to reconnect 15 acres of historic salt marsh	1	Disconnection of historic salt marsh	Pysht Estuary Engineering Feasibility Analysis	Estuary	Habitat Connectivity	15 acres of historic salt marsh	Chinook	Steelhead, cutthroat, chum, Coho	30% Design underway			Final Engineering/Permitting	\$250,000	Construction	\$1,000,000	2012	LEKT, M&R & CLC	\$1,250,000	\$150,000	PSAR
10	Restoration	Capital	IMW Restoration Treatments	Complete LWD Restoration in portions of IMW Watersheds (Sadie Creek, East Twin)	1	LWD, Side Channel, riparian	IMW Study Plan, WRIA 19 Recovery Plan, WRIA LFA	Riparian/Floodplain	Instream Habitats, Riparian	Add LWD in form of large key pieces to previously untreated/under treated reaches	Coho	steelhead, chum	Conceptual	Permits and Engineering	\$50,000	Construction	\$250,000	Construction	\$250,000	2012	LEKT	\$550,000	\$50,000	SRFB
11	Restoration	Capital	Nearshore Restoration Strategy for Twin Rivers	The proposal consists of removing rock & sheet pile surrounding a 3 acre pier (also called a "mole") located entirely on state owned Department of Natural Resources (WDNR) leased tidelands, and cutting a channel along the base of the pier.	2	WRIA 19 LFA, Smith 1999	Recovery plan, Hood Canal/Eastern Strait of Juan de Fuca Summer Chum	Nearshore	Nearshore Action Plan	Removal of 2.4 acre pier (62,600 cyof fill), steel & creosote treated piles along with about 13,000 cy of rip rap.	Chinook	Coho, bulltrout, chum, cutthroat, steelhead	Conceptual	Permits & Engineering	\$50,000	Construction	\$480,000		2011	WDFW, WDNR & LEKT	\$520,000	\$78,000	SRFB	
12	Restoration	Capital	Nelson Creek Fish Passage Barrier Removal Project	Restore 1 stream-mile of Nelson Creek to fish passage by replacing 2 fish passage barrier culverts with fish friendly culverts	3	Barriers to fish passage	WRIA 19 Salmonid Restoration Plan, Habitat Protection Goal 5, WRIA 19 LFA	Riparian	Fish Passage	Restore 1 stream mile of Nelson Creek on two separate stream stems to fish passage	Coho	Steelhead, Chum, Cutthroat	Conceptual design			Permitting and design	\$30,000	Construction	\$320,000	2012	CC & WDNR	\$350,000	\$30,000	SRFB
13	Acquisition for Protection	Capital	Salt Creek Habitat Protection	Protect the best existing habitat on Salt Creek's freshwater and marine shorelines and estuary through conservation easement and fee simple acquisition.	2	High Development Potential / Conversion, Lack of in-river large woody debris, Barriers to fish passage, Riparian area degradation, Impaired instream flows.	Salt Creek Watershed: An Assessment of Habitat Conditions, Fish Populations and Opportunities for Restoration, by Mike McHenry, Randall McCoy and Mike Haggerty	Riparian, Estuary, Nearshore	Instream Habitats, Riparian	200+acres protected	Salt Creek Coho	Salt Creek Winter Steelhead, Mid-Strat Cutthroat Trout, Chinook, & Chum	Conceptual	Outreach and Appraisals	\$30,000	Acquisition	\$4,000,000	Acquisition	\$2,000,000	2012	NOLT	\$6,030,000	\$500,000	unknown
14	Restoration	Capital	Salt Creek Salt Marsh Reconnection	Removal of 2 failed pipes and replace with bridge	1	High Development Potential / Conversion, Barriers to fish passage, Estuary area degradation.	Salt Creek Watershed: An Assessment of Habitat Conditions, Fish Populations and Opportunities for Restoration, by Mike McHenry, Randall McCoy and Mike Haggerty	Instream	Fish Passage	Open up 30 acres of estuary habitat with no barrier	Salt Creek Coho	Salt Creek Winter Steelhead, Mid-Strat Cutthroat Trout, Chinook, & Chum	30% Design underway	Outreach		Design & permitting	\$50,000	Construction	\$240,000	2012	CCD & LEKT	\$290,000	\$43,500	SRFB
15	Restoration	Capital	Salt Creek Final Fish Passage Corrections Project	Removal of about 13 barrier pipes in Salt Creek	2	Barriers to fish passage, WRIA 19 LFA	Salt Creek Watershed: An Assessment of Habitat Conditions, Fish Populations and Opportunities for Restoration, by Mike McHenry, Randall McCoy and Mike Haggerty	Instream	Fish Passage	Remove 13 barriers	Salt Creek Coho	Salt Creek Winter Steelhead, Mid-Strat Cutthroat Trout, Chinook, & Chum	Conceptual	Design & permitting	\$200,000	Construction	\$3,000,000	2012	LEKT, CCD & CC	\$3,200,000	\$480,000	SRFB		
16	Restoration	Capital	Elwha ELJ's	Construct 20 additional ELJ's in the lower Elwha River prior to dam removal in 2012	1	LWD, Side Channel, floodplain channelization	Elwha Fish Recovery Plan, chapter 8	Riparian/Floodplain	Instream Habitats, Riparian	20 new ELJ's to bring total to 50 installed prior to dam removal	Coho	Steelhead, cutthroat, chum, Chinook	design and permitting completed			Construction	\$500,000	Construction	\$500,000	2012	LEKT	\$1,000,000	\$50,000	SRFB

No.	Project Information and How it Relates to the Recovery Plan												Project Planning						Project Cost and Sponsor					
	Project Type	Plan Category	Project Name	Project Description (brief description)	Priority tier of project	Limiting Factors	Document Reference for limiting factor (Recovery Plan, Chapter 3 - Habitat Protection)	Habitat Type (HWS items - i.e. riparian, estuary river delta, Nearshore, etc.)	Activity Type (HWS items - i.e. fish passage, instream flow, sediment reduction, etc.)	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (Conceptual, Feasibility completed, land acquisition completed, design completed, permitting completed, construction completed)	2010 Activity to be funded	2010 Estimated Cost	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
17	Restoration	Capital	Lower Elwha Hatchery Outfall and Berm Removal	Remove 1400' of existing hatchery outfall which represents a perpendicular dike across the floodplain	1	Floodplain and estuary restoration	Elwha Fish Recovery Plan, chapter 8	Riparian/Floodplain	Floodplain/Estuary restoration	Restore physical processes in floodplain and estuary including connectivity with historic side-channels and distributary habitat	Chinook	Coho, chum, pink, steelhead, bull trout	Permitting completed	Construction	\$500,000					2010	LEKT	\$500,000	\$75,000	SRFB
18	Restoration	Capital	Elwha River Estuary Restoration	Project will build on short term fish passage restoration of west levee currently underway.	2	Floodplain and estuary restoration	Elwha Fish Recovery Plan, chapter 8	Riparian/Floodplain	Floodplain/Estuary restoration	Restore physical processes in floodplain and estuary including connectivity with historic side-channels and distributary habitat	Chinook	Coho, chum, pink, steelhead, bull trout	Conceptual	Design & Permitting	\$210,000	Implementation	\$1,040,000	Implementation	\$70,000	2012	LEKT, CC, WDFW & TNC	\$1,320,000	\$198,000	SRFB
19	Restoration	Capital	Elwha Culvert Replacement	Project will restore Bull trout and anadromous salmonid refugia in the Elwha Watershed	1	Barriers to fish passage, WRIA 19 LFA	Elwha Fish Recovery Plan, chapter 8	Instream	Fish Passage	Open up 3/4 miles of habitat	Bull Trout	Cutthroat, Puget Sound Steelhead	30% Design & Permitting	Bidding	\$100,000	Construction	\$400,000			2010	ONP & LEKT	\$500,000	\$75,000	SRFB
20	Restoration	Capital	Ennis Creek Habitat Restoration & Protection	Continuation of prior restoration including addition of LWD and boulder placement; and augment existing wetland and riparian tree planting.	3	Loss of Habitat, Riparian Areas & LWD Recruitment, and Water Quality	WRIA 18 Watershed Plan and LFA	Riparian, Upland, Wetland	Riparian, Upland, and Wetland Habitat project	Restore and protect Ennis Creek's relatively pristine salmonid habitat	Bull Trout	Coho, Cutthroat, and Winter Steelhead	Conceptual			LWD and boulder purchase and placement	\$75,000	order trees, identify areas, and plant trees in the existing wetland and riparian area	\$75,000	2012	WFC, LEKT & NOLT	\$150,000	\$20,000	PA Mitigation and other
21	Restoration	Capital	Valley Creek Restoration	Remove 500 feet of existing culvert between 5th Street and 6th Street, remainder 1900 feet of new stream channel and floodplain between 5th Street and 9th Street, remove 4 sections of 84" pipe and replace with 4 concrete fishways. The design part of this project has been funded.	3	Culverts, confined/incised channel, lack of LWD, plane-bed structure, narrow riparian zone, non-native invasive weeds, urban stormwater impacts.	Recovery Plan, Chapter 3; 1999 Habitat Limiting Factors WRIA 18	Riparian	Instream, Riparian	Restore Valley Creek and remove fish passage barriers by constructing 1900 feet of new stream channel and floodplain, remove 500 feet of culvert, and removing 4 sections of 84" pipe and replacing those with 4 concrete fishways.	Coho	Winter Steelhead, cutthroat	30% design completed; Land acquisition completed	Permitting & design completion	\$100,000	Construction: Construct 1900 feet of new stream channel and floodplain, remove 500 feet of culvert	\$976,900	Construction: Remove 4 sections of 84" pipe and replace with 4 concrete fishways	\$477,200	2012	VCRC, COPA & NOSC	\$1,554,100	\$135,000	unknown
22	Restoration	Capital	Ediz Hook A Frame Site Shoreline Restoration	Remove bank hardening, restore shoreline slope, vegetation as well as LWD and gravel supplementation 1200' of Ediz Hook	3	Nearshore hardening	WRIA 18 LFA	Nearshore	Nearshore Restoration	Restore shoreline morphology, remove hardened structures, beach nourishment and dune revegetation along 1,000 feet of shoreline and 1.5 acres of estuary	Forage fish	Pink, Chum, Chinook, Coho, and Steelhead	Conceptual	design and permitting	\$150,000	Construction	\$250,000	Construction	\$250,000	2012	LEKT, WDNR & COPA	\$650,000	\$100,000	PSAR
23	Restoration	Capital	Ediz Hook Beach Nourishment	This project will restore & maintain the inner spit on Ediz Hook	3	Degraded Nearshore and estuarine conditions and loss of associated habitat	Executive Summary: Nearshore function of the central Strait of Juan de Fuca for juvenile fish, including Puget Sound Chinook salmon, Chapter 1; and SALMON AND STEELHEAD HABITAT LIMITING FACTORS WATER RESOURCE INVENTORY AREA 18, the Chapter on MARINE HABITAT LIMITING FACTORS.	Nearshore	Marine Shoreline Project	Restore shoreline morphology and estuarine conditions	Forage fish	pink, chum,	Conceptual	design and permitting	\$100,000	Construction	\$375,000			2012	City of PA, Port of PA, WDNR & LEKT	\$475,000	\$71,250	SRFB, PSAR
24	Acquisition for Restoration	Capital	Port Angeles Waterfront Property Acquisition	Acquire a 2 acre waterfront property at Oak Street for public beach/estuary restoration	3	Habitat Loss, degraded Nearshore and estuarine conditions.	Port Angeles Shoreline Rehabilitation Plan p.2 ; From Salmon and Steelhead Limiting Factors, WRIA 18 p. 147	Nearshore/Marine Shoreline	Nearshore Restoration & fish passage	2 acres urban waterfront and estuary protected for restoration	Chinook	Coho and winter steelhead	Conceptual			Purchase	\$2,500,000			2012	NOLT, COPA, LEKT & VCRC	\$2,500,000	\$500,000	unknown
25	Restoration	Capital	Morse Creek Remeander	Reconnect Morse Creek with its historic floodplain to restore habitat complexity and stability.	1	Riparian, floodplain, spawning and rearing habitat	WRIA 18 LFA p 586	Instream, Riparian	Habitat complexity, flow reduction, floodplain reconnection	Restore 9 acres of floodplain and 1,700' of creek channel, underplanting 9 acres with conifers	Steelhead	Sea-run cutthroat trout, Pink, chum, Bull Trout	Design approaching 100% late 2009, permitting docs under development, majority construction funds secured	Construction	\$1,275,000	Revegetation (underplanting deciduous forest with conifer)	\$15,000			2011	NOSC	\$1,300,000	\$200,000	SRFB
26	Acquisition for Restoration	Capital	Morse Creek Property Acquisition	Acquire 2 lots in Morse Creek floodplain.	2	Riparian, floodplain, spawning and rearing habitat	WRIA 18 LFA p 586	Instream, Riparian	Habitat complexity, flow reduction, floodplain reconnection	Acquisition of two parcels on Cottonwood Lane along Morse Creek	Steelhead	Sea-run cutthroat trout, Pink, chum, Bull Trout	One landowner contacted and consent given to do an appraisal. No further action until funds acquired. Second landowner not contacted yet			Landowner contact, property appraisals, legal fees, property purchase	\$950,000	property purchase if not completed in 2011		2012	WDFW	\$950,000	\$142,500	SRFB
27	Acquisition for Protection	Capital	Siebert Creek Ecosystem Protection Phase II	Acquire 1 property and 5 conservation easements make conservation in lower Siebert Creek continuous. Protect feeder bluffs.	3	Degraded channel condition in some reaches	Siebert Creek Watershed Assessment, p 6	Riparian, Marine bluff	Habitat complexity, flow reduction, floodplain reconnection	40 acres of marine bluff protected, 245 acres of riparian buffer protected.	Coho	Fall chum, winter steelhead, cutthroat	Feasibility completed	Purchase of 200 acre property	\$2,000,000	Riparian conservation easements	\$765,000	marine bluff conservation easements	\$680,000	2012	NOLT	\$3,445,000	\$1,000,000	SRFB, PSAR
28	Restoration	Capital	Siebert Creek HWY 101 Fish Passage Restoration	Replace box culvert on HWY 101 that is fish barrier with a bridge to open up about 7.5 miles of spawning & rearing habitat.	3	Riparian, floodplain, spawning and rearing habitat	Siebert Creek Watershed Analysis	Instream, Riparian	Fish passage	Open up 7.5 miles of habitat	Coho	Fall chum, winter steelhead, cutthroat	Conceptual			Design	\$250,000	Permitting	\$100,000	2012	CC, JSKT & WSDOT	\$6,000,000	\$1,000,000	SRFB

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				Project Description (brief description)	Priority tier of project	Limiting Factors	Document Reference for limiting factor (Recovery Plan, Chapter 3 - Habitat Protection)	Habitat Type (HWS items - i.e. riparian, estuary river delta, Nearshore, etc.)	Activity Type (HWS items - i.e. fish passage, instream flow, sediment reduction, etc.)	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (Conceptual, Feasibility completed, land acquisition completed, design completed, permitting completed, construction completed)	2010 Activity to be funded	2010 Estimated Cost	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
29	Restoration	Capital	Dungeness River Engineered Log Jams	Build ELJ's in Dungeness River from river mile (RM) 2.7 to 18.8 and in the Gray Wolf River from RM 0.0 to 1.0.	1	Channel structure and complexity	WRIA 18 LFA page 105, Puget Sound Recovery Plan pg 324	Instream	Large wood recovery	Build approximately 120 stable log jams in 20 miles of mainstem river.	PS Chinook	Puget Sound steelhead, summer chum, Coho, fall chum, pink, bull trout	RM 5.2 to 6.0 ELJ's are complete.	Gray Wolf RM 0.0 to 1.0 design only.	\$120,000	Gray Wolf RM 0.0 to 1.0 ELJ construction	\$800,000	Dungeness RM 12.0 to 18.8 design-only.	\$200,000	2019	JSKT	\$11,000,000	\$1,650,000	SRFB
30	Acquisition for Protection	Capital	Dungeness River Corridor Protection: RM 0.8 to 12.0	This project will protect high quality riverine forest habitat and properties needed for flood plain restoration projects on the Dungeness River downstream of river mile (RM) 12.0 through the purchase of property and conservation easements. The project's goal is to purchase fee simple titles and conservation easements on approximately 160 acres and about 4 miles of river channel in 8 years.	1	Channel Structure and Complexity Floodplain Connectivity & Function Riparian Areas & LWD Recruitment Water Quality	WRIA 18 LFA	Riparian	Acquisition	160 Acres, 4 miles of river channel.	PS Chinook	Puget Sound steelhead, summer chum, Coho, fall chum, pink, bull trout	Conceptual		2011 purchases	\$1,500,000	2012 purchases	\$2,000,000	2018	JSKT, NOLT & WDFW	\$9,000,000	\$1,350,000	SRFB, Nat. Coastal Wetlands Cons., ESRP, ALEA	
31	Restoration	Capital	Dungeness Riparian Reforestation	This project will restore the riparian zone along the Dungeness Mainstem.	2	Degraded water quality and high stream temperature, and Degraded riparian conditions	WRIA 18 LFA page 105, Puget Sound Recovery Plan pg 324	Riparian	Instream Habitats, Riparian	15 acres of Revegetation	PS Chinook	Puget Sound steelhead, summer chum, Coho, fall chum, pink, bull trout	Conceptual		Landowner contracts & Planting	\$50,000	Landowner contracts & Planting	\$50,000	2012	CCD, JSKT, CC & NWB	\$150,000	\$20,000	SRFB	
32	Acquisition for Protection	Capital	Dungeness Drift Cell Protection	Permanently protect 10 miles of coastal feeder bluffs in the Dungeness Drift Cell	1	1. Ecosystem links between upland and Nearshore habitats. 2. Reduced sediment input from feeder bluffs to Nearshore area. 3. Permanent loss of habitat above +5 feet Mean Low-Low Water (MLLW), which represents the suitable habitat area for surf smelt and sand lance spawning.	WRIA 17 LFA, WRIA 18 LFA	Nearshore	Acquisition	Permanently protect 10 miles of coastal feeder bluffs	PS Chinook	Puget Sound steelhead, summer chum, Coho, fall chum, pink, bull trout	Research and planning phase has been funded.		Design-only project	\$150,000	Purchase of easements, property, relocation of structures	\$5,000,000	2014	JSKT	\$5,500,000	\$825,000	SRFB, ESRP, NCWC & EPA	
33.2	Acquisition for Restoration	Capital	Dungeness River Instream Flow Improvements	The Dungeness Agricultural Water Users Association, comprised of 4 irrigation districts & 3 irrigation companies, have a comprehensive irrigation ditch-piping project that will result in anticipated in-river water savings of 6.7-7.7 cfs.	1	Low instream flows	Draft WRIA 18 Dungeness/Eliwha/Morse Steelhead Limiting Factors, the WRIA 18 LFA, the WRIA 18 Watershed Plan (Chapter on Water Quantity) & the Puget Sound Chinook Recovery Plan (Chapter 6: Regional Salmon Recovery Strategies)	Instream habitat, Riparian	instream flow	conserve 6.7-7.7 cfs	PS Chinook	Puget Sound steelhead, summer chum, Coho, fall chum, pink, bull trout	Feasibility completed, preliminary design completed	Final design	Construction	\$3,500,000	Construction	\$1,180,000	2012	CCD & DIG	\$4,680,000	\$702,000	SRFB	
35	Restoration	Capital	Lower Dungeness Dikes Setback, Phase II	Floodplain and river recovery in the lower 2.6 miles was ranked #1 by the DRMT and #2 in EDT. The lower river is straightened between two dikes, which cuts off relic meanders and a substantial area of floodplain (River mile 0.8-2.6). Two dimensional modeling has shown that floods greater than bankfull would occupy floodplain beyond the dikes on both sides of the river. Phase I funding was awarded for engineering and design. Phase II funding is needed for project construction. This project must be completed at the same time as the channel re-meandering and ELJ placement project listed as phase III	1	Channel Confinement	Draft WRIA 18 Dungeness/Eliwha/Morse Steelhead Limiting Factors, and the Recommended Restoration Projects for the Dungeness	Riparian	Dike Setback	1.8 mi of river restored	Chinook	Chum; Bull Trout, Steelhead	Feasibility completed, preliminary design completed	Final design, construction	Construction	\$5,000,000	Construction	\$2,000,000	2012	CC, ACOE, JSKT	\$7,500,000	\$2,500,000	SRFB	
36	Restoration	Capital	Lower Dungeness Channel Re-meandering & ELJ Placement, Phase III	Floodplain and river recovery in the lower 2.6 miles was ranked #1 by the DRMT and #2 in EDT. The lower river is straightened between two dikes, which cuts off relic meanders and a substantial area of floodplain (River mile 0.8-2.6). Two dimensional modeling has shown that floods greater than bankfull would occupy floodplain beyond the dikes on both sides of the river. Phase I funding was awarded for engineering and design. Phase II funding is needed for project construction. This project must be completed at the same time as the channel re-meandering and ELJ placement project listed as phase II	1	Channel Confinement	Draft WRIA 18 Dungeness/Eliwha/Morse Steelhead Limiting Factors	Riparian	Dike Setback	1.8 mi of river restored	Chinook	Chum; Bull Trout, Steelhead	Feasibility completed, preliminary design completed	Final design, construction	Construction	\$1,200,000	Construction	\$675,000	2012	CC, ACOE, JSKT	\$2,175,000	\$375,000	SRFB	
37	Acquisition for Protection	Capital	North Sequim Bay Drift Cell Protection (Travis and Paradise Cove Spit Protection Project)	Permanently protect the Travis and Paradise Cove Spits and the coastal feeder bluffs within their drift cells. Will use management plans, conservation easements, and land purchases.	1	1. Ecosystem links between upland and Nearshore habitats. 2. Reduced sediment input from feeder bluffs to Nearshore area. 3. Permanent loss of habitat above +5 feet Mean Low-Low Water (MLLW), which represents the suitable habitat area for surf smelt and sand lance spawning.	WRIA 17 LFA, WRIA 18 LFA	Nearshore	Acquisition design only	Protection of 3.3 miles of coastal feeder bluff, 12,000 feet of spit habitat, and 115 acres of marine shallow water habitat	Hood Canal/Eastern Strait of Juan de Fuca summer chum	Bull trout, Puget Sound steelhead & Chinook	Conceptual		Project Design & development of Management Plans	\$130,000	Land Acquisition	\$1,000,000	2013	JSKT & NOLT	\$1,130,000	\$169,500	SRFB, ESRP, National Coastal Wetlands Conservation	

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39	Restoration	Capital	McDonald Creek Diversion, Dam Removal and Ditch Lining	McDonald Creek diversion dam blocks adult and juvenile fish passage during low flow summer months. The fish ladder is closed during summer months to increase flow into the ditch outtake. This project will discontinue using McDonald Creek to convey Agnew ditchwater and remove the possibility of attracting strays into McDonald Creek from the Dungeness.	3	low instream flows	WRIA 18 LFA	Instream habitat, Riparian	instream flow	conserve +/- 0.8 cfs	Hood Canal/Eastern Strait of Juan de Fuca summer chum	Puget Sound steelhead & Chinook, summer chum, Coho, fall chum, pink, bull trout	Conceptual	Design & permitting	\$100,000	Construction	\$600,000	2012	JSKT, AID, WDFW & CCD	\$700,000	\$105,000	SRFB		
40	Restoration	Capital	Cassalery Creek Instream Flow Enhancement Project	This project will add 0.1 to 0.2 CFS Class "A" Reclaimed Water into Cassalery Creek.	3	Insufficient instream flow & Riparian area degradation	Clallam County State of the Streams (page 94, Greater Dungeness Watershed Study) & Draft WRIA 18 Dungeness/Elwha/Morse Steelhead Limiting Factors, the WRIA 18 LFA (p. 82 of WRIA 18 LFA), the WRIA 18 LFA (p. 82), the WRIA 18 Watershed Plan (Chapter on Water Quantity) & the Puget Sound Chinook Recovery Plan (Chapter 6: Regional Salmon Recovery Strategies).	Riparian	Instream Flow	Adds 0.1 to 0.2 CFS to Instream Flow	Fall Chum	Winter Steelhead, Cutthroat, Coho, and possibly Bull Trout	Design completed	Permitting & Riparian area clean-up	\$7,500	Construction	\$92,500	2011	SWD	\$100,000	\$15,000	unknown		
41	Restoration	Capital	Meadowbrook Creek	Restore 40 acres of estuary at Meadowbrook creek, Reconnect Meadowbrook to Dungeness system, Riparian planting along Meadowbrook (upstream)	2	Water quality, LWD, Lack of riparian habitat	Recovery Plan, Chapter 3	Estuary, Riparian	Fish Passage	250 ft of channel, approximately 40 acres floodplain habitat	Chinook	Coho, Winter Steelhead	Feasibility nearing completion, design on Dungeness Habitat property nearly complete	Permitting & Construction	\$150,000	Construction	\$100,000	2011	DU	\$330,000	\$80,000	NAWCA		
44	Acquisition for Protection	Capital	Jimmycomelately Riparian Protection	Purchase a 1/4-mile length of riparian forest along Jimmycomelately (JCL) Creek (conservation easement or fee-simple).	2	Riparian habitat, LWD	Summer Chum Salmon Recovery Plan pages 85, 99.	Riparian	Acquisition	0.75 Miles of riparian corridor, approximately 72 acres.	HC/ESJDF summer chum, Coho, PS steelhead	Cutthroat	Conceptual	Appraisal/ review/ title report/ negotiations/purchase	\$1,000,000			2010	NOLT & JSKT	\$1,000,000	\$150,000	SRFB		
45	Acquisition for Protection	Capital	Washington Harbor Drift Cell Protection	Washington Harbor is a 154 acre estuarine embayment located adjacent to the entrance of Sequim Bay and is formed by two spits - Gibson and South. The spits will be permanently protected, along with the 1.85 miles of coastal feeder bluffs that support the spits. Protection will be accomplished using conservation easements and possibly property purchases.	1	1. Ecosystem links between upland and Nearshore habitats. 2. Reduced sediment input from feeder bluffs to Nearshore area. 3. Loss of riparian vegetation that provides shade to the upper beach.	WRIA 17 LFA, WRIA 18 LFA	Nearshore	Acquisition	1.85 miles of feeder bluff shoreline, 11,560 feet of spit shoreline, and 154 acres of estuarine habitat	Hood Canal/Eastern Strait of Juan de Fuca summer chum	Bull trout, Puget Sound steelhead & Chinook	Conceptual	Design-only	\$130,000	Implementation	\$1,250,000	2013	NOSC & JSKT	\$1,380,000	\$207,000	SRFB, PSAR		
46	Acquisition for Protection	Capital	Washington Harbor Habitat Protection Project	Maintain expansive and important Nearshore habitat for numerous salmonid populations and forage fish in the 118-acre estuarine system at the mouth of Bell Creek and adjacent to the entrance to Sequim Bay.	2	Protection of estuaries, critical for production of prey organisms for juvenile out-migrant, juvenile salmonid rearing, and returning adults; and critical rearing and transitional habitat.	WRIA 18 LFA	Nearshore, Estuary	Land Acquisition project for protection of estuarine and Nearshore habitat	Protect 118 acre estuarine system	Hood Canal/Eastern Strait of Juan de Fuca summer chum	Bull trout, Puget Sound steelhead & Chinook	Conceptual	Planning and Outreach to landowners	\$10,000	Planning and Outreach to landowners	\$10,000	Implementation Conservation Easement Acquisition, and Fee Simple	\$1,000,000	2012	NOLT & JSKT	\$1,020,000	\$153,000	SRFB
47	Restoration	Capital	Washington Harbor Tidal Flow Restoration Project	Restore unimpeded fish access & habitat forming processes. The design part of this project has been funded.	1	Ecosystem links between upland and Nearshore habitats. Shade minimizes desiccation of baillfish eggs that are laid in high intertidal gravels and sands, beach, resulting in loss of the shallow, Nearshore migration corridors for salmonids that provide protection from predation.	WRIA 18 LFA	Instream flow, Nearshore	Nearshore habitat, riparian, fish passage	33 ac of tidal exchange	Hood Canal/Eastern Strait of Juan de Fuca summer chum	Bull trout, Puget Sound steelhead & Chinook	30% Design	Final design & permitting	\$200,000	construction	\$750,000	2012	JSKT & COS	\$950,000	\$142,500	SRFB, PSAR		
77	Restoration	Capital	Grays Marsh and Gierin Creek	Project Design and Feasibility Study to: Restore and enhance salt marsh connectivity and enhancement of Gierin Creek	3	Saltwater Estuary, LWD, Side Channel, riparian	WRIA 18 Limiting Factors Analysis	Estuary river delta and riparian	Instream, Riparian	50 ac riparian 5,300 ft edge, 50 ac off channel, 10 log jams	Chinook, Chum, Coho Salmon, and Steelhead	Cutthroat and bull trout	This will be Phase 1: Conceptual, Feasibility and 30% design	NA	\$0	Conceptual, Feasibility	60-100K	Construction	n/a	2012	WDFW	\$100,000		SRFB: ESRP and or PSAR
78	Restoration	Capital	McDonald Creek Large Wood Recovery	Build wood jams in McDonald Creek from approximately river mile (RM) 1 to 3.	2	"Channel instability between the mouth and Highway 101 is further impacted by LWD depletion" and "Key piece density was poor throughout the lower 9 miles."	WRIA 18 LFA page 122	Instream	Large wood recovery/complex instream habitat restoration	Restore large wood jams to approximately 2 miles of mainstem channel.	Coho, steelhead	Cutthroat	Phase 1 Construction completed.	Phase 2 Construction	\$100,000	Phase 3 Construction	\$100,000	2013	Jamestown SYKallam Tribe	\$400,000		NFWF		

No.	Project Type	Plan Category	Project Name	Project Information and How it Relates to the Recovery Plan										Project Planning							Project Cost and Sponsor			
				Project Description (brief description)	Priority tier of project	Limiting Factors	Document Reference for limiting factor (Recovery Plan, Chapter 3 - Habitat Protection)	Habitat Type (HWS items - i.e. riparian, estuary river delta, Nearshore, etc.)	Activity Type (HWS items - i.e. fish passage, instream flow, sediment reduction, etc.)	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (Conceptual, Feasibility completed, land acquisition completed, design completed, permitting completed, construction completed)	2010 Activity to be funded	2010 Estimated Cost	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
80	Acquisition for Protection	Capital	Lyre River Protection	Protect habitat connectivity from old growth forest to the marine shoreline within the Lyre River corridor RM 0.0 to RM 2.0 through conservation easement and fee simple acquisition.	2	Channel Structure and Complexity, and Riparian Areas & LWD Recruitment	WRIA 19 (Hoko-Lyre) Watershed Plan Draft (throughout the plan), and Draft WRIA 19 Salmonid Restoration Plan (Section 8.3.1)	Riparian, estuary, and nearshore	Land Protection	Conservation easement and fee simple acquisition on X acres	Coho	Chum, Cutthroat, and Steelhead	Feasibility Pending	Outreach and Appraisals	Acquisition	Acquisition	\$2,500,000	2013	NOLT and WDFW	\$5,000,000	\$750,000	Donated conservation easement value: WWRP, SRFB, PSAR, PSNERP		
81	Acquisition for Protection	Capital	Pyshet Floodplain Acquisition Phase II	This project will permanently protect, by means of conservation easements and fee simple acquisition, other lands in the same reach of the Pyshet upstream from RM 8.93 to approximately RM 11.0 and downstream from 8.7 to approximately RM 5.5.	3	Riparian Conditions	WRIA 19 LFA	Riparian	Land Protection & Sediment Reduction	Conservation easement and fee simple acquisition on X acres	Chinook	Chum, Coho, Cutthroat, and Steelhead	Feasibility almost complete	Outreach and Appraisals	Acquisition	Acquisition	\$250,000	2013	NOLT and Makah	\$500,000	\$75,000	Donated conservation easement value: SRFB, PSAR		
Hatchery																								
48	Hatchery	Plan Implementation & Coordination	Elwha River Native Steelhead Brood Development Project	Produce a new hatchery-origin winter steelhead population based upon the existing natural-origin winter steelhead stock in the Elwha River	2	Hatchery Practices	Elwha River Fish Restoration Plan; HSRG Eastern Straits Review	Hatchery Reform	Manage hatcheries for recovery through capital improvements	Establish a new hatchery-based winter steelhead population	Winter Steelhead		Ready to implement	Fish Production & Broodstock Development	\$150,000	Fish Production & Broodstock Development	\$150,000	Fish Production & Broodstock Development	\$150,000	On-going	LEKT	\$450,000	\$67,500	BIA
Harvest																								
Hydropower																								
Other																								
Total Capital Need															\$7,412,500	\$27,329,400	\$29,367,200	\$88,739,100	\$14,625,000					
Non-Capital Programs																								
Harvest Management Support																								
64	Harvest Management Support	Non-Capital	Dungeness Improved Fisheries Enforcement	Enforcement is under-staffed. Two additional officers are needed for effective enforcement of enclosures and to ensure orderly fisheries	2	Illegal harvest of already small populations of Dungeness Chinook	Puget Sound Chinook Recovery Plan	Chinook-bearing streams	illegal harvesting	Protection of the Dungeness Chinook populations	Dungeness Chinook	Coho, steelhead, chum, pink,	Ready to implement	2 FTE's	\$200,000	2 FTE's	\$200,000	2 FTE's	\$200,000	On-going	WDFW & JSKT	\$600,000	\$90,000	SRFB, PSAR
Future Habitat Project Development																								
50	Future Habitat Project Development	Non-Capital	Clallam County Inventory Culverts	Assess fish passage conditions for stream crossings on County roads	1	Improved fish passage	Recovery Plans & LFA	Instream Riparian	Fish Passage	Improved fish passage	All ESA Salmon species	All other salmon species	Conceptual	Planning & Design	\$50,000	Field data mapping & collection & data entry	\$250,000	2012	CC	\$300,000	\$45,000	PSAR, SRFB		
54	Future Habitat Project Development	Non-Capital	Elwha Conservation Planning	Create a plan based on Elwha Fish Recovery Plan's recommendation to develop a long term strategy for purchase or development of conservation easements on floodplain & estuary property outside of ONP	1	Habitat degradation and loss, floodplain modification, fish access (dams), channel conditions, riparian condition, water quality, biological processes, estuarine processes	Elwha Fish Recover Plan, 75-82, Habitat Limiting Factors for WRIA 18 154-161	Riparian	Instream flow, sediment reduction	Report that contains a list of prioritized parcels and landowner willingness for conservation easements or acquisition	PS Summer Chinook	Summer and Fall Chum, Upper and Lower Pink, Summer and Winter Steelhead, Cutthroat Trout, Dolly Varden, Bull Trout	Feasibility completed	GIS, Develop a system for prioritization, landowner outreach	\$19,500	Preliminary Appraisals, Title Review, Landowner willingness forms	\$47,500	Report	\$2,000	2012	NOLT, LEKT & CC	\$69,000	\$13,500	Makah & CC
55	Future Habitat Project Development	Non-capital	The Elwha Nearshore Action Plan	The Elwha Nearshore action plan: Understanding, protecting, and restoring the Elwha Nearshore (Freshwater Bay to Ediz Hook, central Strait of Juan De Fuca, Olympic Peninsula, Washington).	2	Need for a plan to restore the Elwha Nearshore	WRIA 18 LFA, Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Recovery plan	Nearshore	Nearshore Action Plan	20 linear km of Nearshore & 90 acres of estuary habitat	ESA-listed Puget Sound & Columbia River Chinook	bull trout, steel head & summer chum	Conceptual	restoration priority catalog, land owner actions & inventory	\$150,000	Coordinate with landowners for protection strategies of acquisition & easement	\$150,000	Continue coordinate with landowners for protection strategies of acquisition & easement	\$150,000	2012	CC & WDFW	\$650,000	\$50,000	EPA or others
59	Future Habitat Project Development	Non-Capital	Port Angeles Harbor Basin Program	Bringing the stakeholders together to discuss the future of the Port Angeles Harbor Basin.	2	Degraded Nearshore and estuarine conditions and loss of associated habitat; Degraded water quality and temperature;	Chapter 2.11 STRAIT OF JUAN DE FUCA MARINE NEARSHORE ENVIRONMENT in the Elwha-Dungeness Watershed Plan Water Resource Inventory Area 18 (WRIA 18) and Sequim Bay in West WRIA 17; The WRIA 18 LFA; and The Puget Sound Chinook Recovery Plan, Chapter 3 - Habitat Factors Affecting Puget Sound Chinook Salmon and Bull Trout	Nearshore	Marine shoreline projects	A unified vision for the restoration of the PA Harbor Basin	Puget Sound Chinook	Hood Canal Strait of Juan de Fuca Summer Chum	Conceptual	Hiring a facilitator, and hosting visioning / planning meetings	\$20,000	Hiring a facilitator, and hosting visioning / planning meetings	\$20,000	Hosting meetings & write report	\$20,000	2012	NOPL & MRC	\$60,000	\$9,000	SRFB, PSAR
63	Future Habitat Project Development	Non-Capital	Dungeness River Habitat Resurvey	Understand baseline habitat conditions, since the lower 10 miles of the river have been restored. Assess trends in habitat conditions, and identify areas of concern.	2	Baseline habitat monitoring is a basic need for understanding whether habitat conditions are degrading or improving.	Recovery Plans & LFA	Riparian	Understanding of the baseline conditions	Create a habitat map for the Dungeness River.	All ESA Salmon species	All other salmon species	Conceptual	Planning	\$50,000	Field study	\$100,000	Field study	\$100,000	On-going	JSKT	\$250,000	\$37,500	SRFB
67	Future Habitat Project Development	Non-Capital	Increase Recovery Capacity & Support NOPL-wide	Quicken the pace of recovery by diversifying funding, assisting with project design and implementation & coordinating with recovery organizations.	1	Recovery implementation hindered by lack of capacity & lack of funding	Recovery Plan goals	Riparian, estuary, river delta, Nearshore	Instream flow, fish passage	Increased projects developed & new funding gained	All ESA Salmon species	All other salmon species	Work underway	Maintain increased staffing which will allow us to begin more projects & gain new funding for such	\$50,000	Maintain increased staffing which will allow us to begin more projects & gain new funding for such	\$50,000	Maintain increased staffing which will allow us to begin more projects & gain new funding for such	\$50,000	On-going	NOPL	\$150,000	\$22,500	PSAR, SRFB
Habitat Protection																								
49	Habitat Protection	Non-Capital	Create Stable-funded Incentive program	Non-regulatory riparian habitat protection program, with sufficient funding, could protect a lot of high quality fish habitat and help to support ecosystem function.	1	Funding limitations	Recovery Plans & LFA	Funding limitations	Riparian Habitat Protection	Sufficiently fund a non-regularly incentive program for riparian habitat protection	All ESA listed salmonids	All other salmonids	Implementation	Implementation	\$100,000	Implementation	\$100,000	Implementation	\$100,000	On-going	CC & CCD	\$300,000	\$150,000	CC
52	Habitat Protection	Non-Capital	Clallam County Map Roadside Ditches	Assess quantity and quality of stormwater from roadside ditches to stream channels. Baseline for stormwater quality monitoring.	2	Degraded water quality	Recovery Plans & LFA	stream network	water quality	Assess stormwater quality and the effect of roadside ditches. Develop a baseline for stormwater quality monitoring.	All ESA Salmon species	All other salmon species	Conceptual	Identify crossing and ditches on maps	\$100,000	Ground truthing and water quality monitoring	\$30,000	water quality monitoring and develop report	\$30,000	2012	CC	\$75,000	\$11,250	SRFB, PSAR

No.	Project Type	Plan Category	Project Information and How it Relates to the Recovery Plan										Project Planning						Project Cost and Sponsor					
			Project Name	Project Description (brief description)	Priority tier of project	Limiting Factors	Document Reference for limiting factor (Recovery Plan, Chapter 3 - Habitat Protection)	Habitat Type (HWS items - i.e. riparian, estuary river delta, nearshore, etc.)	Activity Type (HWS items - i.e. fish passage, instream flow, sediment reduction, etc.)	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (Conceptual, Feasibility completed, land acquisition completed, design completed, permitting completed, construction completed)	2010 Activity to be funded	2010 Estimated Cost	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
53	Habitat Protection	Non-Capital	Clallam Water type Inventory and Assessment	Correct and update the water type maps, which has many errors, and could result in under-protection of 40-60% of the fish-bearing streams, if not corrected.	1	Improves local gov't information sources for the protection of critical areas under the GMA.	Recovery Plans & LFA	Instream Riparian	Correction of maps	Elimination of errors in the WDNR water type maps	All ESA Salmon species	All other salmon species	Conceptual		project scoping, landowner contacts, fieldwork, data collection	\$120,000	Assessment, field work, data entry, interactive mapping	\$200,000	2012	WFC	\$370,000	\$75,000	SRFB, PSAR	
69	Habitat Protection	Non-Capital	NOPLA area wide data base for habitat restoration, protection & permitted activities	Work w/nearby govts to integrate GIS & Permit Tracking to understand and monitor landscape-scale development patterns within LE	3	All-H Integration	Recovery Plans & LFA	Monitoring	Monitoring	Design, Purchase & Populate data base, followed by analysis	All ESA Salmon species	All other salmon species	Conceptual	Purchase & Install	\$100,000	Populate data base, followed by analysis	\$100,000	Continue to add new info to data base	\$15,000	Insertion of new data will be on-going	NOPLA, CC, COPA & COS	\$200,000	\$39,750	PSAR/Other
70	Habitat Protection	Non-Capital	Assess implementation of CAO, SMP & HPA ordinance	Ground truth survey to gauge effectiveness of regulations designed to protect habitat.	1	Advance All-H Integration	Recovery Plans & LFA	Monitoring	Monitoring	Survey, info integrated into data base, analysis	All ESA Salmon species	All other salmon species	Conceptual		All	\$100,000			2012	NOPLA, CC, COPA & COS	\$100,000	\$15,000	PSAR/Other	
71	Habitat Protection	Non-Capital	NOPLA Area Wide Increase compliance with ordinances & codes	Help increase compliance through active enforcement & inspection at all stages of development.	2	Advance All-H Integration	Recovery Plans & LFA	Monitoring	Monitoring	Resources to provide increased compliance and move to proactive enforcement.	All ESA Salmon species	All other salmon species	Conceptual		Increased & proactive enforcement	\$200,000	Continue increased & proactive enforcement	\$200,000	On-going	NOPLA, CC, COPA & COS	\$200,000	\$20,000	Unknown	
72	Habitat Protection	Non-Capital	NOPLA area wide update stormwater management program	Support efforts by Clallam Co. & City of PA to reduce stormwater runoff.	2	Advance salmon recovery	Puget Sound Chinook Recovery Plan, Clean Water Act	Instream Habitat & Riparian	Instream flow, fish passage	implement comprehensive stormwater management system	All ESA Salmon species	All other salmon species	Feasibility	Monitoring of the Sequim-Dungeness area	Monitoring all of Clallam County and convening a stakeholder group		Development of Stormwater Management Plan				NOPLA, CC, COPA & COS	\$719,000	\$538,000	EPA
73	Habitat Protection	Non-Capital	NOPLA Area Wide update Shoreline Master Program (SMP)	Support efforts by Clallam County & City of PA which are mandated by WA to update SMP's by 2011.	2	Advance salmon recovery	Puget Sound Chinook Recovery Plan	Instream Habitat, Nearshore & Riparian	Sediment Reduction	Update Shoreline Master Plans	All ESA Salmon species	All other salmon species	Conceptual	Obtain funding & begin SMP process	Continue work & process to update SMP	\$300,000	SMP update completed	\$300,000	2012	NOPLA, CC, COPA & COS	\$600,000	\$90,000	DOE	
79	Habitat Protection	Capital	Lower Morse Creek Restoration: Community Outreach & Feasibility Study Phase	Conduct community outreach in the lower reaches of Morse Creek to determine community member needs, concerns and support for possible restoration actions in the lower 1.2 miles of Morse Creek. Identify technical assessment/data needs and develop a preliminary engineering concept to assist with development of engineering at a later time.	2	Floodplain, lwd, habitat features, pools	WRIA 18 LFA	Riparian/Floodplain	Riparian Instream Habitat	Prepare feasibility study to include landowner outreach and groundwork for engineering	steelhead	pink, chum, coho, bull trout, chinook, cutthroat	Conceptual	N/A	N/A	N/A	feasibility study	200,000	2013	NOSC	200,000	partner contributions up to 10,000	no preference	
Watershed Plan Implementation & Coordination																								
57	Watershed Plan Implementation & Coordination	Non-Capital	Elwha Watershed Adaptive Management Plan	Collect baseline information prior to dam removal; Mark hatchery and wild fish up to 4 years prior to dam removal.	1	Need to evaluate fish response during dam removal.	The Elwha River Fish Restoration Plan	Riparian Instream	Recovery Integration and Monitoring, Adaptive Management	Adaptive Management during the dam removal process	Strails Chum	Bull Trout, Coho, Steelhead, Cutthroat	Conceptual	Begin adaptive management process	Development of Elwha Adaptive Management & Monitoring	\$145,000	Implement Adaptive Management Plan and Monitoring	\$130,000	\$85,000	2012	LEKT	\$375,000	\$360,000	Unknown
66	Watershed Plan Implementation & Coordination	Non-Capital	12 River Channel Migration Zone Assessment	CMZ mapping and delineation, and incorporation of those maps into the Critical Areas Ordinance. Clallam County has jurisdiction and authority to limit development within CMZs through the Critical Areas Ordinance	1	CMZ's are also the most productive salmonid habitat, so delineation will help protect.	Clallam County Critical Areas Ordinance	CMZs	CMZ mapping and delineation	CMZ delineation	All ESA listed salmonids	All other salmonids	Conceptual	project scope, consultant selection	CMZ Mapping and delineation	\$50,000		\$250,000		2011	JSKT, LEKT, Makah & CC	\$300,000	\$255,000	Unknown
Outreach & Education																								
51	Outreach & Education	Non-Capital	Clallam County Salmonid Outreach Planner	Develop a comprehensive and collaborative program for outreach, education, public involvement, and stewardship promotion.	3	Need a coordinated and consistent effort to communicate with citizens about salmonid ecology and recovery.		Capacity	Development of an outreach program	Increase public awareness of salmonid recovery efforts	All ESA listed salmonids	All other salmonids	Conceptual	Determine existing local efforts and ID potential linkages	Create links, close gaps	\$66,600	Project design and further recovery plan	\$66,600	\$66,600	On-going	CC & CCD	\$200,000	\$30,000	Unknown
58	Outreach & Education	Non-Capital	Elwha Morse Management Team	Support and develop capacity for EMMT	3	Limited capacity		Capacity	Support and develop capacity for EMMT	Support and develop capacity for EMMT	All ESA listed salmonids	All other salmonids	Conceptual	Increase capacity	Project design / volunteer dev	\$75,000	Implement Projects	\$75,000	\$75,000	On-going	CC	\$225,000	\$33,750	Unknown
60	Outreach & Education	Non-capital	WRIA 19 Conservation Planning	Identify land, assess value and willingness for easements and acquisition	2	Identify properties in WRIA 19 to assess ecosystem function, market value, and landowner willingness on a parcel-by-parcel basis to develop a plan for land acquisition through permanent conservation easements and fee simple acquisition	p. 5-1 of WRIA19RC Draft	Riparian, estuary, river delta, Nearshore	Instream flow, sediment reduction	Conservation Acquisition program for WRIA 19 with prioritized list of parcels for acquisition	PS Chinook	Bull Trout, Coho, Winter Steelhead, Cutthroat, Chum	Feasibility completed	Outreach, GIS, preliminary appraisals, title report, prepare report	Outreach, GIS, preliminary appraisals, title report, prepare report	\$73,000		\$75,000		2010	NOLT, Makah & LEKT	\$148,000	\$20,000	LEKT & Makah in kind - technical assistance & GIS
61	Outreach & Education	Non-Capital	WRIA-19 Watershed Council	Support and develop capacity for WRIA-19 Watershed Council.	3	Limited capacity	WRIA 19 SALMON RESTORATION PLAN	Capacity	Support and develop capacity for WRIA-19 Watershed Council	Support and develop capacity for WRIA-19 Watershed Council	All ESA listed salmonids	All other salmonids	Conceptual	Increase capacity	Project design / volunteer dev	\$75,000	Implement Projects	\$75,000	\$75,000	On-going	CC	\$225,000	\$33,750	Unknown
62	Outreach & Education	Non-Capital	Dungeness River Management Team	Support and develop capacity for the DRMT	3	Limited capacity		Capacity	Support and develop capacity for the DRMT	Support and develop capacity for the DRMT	All ESA listed salmonids	All other salmonids	Conceptual	Increase capacity	Project design / volunteer dev	\$75,000	Implement Projects	\$75,000	\$75,000	On-going	CC	\$225,000	\$33,750	Unknown
68	Outreach & Education	Non-Capital	NOPLA-Area Wide Outreach Program	Variety of efforts to inform and educate about the need for salmon recovery, local projects underway, and call to action about what individuals can do.	3	Need for an outreach program	Puget Sound Partnership Action Agenda	Development of an outreach program	Development of an outreach program	Development of an outreach program	All ESA listed salmonids	All other salmonids	Conceptual	Develop and implement outreach plan	Update website and outreach displays	\$30,000	Expand and Continue Outreach	\$30,000	\$25,000	On-going	NOPLA & WDFW	\$85,000	\$12,750	Unknown
Instream Flow Protection																								
Habitat Project																								
Stock Monitoring Support																								
56	Stock Monitoring Support	Non-Capital	Elwha River Nearshore Biodiversity Investigations	Assess the current status of salmon and associated fish in the Nearshore adjacent to the Elwha River, characterization of habitat	3	Filling a data gap in the region	Technical Workshop on Nearshore Restoration in the Central Strait of Juan de Fuca	Nearshore	Biodiversity assessment	Development of pre dam removal and post dam removal databases for fish communities in the Central Strait. Identification of food web relationships, mapping of habitats.	PS Chinook	Coho, chum, steelhead, smelt, sand lance, herring, rockfish,	Ready to implement	Nearshore biodiversity Investigations	Nearshore biodiversity Investigations	\$75,000		\$75,000		2015	NOAA, USGS & LEKT	\$450,000	\$67,500	LEKT, JSKT, Batelle
76	Stock Monitoring Support	Non-Capital	Elwha River Salmon Enumeration Weir	Construct, install and maintain a floating weir in the Elwha River to allow the accurate enumeration of returning adult salmon to the Elwha River	1	Filling a data gap in the region - monitoring the effects of ecosystem restoration	Elwha River Fish Restoration Plan	Mainstem Elwha River	Enumeration of returning adult salmon	Count all adult salmon returning to Elwha River	PS Chinook	Coho, steelhead, chum, pink,	Being implemented for one year but operational funding needed to continue.		Maintenance and operation	\$305,000		\$305,000		2011	NPS, USGS, USFWS, NOAA, WDFW & LEKT	\$610,000	\$210,000	USGS/NPS grant
Habitat Project Monitoring																								
65	Habitat Project Monitoring	Non-Capital	Jimmycomelately Creek & Dungeness River Habitat	Stewardship funding for 300 acres conserved through conservation easements and acquisition	3	Protection from improper use, noxious weed control, general site maintenance, and monitoring of land use.	Recommended Land Protection Strategies for the Dungeness Riparian Area	Monitoring	Monitoring	Monitor and manage 300 acres of protected lands - salmonid habitat	Dungeness Chinook	all other salmonid species	Conceptual	Staff (0.17 FTE), mileage, supplies, equipment	Staff (0.17 FTE), mileage, supplies, equipment	\$17,200		\$17,200		On-going	WDFW, JSKT, NOLT & CC	\$51,600	\$7,740	SRFB, PSAR

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74	Habitat Project Monitoring		NOPLE Area Adaptive Management Plan & Monitoring	LE will participate in group process needed to create an adaptive management plan	3	Lack of H integration	Recovery Plans & LE Statute	Monitoring	Monitoring	Participate & complete adaptive management process & plan	All ESA Salmon species	All other salmon species	Conceptual	Provide Further education about	\$1,000	Begin Adaptive Management Process	\$75,000	Continue & Complete Adaptive Mgmt Process & Plan	\$75,000	2012	NOPLE, CC, COPA & COS	\$165,000	\$15,000	In-kind/other
75	Habitat Project Monitoring	Non-Capital	NOPLE Area wide Monitoring Program	Establish monitoring program for VSP parameters & provide for data/findings for EDT/AHA	2	Need for a monitoring program	Puget Sound Chinook Recovery Plan	Monitoring	Monitoring	Begin w/Dungeness Chinook population analysis and modeling to support harvest, hatchery & habitat mgmt & planning	Dungeness Chinook	Coho, steelhead, chum, pink,	Conceptual	Design & Establish population analysis & modeling	\$100,000	Data Collection & Analysis	\$100,000	More Data collection & Analysis	\$100,000	2012	NOPLE, CC, COPA & COS	\$300,000	\$45,000	Unknown
	Research																							
	Other																							
	Total Non-Capital Need:														\$17,202,300		\$57,575,100		\$60,570,200			\$185,330,800	\$27,799,620	
	Priority Projects and Programs Benefiting Non-Listed Species																							
	Total Non-Listed Species Need:																							

WRIA 19 Subbasin Goals and Strategies
Version 8_2

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Salt Creek	Estuary and Nearshore Processes and Habitat Conditions	High	Salt Creek Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Salt Creek Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Salt Creek Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist.	2-4	Salt Creek Recovery Strategy 3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1
Salt Creek	Habitat Connectivity	Medium	Salt Creek Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Salt Creek Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Salt Creek Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-
Salt Creek	Biological Processes	Medium	Salt Creek Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Salt Creek Recovery Strategy 6	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of Salt Creek salmonids is maintained.	1/3	Salt Creek Recovery Strategy 7	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
Salt Creek	Hydrologic Processes	Medium	Salt Creek Recovery Goal 4	Restore hydrologic processes and natural hydrologic variability to the extent that hydrologic impacts no longer limit Salt Creek salmonid VSP parameters.	Salt Creek Recovery Strategy 8	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	-	-	-	-	-	-
Salt Creek	Sediment Processes	Low	Salt Creek Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in Salt Creek to the extent that sediment processes do not limit salmonid VSP parameters.	Salt Creek Recovery Strategy 9	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Salt Creek Recovery Strategy 10	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Salt Creek Recovery Strategy 11	Restore natural wood loading volume and density to the Salt Creek watershed to restore habitat forming processes and improve in-stream sediment routing (see also Section 7.1.1.7).	4
Salt Creek	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Salt Creek Recovery Strategy 12	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3/4	Salt Creek Recovery Strategy 13	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Salt Creek Recovery Strategy 14	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	3

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Salt Creek	Habitat and LWD Conditions	Medium	Salt Creek Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Salt Creek Recovery Strategy 15	Where data are lacking assess instream meso-habitat conditions in the Salt Creek watershed.	1	Salt Creek Recovery Strategy 16	Implement wood supplementation in identified wood deficient zones outlined in McHenry et al. (2004) and/or from future habitat monitoring results.	4	-	-	-
Salt Creek	Water Quality Conditions	Low	Salt Creek Recovery Goal 8	Protect and/or restore water quality conditions so that water quality conditions do not limit salmonid VSP parameters.	Salt Creek Recovery Strategy 17	Develop water quality monitoring program for the Salt Creek watershed.		Salt Creek Recovery Strategy 18	Protect and restore water quality through the implement riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-
Lyre River	Estuary and Nearshore Processes and Habitat Conditions	Medium	Lyre River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Lyre River Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Lyre River Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist. Include road maintenance and abandonment plans. Restore floodplain forest in the lower reaches to increase bank stability and reduce sediment introduction and transport to the estuary.	3	Lyre River Recovery Strategy 3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1
Lyre River	Habitat Connectivity	Low	Lyre River Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Lyre River Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Lyre River Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-
Lyre River	Biological Processes	Medium	Lyre River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Lyre River Recovery Strategy 6	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of Lyre River salmonids is maintained.	1/3	Lyre River Recovery Strategy 7	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
Lyre River	Hydrologic Processes	Low	Lyre River Recovery Goal 4	Restore hydrologic processes and natural hydrologic variability to the extent that hydrologic impacts no longer limit the Lyre River salmonid VSP parameters.	Lyre River Recovery Strategy 8	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	-	-	-	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Lyre River	Sediment Processes	Medium	Lyre River Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) to the extent that sediment processes do not limit salmonid VSP parameters.	Lyre River Recovery Strategy 9	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Lyre River Recovery Strategy 10	Reduce road and other landuse related surface erosion to levels that achieve Lyre River Recovery Goal 5.	3	-	-	-
Lyre River	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals .	Lyre River Recovery Strategy 11	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	Lyre River Recovery Strategy 12	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Lyre River Recovery Strategy 13	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3
Lyre River	Habitat and LWD Conditions	Unknown	Lyre River Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Lyre River Recovery Strategy 14	Protect, maintain, and or restore large woody debris (LWD) loading and physical habitat conditions through implementing riparian acquisitions, conservation easements, and riparian and habitat restoration projects.	1/3/4	-	-	-	-	-	-
Lyre River	Water Quality Conditions	Unknown	Lyre River Recovery Goal 8	Protect and/or restore water quality conditions so that water quality conditions do not limit salmonid VSP parameters.	Lyre River Recovery Strategy 15	Develop water quality monitoring program for the Lyre River watershed.	1	Lyre River Recovery Strategy 16	Protect and restore water quality through the implement riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-
Twin Rivers	Estuary and Nearshore Processes and Habitat Conditions	High	Twin Rivers Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Twin Rivers Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Twin Rivers Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist. Include road maintenance and abandonment plans. Restore floodplain forest in the lower reaches to increase bank stability and reduce sediment introduction and transport to the estuary.	2-4	Twin Rivers Recovery Strategy 3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1
Twin Rivers	Habitat Connectivity	Low	Twin Rivers Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Twin Rivers Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Twin Rivers Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Twin Rivers	Biological Processes	Medium	Twin Rivers Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Twin Rivers Recovery Strategy 6	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of East and West Twin rivers salmonids is maintained.	1/3	Twin Rivers Recovery Strategy 7	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
Twin Rivers	Hydrologic Processes	Medium	Twin Rivers Recovery Goal 4	Restore hydrologic processes and natural hydrologic variability to the extent that hydrologic impacts no longer limit the Twin Rivers salmonid VSP parameters.	Twin Rivers Recovery Strategy 8	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	-	-	-	-	-	-
Twin Rivers	Sediment Processes	Medium	Twin Rivers Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in Twin Rivers to the extent that sediment processes do not limit salmonid VSP parameters.	Twin Rivers Recovery Strategy 9	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Twin Rivers Recovery Strategy 10	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	-	-	-
Twin Rivers	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Twin Rivers Recovery Strategy 11	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	Twin Rivers Recovery Strategy 12	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Twin Rivers Recovery Strategy 13	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3
Twin Rivers	Habitat and LWD Conditions	Medium	Twin Rivers Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Twin Rivers Recovery Strategy 14	Continue the Intensively Monitored Watershed program including implementation of present project proposals. Identify and prioritize the West Twin for large woody debris introduction and riparian forest planting upon completion of or consistent with IMW.	1/3/4	-	-	-	-	-	-
Twin Rivers	Water Quality Conditions	Unknown	Twin Rivers Recovery Goal 8	Protect and/or restore water quality conditions so that water quality conditions do not limit salmonid VSP parameters.	Twin Rivers Recovery Strategy 15	Develop water quality monitoring program for the Twin Rivers watershed.	1	Twin Rivers Recovery Strategy 16	Protect and restore water quality through the implement riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Deep Creek	Estuary and Nearshore Processes and Habitat Conditions	Functional	Deep Creek Recovery Goal 1	Protect estuary and nearshore processes and habitat conditions so that future limiting factors do not develop.	Deep Creek Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Deep Creek Recovery Strategy 2	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1	-	-	-
Deep Creek	Habitat Connectivity	Low	Deep Creek Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Deep Creek Recovery Strategy 3	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Deep Creek Recovery Strategy 4	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-
Deep Creek	Biological Processes	Medium	Deep Creek Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Deep Creek Recovery Strategy 5	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of Deep Creek salmonids is maintained.	1/3	Deep Creek Recovery Strategy 6	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
Deep Creek	Hydrologic Processes	Medium	Deep Creek Recovery Goal 4	Restore hydrologic processes and natural hydrologic variability to the extent that hydrologic impacts no longer limit the Deep Creek salmonid VSP parameters.	Deep Creek Recovery Strategy 7	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	-	-	-	-	-	-
Deep Creek	Sediment Processes	Medium	Deep Creek Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in Deep Creek to the extent that sediment processes do not limit salmonid VSP parameters.	Deep Creek Recovery Strategy 8	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Deep Creek Recovery Strategy 9	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Deep Creek Recovery Strategy 10	Restore natural wood loading volume and density to the Deep Creek watershed to restore habitat forming processes and improve in-stream sediment routing.	4
Deep Creek	Riparian and Floodplain Processes and Conditions	Medium	Deep Creek Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Deep Creek Recovery Strategy 11	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	Deep Creek Recovery Strategy 12	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Deep Creek Recovery Strategy 13	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Deep Creek	Habitat and LWD Conditions	Medium	Deep Creek Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Deep Creek Recovery Strategy 14	Continue the Intensively Monitored Watershed program including implementation of present project proposals. Identify and prioritize the West Twin for large woody debris introduction and riparian forest planting upon completion of or consistent with IMW.	1/3/4	-	-	-	-	-	-
Deep Creek	Water Quality Conditions	Medium	Deep Creek Recovery Goal 8	Protect and/or restore water quality conditions so that water quality impacts do not limit salmonid VSP parameters.	Deep Creek Recovery Strategy 15	Develop water quality monitoring program for the Deep Creek watershed.	1	Deep Creek Recovery Strategy 16	Protect and restore water quality through the implement riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-
Pysht River	Estuary and Nearshore Processes and Habitat Conditions	High	Pysht River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Pysht River Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Pysht River Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist. Reconnect tidal and fish passage processes where possible.	2-4	Pysht River Recovery Strategy 3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1
Pysht River	Habitat Connectivity	High	Pysht River Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Pysht River Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Pysht River Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-
Pysht River	Biological Processes	High	Pysht River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Pysht River Recovery Strategy 6	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of Pysht River salmonids is maintained.	1/3	Pysht River Recovery Strategy 7	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	Pysht River Recovery Strategy 8	Supplementation with hatchery origin salmonids.	3-6

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Pysht River	Hydrologic Processes	High	Pysht River Recovery Goal 4	Protect, maintain, and/or restore hydrologic processes and natural hydrologic variability in the Pysht River watershed to the extent that hydrologic impacts do not limit salmonid VSP parameters.	Pysht River Recovery Strategy 9	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	Pysht River Recovery Strategy 10	Implement recommendations found in the WRIA 19 Watershed Plan (e.g., establish in-stream flows).	1/3	-	-	-
Pysht River	Sediment Processes	High	Pysht River Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in Pysht River to the extent that sediment processes do not limit salmonid VSP parameters.	Pysht River Recovery Strategy 11	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Pysht River Recovery Strategy 12	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Pysht River Recovery Strategy 13	Restore natural wood loading volume and density to the Pysht River watershed to restore habitat forming processes and improve in-stream sediment routing.	4
Pysht River	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Pysht River Recovery Strategy 14	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	Pysht River Recovery Strategy 15	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Pysht River Recovery Strategy 16	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3
Pysht River	Habitat and LWD Conditions	High	Pysht River Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Pysht River Recovery Strategy 17	Where data are lacking assess instream meso-habitat conditions in the Pysht River watershed.	1	Pysht River Recovery Strategy 18	Implement wood supplementation in identified wood deficient zones and/or from future habitat monitoring results.	1/3/4	-	-	-
Pysht River	Water Quality Conditions	High	Pysht River Recovery Goal 8	Protect and/or restore water quality conditions so that water quality impacts do not limit salmonid VSP parameters.	Pysht River Recovery Strategy 19	Develop water quality monitoring program for the Pysht River watershed.	1	Pysht River Recovery Strategy 20	Protect and restore water quality through the implementation of riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-
Clallam River	Estuary and Nearshore Processes and Habitat Conditions	High	Clallam River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Clallam River Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	Clallam River Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist. Reconnect tidal and fish passage processes where possible.	2-4	3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Clallam River	Habitat Connectivity	Medium	Clallam River Recovery Goal 2	Restore habitat connectivity so that habitat connectivity no longer limits salmonid VSP parameters.	Clallam River Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Clallam River Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	Clallam River Recovery Strategy 6	Where restoration of habitat connectivity is currently not possible develop mitigation plan that minimizes the impacts to salmonids.	2-6
Clallam River	Biological Processes	High	Clallam River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	Clallam River Recovery Strategy 7	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of Clallam River salmonids is maintained.	1/3	Clallam River Recovery Strategy 8	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
Clallam River	Hydrologic Processes	High	Clallam River Recovery Goal 4	Protect, maintain, and/or restore hydrologic processes and natural hydrologic variability in the Clallam River watershed to the extent that hydrologic impacts do not limit salmonid VSP parameters.	Clallam River Recovery Strategy 9	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	Clallam River Recovery Strategy 10	Implement recommendations found in the WRIA 19 Watershed Plan (e.g., establish in-stream flows).	1/3	-	-	-
Clallam River	Sediment Processes	Medium	Clallam River Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in Clallam River to the extent that sediment processes do not limit salmonid VSP parameters.	Clallam River Recovery Strategy 11	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	Clallam River Recovery Strategy 12	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Clallam River Recovery Strategy 13	Restore natural wood loading volume and density to the Clallam River watershed to restore habitat forming processes and improve in-stream sediment routing.	4
Clallam River	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Clallam River Recovery Strategy 14	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	Clallam River Recovery Strategy 15	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	Clallam River Recovery Strategy 16	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3
Clallam River	Habitat and LWD Conditions	Medium	Clallam River Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	Clallam River Recovery Strategy 17	Where data are lacking assess instream meso-habitat conditions in the Clallam River watershed.	1	Clallam River Recovery Strategy 18	Implement wood supplementation in identified wood deficient zones and/or from future habitat monitoring results.	1/3/4	-	-	-
Clallam River	Water Quality Conditions	High	Clallam River Recovery Goal 8	Protect and/or restore water quality conditions so that water quality impacts do not limit salmonid VSP parameters.	Clallam River Recovery Strategy 19	Develop water quality monitoring program for the Clallam River watershed.	1	Clallam River Recovery Strategy 20	Protect and restore water quality through the implementation of riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Hoko River	Estuary and Nearshore Processes and Habitat Conditions	High	Hoko River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Hoko River Recovery Strategy 1	Ensure that existing environmental regulations and management plans protect estuarine and nearshore processes.	1	Hoko River Recovery Strategy 2	Protect intact, continuous shoreline that is uninterrupted by man-made armoring.	1	Hoko River Recovery Strategy 3	Remove existing “hard-point” armoring and/or replace with alternative design methods that avoid and minimize environmental impacts to the greatest extent possible.	3
Hoko River	Estuary and Nearshore Processes and Habitat Conditions	High	Hoko River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Hoko River Recovery Strategy 4	Support natural process recovery through wood supplementation.	4	-	-	-	-	-	-
Hoko River	Habitat Connectivity	Medium	Hoko River Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Hoko River Recovery Strategy 5	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Hoko River Recovery Strategy 6	Develop basin-wide inventory of existing water-crossings and incorporate current condition assessment. Restore habitat connectivity where habitat is currently disconnected.	1/2	-	-	-
Hoko River	Biological Processes	High	Hoko River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, productivity, and diversity to conditions needed to achieve VSP.	Hoko River Recovery Strategy 7	Maintain genetic diversity within natural origin Hoko populations.	1/3	Hoko River Recovery Strategy 8	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	Hoko River Recovery Strategy 9	Improve spatial distribution and retention of salmon carcasses in the Hoko River drainage to maintain critical marine-derived nutrient cycles.	3-6
Hoko River	Hydrologic Processes	High	Hoko River Recovery Goal 4	Restore natural flow regime (magnitude, frequency, duration, timing, and rate-of-change) to conditions that maintain self-sustaining ecological processes and patterns.	Hoko River Recovery Strategy 10	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	Hoko River Recovery Strategy 11	Maintain existing USGS Hoko River gaging station.	1	Hoko River Recovery Strategy 12	Evaluate existing road network and determine appropriate road density necessary to achieve Hoko River Recovery Goal 4.	1

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Hoko River	Sediment Processes	Medium	Hoko River Recovery Goal 5	Minimize sediment inputs to the Hoko River drainage to those that occur naturally through space and time. Restore and protect natural in-stream sediment transport processes. Where sediment levels are impaired reduce fine sediment (< 0.85mm) volume within the hyporheic zone to improve survival to emergence (STE).	Hoko River Recovery Strategy 13	Eliminate road/culvert related mass wasting events to fish-bearing water.	3	Hoko River Recovery Strategy 14	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Hoko River Recovery Strategy 15	Restore natural wood loading volume and density to the Hoko watershed to restore habitat forming processes and improve in-stream sediment routing.	4
Hoko River	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Goal 6	Protect existing intact and high functioning riparian and floodplain processes and conditions to ensure “no net loss”. Restore degraded riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals .	Hoko River Recovery Strategy 16	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3	Hoko River Recovery Strategy 17	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and/or restoration projects.	1/3/4	Hoko River Recovery Strategy 18	Reduce riparian and floodplain road network that causes compaction and disconnection of subsurface flow pathways.	3
Hoko River	Habitat and LWD Conditions	High	Hoko River Recovery Goal 7	Maintain and improve existing habitat to the conditions necessary to attain VSP goals.	Hoko River Recovery Strategy 19	Assess instream meso-habitat in the Hoko watershed.	1	Hoko River Recovery Strategy 20	Based on LWD volume and density develop a strategic implementation plan to achieve conditions that support VSP goals. Implement wood supplementation in high priority, wood deficient zones.	1/3/4	-	-	-
Hoko River	Water Quality Conditions	High	Hoko River Recovery Goal 8	Establish water quality conditions that do not inhibit or prolong recovery to VSP goals.	Hoko River Recovery Strategy 21	Develop water quality monitoring program for the Hoko watershed.	1	-	-	-	-	-	-
Sekiu River	Estuary and Nearshore Processes and Habitat Conditions	Medium	Sekiu River Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	Sekiu River Recovery Strategy 1	Ensure that existing environmental regulations and management plans protect estuarine and nearshore processes.	1	Sekiu River Recovery Strategy 2	Protect intact, continuous shoreline that is uninterrupted by man-made armoring.	1	Sekiu River Recovery Strategy 3	Remove existing “hard-point” armoring and/or replace with alternative design methods that avoid and minimize environmental impacts to the greatest extent possible.	3
Sekiu River	Habitat Connectivity	Medium	Sekiu River Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	Sekiu River Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	Sekiu River Recovery Strategy 5	Develop basin-wide inventory of existing water-crossings and incorporate current condition assessment. Restore habitat connectivity where habitat is currently disconnected.	1/2	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Sekiu River	Biological Processes	High	Sekiu River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, productivity, and diversity to conditions needed to achieve VSP.	Sekiu River Recovery Strategy 6	Maintain genetic diversity within natural origin Sekiu populations.	1/3	Sekiu River Recovery Strategy 7	Supplementation with hatchery origin salmonids.	3-6	Sekiu River Recovery Strategy 8	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3
Sekiu River	Biological Processes	High	Sekiu River Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, productivity, and diversity to conditions needed to achieve VSP.	Sekiu River Recovery Strategy 9	Improve spatial distribution and retention of salmon carcasses in the Sekiu River drainage to maintain critical marine-derived nutrient cycles.	3-6	-	-	-	-	-	-
Sekiu River	Hydrologic Processes	Unknown	Sekiu River Recovery Goal 4	Restore natural flow regime (magnitude, frequency, duration, timing, and rate-of-change) to conditions that maintain self-sustaining ecological processes and patterns.	Sekiu River Recovery Strategy 10	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	Sekiu River Recovery Strategy 11	Maintain existing Washington Department of Ecology Sekiu River stream gaging station.	1	Sekiu River Recovery Strategy 12	Evaluate existing road network and determine appropriate road density necessary to achieve Sekiu Recovery Goal 4.	1
Sekiu River	Sediment Processes	Medium	Sekiu River Recovery Goal 5	Minimize sediment inputs to the Sekiu River drainage to those that occur naturally through space and time. Restore and protect natural in-stream sediment transport processes. Where sediment levels are impaired reduce fine sediment (< 0.85mm) volume within the hyporheic zone to improve survival to emergence (STE).	Sekiu River Recovery Strategy 13	Eliminate road/culvert related mass wasting events to fish-bearing water.	3	Sekiu River Recovery Strategy 14	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	Sekiu River Recovery Strategy 15	Restore natural wood loading volume and density to the Sekiu watershed to restore habitat forming processes and improve in-stream sediment routing.	3/4
Sekiu River	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Goal 6	Protect existing intact and high functioning riparian and floodplain processes and conditions to ensure “no net loss”. Restore degraded riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	Sekiu River Recovery Strategy 16	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian zones that maintain all necessary ecological function.	1/3	Sekiu River Recovery Strategy 17	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and/or restoration projects.	1/3/4	Sekiu River Recovery Strategy 18	Reduce riparian and floodplain road network that causes compaction and disconnection of subsurface flow pathways.	3

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
Sekiu River	Habitat and LWD Conditions	High	Sekiu River Recovery Goal 7	Maintain and improve existing habitat to the conditions necessary to attain VSP goals.	Sekiu River Recovery Strategy 19	Assess instream meso-habitat in the Sekiu watershed.	1	Sekiu River Recovery Strategy 10	Based on LWD volume and density develop a strategic implementation plan to achieve conditions that support VSP goals. Implement wood supplementation in high priority, wood deficient zones.	1/3/4	-	-	-
Sekiu River	Water Quality Conditions	Unknown	Sekiu River Recovery Goal 8	Establish water quality conditions that do not inhibit or prolong recovery to VSP goals.	Sekiu River Recovery Strategy 21	Develop water quality monitoring program for the Sekiu watershed.	1	-	-	-	-	-	-
WSI	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Goal 1	Protect and restore estuary and nearshore processes and habitat conditions so that current limiting factors are no longer limiting and future limiting factors do not develop.	WSI Recovery Strategy 1	Protect estuarine processes and habitat conditions from degradation by employing environmental regulations and management plans. Where regulations are insufficient to protect estuarine processes and habitat conditions implement conservation easements or acquisitions with willing landowners.	1	WSI Recovery Strategy 2	Restore degraded estuarine habitat conditions where they exist. Reconnect tidal and fish passage processes where possible.	2-4	3	For properties that provide particularly important estuarine processes and nearshore habitat, implement conservation easements or acquisitions with willing landowners.	1
WSI	Habitat Connectivity	Medium	WSI Recovery Goal 2	Restore and protect habitat connectivity so that habitat connectivity does not limit salmonid VSP parameters.	WSI Recovery Strategy 4	Maintain and protect habitat connectivity where habitat connectivity is intact through the effective implementation of regulations.	1	WSI Recovery Strategy 5	Restore habitat connectivity where habitat is currently disconnected.	2	-	-	-
WSI	Biological Processes	High	WSI Recovery Goal 3	Maintain, protect, and/or restore salmonid population abundance, spatial distribution, productivity, and diversity.	WSI Recovery Strategy 6	Minimize or eliminate risks associated with hatchery origin salmonids to ensure that the genetic diversity of WSI salmonids is maintained.	1/3	WSI Recovery Strategy 7	Evaluate in and out of basin fishing-related mortalities and influence fisheries regulations so that spawning escapement is sufficient to ensure VSP, as well as deliver adequate levels of marine nutrients from decaying salmon carcasses.	1/3	-	-	-
WSI	Hydrologic Processes	Unknown	WSI Recovery Goal 4	Restore and protect hydrologic processes and natural hydrologic variability to the extent that hydrologic impacts do not limit the WSI salmonid VSP parameters.	WSI Recovery Strategy 8	Restore hydrologic processes by addressing issues related to water withdrawals, stream piracy, impermeable surfaces, loss of wetlands and wetland function, and deforestation. Protect intact hydrologic processes where they exist.	1/3	-	-	-	-	-	-

Watershed	Primary Watershed Process Addressed	Process Impairment Rating	Recovery Goal ID	Recovery Goal Narrative	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier	Recovery Strategy ID	Recovery Strategy Narrative	Recovery Strategy Tier
WSI	Sediment Processes	Unknown	WSI Recovery Goal 5	Maintain and restore sediment processes (production, routing, storage, and grain size frequency distribution) in WSI to the extent that sediment processes do not limit salmonid VSP parameters.	WSI Recovery Strategy 9	Eliminate road/culvert and other landuse related mass wasting events that deliver to streams.	3	WSI Recovery Strategy 10	Reduce surface runoff from existing road network to levels that meet or exceed existing Washington State Water Quality Standards.	3	WSI Recovery Strategy 11	Restore natural wood loading volume and density to the WSI watershed to restore habitat forming processes and improve in-stream sediment routing.	4
WSI	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Goal 6	Restore riparian and floodplain processes and conditions so that they are at levels necessary to attain VSP goals.	WSI Recovery Strategy 12	Hydrologically reconnect streams to their floodplains for the purposes of floodplain storage and reconnection of off-channel habitat.	3	WSI Recovery Strategy 13	Protect, maintain, and or restore riparian habitat conditions by implementing riparian acquisitions, conservation easements, and riparian and in-stream restoration projects.	1/3/4	WSI Recovery Strategy 14	Ensure that current and future regulatory mechanisms are in place to protect and provide sufficient riparian and floodplain conditions to maintain all necessary ecological function.	1/3
WSI	Habitat and LWD Conditions	Medium	WSI Recovery Goal 7	Maintain and improve existing habitat conditions to levels necessary to attain VSP goals.	WSI Recovery Strategy 15	Where data are lacking assess instream meso-habitat conditions in the WSI watershed.	1	WSI Recovery Strategy 16	Based on LWD volume and density develop a strategic implementation plan to achieve conditions that support VSP goals. Implement wood supplementation in high priority, wood deficient zones.	1/3/4	-	-	-
WSI	Water Quality Conditions	Unknown	WSI Recovery Goal 8	Protect and/or restore water quality conditions so that water quality impacts do not limit salmonid VSP parameters.	WSI Recovery Strategy 17	Develop water quality monitoring program for the WSI watershed.	1	WSI Recovery Strategy 18	Protect and restore water quality through the implementation of riparian/floodplain recovery strategies and actions that protect and restore riparian and floodplain habitat.	1/3/4	-	-	-

**WRIA 19 Subbasin Actions
Version 8_2**

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Salt Creek	SCA#1	HRA	The Salt Creek estuary and salt marsh is partially disconnected from the mainstem of Salt Creek by a 1,000 foot long, 10 foot high road which was installed in the early 1920's (Shaffer et al. 2006). WDFW and the landowner of the road are working together to restore the function of the Salt Creek estuary with the specific collective goals of: 1) Improving fish access; 2) Decreasing mosquito populations, and; 3) Possibly provide additional water storage during high flows, while maintaining the current level of access (Shaffer et al. 2006). Based upon these goals WDFW and the land owner have proposed at a minimum, replacing the two failed box culverts with a minimum of 6 foot diameter round concrete culverts (Shaffer et al. 2006).	Estuary and Nearshore Processes and Habitat Conditions	High	Salt Creek Recovery Strategy 2	2/3	Salt Creek Recovery Goal 1	WDFW		
Salt Creek	SCA#2	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Estuary and Nearshore Processes and Habitat Conditions	High	Salt Creek Recovery Strategy 3	1	Salt Creek Recovery Goal 1	Not Defined		
Salt Creek	SCA#3a	HRA	Install fish passable culvert on Hart Creek (Camp Hayden Road). A fish passable culvert will provide access to approximately 0.1 miles of low gradient (<4%) fish habitat.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	2	Salt Creek Recovery Goal 2	Clallam County		
Salt Creek	SCA#3b	HRA	Implement comprehensive fish passage program directed at Kreaman Creek and tributaries. Currently 5 culverts partially or totally block access to 0.37, 1.08, 0.38, 0.50, and 0.40 miles of <1%, 1-2%, 2-4%, 4-8%, and 8-20% gradient habitat respectively.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	2	Salt Creek Recovery Goal 2	Not Defined		
Salt Creek	SCA#3c	HRA	The Nordstrom Creek SR 112 culvert is a partial fish barrier, replacing this structure with a fully passable stream crossing structure will enhance fish passage to 0.78, 1.27, 0.81, and 0.48 miles of 1-2%, 2-4%, 4-8% and 8-20% gradient habitat respectively.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	2	Salt Creek Recovery Goal 2	WDOT		
Salt Creek	SCA#3d	HRA	The Falls Creek (tributary to Nordstrom Creek) SR 112 culvert is a partial barrier. Replacement of this stream crossing will provide passage to 1.15, 0.45, and 0.49 miles of 1-2%, 2-4%, and 4-8% gradient habitat respectively	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	2	Salt Creek Recovery Goal 2	WDOT		
Salt Creek	SCA#3e	HRA	Conduct fish passage culvert inventory in upper Nordstrom, Wasankari, and Lijendahl creeks. Prioritize and replace fish barriers within this portion of the watershed.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	1/2	Salt Creek Recovery Goal 2	Various		
Salt Creek	SCA#4	RM&E and HRA	Assess series of constructed private ponds throughout the watershed for fish passage issues affecting habitat connectivity. Prioritize streams/ponds for fish passage improvements and implement fish passage restoration program.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 5	2	Salt Creek Recovery Goal 2	Not Defined		
Salt Creek	SCA#5	PA	Advocate for the enforcement of existing regulations that protect and provide for fish passage.	Habitat Connectivity	Medium	Salt Creek Recovery Strategy 4	1	Salt Creek Recovery Goal 2	Various		
Salt Creek	SCA#6	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004), which recommend no hatchery fish outplanting into the Salt Creek watershed.	Biological Processes	Medium	Salt Creek Recovery Strategy 6	1	Salt Creek Recovery Goal 3	WDFW and Tribes		
Salt Creek	SCA#7	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	Medium	Salt Creek Recovery Strategy 7	1	Salt Creek Recovery Goal 3	WDFW and Tribes		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Salt Creek	SCA#8	RM&E and PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	Medium	Salt Creek Recovery Strategy 7	1	Salt Creek Recovery Goal 3	WDFW and Tribes		
Salt Creek	SCA#9	HRA and PA	Reintroduction and management of beaver (<i>Castor canadensis</i>) in portions of the Salt Creek watershed could help restore wetland functions. Potential areas for consideration should include low gradient streams without significant human infrastructure (e.g., the mainstem below river mile 5.0, Kreaman Creek, Oien Creek, unnamed tributaries 19.0009 and 19.0010).	Hydrologic Processes	Medium	Salt Creek Recovery Strategy 8	3	Salt Creek Recovery Goal 4	Not Defined		
Salt Creek	SCA#10	HRA	Reforestation of unutilized pastures and other open areas could help improve hydrologic processes.	Hydrologic Processes	Medium	Salt Creek Recovery Strategy 8	3	Salt Creek Recovery Goal 4	Various		
Salt Creek	SCA#11	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	Medium	Salt Creek Recovery Strategy 8	3	Salt Creek Recovery Goal 4	Various		
Salt Creek	SCA#12	PA	Limit future water withdrawals from the Salt Creek watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Medium	Salt Creek Recovery Strategy 8	1	Salt Creek Recovery Goal 4	DOE		
Salt Creek	SCA#13	HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	Low	Salt Creek Recovery Strategy 9 & 10	3	Salt Creek Recovery Goal 5	Various		
Salt Creek	SCA#14	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion (see also Section 7.1.1.6).	Sediment Processes	Low	Salt Creek Recovery Strategy 11	3	Salt Creek Recovery Goal 5	Various		
Salt Creek	SCA#15	HRA	Treatment of channel incision in the mainstem of Salt Creek from RM 0.5 to 6.0 (note RM 2.5 to 3.5 were treated with LWD placement in 2006).	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 12	3/4	Salt Creek Recovery Goal 6	Elwha Tribe, private landowners		
Salt Creek	SCA#16	HRA	Develop and implement a treatment plan for channel incision from RM 0 to RM 1.0 in Nordstrom Creek.	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 12	3/4	Salt Creek Recovery Goal 6	Elwha Tribe, private landowners		
Salt Creek	SCA#17	HRA	Develop and implement restoration treatment that includes the abandonment of the Camp Hayden spur road, LWD placement, and riparian planting. This will help restore channel migration processes and reconnect portions of the floodplain with the mainstem.	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 12	3/4	Salt Creek Recovery Goal 6	Elwha Tribe, private landowners		
Salt Creek	SCA#18	RM&E and HRA	Evaluate the Thompson Road Bridge across mainstem Salt Creek for impacts to flood flow and floodplain	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 12	1/3	Salt Creek Recovery Goal 6	Not Defined		
Salt Creek	SCA#19	HRA	Replace undersized Oien Road Bridge across mainstem Salt Creek	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 12	3	Salt Creek Recovery Goal 6	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Salt Creek	SCA#20	HRA	Implement riparian restoration projects within the 54 degraded riparian stream segments identified by McHenry et al. (2004). A total of 18.2 linear miles of riparian habitat could benefit from riparian restoration treatments. In addition, they identified 4.3 miles of stream adjacent roads within these 54 riparian segments that are affecting riparian conditions. For detailed riparian segment level data please refer to Table 20 in McHenry et al. (2004).	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 13	3	Salt Creek Recovery Goal 6	Various		
Salt Creek	SCA#21	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 13	1	Salt Creek Recovery Goal 6	Not Defined		
Salt Creek	SCA#22	RM&E and PA	Map and delineate channel migration zones within the Salt Creek watershed.	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 13	1	Salt Creek Recovery Goal 6	Clallam County and others		
Salt Creek	SCA#23	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	High	Salt Creek Recovery Strategy 14	na	Salt Creek Recovery Goal 6	NOPL		
Salt Creek	SCA#24	HRA	Work with landowners to develop comprehensive stream restoration and habitat access program for Barr Creek (Falls Creek tributary)	Habitat and LWD Conditions	Medium	Salt Creek Recovery Strategies 5, 13, 15, 16	1-4	Salt Creek Recovery Goal 7	Not Defined		
Salt Creek	SCA#25	HRA	Work with landowner(s) to develop comprehensive stream restoration program on lower Salt, Kreaman, and Hart creeks. The project area is located on lower Salt Creek and includes unconstrained portions of the floodplain channel, as well as lower Kreaman Creek, which enters Salt Creek across its floodplain. An unnamed tributary, Hart Creek drains into Salt Creek after crossing Camp Hayden Road.	Habitat and LWD Conditions	Medium	Salt Creek Recovery Strategies 5, 13, 15, 16	1-4	Salt Creek Recovery Goal 7	Not Defined		
Salt Creek	SCA#26	HRA	Work with landowner to develop comprehensive stream restoration program on Bear Cree. The project area includes approximately 0.5 miles of Bear Creek south of Liljedahl Road.	Habitat and LWD Conditions	Medium	Salt Creek Recovery Strategies 13 and 16	3/4	Salt Creek Recovery Goal 7	Not Defined		
Salt Creek	SCA#27	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI). Also include monitoring of hydrocarbons and other potential contaminants.	Water Quality Conditions	Low	Salt Creek Recovery Strategy 17	1	Salt Creek Recovery Goal 8	Not Defined		
Salt Creek	SCA#28	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	Low	Salt Creek Recovery Strategy 18	na	Salt Creek Recovery Goal 8	Not Defined		
Lyre River	LRA#1	RM&E and HRA	To the west of the mouth of the Lyre River investigate impacts of bulkhead structure to physical habitat forming processes and sediment movement within the drift cell.	Estuary and Nearshore Processes and Habitat Conditions	Medium	Lyre River Recovery Strategy 2	1/3	Lyre River Recovery Goal 1	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Lyre River	LRA#2	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Estuary and Nearshore Processes and Habitat Conditions	Medium	Lyre River Recovery Strategy 3	1	Lyre River Recovery Goal 1	Not Defined		
Lyre River	LRA#3a	HRA	Work with Clallam County PUD, WDOT, WDNR, and private landowners to assess, prioritize, and correct potential fish barriers in the Nelson Creek subbasin.	Habitat Connectivity	Low	Lyre River Recovery Strategy 5	2	Lyre River Recovery Goal 2	Various		
Lyre River	LRA#3b	HRA	The mainstem of Susie Creek is free of fish barriers, however, the status of barriers in tributaries to Susie Creek is undocumented. Work with WDNR and private landowners to assess, prioritize, and correct potential fish barriers in tributaries to the Susie Creek subbasin.	Habitat Connectivity	Low	Lyre River Recovery Strategy 5	1/2	Lyre River Recovery Goal 2	Various		
Lyre River	LRA#4	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004), which recommend the discontinuation of hatchery outplanting in the Lyre River watershed.	Biological Processes	Medium	Lyre River Recovery Strategy 6	1	Lyre River Recovery Goal 3	WDFW and Tribes		
Lyre River	LRA#5	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	Medium	Lyre River Recovery Strategy 7	1	Lyre River Recovery Goal 3	WDFW and Tribes		
Lyre River	LRA#6	RM&E and PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	Medium	Lyre River Recovery Strategy 7	1	Lyre River Recovery Goal 3	WDFW and Tribes		
Lyre River	LRA#7	HRA	Reforestation of riparian forest and wetlands associated with floodplains to improve hydrologic processes related to flood capacity within the flood plain areas.	Hydrologic Processes	Low	Lyre River Recovery Strategy 8	3	Lyre River Recovery Goal 4	Not Defined		
Lyre River	LRA#8	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	Low	Lyre River Recovery Strategy 8	3	Lyre River Recovery Goal 4	Various		
Lyre River	LRA#9	PA	Limit future water withdrawals from the Lyre River watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Low	Lyre River Recovery Strategy 8	1	Lyre River Recovery Goal 4	DOE		
Lyre River	LRA#10	HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	Medium	Lyre River Recovery Strategy 9	3	Lyre River Recovery Goal 5	Various		
Lyre River	LRA#11	HRA	Inventory roads for decommissioning, drainage structure removal and restoration of stream segments within the crossing structure.	Sediment Processes	Medium	Lyre River Recovery Strategy 10	3	Lyre River Recovery Goal 5	Various		
Lyre River	LRA#12	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 11	3	Lyre River Recovery Goal 6	Various		
Lyre River	LRA#13	HRA	Treatment and restoration of the lower 2.0 miles of the mainstem Lyre River including LWD placement, and riparian planting. This will help restore channel migration processes and reconnect portions of the floodplain with the Lyre mainstem.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 12	3/4	Lyre River Recovery Goal 6	Not Defined		
Lyre River	LRA#14	HRA	Based on results of a watershed assessment, implement riparian restoration projects within degraded riparian stream segments. Identify stream adjacent roads within these riparian segments that are affecting riparian conditions.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 11, 12	3	Lyre River Recovery Goal 6	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Lyre River	LRA#15	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 12	1	Lyre River Recovery Goal 6	Not Defined		
Lyre River	LRA#16	PA	Map and delineate channel migration zones within the Salt Creek watershed.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 12	1	Lyre River Recovery Goal 6	Clallam County and others		
Lyre River	LRA#17	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	Medium	Lyre River Recovery Strategy 13	na	Lyre River Recovery Goal 6	NOPL		
Lyre River	LRA#18	RM&E and HRA	Conduct a comprehensive watershed assessment to investigate current habitat conditions and better identify limiting factors affecting salmonids. Upon completion of a Lyre River watershed assessment develop a detailed list of projects to improve instream habitat and LWD conditions in the Lyre river sub basin. Implement a systematic enhancement of habitat by introducing LWD.	Habitat and LWD Conditions	Unknown	Lyre River Recovery Strategy 1, 5, 13, and 14	1/3/4	Lyre River Goal 1, 2, and 7	Not Defined		
Lyre River	LRA#19	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI).	Water Quality Conditions	Unknown	Lyre River Recovery Strategy 15	1	Lyre River Recovery Goal 8	Not Defined		
Lyre River	LRA#20	PA	Develop and implement a compliance monitoring program in the Lyre River to ensure effective implementation and enforcement of Forest Practice Rule and County Critical areas Ordinances.	Water Quality Conditions	Unknown	Lyre River Recovery Strategy 16	na	Lyre River Recovery Goal 8	DNR and Clallam County		
Lyre River	LRA#21	RM&E	Inventory and prioritize sources of water quality impacts including sources of fine sediment and channel reaches with deficient riparian vegetation.	Water Quality Conditions	Unknown	Lyre River Recovery Strategy 9, 10, and 16	1	Lyre River Recovery Goal 8	Not Defined		
Twin Rivers	TRA#1	HRA	To the west of the mouth of the West Twin River remove the sheet pile and mole structure to restore physical habitat forming processes and sediment movement within the drift cell.	Estuary and Nearshore Processes and Habitat Conditions	High	Twin Rivers Recovery Strategy 2	3	Twin Rivers Recovery Goal 1	Not Defined		
Twin Rivers	TRA#2	RM&E	Assess historical estuarine and nearshore habitat that has been affected by SR 112 and the historical alterations that have disrupted floodplain connectivity between the Twin Rivers. Include an investigation into the potential impacts of macro-algae blooms on estuarine-nearshore water quality. Implement the recommendation from this assessment.	Estuary and Nearshore Processes and Habitat Conditions	High	Twin Rivers Recovery Strategy 2	1	Twin Rivers Recovery Goal 1	Not Defined		
Twin Rivers	TRA#3	HRA	Investigate the potential implementation of a conservation easement (or the direct acquisition) for the private property between the mouths of the Twin Rivers.	Estuary and Nearshore Processes and Habitat Conditions	High	Twin Rivers Recovery Strategy 1, 3	1	Twin Rivers Recovery Goal 1	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Twin Rivers	TRA#4	RM&E and HRA	Identify water-crossing and road inventories from basin landowners and combine into single basin-wide inventory. Where water-crossing information is lacking or missing, work with landowners to inventory and assess. Use a basin-wide approach to identify biological, physical, and process-based metrics for prioritizing future habitat connectivity projects.	Habitat Connectivity	Low	Twin Rivers Recovery Strategy 5	1/2	Twin Rivers Recovery Goal 2	Not Defined		
Twin Rivers	TRA#5a	HRA	Culvert on the USFS 3040 Road at RM 0.8 on the East Fork of the East Twin River is currently classified as a complete barrier to fish. Replace (or remove) the culvert with crossing structure that allows for better fish passage.	Habitat Connectivity	Low	Twin Rivers Recovery Strategy 5	2	Twin Rivers Recovery Goal 2	USFS		
Twin Rivers	TRA#5b	HRA	Replace barrier culvert in unnamed tributary 19.0106 with stream crossing structure that allows for better fish passage.	Habitat Connectivity	Low	Twin Rivers Recovery Strategy 5	2	Twin Rivers Recovery Goal 2	Not Defined		
Twin Rivers	TRA#6	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004).	Biological Processes	Medium	Twin Rivers Recovery Strategy 6	1	Twin Rivers Recovery Goal 3	WDFW and Tribes		
Twin Rivers	TRA#7	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	Medium	Twin Rivers Recovery Strategy 7	1	Twin Rivers Recovery Goal 3	WDFW and Tribes		
Twin Rivers	TRA#8	RM&E and PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	Medium	Twin Rivers Recovery Strategy 7	1	Twin Rivers Recovery Goal 3	WDFW and Tribes		
Twin Rivers	TRA#9	HRA	Reforestation of riparian forest and reconnection of wetland hydrology associated with floodplains to improve hydrologic processes related to flood capacity within the flood plain areas.	Hydrologic Processes	Medium	Twin Rivers Recovery Strategy 8	3	Twin Rivers Recovery Goal 4	Not Defined		
Twin Rivers	TRA#10	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	Medium	Twin Rivers Recovery Strategy 8	3	Twin Rivers Recovery Goal 4	Not Defined		
Twin Rivers	TRA#11	PA	Limit future water withdrawals from the Twin Rivers watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Medium	Twin Rivers Recovery Strategy 8	1	Twin Rivers Recovery Goal 4	DOE		
Twin Rivers	TRA#12	HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	High	Twin Rivers Recovery Strategy 9, 10	3	Twin Rivers Recovery Goal 5	Various		
Twin Rivers	TRA#13	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion.	Sediment Processes	High	Twin Rivers Recovery Strategy 12	3	Twin Rivers Recovery Goal 5	Not Defined		
Twin Rivers	TRA#14	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Strategy 10, 11	3	Twin Rivers Recovery Goal 4 and 6	Not Defined		
Twin Rivers	TRA#15	HRA	Develop and implement restoration treatment that includes LWD placement and riparian planting/enhancement. This will help restore channel migration processes and reconnect portions of the floodplain with the mainstem.	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Strategy 11, 12	3/4	Twin Rivers Recovery Goal 6 and 7	Elwha Tribe		
Twin Rivers	TRA#16	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Strategy 12	1	Twin Rivers Recovery Goal 6	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Twin Rivers	TRA#17	RM&E and PA	Map and delineate channel migration zones within the East and West Twin Rivers watershed.	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Strategy 12	1	Twin Rivers Recovery Goal 6	Clallam County and others		
Twin Rivers	TRA#18	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	Medium	Twin Rivers Recovery Strategy 13	na	Twin Rivers Recovery Goal 6	NOPL		
Twin Rivers	TRA#19	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI).	Water Quality Conditions	Unknown	Twin Rivers Recovery Strategy 15	1	Twin Rivers Recovery Goal 8	Not Defined		
Twin Rivers	TRA#20	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	Unknown	Twin Rivers Recovery Strategy 16	na	Twin Rivers Recovery Goal 8	DNR and Clallam County		
Twin Rivers	TRA#21	RM&E	Inventory and prioritize sources of water quality impacts including sources of fine sediment and channel reaches with deficient riparian vegetation.	Water Quality Conditions	Unknown	Twin Rivers Recovery Strategy 9, 10, 16	1	Twin Rivers Recovery Goal 8	Not Defined		
Deep Creek	DCA#1a	HRA	Two separate culverts (SR 112) on an unnamed tributary to Deep Creek block an unquantified amount of potential salmonid habitat. Replace culverts with crossing structures that allow for better fish passage.	Habitat Connectivity	Low	Deep Creek Recovery Strategy 4	2	Deep Creek Recovery Goal 2	WDOT		
Deep Creek	DCA#1b	HRA	Replace the partial barrier culvert (M&R 3100 Road) on an unnamed tributary to the W.F. Deep Creek with stream crossing structure that allows for better fish passage.	Habitat Connectivity	Low	Deep Creek Recovery Strategy 4	2	Deep Creek Recovery Goal 2	?		
Deep Creek	DCA#1c	HRA	Compile existing RMAP data and conduct fish passage culvert inventory for uninventoried portions of the Deep Creek watershed. Prioritize and replace fish barriers within the Deep Creek watershed.	Habitat Connectivity	Low	Deep Creek Recovery Strategy 4	1/2	Deep Creek Recovery Goal 2	?		
Deep Creek	DCA#2	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004).	Biological Processes	Medium	Deep Creek Recovery Strategy 5	1	Deep Creek Recovery Goal 3	WDFW and Tribes		
Deep Creek	DCA#3	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	Medium	Deep Creek Recovery Strategy 6	1	Deep Creek Recovery Goal 3	WDFW and Tribes		
Deep Creek	DCA#4	RM&E and PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	Medium	Deep Creek Recovery Strategy 6	1	Deep Creek Recovery Goal 3	WDFW and Tribes		
Deep Creek	DCA#5	HRA	Reforestation of riparian forest and wetlands associated with flood plains to improve hydrologic processes related to flood capacity within the flood plain areas.	Hydrologic Processes	Medium	Deep Creek Recovery Strategy 7	3	Deep Creek Recovery Goal 4	Not Defined		
Deep Creek	DCA#6	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	Medium	Deep Creek Recovery Strategy 7	3	Deep Creek Recovery Goal 4	Not Defined		
Deep Creek	DCA#7	PA	Limit future water withdrawals from the Deep Creek watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Medium	Deep Creek Recovery Strategy 7	1	Deep Creek Recovery Goal 4	DOE		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Deep Creek	DCA#8	HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	Medium	Deep Creek Recovery Strategy 8, 9	3	Deep Creek Recovery Goal 5	Various		
Deep Creek	DCA#9	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion.	Sediment Processes	Medium	Deep Creek Recovery Strategy 12	3	Deep Creek Recovery Goal 5	Not Defined		
Deep Creek	DCA#10	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	Medium	Deep Creek Recovery Strategy 12	1	Deep Creek Recovery Goal 6	Not Defined		
Deep Creek	DCA#11	RM&E and PA	Map and delineate channel migration zones within the Deep Creek watershed.	Riparian and Floodplain Processes and Conditions	Medium	Deep Creek Recovery Strategy 12	1	Twin Rivers Recovery Goal 6	Clallam County and others		
Deep Creek	DCA#12	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	Medium	Deep Creek Recovery Strategy 13	na	Twin Rivers Recovery Goal 6	NOPL		
Deep Creek	DCA#13	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI).	Water Quality Conditions	Medium	Deep Creek Recovery Strategy 15	1	Twin Rivers Recovery Goal 8	Not Defined		
Deep Creek	DCA#14	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	Medium	Deep Creek Recovery Strategy 16	na	Twin Rivers Recovery Goal 8	DNR and Clallam County		
Deep Creek	DCA#15	RM&E	Inventory and prioritize sources of water quality impacts including sources of fine sediment and channel reaches with deficient riparian vegetation.	Water Quality Conditions	Medium	Deep Creek Recovery Strategy 8-12	1	Twin Rivers Recovery Goal 8	Not Defined		
Pysht River	PRA#1	HRA	Implement recommendations from estuary restoration feasibility study. Project actions may include dredge spoil removal, restoring tidal connectivity to isolated channels, removal of sheet pile, removal of roads associated with log storage facilities, etc.	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2-4	Pysht River Recovery Goal 1	M&R/Elwha Tribe		
Pysht River	PRA#2	HRA	Reconnect tidal wetlands (specifically within the central portion of the Pysht River meander, these are the wetlands affected by the east side road system).	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2	Pysht River Recovery Goal 1	M&R/Elwha Tribe		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Pysht River	PRA#3a	HRA	Replace Farm Road culvert on Indian Creek with crossing structure that allows for better fish passage, decreases erosion, and restores complete tidal connectivity.	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2	Pysht River Recovery Goal 1	M&R/Elwha Tribe		
Pysht River	PRA#3b	HRA	Replace Farm Road culvert on Indian Slough with crossing structure that allows for better fish passage and complete tidal connectivity.	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2	Pysht River Recovery Goal 1	M&R/Elwha Tribe		
Pysht River	PRA#3c	HRA	Replace Farm Road culvert on Section 9 Creek with crossing structure that allows for better fish passage and complete tidal connectivity.	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2	Pysht River Recovery Goal 1	M&R/Elwha Tribe		
Pysht River	PRA#3d	HRA	Replace Farm Road culvert on Cabin Creek with crossing structure that allows for better fish passage and complete tidal connectivity. This project is currently funded and planned for replacement during the summer of 2010.	Estuary and nearshore processes and habitat conditions	High	Pysht River Recovery Strategy 2	2	Pysht River Recovery Goal 1	M&R/Elwha Tribe		
Pysht River	PRA#4a	HRA	Replace SR-112 culverts on Indian Creek with crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4b	HRA	Replace the 2000 Road culvert on Ring Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4c	HRA	Replace the 2000 Road culvert on Ring Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4d	HRA	Replace the 2000 Road culvert on Shop Creek crossing structure that allows for better fish passage. Evaluate feasibility of removing fill from wetland and/or constructing new channel around fill.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R/Elwha Tribe		
Pysht River	PRA#4e	HRA	Replace the 3000 Road culvert on Cabin Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R/Elwha Tribe		
Pysht River	PRA#4f	HRA	Investigate methods that could be used to improve habitat connectivity and minimize dewatering of the Andis Slough off-channel habitat. Continued monitoring of site is recommended.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R/Elwha Tribe		
Pysht River	PRA#4g	HRA	Replace SR 112 culvert on Razz Creek T1 with crossing structure that allows for better fish passage and sediment transport.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4h	HRA	Replace SR 112 culvert on Razz Creek T2 with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4i	HRA	Replace unnamed spur road culvert on Razz Creek T4_T3 with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4j	HRA	Replace the 4500 Road culvert on the mainstem Razz Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4k	RM&E and HRA	Monitor and continue to assess habitat connectivity in the 2100 Road Swamp off-channel habitat complex. Implement restoration project that may be developed from assessment.	Habitat connectivity	High	Pysht River Recovery Strategy 5	1-2	Pysht River Recovery Goal 2	Elwha Tribe		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Pysht River	PRA#4l	HRA	Develop and implement a plan to reconnect the 4500 Road Swamp to the mainstem of the Pysht River. This will require at a minimum the replacement of the SR 112 culvert with a crossing structure that provides fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4m	RM&E and HRA	Develop and implement a plan to remove the old railroad grade that runs parallel to Lee Creek. This will provide much needed habitat connectivity to associated wetlands along the right bank of Lee Creek.	Habitat connectivity	High	Pysht River Recovery Strategy 5	1-2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4n	HRA	Replace SR 112 culvert on Hamerquist Creek with crossing structure that allows for better fish passage, as well as improved sediment routing (Note: project ranking for this project included LWD placement and stream redirection which have already been completed).	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4o	HRA	Replace SR 112 culvert on Michelena Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4p	HRA	Replace SR 112 culvert on 25 Mile Creek with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4q	HRA	Replace SR 112 culvert on 4800 Road Swamp with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4r	HRA	Replace SR 112 culvert on Burnt Creek One with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4s	HRA	Replace SR 801 culvert on Burnt Creek One with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4t	HRA	Replace SR 112 culvert on Burnt Creek Two with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4u	HRA	Replace 801 Road culvert on Burnt Creek Two with crossing structure that allows for better fish passage.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	M&R		
Pysht River	PRA#4v	HRA	Replace an impassable culvert near RM 0.3 in a tributary to Reed Creek (19.0014) with crossing structure that allows for fish passage. This potential barrier requires field verification of fish passage conditions above and below the culvert prior to restoration planning.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	Not Defined		
Pysht River	PRA#4w	HRA	Replace SR 112 culvert on tributary 19.0121A (RM 0.3) to Green Creek with crossing structure that allows for better fish passage. This potential barrier requires field verification of fish passage conditions above and below the culvert prior to restoration planning.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		
Pysht River	PRA#4x	HRA	Replace SR 112 culvert on tributary 19.0121 to Green Creek with crossing structure that allows for better fish passage. This potential barrier requires field verification of fish passage conditions above and below the culvert prior to restoration planning.	Habitat connectivity	High	Pysht River Recovery Strategy 5	2	Pysht River Recovery Goal 2	WDOT		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Pysht River	PRA#4y	RM&E and HRA	Identify water-crossing and road inventories from basin landowners and combine into single basin-wide inventory. Where water-crossing information is lacking or missing (S.F. Pysht River and tributaries, and Reed, Green, and Needham creeks), work with landowners to inventory and assess. Use assessment to identify biological, physical, and process-based metrics to use for prioritizing future habitat connectivity projects.	Habitat connectivity	High	Pysht River Recovery Strategy 5	1-2	Pysht River Recovery Goal 2	Not Defined		
Pysht River	PRA#5	RM&E	Develop and implement genetic sampling program for all salmonid species in order to better understand population structure and diversity.	Biological Processes	High	Pysht River Recovery Strategy 6	1	Pysht River Recovery Goal 3	WDFW and Tribes		
Pysht River	PRA#6	PA	For steelhead trout advocate the implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004), which recommend the discontinuation of out-of-basin steelhead outplanting.	Biological Processes	High	Pysht River Recovery Strategy 6	1	Pysht River Recovery Goal 3	WDFW and Tribes		
Pysht River	PRA#7	PA	Evaluate the risks and benefits of Chinook salmon hatchery supplementation, also consider the habitats ability to support a viable Chinook salmon population.	Biological Processes	High	Pysht River Recovery Strategy 6, 8	3-6	Pysht River Recovery Goal 3	WDFW and Tribes		
Pysht River	PRA#8	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	High	Pysht River Recovery Strategy 7	1	Pysht River Recovery Goal 3	WDFW and Tribes		
Pysht River	PRA#9	PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	High	Pysht River Recovery Strategy 7	1	Pysht River Recovery Goal 3	WDFW and Tribes		
Pysht River	PRA#10	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	High	Pysht River Recovery Strategy 9	3	Pysht River Recovery Goal 4	Various		
Pysht River	PRA#11	HRA	Implement projects that reconnect the mainstem and its tributaries to their floodplains and/or associated wetlands.	Hydrologic Processes	High	Pysht River Recovery Strategy 9	3	Pysht River Recovery Goal 4	Not Defined		
Pysht River	PRA#12	HRA	Reforestation of unutilized pastures, degraded riparian/floodplain areas, and other open areas to improve hydrologic processes.	Hydrologic Processes	High	Pysht River Recovery Strategy 9	3	Pysht River Recovery Goal 4	Various		
Pysht River	PRA#13	PA	Limit future water withdrawals from the Pysht River watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	High	Pysht River Recovery Strategy 10	1	Pysht River Recovery Goal 4	DOE		
Pysht River	PRA#14	RM&E and HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	High	Pysht River Recovery Strategy 11, 12	1/3	Pysht River Recovery Goal 5	Not Defined		
Pysht River	PRA#15	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion.	Sediment Processes	High	Pysht River Recovery Strategy 13	3	Pysht River Recovery Goal 5	Not Defined		
Pysht River	PRA#16	RM&E	Using existing core sample data for the Pysht watershed (McHenry et al. 1994), collect core samples in the next two years to compare conditions.	Sediment Processes	High	Pysht River Recovery Strategy 11, 12	1	Pysht River Recovery Goal 5	Not Defined		
Pysht River	PRA#17	HRA	Attempt to reconnect floodplain where it is viable, through barrier correction, road relocation, or treatment of mainstem incision. The restructuring of the mainstem Pysht River with LWD, from both natural recruitment and restoration projects likely offers the best approach for treating incision problems.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 14	1-4	Pysht River Recovery Goal 6	Various		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Pysht River	PRA#18	HRA	Work with WDOT regarding future Highway 112 planning to encourage alternative road locations that minimize encroachment of floodplain habitats.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 14, 15	1-4	Pysht River Recovery Goal 6	WDOT		
Pysht River	PRA#19	HRA	Convert unutilized fields and non-forested riparian areas back to functional riparian forests	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	3	Pysht River Recovery Goal 6	Various		
Pysht River	PRA#20	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances. Limit future land use encroachment along the Pysht River floodplain.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	na	Pysht River Recovery Goal 6	DNR and Clallam County		
Pysht River	PRA#21	HRA	Assess possibilities for obtaining floodplain conservation easements along the Pysht River corridor. A nearly 1000 acre easement that includes significant portions of the estuary has recently been negotiated. Floodplain easements that connect to this core area are a logical strategy for conserving floodplain habitats over the long term.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	1	Pysht River Recovery Goal 6	Various		
Pysht River	PRA#22	HRA	Implement riparian restoration projects where degraded riparian forest conditions exist. Riparian conditions are degraded throughout many portions of the watershed. Many of these areas could benefit from riparian restoration.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	3	Pysht River Recovery Goal 6	Various		
Pysht River	PRA#23	HRA	Replace the 3400 Road bridge on the South Fork Pysht River with a bridge that allows for optimal passage of LWD, sediment, and water at the 100-year flood flow.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 14, 15	3	Pysht River Recovery Goal 6	M&R		
Pysht River	PRA#24	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	1	Pysht River Recovery Goal 6	Not Defined		
Pysht River	PRA#25	RM&E and PA	Map and delineate channel migration zones within the Pysht River watershed.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 15	1	Pysht River Recovery Goal 6	Clallam County		
Pysht River	PRA#26	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	High	Pysht River Recovery Strategy 16	na	Pysht River Recovery Goal 6	NOPL		
Pysht River	PRA#27	RM&E and HRA	Conduct detailed instream meso-habitat mapping inventory and assessment. Implement wood supplementation in identified wood deficient zones from the habitat mapping assessment.	Habitat and LWD Conditions	High	Pysht River Recovery Strategy 17, 18	1/4	Pysht River Recovery Goal 7	Not Defined		
Pysht River	PRA#28	HRA	Within the S.F. Pysht River implement LWD treatments identified to facilitate floodplain reconnection in channel reaches that have incised from historic land use practices and in the lower 0.5 miles which has had no restoration treatments to date. This project would involve the addition of key pieces of LWD (~200) using a heavy lift helicopter as well as the under-planting of conifers on terraces adjacent to the river.	Habitat and LWD Conditions	High	Pysht River Recovery Strategy 18	4	Pysht River Recovery Goal 7	M&R/Elwha Tribe		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Pysht River	PRA#29	HRA	Develop and implement a detailed stream restoration project in the Razz Creek sub-basin. Project scope should include an evaluation of re-routing the mainstem Razz Creek and reconnecting Razz T1 and T2. Plan should include LWD placement in new channel. Plan should include channel reconfiguration and LWD placement in the lower reach of Razz T1 to reduce cascade step elevations. Also include increasing habitat connectivity in Razz Creek T3_t1 (see Haggerty et al. 2006).	Habitat and LWD Conditions	High	Pysht River Recovery Strategy 18	1-4	Pysht River Recovery Goal 7	M&R/Elwha Tribe		
Pysht River	PRA#30	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI). Also include monitoring of hydrocarbons and other potential contaminants.	Water Quality Conditions	High	Pysht River Recovery Strategy 19	1	Pysht River Recovery Goal 8	Not Defined		
Pysht River	PRA#31	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	High	Pysht River Recovery Strategy 20	na	Pysht River Recovery Goal 8	DNR and Clallam County		
Clallam River	CRA#1	HRA	As much as possible, remove infrastructure that encroaches on the Clallam River estuary and Clallam Bay/Seki nearshore, impeding its function.	Estuary and nearshore processes and habitat conditions	High	Clallam River Recovery Strategy 2	3	Clallam River Recovery Goal 1	Various		
Clallam River	CRA#2	HRA	Reconnect remaining tidal channels and restore wetlands behind the town to increase tidal prism.	Estuary and nearshore processes and habitat conditions	High	Clallam River Recovery Strategy 2	3	Clallam River Recovery Goal 1	Not Defined		
Clallam River	CRA#3	HRA	Reconnect and restore forest wetlands along left bank of Swamp Creek by removing north-south trending grade off of Frontier Road. The road grade mentioned above is within the land parcel described in Clallam River Action 5.	Estuary and nearshore processes and habitat conditions	High	Clallam River Recovery Strategy 2	2/3	Clallam River Recovery Goal 1	Not Defined		
Clallam River	CRA#4	RM&E and HRA	Develop a plan and stakeholder approval for how to monitor the river mouth and how to open the river mouth when closures threaten fish passage. This plan should include the compilation of recent records of mouth closures and openings.	Estuary and nearshore processes and habitat conditions	High	Clallam River Recovery Strategy 1,5,6	1/2/5	Clallam River Recovery Goal 1	Not Defined		
Clallam River	CRA#5	HRA	Protect the wetlands on the east side of town. Explore the possibility of acquiring the land parcel adjacent to the mainstem Clallam River to the south of Frontier Road and to the north of the school. This parcel includes 0.40 miles of mainstem Clallam River (both sides), 0.25 miles of estuarine channel in Swamp Creek and tributaries, 2 fish bearing forested wetlands, and several additional short channel segments that include off-channel rearing habitat.	Estuary and nearshore processes and habitat conditions	High	Clallam River Recovery Strategy 1, 3	1	Clallam River Recovery Goal 1	Not Defined		
Clallam River	CRA#6	HRA	Explore possibility of habitat acquisition and/or easements to protect high quality riparian and floodplain estuarine habitats. Prioritize areas where the tidal prism can be protected and/or increased.	Habitat connectivity	Medium	Clallam River Recovery Strategy 1, 3	1	Clallam River Recovery Goal 1	Not Defined		
Clallam River	CRA#7a	HRA	Replace two total barrier culverts located at RM 0.49 and RM 0.68 of Swamp Creek with fish passable stream crossings	Habitat connectivity	Medium	Clallam River Recovery Strategy 5	2	Clallam River Recovery Goal 2	WDOT, others?		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Clallam River	CRA#7b	HRA	Within Spruce Creek a 0.47 m diameter, 2.7 percent slope, slightly perched culvert (0.25 m) at RM 0.01 completely blocks juvenile fish migration into a 0.4 acre forested wetland complex located directly upstream from the culvert. This culvert is located on Charley Creek Road. A short (13m) stream reach separates the culvert from the Clallam River. No adult salmonid habitat exists upstream of the culvert. Replace culvert with fish passable stream crossing.	Habitat connectivity	Medium	Clallam River Recovery Strategy 5	2	Clallam River Recovery Goal 2	Clallam County		
Clallam River	CRA#7c	HRA	Replace total fish barrier culvert (SR 112) in Unnamed Creek WP 203 (RBT to Clallam River RM 6.24) with fish passable structure.	Habitat connectivity	Medium	Clallam River Recovery Strategy 5	2	Clallam River Recovery Goal 2	WDOT		
Clallam River	CRA#7d	RM&E and HRA	Assess fish passage through the Hamilton Creek culvert (SR 112). This culvert is not included in the WDOT inventory.	Habitat connectivity	Medium	Clallam River Recovery Strategy 5	1/2	Clallam River Recovery Goal 2	WDOT		
Clallam River	CRA#7e	RM&E	Assess benefits of replacing current fish blockages in an unnamed tributary (Trib H) to Last Creek, unnamed tributary 19.0135, and in an unnamed tributary (Trib WP 450) to the Clallam River (see Section 5.7.2). None of these streams appear to have more than 100 meters of habitat upstream of the current barrier and below the natural barriers present.	Habitat connectivity	Medium	Clallam River Recovery Strategy 5, 6	1	Clallam River Recovery Goal 2	Not Defined		
Clallam River	CRA#8	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set forth in the 2004 Hatchery Reform Report (HSRG 2004) that call for the discontinuation of hatchery outplanting in the Clallam River watershed.	Biological Processes	High	Clallam River Recovery Strategy 7	1	Clallam River Recovery Goal 3	WDFW and Tribes		
Clallam River	CRA#9	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	High	Clallam River Recovery Strategy 8	1	Clallam River Recovery Goal 3	WDFW and Tribes		
Clallam River	CRA#10	PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	High	Clallam River Recovery Strategy 8	1	Clallam River Recovery Goal 3	WDFW and Tribes		
Clallam River	CRA#11	HRA	Reforestation of unutilized pastures, degraded riparian/floodplain areas, and other open areas to improve hydrologic processes	Hydrologic Processes	High	Clallam River Recovery Strategy 9	3	Clallam River Recovery Goal 4	Various		
Clallam River	CRA#12	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	High	Clallam River Recovery Strategy 9	3	Clallam River Recovery Goal 4	Various		
Clallam River	CRA#13	PA	Limit future water withdrawals from the Salt Creek watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	High	Clallam River Recovery Strategy 10	1	Clallam River Recovery Goal 4	DOE		
Clallam River	CRA#14	HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	Medium	Clallam River Recovery Strategy 11, 12	1/3	Clallam River Recovery Goal 5	Various		
Clallam River	CRA#15	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion	Sediment Processes	Medium	Clallam River Recovery Strategy 13	3	Clallam River Recovery Goal 5	Various		
Clallam River	CRA#16	RM&E	Using existing sediment core sample data for the Clallam watershed (McHenry et al. 1994), collect sediment core samples in the next two years to compare conditions.	Sediment Processes	Medium	Clallam River Recovery Strategy 11, 12	1	Clallam River Recovery Goal 5	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Clallam River	CRA#17	HRA	Assess possibilities for acquisition or conservation easements along the lower mainstem (see Haggerty 2008 Draft for sites). Priority should be given to the most intact habitats in order to protect areas that are currently properly functioning.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	1	Clallam River Recovery Goal 6	Not Defined		
Clallam River	CRA#18	HRA	Work with WDOT and Clallam County regarding future Highway 112 planning to encourage alternative road locations that minimize encroachment on the floodplain and floodplain habitats. Consider locations where road relocation out of the active floodplain might be feasible and help address floodplain encroachment issues.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 14, 15	1/3	Clallam River Recovery Goal 6	WDOT and Clallam County		
Clallam River	CRA#19	HRA	Conversion of fields and non-forested riparian areas (mostly between RM 1.0 and 6) back to fully functional riparian forests.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	3	Clallam River Recovery Goal 6	Various		
Clallam River	CRA#20	HRA	Attempt to reconnect floodplain where it is viable, through barrier correction, road relocation, or treatment of mainstem incision. The restructuring of the mainstem Clallam River with LWD, from both natural recruitment and restoration projects likely offers the best approach for treating incision problems.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 14	3/4	Clallam River Recovery Goal 6	Not Defined		
Clallam River	CRA#21	HRA	Work with willing landowners and other restoration partners to remove knotweed and other noxious weeds followed by riparian replanting.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	3	Clallam River Recovery Goal 6	Clallam County Noxious Weed Workgroup		
Clallam River	CRA#22	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances. Limit future land use encroachment along the Clallam River floodplain.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	na	Clallam River Recovery Goal 6	Clallam County and DNR		
Clallam River	CRA#23	HRA	Replace undersized bridges with correctly sized bridges.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 14, 15	3	Clallam River Recovery Goal 6	WDOT		
Clallam River	CRA#24	HRA	Reduce roads, road prisms, and impervious surfaces cover within the floodplain.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 14, 15	3	Clallam River Recovery Goal 6	Various		
Clallam River	CRA#25	HRA	Relocate roads which negatively impact fish populations and habitat.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 14, 15	3	Clallam River Recovery Goal 6	Various		
Clallam River	CRA#26	HRA	Implement projects that will enhance riparian conditions in tributaries where current conditions are poor (e.g. Last Creek segment 1). For other potential projects also see the riparian inventory in Haggerty (2008 Draft).	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	3	Clallam River Recovery Goal 6	Various		
Clallam River	CRA#27	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	1	Clallam River Recovery Goal 6	Various		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Clallam River	CRA#28	RM&E and PA	Map and delineate channel migration zones within the Clallam River watershed.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 15	1	Clallam River Recovery Goal 6	Clallam County		
Clallam River	CRA#29	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPL) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPL.	Riparian and Floodplain Processes and Conditions	High	Clallam River Recovery Strategy 16	na	Clallam River Recovery Goal 6	NOPL		
Clallam River	CRA#30	HRA and RM&E	Mainstem Clallam River- Most of segments 1 through 4 are low or deficient in LWD. LWD projects in any of these stream segments could significantly improve fish habitat conditions. Caution will be needed due to extensive private property holdings and infrastructure located close to the rivers edge. Meso-habitat data are need in stream segments 1 through 4.	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 17, 18	1/4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#31	HRA	Mainstem Clallam River- Upper segment 5 and segment 6 could benefit from LWD introductions that help improve channel complexity, stability, and floodplain connectivity. Historically this stream reach contained abundant LWD, current LWD levels are low in this reach.	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 18	4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#32	HRA	Upper Mainstem Clallam River- Segments 9 and 12 have the most potential to benefit from LWD introductions (segments 7, 8, 10, 11, and 14 are confined, high energy environments where LWD introduction may not be feasible). Projects in these stream reaches should attempt to add habitat complexity and restore floodplain connectivity where possible.	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 18	4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#33	HRA	LWD wood supplementation in the Charley Creek subbasin. Areas to target include the mainstem Charley Creek, upper segment 2 and segment 3, unnamed tributary 19.0135 segment 1, Err Creek segment 1, unnamed tributary 19.0136 segment 1.	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 18	4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#34	HRA	LWD wood supplementation in Simmons Creek segment 1.	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 18	4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#35	HRA	LWD wood supplementation in Blowder Creek (upper segment 1 and portions of segment 2).	Habitat and LWD Conditions	Medium	Clallam River Recovery Strategy 18	4	Clallam River Recovery Goal 7	Not Defined		
Clallam River	CRA#36	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI). Also include monitoring of hydrocarbons and other potential contaminants.	Water Quality Conditions	Medium	Clallam River Recovery Strategy 19	1	Clallam River Recovery Goal 8	Not Defined		
Clallam River	CRA#37	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	Medium	Clallam River Recovery Strategy 20	na	Clallam River Recovery Goal 8	DNR and Clallam County		
Hoko River	HRA#1	RM&E	Assess the effectiveness of existing regulatory mechanisms in protecting natural resources. Identify actions taken under specific regulatory controls that can be assessed through effectiveness monitoring.	Estuary and Nearshore Processes and Habitat Conditions	High	Hoko River Recovery Strategy 1	1	Hoko River Recovery Goal 1	Not Defined		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Hoko River	HRA#2	HRA	Identify willing sellers of parcels with natural shoreline for either permanent conservation or acquisition for protection. Within conservation easements or areas acquired for protection, completely remove shoreline armoring and return to original shoreline geometry.	Estuary and Nearshore Processes and Habitat Conditions	High	Hoko River Recovery Strategy 2, 3	1	Hoko River Recovery Goal 1	Not Defined		
Hoko River	HRA#3	RM&E	Water quality and fish use monitoring should be conducted in the Hoko River estuary to determine potential impacts to aquatic resources. Future monitoring should incorporate recent water quality data collected by Stream Keepers, local residents, and volunteers. Also include cross-section monitoring through and across the meander channel.	Estuary and Nearshore Processes and Habitat Conditions	High	?	1	Hoko River Recovery Goal 1	Not Defined		Does not have a strategy relationship
Hoko River	HRA#4	HRA	Work with landowners to replace existing "hard-point" armoring with alternative soft shore protection designs (ex. beach nourishment, grade control w/ LWD, wood revetment, and biotechnical slope support).	Estuary and Nearshore Processes and Habitat Conditions	High	Hoko River Recovery Strategy 3	3	Hoko River Recovery Goal 1	Various		
Hoko River	HRA#5	RM&E	Assess the feasibility of moving 0.24mi of Hwy 112, that is currently, armored to a higher elevation, landward location.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 3	1	Hoko River Recovery Goal 1	WDOT		
Hoko River	HRA#6	HRA	Introduce small-scale wood complex at outlet of historic meander to improve tidal exchange and maintain surface water connection.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 4	4	Hoko River Recovery Goal 1	Not Defined		
Hoko River	HRA#7	HRA	Introduce large-scale, channel spanning wood complexes below historic meander inlet to improve flood flow connection to meander.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 4	4	Hoko River Recovery Goal 1	Not Defined		
Hoko River	HRA#8a	RM&E	Identify water-crossing and road inventories from basin landowners and combine into single basin-wide inventory. Where water-crossing information is lacking or missing, work with landowners to inventory and assess.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	1	Hoko River Recovery Goal 2	Not Defined		
Hoko River	HRA#8b	RM&E and HRA	Using a basin-wide approach to identify biological, physical, and process-based metrics to use for prioritizing future habitat connectivity projects.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	1/2	Hoko River Recovery Goal 2	Not Defined		
Hoko River	HRA#9a	HRA	Remove undersized, perched culvert that acts as a partial barrier in Johnson Creek at the confluence with the Hoko River. Currently adult coho and steelhead appear to easily pass upstream through the culvert. The road fill is extremely deep and the culvert is partially collapsed and poses a significant risk of catastrophic failure.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Private Landowner?		
Hoko River	HRA#9b	HRA	Repair perched culvert (Hoko Ozette Road) on an unnamed tributary to Johnson Creek (trib 19.0176) blocks access to 0.8 miles of low gradient (1-4%) habitat and 0.35 miles of 4-8% gradient habitat.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Clallam County		
Hoko River	HRA#9c	HRA	Repair perched culvert (spur to 7000 Road) on an unnamed tributary to Johnson Creek (trib 19.0178). This culvert blocks access to 0.68 miles of low gradient (2-4%) stream habitat.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Private Landowner?		
Hoko River	HRA#9d	HRA	Repair perched culvert on an unnamed tributary (19.0189; RM 0.18) to the Hoko River. This culvert blocks access to 0.41 miles of 3-6% gradient spawning habitat.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Private Landowner?		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Hoko River	HRA#9e	HRA	Two perched culverts on the 9000 Road block access to a 4 acre fish bearing wetland complex. No spawning habitat has been identified upstream of the barrier culverts. Replace with fish passable structure.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Private Landowner?		
Hoko River	HRA#9f	HRA	Replace Hoko-Ozette Road partial barrier culvert on Wrights Creek with crossing structure that allows for better fish passage. Ensure structure is adequately sized to pass flood flows, debris, and sediment.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Clallam County		
Hoko River	HRA#9g	HRA	Repair partial barrier associated with SR 112 near MP 12.3. This culvert blocks access to a 1.6 acre wetland complex and 0.15 miles of 2-4% gradient spawning and rearing habitat. An additional 0.3 miles of 4-8% gradient habitat is also upstream of the barrier culvert.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	WDOT		
Hoko River	HRA#9h	HRA	Repair partial barrier culvert on Hoko Ozette Road blocks 0.25 miles of 2-8% gradient spawning and rearing habitat in Hoko Gage Creek (near Hoko RM 5.0).	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Clallam County		
Hoko River	HRA#9i	HRA	An unmapped right bank tributary to unnamed tributary 19.0199 (RM 0.45) contains a barrier culvert at RM 0.06 that blocks access to about 0.1 miles of spawning habitat. Replace with fish passable culvert or bridge.	Habitat connectivity	Medium	Hoko River Recovery Strategy 6	2	Hoko River Recovery Goal 2	Rayonier		
Hoko River	HRA#10	RM&E	Develop and implement genetic sampling program for all salmonid species in order to better understand population structure and diversity.	Biological Processes	High	Hoko River Recovery Strategy 7	1	Hoko River Recovery Goal 3	WDFW and Tribes		
Hoko River	HRA#11	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	High	Hoko River Recovery Strategy 8	1	Hoko River Recovery Goal 3	WDFW and Tribes		
Hoko River	HRA#12	PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	High	Hoko River Recovery Strategy 8	1	Hoko River Recovery Goal 3	WDFW and Tribes		
Hoko River	HRA#13	PA and RM&E	Specify locations to introduce salmon carcass analogs to the Hoko River drainage to improve N, P, and C cycling in areas deficient of natural salmon spawners.	Biological Processes	High	Hoko River Recovery Strategy 9	3-6	Hoko River Recovery Goal 3	WDFW and Tribes		
Hoko River	HRA#14	RM&E	Collaborate with Washington Department of Fish and Wildlife, private landowners, and tribes to provide access and develop field methodology for evaluating flood flow passage through existing instream structures.	Hydrologic Processes	High	Hoko River Recovery Strategy 10	1	Hoko River Recovery Goal 4	Various		
Hoko River	HRA#15	RM&E	Obtain funding for necessary equipment to collect high flow data.	Hydrologic Processes	High	Hoko River Recovery Strategy 10, 11	1	Hoko River Recovery Goal 4	USGS		
Hoko River	HRA#16	RM&E, PA	Obtain necessary information (RMAPs, RMAP Annual Reports, current and historical road inventory) from Washington Department of Natural Resources (WDNR).	Hydrologic Processes	High	Hoko River Recovery Strategy 12	1	Hoko River Recovery Goal 4	Various		
Hoko River	HRA#17	RM&E	Review published literature on impacts to natural basin hydrology due to changes in road density (including work completed in WDNR Hoko Watershed Analysis).	Hydrologic Processes	High	Hoko River Recovery Strategy 12	1	Hoko River Recovery Goal 4	Not Defined		
Hoko River	HRA#18	HRA	In coordination with WDNR, WDFW, and WDOE, and landowners, develop road density goals for the Hoko River drainage based on "best available science" that will achieve Hoko River Recovery Goal 4.	Hydrologic Processes	High	Hoko River Recovery Strategy 12	3	Hoko River Recovery Goal 4	Various		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Hoko River	HRA#19	PA	Limit future water withdrawals from the Hoko River watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	High	Hoko River Recovery Strategy 10	1	Hoko River Recovery Goal 4	DOE		
Hoko River	HRA#20	RM&E	Evaluate rate of road/culvert related failure (mass wasting events) over time using aerial photo interpretation. Compare existing rates of mass wasting events to those historically.	Sediment Processes	Medium	Hoko River Recovery Strategy 13	1	Hoko River Recovery Goal 5	Not Defined		
Hoko River	HRA#21	RM&E and HRA	Using existing RMAP information, quantify remaining orphaned and abandoned roads to determine potential for resource damage and likelihood of failure.	Sediment Processes	Medium	Hoko River Recovery Strategy 13	1/3	Hoko River Recovery Goal 5	Not Defined		
Hoko River	HRA#22	RM&E	Install continuous, long-term turbidity monitoring station coupled with storm-related suspended sediment collection. Use data for long-term trend analysis and measures of state water quality standards.	Sediment Processes	Medium	Hoko River Recovery Strategy 14	1	Hoko River Recovery Goal 5	Not Defined		
Hoko River	HRA#23	RM&E	Using existing sediment core sample data for the Clallam watershed (McHenry et al. 1994), collect sediment core samples in the next two years to compare conditions.	Sediment Processes	Medium	Hoko River Recovery Strategy 15	1	Hoko River Recovery Goal 5	Not Defined		
Hoko River	HRA#24	RM&E	Review published literature on recommended levels of fine sediment volume within the hyporheic zone for a range of STE, and establish benchmarks for the next 10-100 years.	Sediment Processes	Medium	Hoko River Recovery Strategy 15	1	Hoko River Recovery Goal 5	Not Defined		
Hoko River	HRA#25	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPLE) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPLE.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 16	na	Hoko River Recovery Goal 6	NOPLE		
Hoko River	HRA#26	PA and HRA	Limit future land use encroachment on the Hoko River floodplain.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 16, 17	1	Hoko River Recovery Goal 6	Various		
Hoko River	HRA#27	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress) to further refine prioritization of floodplain and riparian habitat. Assess possibilities for obtaining floodplain conservation easements along the Hoko River corridor.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 17	1	Hoko River Recovery Goal 6	Various		
Hoko River	HRA#28	HRA	Conversion of fields and non-forested riparian areas (mostly between RM 0.75 and 4.0) back to fully functional riparian forests.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 17	3	Hoko River Recovery Goal 6	Various		
Hoko River	HRA#29	RM&E and HRA	Evaluate and prioritize the need to remove or abandon road segments that occupy floodplain habitat throughout the Hoko River drainage.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 18	1/3	Hoko River Recovery Goal 6	Various		
Hoko River	HRA#30	PA and HRA	Work with WDOT and Clallam County regarding future Highway 112 and Hoko-Ozette Road planning to encourage alternative road locations that minimize encroachment on the floodplain and floodplain habitats. Considered locations where road relocation out of the active floodplain might be feasible and help address floodplain encroachment issues.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 18	1/3	Hoko River Recovery Goal 6	WDOT and Clallam County		
Hoko River	HRA#31	RM&E and PA	Map and delineate channel migration zones within the Hoko River watershed.	Riparian and Floodplain Processes and Conditions	High	Hoko River Recovery Strategy 16-18	1	Hoko River Recovery Goal 6	Clallam County		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Hoko River	HRA#32	RM&E and HRA	Conduct detailed instream meso-habitat mapping inventory and assessment. Implement wood supplementation in identified wood deficient zones from the habitat mapping assessment.	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 19, 20	1/4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#33	HRA	Mainstem Hoko River - Emerson Flats LWD restoration. The first phase of the project will restore spawning and rearing habitat from RM 5.0 to 6. Adding LWD to this reach will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. It will also reduce scour and assist in gravel bed creation and maintenance. This project will benefit Chinook as well as coho, chum, steelhead and cutthroat trout.	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 20	4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#34	HRA	Mainstem Hoko River – LWD Restoration. Almost the entire low gradient reaches of the Hoko River have insufficient LWD loading as a result of historic land uses. These reaches should be delineated and prioritized for future projects.	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 19	4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#35	HRA	Little Hoko River LWD restoration – The Little Hoko River received extensive habitat restoration between 1994 and 1998. Monitoring has shown that the project has been partially successful in restoring channel and riparian habitat features. Additional LWD treatments have been identified to facilitate floodplain reconnection particularly in channel reaches that have heavily incised. This project would involve the addition of key pieces (~200) using a heavy lift helicopter.	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 20	4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#36	HRA	Herman Creek LWD restoration – This project will restore formerly productive spawning and rearing habitat to Herman Creek. Adding LWD to this tributary will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. It will also reduce scour and assist in gravel bed creation and maintenance.	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 20	4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#37	HRA	Bear/Cub Creek LWD Restoration - This project will restore formerly productive spawning and rearing habitat to two upper Hoko tributaries. Adding LWD to these tributaries will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. It will also reduce scour and assist in gravel bed creation and maintenance	Habitat and LWD Conditions	High	Hoko River Recovery Strategy 20	4	Hoko River Recovery Goal 7	Not Defined		
Hoko River	HRA#38	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI). Also include monitoring of hydrocarbons and other potential contaminants.	Water Quality Conditions	High	Hoko River Recovery Strategy 21	1	Hoko River Recovery Goal 8	Not Defined		
Hoko River	HRA#39	PA	Maintain and expand long-term surface water temperature monitoring program.	Water Quality Conditions	High	Hoko River Recovery Strategy 21	1	Hoko River Recovery Goal 8	Tribes		
Sekiu River	SRA#1	RM&E	Assess the effectiveness of existing regulatory mechanisms in protecting natural resources. Identify actions taken under specific regulatory controls that can be assessed through effectiveness monitoring.	Estuary and Nearshore Processes and Habitat Conditions	Medium	Sekiu River Recovery Strategy 1	1	Sekiu River Recovery Goal 1	Not Defined		
Sekiu River	SRA#2	HRA	Identify willing sellers of parcels with natural shoreline for either permanent conservation or acquisition for protection.	Estuary and Nearshore Processes and Habitat Conditions	Medium	Sekiu River Recovery Strategy 2	1	Sekiu River Recovery Goal 1	Various		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Sekiu River	SRA#3	HRA	Within conservation easements or areas acquired for protection, completely remove shoreline armoring and return to original shoreline geometry.	Estuary and Nearshore Processes and Habitat Conditions	Medium	Sekiu River Recovery Strategy 3	3	Sekiu River Recovery Goal 1	Not Defined		
Sekiu River	SRA#4	HRA	Work with landowners to replace existing "hard-point" armoring with alternative soft shore protection designs (ex. beach nourishment, grade control w/ LWD, wood revetment, and biotechnical slope support).	Estuary and Nearshore Processes and Habitat Conditions	Medium	Sekiu River Recovery Strategy 3	4/5	Sekiu River Recovery Goal 1	Not Defined		
Sekiu River	SRA#5a	RM&E	Identify water-crossing and road inventories from basin landowners and combine into single basin-wide inventory. Where water-crossing information is lacking or missing, work with landowners to inventory and assess.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	1	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#5b	RM&E and HRA	Using a basin-wide approach to identify biological, physical, and process-based metrics to use for prioritizing future habitat connectivity projects.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	1/2	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#6a	HRA	Replace barrier culvert in unnamed tributary to No Name Creek (near RM 0.6) with structure that allows for better fish passage.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	2	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#6b	HRA	When the CZ 1000 Road was constructed it cut off a major meander of the Sekiu River leaving a large ponded channel segment. This habitat is now partially blocked by an improperly placed culvert. Restoring fish access to this pond would substantially increase the off-channel habitat available to juvenile salmonids in this subbasin.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	2	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#6c	HRA	A barrier culvert on the CZ-1000 Road blocks approximately 0.25 miles of spawning and rearing habitat in an unnamed right bank tributary to the Sekiu River (section 13). Replace culvert with crossing structure that allows for better fish passage.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	2	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#6d	HRA	Near RM 0.18 in a left bank tributary to 19.0218 (RM 0.44), a culvert blocks an unquantified amount of coho, steelhead and cutthroat habitat. Upstream habitat quantification needs to occur prior to restoration planning. Replace (or remove) culvert with structure that allows for better fish passage.	Habitat connectivity	Medium	Sekiu River Recovery Strategy 5	2	Sekiu River Recovery Goal 2	Not Defined		
Sekiu River	SRA#7	RM&E	Develop and implement genetic sampling program for all salmonid species in order to better understand population structure and diversity.	Biological Processes	High	Sekiu River Recovery Strategy 6	1	Sekiu River Recovery Goal 3	WDFW and Tribes		
Sekiu River	SRA#8	PA	Evaluate the necessity of hatchery supplementation once higher tiered recovery actions have been completed in the watershed (through future survey/smolt trapping results).	Biological Processes	High	Sekiu River Recovery Strategy 7	3-6	Sekiu River Recovery Goal 3	WDFW and Tribes		
Sekiu River	SRA#9	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	High	Sekiu River Recovery Strategy 8	1	Sekiu River Recovery Goal 3	WDFW and Tribes		
Sekiu River	SRA#10	RM&E and PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	High	Sekiu River Recovery Strategy 8	1	Sekiu River Recovery Goal 3	WDFW and Tribes		
Sekiu River	SRA#11	PA and RM&E	Introduce salmon carcass analogs to the Sekiu river drainage to improve N, P, and C cycling in areas deficient of natural salmon spawners.	Biological Processes	High	Sekiu River Recovery Strategy 9	3-6	Sekiu River Recovery Goal 3	WDFW and Tribes		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Sekiu River	SRA#12	RM&E	Collaborate with Washington Department of Fish and Wildlife, private landowners, and tribes to provide access and develop field methodology for evaluating flood flow passage through existing instream structures.	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 10	1	Sekiu River Recovery Goal 4	Various		
Sekiu River	SRA#13	RM&E	Seek additional funding for maintenance and calibration of WDOE Sekiu River gaging station. Obtain funding for necessary equipment for high flow data collection.	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 11	1	Sekiu River Recovery Goal 4	DOE		
Sekiu River	SRA#14	RM&E, PA	Obtain necessary information (RMAPs, RMAP Annual Reports, current and historical road inventory) from Washington Department of Natural Resources (WDNR).	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 12	1	Sekiu River Recovery Goal 4	Various		
Sekiu River	SRA#15	RM&E	Review published literature on impacts to natural basin hydrology due to changes in road density (including work completed in WDNR Sekiu Watershed Analysis).	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 12	1	Sekiu River Recovery Goal 4	Not Defined		
Sekiu River	SRA#16	HRA	In coordination with WDNR, WDFW, and WDOE, and landowners, develop road density goals for the Sekiu River drainage based on "best available science" that will achieve Sekiu River Recovery Goal 4.	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 12	3	Sekiu River Recovery Goal 4	Various		
Sekiu River	SRA#17	PA	Limit future water withdrawals from the Sekiu River watershed through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Unknown	Sekiu River Recovery Strategy 10	1	Sekiu River Recovery Goal 4	DOE		
Sekiu River	SRA#18	RM&E	Evaluate rate of road/culvert related failure (mass wasting events) over time using aerial photo history. Compare existing rates of mass wasting events to those historically.	Sediment Processes	Medium	Sekiu River Recovery Strategy 13	1	Sekiu River Recovery Goal 5	Not Defined		
Sekiu River	SRA#19	RM&E and HRA	Using existing RMAP information, quantify remaining orphan and abandoned roads to determine potential for resource damage and likelihood of failure.	Sediment Processes	Medium	Sekiu River Recovery Strategy 13	1/3	Sekiu River Recovery Goal 5	Not Defined		
Sekiu River	SRA#20	RM&E	Install continuous, long-term turbidity monitoring station coupled with storm-related suspended sediment collection. Use data for long-term trend analysis and measures of state water quality standards.	Sediment Processes	Medium	Sekiu River Recovery Strategy 14	1	Sekiu River Recovery Goal 5	Not Defined		
Sekiu River	SRA#21	RM&E	Using existing sediment core sample data for the Clallam watershed (McHenry et al. 1994), collect sediment core samples in the next two years to compare conditions.	Sediment Processes	Medium	Sekiu River Recovery Strategy 15	1	Sekiu River Recovery Goal 5	Not Defined		
Sekiu River	SRA#22	RM&E	Review published literature on recommended levels of fine sediment volume within the hyporheic zone for a range of STE, and establish benchmarks for the next 10-100 years.	Sediment Processes	Medium	Sekiu River Recovery Strategy 15	1	Sekiu River Recovery Goal 5	Not Defined		
Sekiu River	SRA#23	HRA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPLE) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPLE.	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Strategy 16	na	Sekiu River Recovery Goal 6	NOPLE		
Sekiu River	SRA#24	RM&E and HRA	Evaluate and prioritize the need to remove or abandon the following road segments: (1) 3.19 miles within 250ft of Sekiu mainstem, (2) 2.35 miles between 250-500ft of Sekiu mainstem, (3) 2.62 miles between 500-750ft of Sekiu mainstem, and (4) 2.98 miles between 750-1000ft of Sekiu mainstem.	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Strategy 18	1/3	Sekiu River Recovery Goal 6	Not Defined		
Sekiu River	SRA#25	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Strategy 17	1	Sekiu River Recovery Goal 6	Various		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
Sekiu River	SRA#26	RM&E and PA	Map and delineate channel migration zones within the Sekiu River watershed.	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Strategy 16, 17	1	Sekiu River Recovery Goal 6	Clallam County		
Sekiu River	SRA#27	RM&E and HRA	Conduct detailed instream meso-habitat mapping inventory and assessment. Implement wood supplementation in identified wood deficient zones from the habitat mapping assessment.	Riparian and Floodplain Processes and Conditions	High	Sekiu River Recovery Strategy 20	1/3/4	Sekiu River Recovery Goal 7	Not Defined		
Sekiu River	SRA#28	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI).	Water Quality Conditions	Unknown	Sekiu River Recovery Strategy 21	1	Sekiu River Recovery Goal 8	Not Defined		
Sekiu River	SRA#29	PA	Maintain and expand long-term surface water temperature monitoring program.	Water Quality Conditions	Unknown	Sekiu River Recovery Strategy 21	1	Sekiu River Recovery Goal 8	Tribes		
WSI	WSIRA#1	RM&E	Develop plan to protect eelgrass and kelp beds where they occur. Plan should focus on sediment reduction where needed.	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Strategy 1	1	WSI Recovery Goal 1	Not Defined		
WSI	WSIRA#2	RM&E and HRA	Evaluate impacts bulkheads constructed near Whiskey Creek, reduce or eliminate potential negative impacts.	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Strategy 2	1/3/4	WSI Recovery Goal 1	Not Defined		
WSI	WSIRA#3	HRA	Restore the mouths of Jim and Joe Creeks by reducing sediment transport to estuary. Remove or reduce impacts of breakwaters near the mouth of Jim Creek. Discontinue dredging in this area.	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Strategy 1, 2	1/3	WSI Recovery Goal 1	Not Defined		
WSI	WSIRA#4	HRA	Develop and implement plan to restore habitat conditions in the Sail River estuary.	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Strategy 1, 2	1/3/4	WSI Recovery Goal 1	Makah Tribe		
WSI	WSIRA#5	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Estuary and Nearshore Processes and Habitat Conditions	Low	WSI Recovery Strategy 3	1	WSI Recovery Goal 1	Not Defined		
WSI	WSIRA#6a	HRA	Within the Colville Creek subbasin a perched culvert (SR112 MP 56.5) in tributary 19.0003 potentially blocks 2.0 miles of coho, steelhead, and cutthroat habitat. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	WDOT		
WSI	WSIRA#6b	HRA	Within the Colville Creek subbasin a culvert (Oxenford Road) in tributary 19.0001a potentially blocks 0.7 miles of coho, steelhead, and cutthroat habitat. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	Clallam County		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
WSI	WSIRA#6c	HRA	Whiskey Creek (RM 1.5), a 40% barrier at box culvert SR 112 MP 49.5 blocks 1.2 miles of coho steelhead, and cutthroat habitat. This documented blockage requires field verification of fish passage conditions above and below the culvert prior to restoration planning. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	WDOT		
WSI	WSIRA#6d	HRA	At the mouth of an unnamed stream located between Deep Creek and West Twin River, a recently installed corrugated metal pipe associated with SR 112 near MP 34.8, blocks about 0.5 miles of coho, steelhead, and cutthroat habitat. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	WDOT		
WSI	WSIRA#6e	HRA	In Jim Creek at RM 0.1, a partial barrier culvert on a private road blocks several miles of habitat in Jim Creek (source: DOT culvert database). Replace with structure that allows for better fish passage.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	Private Landowner?		
WSI	WSIRA#6f	HRA	In Joe Creek at RM 0.5, a 60% passable box culvert on SR 112 MP 32.8 blocks about one mile of coho, steelhead, and cutthroat habitat, based upon database documentation. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	WDOT		
WSI	WSIRA#6g	HRA	A barrier at the Pillar Point access road culvert blocks about 0.8 miles of coho, steelhead, and cutthroat habitat at the mouth of Butler Creek. Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	DNR		
WSI	WSIRA#6h	HRA	Double 30" culverts (SR 112 MP 29.7)form an 80% barrier partially blocking about 0.5 miles of coho, steelhead, and cutthroat habitat in Butler Creek (19.0112 RM 0.3). Upon confirmation of barrier and upstream habitat, replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	WDOT		
WSI	WSIRA#6i	HRA	In a left bank tributary to the Sail River (near RM 0.1), a culvert blocks at least 0.4 (2-4% gradient) miles of coho, steelhead, and cutthroat habitat. Replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	Makah Tribe		
WSI	WSIRA#6j	HRA	On Village Creek (19.0240) near RM 0.25, a 185' long perched culvert blocks 0.32 miles of coho, steelhead, and cutthroat habitat (0.23 miles of 2-4% gradient, moderately confined and 0.09 miles of 4-8% gradient, confined channel. Replace culvert with stream crossing structure that allows for better fish passage and sediment transport capacity.	Habitat connectivity	Medium	WSI Recovery Strategy 5	2	WSI Recovery Goal 2	Makah Tribe		
WSI	WSIRA#7	PA	Advocate implementation of the Hatchery Scientific Review Group (HSRG) recommendations set for forth in the 2004 Hatchery Reform Report (HSRG 2004).	Biological Processes	High	WSI Recovery Strategy 6	1	WSI Recovery Goal 3	WDFW and Tribes		
WSI	WSIRA#8	PA	Advocate the adoption of harvest management regulations that ensure salmonid spawning escapement is sufficient to maintain, protect, and/or restore salmonid VSP parameters.	Biological Processes	High	WSI Recovery Strategy 7	1	WSI Recovery Goal 3	WDFW and Tribes		
WSI	WSIRA#9	PA	Implement and/or continue to implement population abundance monitoring.	Biological Processes	High	WSI Recovery Strategy 7	1	WSI Recovery Goal 3	WDFW and Tribes		

Watershed	Action ID	Action Type	Action Description	Primary Watershed Process Addressed	Process-Input-Condition Impairment Rating	Primary Recovery Strategy Addressed	Recovery Action Hierarchy	Recovery Goal	Lead Agency	Action Priority	Comments
WSI	WSIRA#10	HRA	Reforestation of riparian forest and wetlands associated with flood plains to improve hydrologic processes related to flood capacity within the flood plain areas.	Hydrologic Processes	Unknown	WSI Recovery Strategy 8	3	WSI Recovery Goal 4	Various		
WSI	WSIRA#11	HRA	Reduce road related hydrologic impacts by reducing road densities and/or disconnecting road systems from the stream network.	Hydrologic Processes	Unknown	WSI Recovery Strategy 8	3	WSI Recovery Goal 4	Various		
WSI	WSIRA#12	PA	Limit future water withdrawals from WSI tributaries through the implementation of the WRIA 19 Watershed Plan (WRIA 19 Planning Unit 2010).	Hydrologic Processes	Unknown	WSI Recovery Strategy 8	1	WSI Recovery Goal 4	DOE		
WSI	WSIRA#13	RM&E and HRA	Inventory roads for maintenance (use existing RMAP and other available data), side cast removal, and drainage structure improvements. Prioritize for project actions.	Sediment Processes	Unknown	WSI Recovery Strategy 9, 10	3	WSI Recovery Goal 5	Various		
WSI	WSIRA#14	HRA	Reforest riparian and floodplain areas to increase stream bank integrity and reduce bank erosion.	Sediment Processes	Unknown	WSI Recovery Strategy 13	3	WSI Recovery Goal 5	Various		
WSI	WSIRA#15	RM&E	Few riparian and floodplain habitat data are available for WSI subbasin streams. Collecting additional data where data are lacking could help identify areas in need of riparian restoration.	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Strategy 12, 13	1	WSI Recovery Goal 6	Not Defined		
WSI	WSIRA#16	HRA	Conversion of fields and non-forested riparian areas back to fully functional riparian forests. Target streams should include Colville, Whiskey, and Field creeks.	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Strategy 12, 13	3	WSI Recovery Goal 6	Various		
WSI	WSIRA#17	HRA	Implement recommendations from the Western Strait Habitat Conservation Plan (NOLT in progress), which prioritizes important habitats that could benefit from conservation easements or acquisition.	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Strategy 13	1	WSI Recovery Goal 6	Not Defined		
WSI	WSIRA#18	RM&E and PA	Map and delineate channel migration zones within the WSI sub-basins.	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Strategy 13, 14	1	WSI Recovery Goal 6	Clallam County		
WSI	WSIRA#19	PA	Advocate and support a WRIA 19 representative of the North Olympic Peninsula Lead Entity (NOPE) to participate in the Forest and Fish policy group. Individual would provide a conduit for information between the forest practices AM program and the salmon recovery efforts of NOPE.	Riparian and Floodplain Processes and Conditions	Medium	WSI Recovery Strategy 14	na	WSI Recovery Goal 6	NOPE		
WSI	WSIRA#20	RM&E and HRA	Conduct detailed instream meso-habitat mapping inventory and assessment. Implement wood supplementation in identified wood deficient zones from the habitat mapping assessment.	Habitat and LWD Conditions	Medium	WSI Recovery Strategy 15, 16	1/3/4	WSI Recovery Goal 7	Not Defined		
WSI	WSIRA#21	RM&E	Implement long-term surface water quality monitoring program (e.g., temperature, dissolved oxygen, pH, conductivity, turbidity, BIBI). Also include monitoring of hydrocarbons and other potential contaminants.	Water Quality Conditions	Unknown	WSI Recovery Strategy 17	1	WSI Recovery Goal 8	Not Defined		
WSI	WSIRA#22	PA	Advocate for effective implementation and enforcement of Forest Practice Rules and County Critical Areas Ordinances.	Water Quality Conditions	Unknown	WSI Recovery Strategy 18	na	WSI Recovery Goal 8	DNR and Clallam County		