Snoqualmie River • Snohomish River • Skykomish River

The Snohomish River Basin

Building a Healthy Watershed

Snohomish Basin
Salmon Recovery Forum

Snoqualmie ~ Watershed
Forum

Introduction

Overview of the Snohomish Basin 10-Year Conservation Plan and 3-Year Work Planning

The *Snohomish River Basin Salmon Conservation Plan* (2005) is a multi-salmonid strategy that emphasizes two Endangered Species Act (ESA) listed species, Chinook salmon and bull trout char, as well as non-listed coho, all of which are used as proxies for other salmonids in the Basin. The *Plan*, developed by the 41-member Snohomish Basin Salmon Recovery Forum (the Forum), incorporates actions across habitat, harvest and hatchery management to bring the listed wild stocks back to healthy, harvestable levels.

The Snohomish River Basin 3-year Work Plan update is a combination of documents that provides direction and a technical foundation for salmon recovery in the Basin. This work is outlined for the next 3 years and derives from the 10-year *Snohomish River Basin Salmon Conservation Plan* (2005). Included in the 2009 3-year Work Plan update are: a narrative, a spreadsheet containing all of the capital, programmatic, harvest and hatchery actions that outline our strategy for the next three years of the recovery process, and a map showing the locations of habitat restoration projects in the Basin.

The Puget Sound Partnership has established the following 3-Year work plan goals:

1. To provide a forum for watershed groups, the Recovery Implementation Technical Team (RITT), and Puget Sound Partnership (PSP) staff to discuss the work, status, and needs of salmon recovery in each salmon recovery watershed chapter and regionally;
2. To have a tool that documents the work, status, and needs of salmon recovery per each salmon recovery watershed chapter for the next three years that can be rolled up into a regional statement of the funding and capacity needs, current status, and existing work underway;
3. To be a tool for identifying priority projects for current and future funding opportunities;
4. To document changes in the implementation of each salmon recovery watershed chapter.

These goals will be addressed through using the work plan to create clear linkages between Plan Strategies / benchmarks and implementation progress in order to identify priorities actions and highlight these actions on our work list.

Snohomish Basin uses the 3-Year Work Plan to meet these goals:

1. Run an inclusive work planning process that is representative of the diversity of work being conducted throughout the basin.
2. Utilize the work plan as a communication tool for :
    - Project and program sponsors
    - Basin staff
    - Technical and Policy Development Committees
    - The Snohomish Basin Forum

The Snohomish River Basin Three-Year Work Program identifies work planned over a three-year period to advance salmon recovery through habitat protection, restoration, hatchery operations, harvest management, and integration of multi-H activities. For 2010, the total list of projects reflects actions being taken by project sponsors throughout the basin as well as projects that could take place given different funding levels, the opportunistic nature of restoration, and recommendations from the *Plan*. The project list is largely self-selected by project sponsors, based on landowner willingness, match and other readiness criteria. This list therefore represents a comprehensive list of actions project sponsors are actively working to advance. These actions are informed by recommended specific sequencing laid out in the ten-year *Plan*, but are not to be considered a definitive list of projects that will absolutely take place over the next three years.

All projects in the work program are consistent with the priorities laid out in the *Plan*. In addition to capital and operating projects, the work program highlights protection measures, harvest, hatchery, and H-integration needs in the basin. The narrative is structured by the questions posed by the Puget Sound Partnership and Recovery Implementation Technical Team:

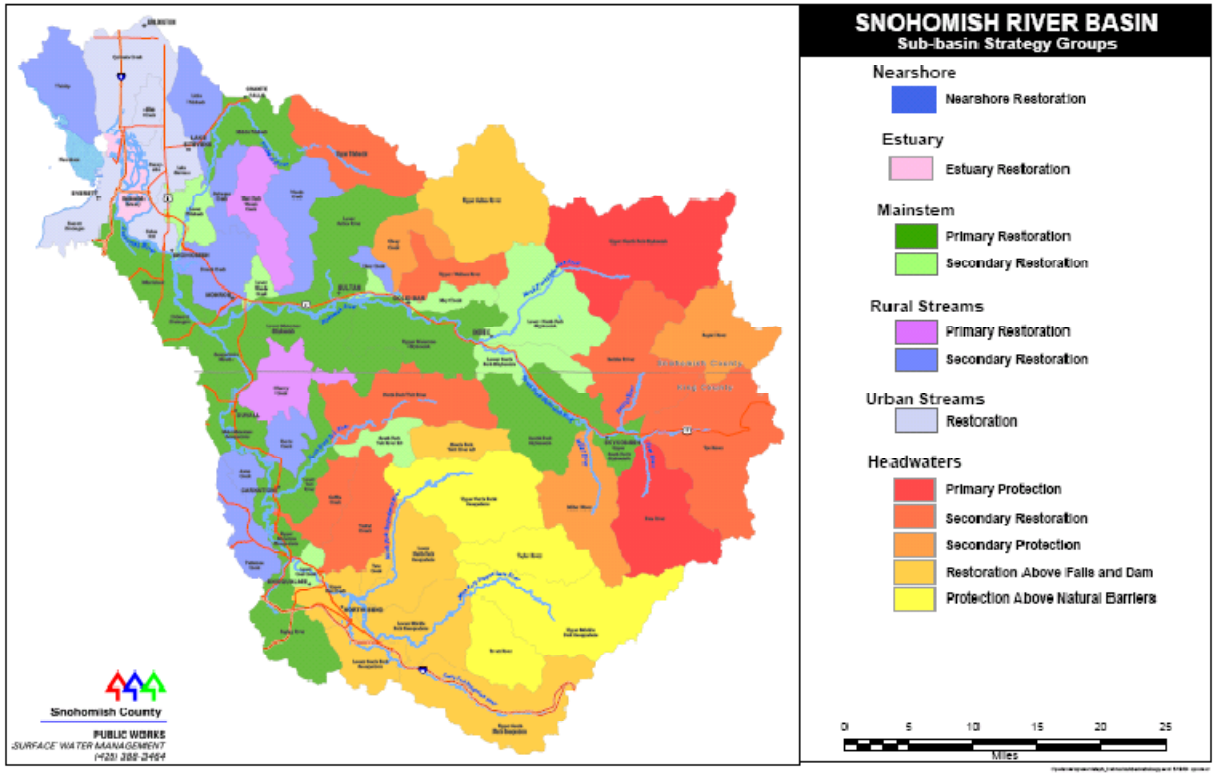
- Consistency – we provide framework for habitat, hatchery, and harvest developed by the Snohomish River Basin Conservation Plan (2005) and discuss work proposed under this 3-year work plan
- Pace/Status – we identify 10-year benchmarks developed in the Snohomish River Basin Conservation Plan (2005), evaluate progress toward those benchmarks, and link this information to a prioritization scheme
- Sequence/Timing – we provide a general discussion of prioritization, sequencing, and timing considerations
- The Next Big Challenge – we highlight any changes in approach or new implementation challenges

Strategy, Progress, Priorities, and Anticipated 3-Year Outcomes

Consistency Question: *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?*

Habitat Overview: Sub-basin Strategy Groups Identify Protection and Restoration Priority Areas

As part of the development of the habitat strategic framework in the Snohomish River Basin Conservation Plan, each of 62 sub-basins and nearshore areas was assigned to one of twelve Sub-basin Strategy Groups (SBSG). Each SBSG is characterized by three main factors: basin location (geomorphic, land-use, role in supporting salmon life history stage), condition of watershed processes (hydrology, sediment, and riparian), and current and potential salmonid use (Appendix A). Through the use of SBSGs, the conservation plan tailors the recovery strategy through the identification and prioritization of specific preservation and restoration actions at the Sub-basin Strategy Group level.



Habitat Protection

Framework: In order to achieve a net gain of salmon habitat, restoration actions must be coupled with the protection and preservation of existing functional habitat. Protection actions to preserve high priority habitat and watershed function are given the highest priority within every Sub-basin Strategy Group (Appendix B). While much of the land in WRIA 7 is forested and held by state (12.1%) and federal governments (37.6%), private forestry remains a significant land use. Some areas are subject to active logging and associated activities, such as road-building, while others are within protected wilderness areas. Thus, development risk (and resulting impairment to basin hydrology and increases in impervious area) is considered to be a lower risk in these areas. While forest protection is important, the Plan's protection efforts are largely focused on the remaining portions of the basin where further land conversion and habitat degradation are likely, primarily within unincorporated King and Snohomish counties. Incorporated areas also have a role to play habitat protection.

Summarized 3-Year Outcomes: Habitat protection progress will greatly be advanced by EPA Puget Sound Watershed Management Assistance funds Snohomish Basin partners (Snohomish County, Tulalip Tribes, and King County) recently received (Project ID 07-NC-014). This 4-year grant will enable the basin to develop a protection strategy for hydrologic processes. In addition to this grant, the Tulalip Tribes are working with the partners to advance a pilot project following our proposed strategy methodology in the Pilchuck River Sub-basin. At the end of a three-year time period, the watershed characterization and reach-scale process analysis will have been conducted within protection priority sub-basins. This groundwork will facilitate subsequent work covered by the grant, developing a strategic, actionable habitat protection plan and implementing early action plan elements. The Snohomish Basin is also working to establish cumulative effectiveness elements in the basin-wide monitoring plan. This monitoring will provide a systematic evaluation of habitat change, capturing both habitat improvements and degradation, throughout the basin.

In advance of a more developed protection strategy and information about habitat change, several habitat protection projects are included in the 3-year work program project list, illustrating the need for early action to advance protection efforts. These projects include the development of an acquisition strategy along the nearshore, acquisitions along priority reaches of mainstem rivers to protect intact juvenile rearing habitat, and acquisitions in the rural and headwater areas aimed at protecting hydrologic and sediment watershed processes (all identified as Tier 1 actions in the Plan). Additional non-capital efforts encourage best management practice implementation and land-use specific stewardship, and outreach for general environmental awareness. Shoreline Master Program updates are in progress or planned for many Snohomish Basin jurisdictions during this work plan period, providing an opportunity for improved land use planning with implications for salmon recovery. At a larger scale, the NOAA biological opinion on the FEMA flood insurance program has implications for floodplain development and associated protection issues.

Funding: Funding requirements for habitat protection are difficult to summarize. Funds for acquisition are the most straight forward to calculate, but only capture one approach out of many needed for protection. Costs for other tools often associated with personnel costs to provide technical assistance,

conduct landowner outreach, and interface on policy issues. Given that investments made in habitat protection have broad societal benefits and costs, it is necessary to more rigorously evaluate funding mechanisms and formulate a funding strategy.

Changes between 2010 and 2011: This work plan continues to reflect the primary importance of habitat protection identified in the work plan and sequencing issues related to habitat protection and restoration. With the funding of Puget Sound Watershed Management Assistance Funds and current efforts to investigate market-based mechanisms for protection, we anticipate that future work plans will be more strategic and directive in identifying protection needs and linking goals to available tools.

Habitat Restoration

Framework: The loss of rearing habitat quantity and quality along the mainstem rivers, estuary and nearshore is thought to be the primary habitat factor in the decline of Snohomish Basin Chinook salmon. In other words, the basin is thought to contain sufficient high-quality spawning habitat to support recovery, but subsequent juvenile production is thought to be severely limited by the disconnection of floodplain and estuarine habitats and degradation of nearshore habitat. The Plan calls for actions focused on restoring and preserving watershed processes across the basin, with special emphasis on rearing habitat improvements in these high-priority environments. For the first decade of Plan implementation, a generalized allocation of resources between the strategy groups includes:

- 80% of basin-wide capital project resources should be directed toward restoration and protection efforts in the Nearshore, Estuary, and Mainstem Sub-basin Strategy Groups.
- 15% of basin-wide capital project resources should be funded toward restoration and protection efforts in lowland tributaries.
- 5% effort should be directed toward effort in headwater areas.

The 10-year target allocation is not only based primarily on ecological prioritization, but also reflects practical and political considerations.

Summarized 3-Year Outcomes:

- In the Nearshore SBSG, an assessment to direct beach restoration and habitat protection has progressed ensuring that protection and restoration moves forward in a coordinated fashion and that these efforts are directed at high priority projects . As part of this process, data were collected and analyzed, and stakeholder group was created. A preferred project list is forthcoming.
- In the Estuary SBSG, project sponsors continue to advance multiple large tidal marsh projects. Projects and planned work indicate the tidal marsh acreage needed to meet 10-year benchmarks may be under construction by 2015.Recent work by Snohomish County, the tribes and agricultural interests is bearing fruit through the Sustainable Lands Strategy. It appears that this process is making headway on moving these projects forward past the loss of agricultural land hurdle.

- Construction is complete or nearly complete on several large scale Mainstem Primary SBSG restoration projects with other projects currently advancing. Project sponsors continue to achieve good spatial distribution of these projects, as work is being advanced in the Snohomish, Pilchuck, Snoqualmie, Skykomish, and Tolt rivers. Despite this effort, it is not clear if we will be on track to meet 10-year benchmarks at the end of the 3 year period covered by the work plan. Completed projects have been removed from the plan while assessment and feasibility studies continue to identify new projects to move toward construction. While we appear to be on pace to meet riparian benchmarks based on project implementation data, little is known about riparian loss since the adoption of the plan, and it is important that we continue to maintain a good pace with riparian restoration and related stewardship efforts. One avenue for evaluating this progress is through WDFW, who is working on a riparian analysis within the Snohomish Basin. Our Technical Committee will continue to work with WDFW on this project as part of our adaptive management efforts.
- The Mainstem Secondary SBSG is not well represented by the project list, which is congruent with the prioritization established in the plan and reflects the reality of resources to advance lower priority projects.
- Work in Rural SBSG is coordinated among multiple basin partners and assessments direct restoration priorities. In the Rural Primary Subbasin Strategy Group, the habitat and geomorphic assessment in West Fork Woods Creek Subbasin is nearly complete and will direct actions by a number of project sponsors. Work in Cherry Creek also has a long history of collaborative and sustained effort, though efforts have been hampered by landowner and diking district concerns. While many riparian and fish passage opportunities are identified in this work plan, opportunities for restoring side-channel habitat are lacking.
- In the Urban Subbasin Strategy group, efforts directed towards the Allen Creek Subbasin are of particular interest in this work plan. Door to door outreach to engage landowners in best management practices to protect water quality and riparian habitat restoration is complementary to the restored fish passage element of the Qwuloolt tidal marsh project. The Allen-Quilceda Watershed Team (AQWA Team) continues to provide a key function coordination restoration and outreach actions among partners working in this urban area.

Funding: Identified 3-year funding needs are about $45.5 Million, roughly equalling the Forum annual funding goal of $15 – $17M per year, using the total cost of identified restoration projects, subtracting Marshland and the Mukilteo Creosote project as outliers, then subtracting funds already in-hand. This method takes into consideration that some projects, such as Qwuloolt are already fully funded, yet remain on the list as a continuing activity. The anticipated allocation of cost between Subbasin strategy groups is aligned with the generalized allocation of resources recommended in the plan. While anticipated funding needs generally correspond with both overall funding targets and allocation splits, it is important to highlight that past analysis of restoration funding has identified that we have been implementing the habitat part of the Plan at a rate of 34% per year. As is expected given the past funding deficit, implementation monitoring (p. 12) confirms that we are not on pace to meet our benchmarks. Even assuming no net loss in habitat function, we will need to increase the rate of implementation significantly to meet our 10 year-benchmarks. The current backlog of project work stands at ~$53M and it is unlikely that we will be able to address this deficit with the proposed work plan.

Changes between 2010 and 2011: Twelve projects representing approximately $3.5 Million worth of worth were completed last year. This number underestimates the amount of work accomplished last year, because many projects remain on this list due to maintenance needs and several of the

projects were fully funded in outside of last year. Additional reasons for removal included: need for further prioritization (4), project is being addressed under a different project (1), change in sponsor priorities (1) and no reason identified (1). Nineteen new habitat capital projects were added to the work plan in 2010. Several of these projects were the result of new ways of tracking projects within Snohomish County.

Harvest Management

Framework: Snohomish Chinook are harvested as part of large, mixed-stock fisheries from southeast Alaska to north Puget Sound and as bycatch in Puget Sound fisheries directed at harvestable hatchery Chinook and other salmon species. Harvest rates have declined more or less steadily since the inception of the Pacific Salmon Treaty in the mid-1980s and especially beginning in the mid-1990s just before the ESA-listing of Puget Sound Chinook salmon in 1998. The role of fishery management in the Plan is based on the premise that harvest can be limited to a rate that will not impede recovery as long as other actions (habitat protection, habitat restoration, and hatchery management) are also implemented to promote recovery. The current harvest plan[1] assumes that sustained annual harvest rates below 21% (as measured by the FRAM[2] model) will enable the Snohomish Chinook populations to increase in abundance and productivity consistent with the quantity and quality of habitat available throughout their life cycle. The Plan also hypothesizes that this exploitation rate is low enough to improve spatial distribution, life history diversity, and better represent a natural distribution of age classes in the population.

Summarized 3-Year Outcomes: The most important outcome for the next three years is to achieve both the preseason planned, and the postseason realized, overall exploitation rates below the 0.21 (as measured by FRAM) guideline. This should be easier to reach with reduced Canadian and Alaskan interceptions due to the new Pacific Salmon Treaty annex (see below). We have completed sample collections and genetic analyses necessary to include the Skykomish population in the DNA baseline for coast-wide stock composition analysis of Chinook salmon fisheries, and the Snoqualmie population will follow. However, this information will not be usable in management until a coast-wide fishery genetic sampling and analysis program is funded and implemented.

Funding: The work necessary for planning and managing fisheries according to the harvest management plan is funded through federal, state, and tribal fishery management programs. Coded-wire tagging, tag recovery, laboratory processing of tags, and database maintenance are funded mainly through federal funds made available to state and tribal fishery managers for this purpose. Analysis of stock composition and exploitation rates is funded through Pacific Salmon Commission implementation funds and by state and tribal comanagers in the domestic management process. These are mainly region- or coast-wide programs, and it is difficult to separate the portion of these funds that would be spent to manage Snohomish Chinook. Determination of

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[1] Guidelines for overall harvest impacts on Snohomish Chinook are included in the *Comprehensive Management Plan for Puget Sound Chinook: Harvest Management Component*, 2010. This plan is currently under review by NOAA and, when adopted, will be in effect through April 30, 2014.

[2] The Fishery Regulation Assessment Model is used by state and tribal comanagers and the Pacific Fishery Management Council annually to evaluate the cumulative effects of all harvest-related mortality on west coast Chinook and coho salmon stocks.

separate exploitation rates for the Skykomish and Snoqualmie populations, and subsequent development of separate rebuilding exploitation rates for these, is dependent on funding and implementing a coordinated, coast-wide genetic sampling and data analysis program for Chinook fisheries.

Changes between 2010 and 2011: In 2009, the United States and Canada began implementing a new Chinook annex to the Pacific Salmon Treaty that included a 15% reduction in mixed-stock fisheries in southeast Alaska and a 30% reduction in mixed-stock fisheries off the west coast of Vancouver Island. Initial indications are that these changes are resulting in some reduction in overall exploitation rates on Snohomish Chinook. In early 2010, the comanagers submitted a new harvest management plan covering the years 2011-2014, which is now being reviewed by NOAA Fisheries. The Snohomish portion of this plan will continue the current harvest management guidelines for fisheries south of the US/Canada border.

Hatchery Management

Framework: The State of Washington and the Tulalip Tribes operate hatchery programs in the Snohomish basin to provide harvest opportunity with minimal effect on natural origin fish. The Plan assumes that these hatcheries can be managed in a way that will not impede recovery, assuming other actions to promote recovery (habitat protection, habitat restoration, and harvest management) are implemented. Hatchery management strategies include: increasing the genetic similarity of the Skykomish hatchery stocks and the Skykomish natural population via integrated broodstock management; evaluating possible negative ecological interactions between hatchery- fish and natural-origin fish; addressing migration delays or blockages for natural-origin fish due to hatchery weirs, and targeting hatchery-origin fish in fisheries. The implementation plan for these strategies is the subject of a 2005 state-tribal Hatchery Memorandum of Understanding (MOU) Agreement between the Washington Department of Wildlife and the Tulalip Tribes as well as an updated Hatchery Action Implementation Plan (HAIP) for the Snohomish basin, which is currently under development[3].

Summarized 3-Year Outcomes: We continue to evaluate and annually report on the continuing programs mentioned above. The results of the studies of gene flow and ecological interactions will be applied to modify hatchery management assumptions as soon as new findings become available. The comanagers expect to complete the Snohomish HAIP within the near future.

Funding: Much of the implementation of the hatchery plan is funded through hatchery reform funds granted to WDFW and the Tulalip Tribes. The remainder is funded with normal operations funds available to the comanagers. Monitoring of ecological interactions in the estuary is part of a NOAA Fisheries funded project, with a substantial in-kind contribution made by the Tulalip Tribes. Gene flow studies have been funded through Pacific Salmon Commission LOA funds as well as Hatchery Reform funds granted to the Tulalip Tribes.

Changes between 2010 and 2011: The hatchery management program is substantially the same in 201 as in 2010. Once the Snohomish HAIP is completed, there will likely be some changes.

[3] See also "Snohomish Region Hatchery Program Overview", 2009, available from the WDFW and Tulalip Tribes.

H-Integration

Framework: Management within each H is already coordinated to some degree with the other H's, as indicated in the above sections. Completion of the monitoring and adaptive management plan, currently under development by the Technical and Policy Development Committees, will enhance this coordination. Ultimately, the question for understanding our progress towards salmon recovery is, *what is the cumulative effectiveness of all our actions, and what is the relative effect of habitat, harvest, and hatchery management on our ability to reach our goal.* Our ability to answer this question will depend on information about resource status over time (such as spawning escapement and juvenile outmigration abundance) and information that enables us to draw relationships between management actions and fish response.

Summarized 3-Year Outcomes: In 2010, the Technical Committee will complete a more detailed version of a monitoring plan, with the Policy Development Committee adding sections to address socio-economic issues and identify an adaptive management framework. Currently, information collected to inform harvest management provides an important dataset to allow us to understand the cumulative impact of H-management over time. Annual estimates of natural spawning escapement are completed by WDFW using a combination of aerial, boat, and foot surveys of redds throughout the basin. The redd counts are expanded by an assumed ratio of fish to redds to derive the estimate of the total number of Chinook salmon spawning naturally in the basin. Since 1997, the spawning escapement estimates have been partitioned into natural- and hatchery-origin components from samples of spawned-out carcasses throughout the basin. Carcasses with thermally-marked otoliths, coded-wire tags, or missing adipose fins are classified as being of hatchery origin, and all others are assumed to be of natural origin. Juvenile out-migrant numbers are estimated annually using traps in the lower Skykomish and Snoqualmie Rivers.

In addition, there are several projects on the work plan that explicitly cross Hs. Integrating hatchery and habitat management include the estimation of the presence of hatchery-origin adult Chinook on the spawning grounds in different habitats throughout the system as well as the artificial passage of Chinook in the South Fork Skykomish River over Sunset Falls into otherwise inaccessible habitat. Harvest and hatchery integration includes directing fisheries on hatchery production through selective recreational fishing opportunities in Port Gardner – Saratoga Pass area and in the Skykomish River when hatchery-origin Chinook are transiting those areas as well as management of the tribal fishery in Tulalip Bay in time and area to focus on Tulalip Hatchery fish.

Funding: Spawning escapement estimation is funded by WDFW operational funds. The breakout of natural- and hatchery-origin fish is funded mainly through hatchery reform funds competed for annually by the Tulalip Tribes, with in-kind contributions from WDFW. The certainty of hatchery reform funds remaining available into the future is questionable. Juvenile outmigrant smolt trapping operations have been funded annually through Coastal Salmon recovery funds granted to the Tulalip Tribes. Completion of the monitoring plan will also yield a more complete cost picture.

Changes between 2010 and 2011: These programs have not changed substantially between 2010 and 2011. In this work plan we attempt to draw greater attention to projects that have cross-H implications.

Pace/Status Question: *What is the status of actions underway per your recovery plan chapter? Is this on pace with the goals of your recovery plan? What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals?*

The following tables (p. 11-15) show implementation – or activity – progress toward the Plan's restoration targets. It is part of an iterative process in monitoring, reporting and adaptively managing the strategies and actions outlined in the Plan and will continue to evolve in the future. The tables neither reflect the effectiveness of the projects implemented (achieving full ecological function), nor does it reflect the overall changes in the watershed landscape (planted riparian areas vs. areas lost due to development or channel migration). Our restoration actions are long-term investments toward achieving habitat conditions that will support healthy Chinook populations. Some actions, such as removal of a migration barrier, realize immediate impacts, while others such as riparian plantings take decades to reach maturity. While building a mature riparian forest takes time, the actions in the table are critical to our ultimate goal of restoring natural processes. The values in the table also have a range of confidence associated with them. Confidence in the figures is eroded where we have less data on exact overlap with focus reaches, more project sponsors implementing projects, a range of restoration methodologies and approaches to measuring outcomes, and issues of how to quantify restoration outcomes where we "let the river do the work for us." Again, monitoring these actions and their associated effectiveness will evolve and change over time, and both project sponsors and the Technical Committee remain supportive of resolving these issues.

Table 1: Habitat Protection	2005 Intact	Status	3-Year Outcome Needed to be on Track in 3 yrs?	Work Plan Meets this Need?
Nearshore Beaches and Shoreline:		Habitat loss is not systematically monitored throughout the basin. Current status information includes: • Mainstem riparian loss pilot (Snohomish County only) • Snohomish County CAR monitoring • King County CAO monitoring • Acquisition reporting	Snohomish Basin Watershed Characterization and Protection funded and Watershed Characterization and Characterization of reach-scale processes within protection priority sub-basins work elements completed. Tulalip Pilchuck protection pilot project advances the larger Snohomish EPA grant. Development and implementation of Status and Trend (Cumulative Effectiveness) element of Basin Monitoring Plan	Yes
Riparian Areas (focus reaches)	297 acres			
Edge Habitat (focus reaches)	22 miles			
Estuary: Tidal Marsh				
Riparian Areas (focus reaches)	165 acres			
Edge Habitat (focus reaches)	27 miles			
Forest Cover	687 acres			
Mainstem-primary:				
Riparian Areas (focus reaches)	5,991 acres			
Edge Habitat (focus reaches)	236 miles			
Forest Cover	116,633 acres			
Mainstem-secondary:				
Riparian Areas (focus reaches)	2,497 acres			
Edge Habitat (focus reaches)	79 miles			
Forest Cover	44,935 acres			
Rural Streams Primary:				
Riparian Areas (focus reaches)	709 acres			
Forest Cover	18,286 acres			
Rural Streams Secondary:				
Riparian Areas (focus reaches)	258 acres			
Forest Cover	36,624 acres			
Urban Streams				
Riparian Areas (focus reaches)	137 acres			
Forest Cover	8,558 acres			
Headwaters Primary Protection				
Riparian Areas (focus reaches)	1,318 acres			
Forest Cover	61,865 acres			

Table 2: Habitat Restoration	Needed Habitat Gain in 10 years	Progress since 2005	Percent 10-year Benchmark	Currently on Target to Meet Benchmark?	3-Year Outcome Needed to be on Track in 3 yrs?	Work Plan Meets this Need?
Nearshore Beaches and Shoreline	At least 1 mile	0.2 mi	20%	Progress Made	feasibility / assessment	**Unknown**
Estuary: Tidal Marsh	1,237 acres	375 acres	30%	Progress Made	at least 646 acres	**Unknown**
Mainstem-primary:						
Restored Edge Habitat	10.4 miles	1.8 mi	17%	No	at least 6.5 mi.	No
Restored Riparian Habitat	256 acres	159 acres	62%	Yes	Unknown, given lack of information about habitat loss/project performance	**Unknown**
Restored Off-channel Habitat	167 acres	25 acres	15%	No	At least 106 acres	No
Large Woody Debris	41 logjams			Yes	Unknown, given lack of information about habitat loss/project performance	**Unknown**
Mainstem-secondary:						
Restored Riparian Habitat	6 acres		0%	No	4.5 acres	No
Restored Off-channel Habitat	6 acres		0%	No	4.5 acres	No
Rural Streams Primary:						
Restored Riparian Habitat	13 acres	6 acres	46%	Progress Made	5.3 acres	**Unknown**
Restored Off-channel Habitat	10 acres		0%	No	7.5 acres	No
Rural Streams Secondary:						
Restored Riparian Habitat		14 acres	met assuming no habitat loss	Yes	Unknown, given lack of information about habitat loss	**Unknown**
Restored Off-channel Habitat	41 acres	7 acres	17%	No	25.5 acres	No
Urban Streams:						
Restored Riparian Habitat	75 acres	16 acres	21%	Progress Made	44.2 acres	No
Restored Off-channel Habitat			met assuming no habitat loss	Yes	Unknown, given lack of information about habitat loss	**Unknown**

Table 3: Hatchery Operations	Quantifiable Goal	Information about Progress	Currently on Target to Meet Benchmark?	Priority (High, Medium, Low)	3-Year Outcome Needed to be on Track in 3 yrs?	Work Plan Meets this Need?
Potential negative ecological interactions between hatchery- and natural-origin fish	Finish study and develop more specific goals. Ecological interactions to minimally impact recovery potential. Add a date - goal to establish a more quantifiable benchmark.	Currently studying ecological interactions in freshwater, estuarine and nearshore habitats (NOAA Fisheries and Tulalip). No endpoint for applying results to hatchery programs has been identified.	The effect of ecological interactions is currently unknown. Making progress on research, but need report on results to date.	High	Need analysis of available data. Redesign of studies to focus on hatchery-natural interactions.	
Potential decreased genetic diversity and fitness through hatchery-origin adult spawners straying and interbreeding with natural-origin fish in natural spawning areas	• Short-term Benchmark: PNI > 0.50 • Long-term Goal: PNI > 0.70 • 100% of the broodstock from within the system • 300 to 700 natural origin fish (NOB) used in the integrated broodstock program	1) Annual estimates of PNI determined from gene flow between hatchery- and natural-origin fish. 2) Relate gene flow to proportions of hatchery- and natural-origin fish observed in hatchery and natural escapements.	Yes	High	Continue NOR/HOR proportion assessments and gene flow assessments in hatchery and natural stock components.	
Reduction of NOR escapement due to incorporation of NOB in hatchery broodstock	Restrict taking of NOB to Sunset Falls and upper Wallace River Hatchery returns only. Limit the number of NOB taken from Sunset Falls to a maximum of 20% of the return annually. Prohibit removals of natural-origin fish in years of critical escapement.	1) Number of NOB taken from natural areas relative to total NOR escapement.	On target for PNI now, but need to improve methods to assess gene flow.	High	1) Increase NOB on spawning grounds, 2) Continue NOB monitoring, 3) Improve gene flow monitoring.	
Introduction of non-local hatchery broodstock into the watershed	Use only Skykomish native broodstock to provide gametes for Wallace River and Tulalip Hatcheries.	Percentage of eggs from Skykomish broodstock	Yes	High	1) Maintain 100% of broodstock from Skykomish summer Chinook. 2) Need new Tulalip/WDFW Hatchery MOU Agreement to assure this.	
Migration delay or blockage - Wallace River	200 pairs passed above Wallace Hatchery weir.	Number of Chinook passed above Wallace River Hatchery each year.	See data summary*	Medium	Continue to implement Hatchery MOU Agreement.	
Migration delay or blockage - Tokul Creek steelhead hatchery	Pass all NOR Chinook that reach the Tokul Creek Hatchery to upstream habitat.	Number of [NOR] Chinook passed above Tokul Creek Hatchery each year.	Unknown, need information from WDFW	Medium	Document progress and maintain fish passage program.	

Table 4: Fisheries Management	Quantifiable Goal	Information about Progress	On Target to Meet Benchmark?	Priority (High, Medium, Low)	3-Year Outcome Needed to be on Track in 3 yrs?	Work Plan Meets this Need?
Adoption of a preseason plan consistent with RER guideline	Rebuilding exploitation rate in the plan	Projected annual exploitation rates (total and SUS) from preseason plan.	Consistent w/ plan but not RER (see Snohomish Chinook FRAM 2009 Validation Analysis.xlsx))	High		Yes *
Implementation of fishing plan consistent with preseason plan	Preseason projected exploitation rate	Post-season estimate of exploitation rate (from post-season FRAM run)	Yes, recently (see Snohomish Chinook FRAM 2009 Validation Analysis.xlsx)	High	Continue attention to in season management plus implementation of new PST annex	Yes *
Develop tool to separately assess exploitation rate on Snoqualmie population	Five years of Snoqualmie-specific exploitation rates and productivity are available by 2018.	Samples collected and genetic analysis completed for Snoqualmie GSI baseline. Need to be incorporated into coast-wide baseline.	Regular fishery sampling and processing not started yet. Baseline modification and coast-wide sampling must begin within the next year to get on target. Currently not on target.	Med	1. Have separate Skykomish and Snoqualmie baselines in coast-wide baseline. 2. begin regular GSI fishery sampling and sample processing.	No
Development of Snoqualmie specific RER	Separate Snoqualmie and Skykomish - specific RERs are available by 2019.	RER developed based on Snoqualmie data	Work not started yet. Depends on the above.	Med	Depends on other work. Not ready in three years.	No
Harvest practices do not alter spatial distribution or age distribution of spawners (controlled by ecological factors)	Expected spatial and age distributions under zero harvest.	observed (after harvest) distribution = expected if no harvest	Work not started yet Plan hypothesizes that reduced harvest rates will also result in reduced effects on age and spatial distribution	Low	Next step is to develop model comparing observed and expected distributions	No

Table 5: H - Integration	Quantifiable Goal	Information about Progress	Currently on Target to Meet Benchmark?	Priority (High, Medium, Low)	3-Year Outcome Needed to be on Track in 3 yrs?	Work Plan Meets this Need?
All-H: Natural spawning escapement	1) NOR Numbers increasing towards recovery goal 2) Spatial distribution	1) Annual estimate of natural NOR spawning escapement 2) annual estimates by subwatershed	Uncertain	High	1) 8-year average NOR escapement exceeds previous 8 year average	Yes, except spatial delineation of escapement estimation
All - H: Social capital infrastructure - support diverse recovery efforts and to diffuse outreach messages.	none identified	2 Tribal Governments, 6 local governments, 2 state agencies, 8 non-profits actively involved in program and project identification. 41 agencies and organizations represented on the Forum.	Unknown	High		
Habitat and Harvest: Smolt outmigration monitoring.	NOR numbers increasing towards recovery goal	Annual estimates of NOR outmigrants from Skykomish and Snoqualmie populations	Uncertain	High		
Habitat and Hatchery: Identify hatchery fish where they are so that we can better understand natural fish production.	Mass marking of fish: WRH: All production is adipose fin-marked except for double index tag groups. WRH: 400,000 fingerling released CWT, 50,000 yearling CWT marked. Tulalip Hatchery Chinook: 80% adipose fin-marked (current goal); 100,000 CWT; 100% mass marked with unique thermal otolith marks.	Number of fish marked and tagged annually	Yes	High		
Harvest and Hatchery: Target hatchery fish in harvest	Conduct time-area management in Area 8D and in the Skykomish River, target selective fisheries on adipose fin-marked fish above where and when appropriate.					
Habitat and Hatchery: Pass fish above Sunset Falls to otherwise inaccessible habitat	Pass all fish reaching the Sunset Falls fish trap less the ones needed for hatchery integration.	Number of fish passed annually	Yes	Not assigned		Yes *
Habitat Protection, Habitat Restoration, and Water Quality: Build awareness about environmental problems	none identified	Puget Sound Partnership Public Opinion Survey				
Habitat Protection, Habitat Restoration, and Water Quality: Effect behavior changes, implementation of BMPs	No overarching goal identified. Some programs identify specific goals	At this time lacking basin framework to evaluate the relationship between behavior changes and habitat and water quality trends.				

Sequence/Timing Question: *What are the top implementation priorities in your recovery plan in terms of specific actions or theme/suites of actions? How are these top priorities being sequenced in the next three years? What do you need to be successful in implementing these priorities?*

In this 3-year work plan, cross-H considerations are more explicitly identified, illustrating that resource managers in the different H sectors are aware of general H-integration issues. At this point we are not able to prioritize or sequence across the H's, nor evaluate resource allocation across the Hs. This type of undertaking might be a valuable analysis for the Snohomish Basin.

Habitat: A fundamental sequencing issue is that if habitat is lost over time, then restoration needs increase. Protection is prioritized over restoration, given restrictions in many projects that prevents full restoration in many situations, and lag times associated with realizing ecological function once a project has been implemented.

Habitat Protection: While the pace of development has slowed with the recent economic downturn, we still anticipate substantial development pressures in the Snohomish Basin. Signs that the economy is turning around may yield some of this pressure in the next year. Some ecological stressors associated with the spread of impervious surfaces associated with development, such as altered hydrologic and sediment processes, will also be exacerbated by climate change. Simultaneously, limited natural resources (such as water and land) are placing different societal interests in direct competition.

Although the Snohomish River Basin Salmon Conservation Plan identified a general habitat strategy that prioritized protection actions over restoration efforts and identified general protection tools, this plan did not establish protection priorities or a protection strategy. This strategy is needed to analyze those areas at the highest risk of degradation, areas where degradation has the greatest impact, and the efficacy of using different protection tools to meet our goals. Even though this strategy is needed to ensure protection of our highest priority areas, on the ground protection efforts cannot be placed on hold until this analysis is completed. The Plan provides good general guidance for protection needs, and should inform these efforts in the interim.

Habitat Restoration: One consideration for sequencing in project priority. The Snohomish River Basin Salmon Conservation Plan lays out a robust framework that prioritizes restoration actions (Appendix B). This work plan further refines this prioritization scheme by adding implementation progress, sponsor capacity, and a rough sequencing element to more clearly categorize projects into *most pressing need, pressing need, need* (Appendix C). Through this process, Tier 1 projects with sponsor capacity, that address lagging benchmarks are identified as being our *most pressing needs* – the most critical projects to complete soon. These projects tend to be projects in the mainstem primary sub-basin strategy group that will restore off-channel or edge habitat, estuary projects to restore tidal marsh, and nearshore projects to protect or restore beach habitat. Project identified as being a *pressing need* include Tier 1 actions that address benchmarks that are currently on pace to meet 10-year benchmarks (e.g., mainstem primary riparian restoration) and Tier 2 and 3 actions that are not pace to meet 10-year benchmarks

(e.g., mainstem secondary, rural, and urban riparian restoration). While advancing these projects are not as urgent as those categorized as *most pressing need*, it is important that we maintain our current pace for Tier 1 actions currently on pace, and accelerate out implementation rate for lower tier projects that are behind in implementation, as resources allow. The final category of projects, those identified as *need*, reflect projects that are part of the salmon recovery plan and are needed to reach salmon recovery. It is important that we continue to advance these projects too, especially as resources allow.

Prioritization alone does not identify which projects should be implemented in what order. At this time, additional sequencing considerations are being addressed to varying degrees on the Subbasin Strategy Group scale. Estuary monitoring partners are working collaboratively to coordinate which projects will apply for what funding, and projects are coming on-line at different times. In the nearshore, there are planned efforts to prioritize and sequence restoration and protection projects. For large, mainstem river projects, sequencing is presently driven by the capacity of the project sponsors able to implement projects of this scale. The project working group has voiced general support for coordinating and sequencing projects on a smaller scale, particularly to reduce in-basin competition for funds.

Harvest Management: The harvest management plan was developed based on the production potential of the habitat in the period 1985-2000. Therefore, if habitat stays the same or improves above this level, the harvest guidelines should be sufficiently conservative to achieve the goal of not impeding recovery. On the other hand, if habitat degradation continues, then the guidelines may not be conservative enough. We expect the beneficial effect of harvest management actions to be apparent within a short time period, while habitat actions will take longer to manifest themselves in improved population performance. However, harvest management actions cannot contribute effectively to recovery without concurrent improvement in habitat.

Hatchery Management: Since 2005, natural-origin Chinook returning to the Wallace River and Sunset Falls fish traps have been selected and incorporated into the Wallace River Hatchery broodstock according to the guidelines in the WDFW/Tulalip Hatchery MOU Agreement. Tulalip and WDFW are also incorporating studies to directly determine the degree of gene flow between the hatchery and natural populations into the long-term hatchery management plan. Studies of ecological interactions in the Snohomish estuary continue. A comprehensive report is expected within the next few years, after which we will evaluate implications for hatchery management. Passage of natural-origin Chinook over the Tokul Creek and Wallace River weirs continues, as does trucking of fish over Sunset Falls. Fishery management continues to target hatchery-origin Chinook through mark-selective recreational fisheries and time-area management methods in Tulalip Bay.

H-integration: Basic stock assessment activities are the key to evaluating the efficacy of the strategies in all of the H's. Spawning escapement programs were originally designed only for the purpose of evaluating harvest management, but are being refined to assess the spatial distribution of spawners in a manner that can be correlated with habitat type and condition. Similarly, juvenile outmigrant assessment

programs are used to predict subsequent adult returns to facilitate harvest management, but they also serve as a basis for measuring overall population productivity and particularly assessment of the time trends in the ability of the freshwater habitat to produce viable outmigrant smolts. The breakout of the escapement into natural- and hatchery-origin components provides one evaluation of the potential effect of hatchery fish on natural populations through interbreeding, but it also allows us to document time trends in natural population abundance, productivity, and spatial distribution relative to hatchery-origin fish. A remaining, missing piece in overall stock assessment is the need to document trends in life history diversity, which could be ascertained through otolith pattern analysis, scale pattern analysis, or a combination of these imaging methods. Overall, the stock assessment work is the bottom line needed to assess overall performance of the recovery plan.

Next Big Challenge Questions:

Do these top priorities reflect a change in any way from the previous three-year work program? Have there been any significant changes in the strategy or approach for salmon recovery in your watershed? If so, how & why?

This work plan contains no significant changes. Rather, it reflects continued refinement over last year's more substantial refinement. Basin staff have not addressed the implications of inadequate funding on prioritization, as raised in previous years. This is an issue not only for the Snohomish Basin, but for Puget Sound in general.

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

Salmon Populations

Currently escapement data provides some indication of population performance. Following the decline in harvest rates of the mid-1990s, natural spawning escapement increased (Fig. 2), although it has begun to show a strong odd-even year fluctuation and a decline since the peak year of 2004. A comparison of the distribution of fishing mortality and escapement under the 2007 and 2009 preseason fishing plans shows the expected gain from implementing the new Chinook annex in the Pacific Salmon treaty (Fig.3). However, escapement only provides us with one view of population performance. Work is underway to extend this analysis to brood year production for the Snohomish. A better understanding of juvenile survival will also be critical for understanding trends in overall population performance.

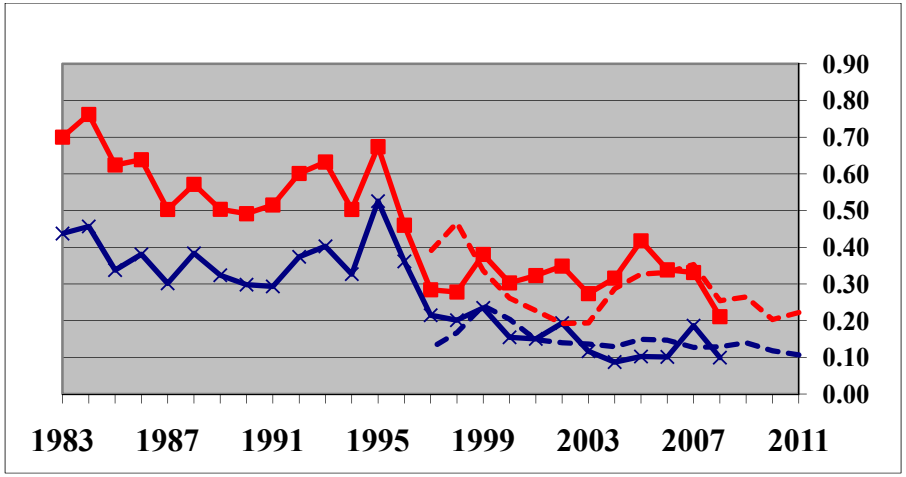


Figure 1. Trend in exploitation rates on Snohomish basin Chinook salmon as measured by the FRAM model, 1983-2011. Red line ("Total") is total exploitation rate, blue line ("SUS") is the portion of this south of the US/Canada border. Solid lines are post-season estimates; dash lines are preseason predictions.

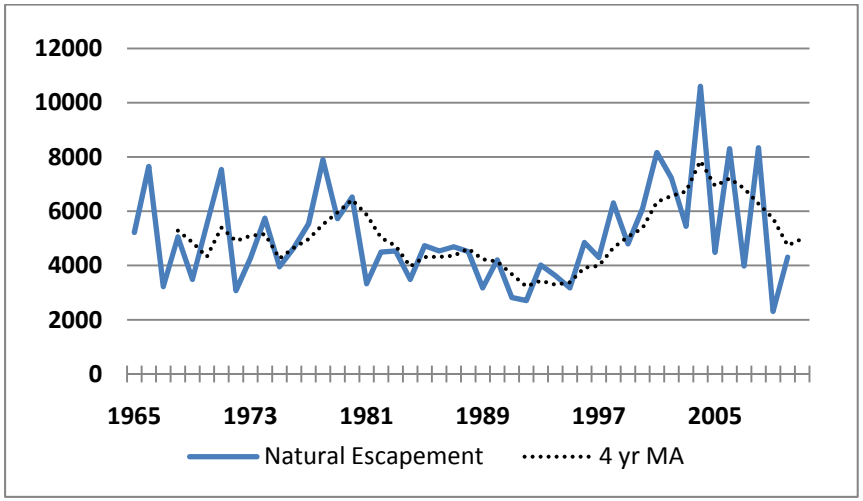


Figure 2. Trend in natural spawning escapement for Snohomish Chinook salmon 1965-2010.

Habitat Trends

At this time we are unable at this time to identify habitat trends, with the possible exception of estuary marsh habitat which is easier to track. The lack of information about habitat trends makes it impossible to know for sure if we are on pace to meet 10-year habitat benchmarks, which are determined by habitat area that remains intact plus restoration gains over the 10-year period.

Given difficulties in habitat trend detection, annually is not the appropriate spatial scale to track habitat change. Thus, adaptive management decisions to direct restoration efforts will be imperfect and rely heavily on project implementation information. The Technical Committee is currently addressing habitat trend monitoring through the cumulative effectiveness section in the WRIA 7 monitoring plan (in progress).

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

Habitat Mitigation Projects

Some projects in the nearshore and estuary are linked to mitigation sites. The Forum has not yet determined how to count habitat gains on projects that involve mitigation and restoration. The Forum is seeking to consensus on how to measure the habitat gain on projects where a sponsor completes additional work to required mitigation. This discussion is part of the Forum work plan within the next couple of years.

Public Support for Salmon Restoration

- Outreach at the regional scale should focus on awareness and understanding of ecosystem and salmon issues, while providing direction, funding and guidance for change facilitators (e.g., watersheds), and change agents (e.g., fisheries enhancement groups) to focus on programs that change behaviors to either implement best management practices or habitat protection.
- Many current outreach efforts (especially targeted at adults) are driven by NPDES permit requirements and water quality concerns. While there are overlaps in messaging for water quality protection and salmon recovery, we need to evaluate what gaps have been created in the shift of the driver for public outreach from salmon to water quality.
- In addition to outreach for behavioral change, outreach needs to capture large scale project public outreach and what the basin is doing and why (i.e. try to get out of a reactive mode and into a proactive approach). The basin needs to be more strategic in public outreach so that positive stories get as much media as negative incidents.

- We need to focus effort on how to engage the volunteer community in a meaningful way. Existing programs assume that we can perpetuate the restoration economy based on volunteers forever.

Balancing Societal Priorities

The current economic situation underscores the realities of balancing societal needs. Particularly in the last couple of years, local and state governments have had very low revenues, forcing decision-makers to make difficult funding decisions and forcing prioritization to allocate limited dollars. Given the current revenue realities, recent funds allocated to Puget Sound environmental issues, especially from the state and the federal government, speak to the realized importance of environmental needs.

Agricultural Preservation and Habitat Restoration

The Snohomish Basin, much like the region in general, has been working through issues associated with competing land uses. Within our Basin, both King County and Snohomish County are working through processes to more formally evaluate competing needs from farm preservation and fish recovery efforts. King County developed a public rule which prescribes how King County will ensure that restoration projects in the Agriculture Production District are compliant with county code. This rule provides a more formal process to approve proposed restoration, and assigns responsibility to the King County Department of Natural Resources and Parks to assist the Department of Development and Environmental Services in making determinations.

In Snohomish County, both the Executive and the Council have established a stakeholder process – known as the Sustainable Lands Strategy – to address competing agricultural and fish restoration interests. Over the course of 2010 and finishing in the first quarter of 2011, the Sustainable Lands Strategy brought together the tribes, agricultural interests and environmental interests to develop a framework under which policy changes, approaches to agricultural and fish viability gains, and funding strategies. In 2011, this same group will implement this framework in Phase II, specifically seeking to address code changes, membership of watershed groups and the County's Agriculture Advisory Board, and plans to improve agriculture and salmon viability in "reaches" within the Snohomish County portion of the Basin.

At this point, new policy direction or code interpretation has not directly affected project implementation. Individual project sponsors with a geographic scope larger than the Snohomish Basin have expressed that burdensome local requirements associated with agricultural concerns could be a deterrent for working in the basin. In this basin, the tension betwixt agriculture preservation and habitat restoration has delayed

some projects, such as Cherry Creek and SmithIsland. However, we hope these new agreements will positively impact projects' ability to advance through construction to completion.

Large Wood Placement and Boater Safety

In response to Ordinance 16581 that was adopted by the King County Council in 2009, King County led a stakeholder process to develop procedures for King County to follow to consider public safety in the design and placement of large wood in streams and rivers, evaluate strategies for wood placement to maximize ecological benefits and minimize public safety risks, and receive public input on large wood placement. The majority of public input on the administrative rule expressed concern that the rule would hinder salmon recovery efforts and disagreement with the policy-basis of the rule. We do not know at this point how the rule will impact the quality large wood placement projects, the rate of implementation, or the spatial distribution of wood placement.

An additional, emerging issue is the natural recruitment of large wood as a consequence of levee removal or other restoration projects. The underlying policy question is whether to consider wood that has been 'encouraged' to fall into the river or to accumulate in jams as tantamount to 'placed' wood for liability purposes. Some interest groups are urging local governments to take such a perspective, which would have the potential to undermine the commitment to restoration of natural processes.

<u>Further clarification on integration</u>

Since 2007, the Puget Sound Partnership (PSP) and local partners (tribes, cities, counties, project sponsors, watershed groups and MRCs) have been working to ensure that the elements of the Action Agenda will work synergistically to recover Puget Sound by 2020. In 2007, development of the Action Agenda started around the seven legislated Action Areas (from the PSP's authorizing legislation, RCW 90.71). With the completion of the first Action Agenda in 2008, the PSP has been working with local partners on the appropriate way in which to involve local partners in implementation of the Action Agenda – in terms of scale and involvement.

In 2009, PSP initiated a second look at the Action Areas with the above implementation involvement thoughts in mind. Local partners are working with PSP to develop Local Integrating Organizations within the Whidbey Action Area and hope to have it resolved in mid-2011. This process will need to address how local actions are implemented (across salmon recovery, stormwater, marine spatial planning, etc.), which have ramifications on local budgets as well as requests for funding.

Challenges associated with the scale of restoration needed

- Grant period: 18 months is not sufficient for projects that are as large and complex as we need to implement. Grant periods need to be scaled to the size and complexity of the project.
- Project sponsors are beginning to take on larger projects to advance priority actions identified in the Plan:
  - Technical support is increasingly available for earlier stages of project development, but support in understanding the analytical process needed to engage in process-level work, the skills needed
  - Project manager skill and abilities, specifically including construction management
  - Ability of non-profits to match grants
- We need assistance in dealing with institutional knowledge. In numerous areas around Puget Sound, staff are nearing retirement age, with no one to back them up. We are about to lose considerable knowledge and capability that will set us back a decade in our ecosystem recovery efforts. We must find ways to address this critical gap. One suggestion during the Action Agenda process was the funding of an innovative "Centers of Excellence" program, which would bring key, innovative knowledge to partners around the Sound.

Monitoring and maintenance needs

The Snohomish Basin Project working group has identified project-specific maintenance and monitoring as a critical step needed to ensure project success, but one for which it is difficult to obtain funding. Given the amount that is invested in restoration, and the critical role restoration plays in our recovery strategy, it is imperative that we fund them through all the phases in order to increase the rate of success, and to systematically evaluate our efforts so that we better understand if our projects are having the beneficial impacts that we expect them to have.

Appendix A: Subbasin Strategy Group Definitions

The 62 sub-basins in the Snohomish River basin plus the nearshore were organized into 12 strategy groups based on three characteristics:

1. Basin location. The five major classifications are nearshore, estuary, mainstem rivers, lowland tributaries, and headwaters. This classification system is useful in developing a restoration strategy because sub-basins within these groups play similar roles in supporting salmon life histories and have similar geomorphic characteristics and land use issues.

2. Condition of watershed processes. Watershed processes drive habitat conditions and, in turn, population performance. The root causes of habitat loss occur on a sub-basin scale. Addressing the root causes of habitat degradation is critical for a successful recovery strategy. Watershed process conditions analyzed and modeled include the current conditions of hydrology, sediment, and riparian processes.

3. Salmonid use. Sub-basins were grouped based on their current Chinook and bull trout use and potential use. Salmonid populations are not distributed uniformly across the landscape. Identifying areas of high and potential use helps to direct scarce resources to where they will have the greatest effect. Sub-basins that have high and moderate coho use are identified in each strategy group. Many sub-basins include focus reaches where recommended actions may be targeted.

Sub-Basin Strategy Group	Salmonid Use/Watershed Condition
Nearshore	High use/Moderately degraded
Estuary	High use/Degraded
Mainstem Primary Restoration	High use / Moderately degraded or degraded
Mainstem Secondary Restoration	Moderate use / Moderately degraded
Rural Streams - Primary Restoration	Moderate use / Moderately degraded
Rural Streams - Secondary Restoration	Low use / Moderately degraded
Urban Stream Restoration	Low use / Degraded
Headwaters - Primary Protection	High use / Intact
Headwaters - Secondary Restoration	Moderate use / Moderately degraded
Headwaters - Secondary Protection	Low use / Intact
Headwaters - Protection Above Natural Barriers	Resident population only / Intact
Headwaters - Protection Above Falls and Dams	Resident population only / Moderately degraded

Appendix B: Plan Tiering Criteria for Habitat Capital Actions

Tiering criteria was established *Plan*. Each individual project was tiered into 1 of 4 levels according to the priority action outlined for the sub-basin strategy group where the project is located.

Sub-basin Strategy Group	Tier	Action
Nearshore	1	Preservation
Nearshore	1	Restore shoreline condition
Nearshore	1	Restore sediment processes
Nearshore	1	Riparian enhancement
Nearshore	2	Protect and/or restore water quality
Nearshore	2	Control invasives
Estuary	1	Preservation
Estuary	1	Reconnect off-channel habitats
Estuary	1	Improve fish passage and tidal exchange on tide-gated streams
Estuary	1	Restore shoreline conditions
Estuary	1	Riparian enhancement
Estuary	2	Addressing water quality impacts
Estuary	2	Enhancing in-stream structures
Mainstem Primary	1	Preservation along focus reaches
Mainstem Primary	1	Preservation to support hydrologic and sediment processes
Mainstem Primary	1	Removal of human-made in-stream barriers along or adjacent to priority reaches
Mainstem Primary	1	Reconnection of off-channel habitats
Mainstem Primary	1	Restoration of shoreline conditions
Mainstem Primary	1	Restoration of hydrologic and sediment processes (for peak flow and base flow)
Mainstem Primary	1	Riparian enhancement
Mainstem Primary	2	Addressing water quality impacts
Mainstem Primary	2	Enhancing instream structures
Mainstem Primary	other	Fish passage on Coho streams

Sub-basin Strategy Group	Tier	Action
Mainstem Secondary	1	Preservation to support hydrologic and sediment processes
Mainstem Secondary	1	Restoration of hydrologic and sediment processes (for peak flow and base flow)
Mainstem Secondary	2	Preservation along focus reaches
Mainstem Secondary	2	Removing human-made in-stream barriers along or adjacent to priority reaches
Mainstem Secondary	2	Restoring shoreline conditions
Mainstem Secondary	2	Enhancing riparian areas
Mainstem Secondary	3	Addressing water quality impacts
Mainstem Secondary	3	Enhancing in-stream structures
Rural Streams Primary	1	Preservation to support hydrologic and sediment processes
Rural Streams Primary	1	Restoration of hydrologic and sediment processes (for peak flow and base flow)
Rural Streams Primary	2	Preservation along focus reaches
Rural Streams Primary	2	Removing human-made in-stream barriers along or adjacent to priority reaches
Rural Streams Primary	2	Restoring shoreline conditions
Rural Streams Primary	2	Riparian enhancement
Rural Streams Primary	3	Addressing water quality impacts
Rural Streams Primary	3	Enhancing in-stream structures
Rural Streams Primary	other	Replacing culverts on small streams
Rural Streams Secondary	1	Preservation to support hydrologic and sediment processes
Rural Streams Secondary	1	Restoration of hydrologic and sediment processes (for peak flow and base flow)
Rural Streams Secondary	3	Preservation (along focus reaches)
Rural Streams Secondary	3	Removing human-made instream barriers along or adjacent to priority reaches
Rural Streams Secondary	3	Restoring shoreline conditions
Rural Streams Secondary	3	Riparian enhancement
Rural Streams Secondary	3	Addressing water quality impacts
Urban Streams	3	Preservation (along focus reaches)

Sub-basin Strategy Group	Tier	Action
Urban Streams	3	Removing human-made in-stream barriers along or adjacent to priority reaches
Urban Streams	3	Restore shoreline conditions
Urban Streams	3	Riparian enhancement
Urban Streams	3	Addressing water quality impacts
Urban Streams	4	Instream structural enhancement
Headwaters Primary Protection	1	Preserving habitat along focus reaches
Headwaters Primary Protection	1	Preserving habitat to support hydrologic and sediment processes
Headwaters Primary Protection	1	Restore shoreline conditions
Headwaters Primary Protection	2	Enhance marine-derived nutrients (North Fork Skykomish only)
Headwaters Secondary Restoration	1	Preserve hydrologic and sediment processes
Headwaters Secondary Restoration	1	Restore hydrologic and sediment processes (for peak flow and base flow).
Headwaters Secondary Restoration	2	Preservation (along focus reaches)
Headwaters Secondary Restoration	2	Remove human-made instream barriers along or adjacent to priority reaches
Headwaters Secondary Restoration	2	Reconnect off-channel habitats
Headwaters Secondary Restoration	2	Restore shoreline conditions
Headwaters Secondary Restoration	2	Enhance riparian habitat
Headwaters Secondary Restoration	3	Address water quality impacts
Headwaters Secondary Restoration	3	Enhance marine-derived nutrients
Headwaters Secondary Restoration	3	Enhance in-stream structure
Headwaters Secondary Restoration	other	replace culverts on small streams
Headwaters Secondary Protection	1	preserve hydrologic and sediment processes
Headwaters Secondary Protection	3	Preservation along focus reaches
Headwaters Secondary Protection	3	Remove human-made in-stream barriers along or adjacent to priority reaches
Headwaters Secondary Protection	3	Reconnect off-channel habitats
Headwaters Secondary Protection	3	Restore shoreline conditions
Headwaters Secondary Protection	3	Address water quality impacts

Sub-basin Strategy Group	Tier	Action
Headwaters Secondary Protection	other	replace culverts on small streams
Headwaters Protection Above Natural Barriers	1	protect watershed processes that support habitat on federal forest lands
Headwaters - Restoration Above Falls and Dams	1	Preservation to support hydrologic and sediment processes
Headwaters - Restoration Above Falls and Dams	1	Restore hydrologic and sediment processes (for peak flow and base flow).
Headwaters - Restoration Above Falls and Dams	3	Riparian enhancement
Headwaters - Restoration Above Falls and Dams	3	Protect water quality
Headwaters - Restoration Above Falls and Dams	4	Remove human-made in-stream barriers
Headwaters - Restoration Above Falls and Dams	4	Restore shoreline conditions
Headwaters - Restoration Above Falls and Dams	5	Provide in-stream structural enhancement

Appendix C: 3-Year Work Plan Sequencing Scheme for Habitat Capital Actions

As part of the 3-year work plan update, we applied a simple categorization scheme to identify the highest priority actions needed given priorities established by the *Pla*n (2005), current progress towards 10-year benchmarks, and the considering sequencing issues and sponsor capacity. The intent of this process is not to judge the merit of each project in the work plan but rather to provide general guidance about the types of restoration action most needed and reflect the ability to advance these projects in light of project readiness. The naming convention of our categorization scheme underscores that all of the proposed actions are needed to reach salmon recovery. However, the need for some projects types, particularly given implementation progress to date, is critical.

1. **Tier assigned by the *Plan***
    a. Tier 1: +85 points
    b. Tier 2: +75 points
    c. Tier 3: +65 points
    d. Tier 4: +55 points

2. **Sponsor capacity**
    a. Sponsor currently has capacity to advance project: 0 points
    b. Sponsor currently lacks capacity to advance project : -10 points

3. **Habitat action addresses lagging 10-year benchmark** (see table 2, p. 12, percent 10-year benchmark column)
    a. < 20%: +10 points
        - mainstem primary off-channel
        - mainstem primary edge
        - rural primary off-channel
        - rural secondary off-channel
        - protection evaluation

    b. 21 – 39%: +5 points
        - nearshore beach
        - estuary marsh

- rural primary riparian
- rural secondary riparian
- urban riparian

c. > 40%: 0 points

4. **Logical Sequencing Considerations**
   a. Logical sequencing issue: -10 points
      Examples:
      - downstream fish blockage
      - project does not address primary limiting factor
      - implementation of project may impede more substantial restoration in the future

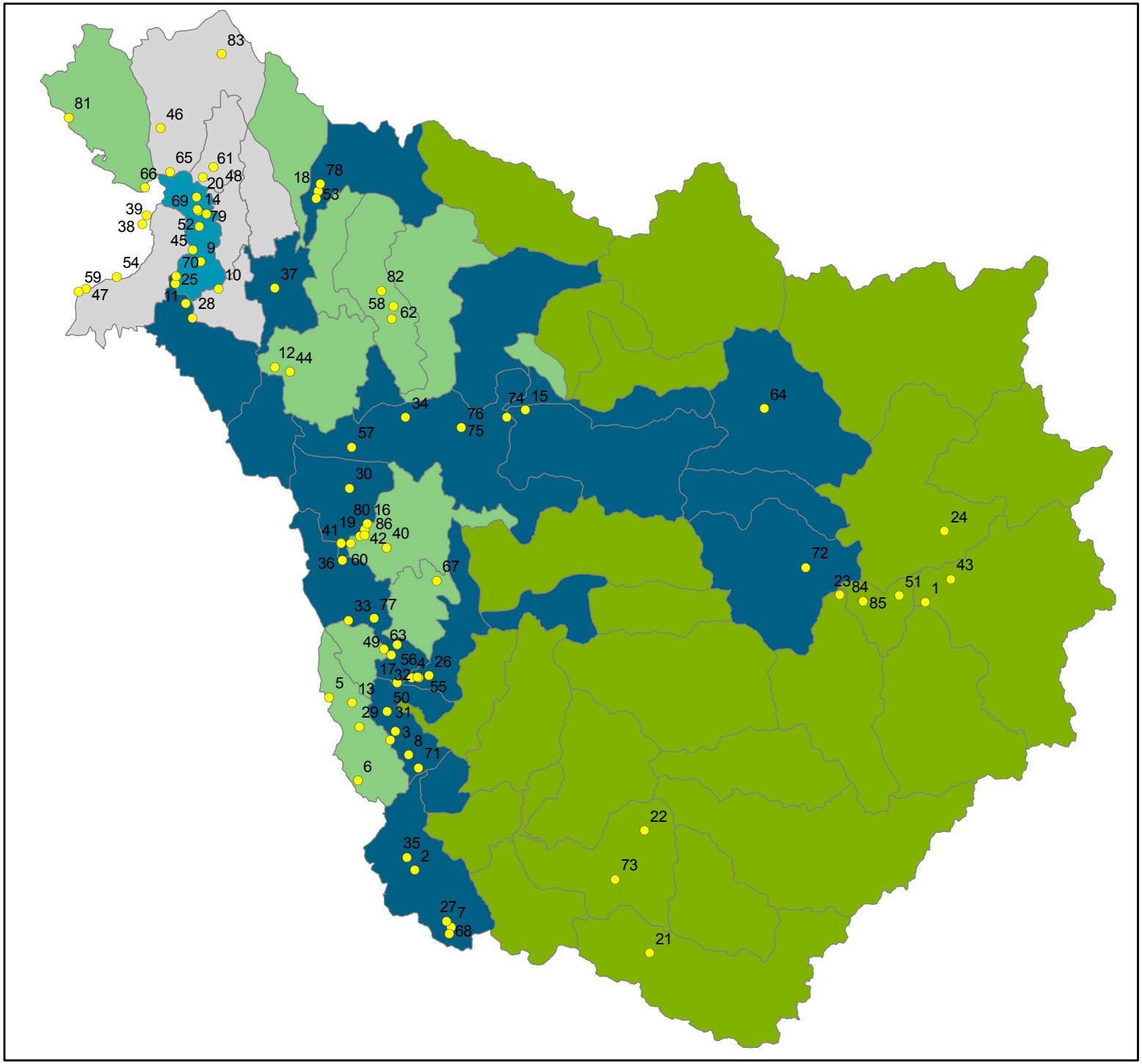
   b. Project informed by larger scale or process assessment: +5 points

Points were summed for each project, and scores ranged from 55-100. Project scores were then binned as follows:

- 90 – 100 points: *Most pressing need*
- 70 – 89 points: *Pressing need*
- < 70 points: *Need*

Appendix D: Project and Program List Color Coding

	Progress made in 2009
	Project added in 2010
	Construction Completed



Snohomish Basin 3-Year Work Plan Project Map

Legend

Sub-basin Strategy Group

- Estuary
- Headwaters
- Mainstem
- Rural
- Urban

Project Location

Snohomish County

PUBLIC WORKS
SURFACE WATER MANAGEMENT
(425) 388-3464

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Map ID	HWS ID	Project Name
1	07-HSR-019	South Fork Skykomish Acquisitions
2	07-MPR-072	Raging River Upper Preston Reach Acquisitions
3	07-RSR-049	Patterson Creek Protection on Stevlingson Property
4	07-MPR-312	Tolt River Habitat Acquisitions (City of Carnation)
5	07-RSR-050	Patterson Creek State DNR Land Acquisition
6	07-RSR-046	Grand Ridge Acquisition
7	07-MPR-217	Upper Raging River Protection and Restoration
8	07-MPR-305	Snoqualmie Fall City Reach Reconnection
9	07-ER-033	Ebey Island Feasibility, Acquisition, and Restoration
10	07-ER-035	Diking District 6 Inter-tidal Restoration Project
11	07-MPR-338	Everett Marshland Tidal Wetland Restoration
12	07-MPR-328	Investigation of Low Dissolved Oxygen in the Cherry Creek Floodplain
13	07-BW-003	Fish Passage Barrier Prioritization - (Phase I)
14	07-ER-102	Smith Island Estuary Restoration - Permitting and Design
15	07-MPR-307	Skykomish Braided Reach Restoration Phase II
16	07-MPR-326	CC Phase II. Cherry Creek Floodplain Restoration
17	07-MPR-311	Lower Tolt River Floodplain Reconnection
18	07-MPR-304	Pilchuck River Riparian Restoration and Fish Habitat Enhancement
19	07-MPR-308	Snoqualmie Riparian Restoration with Salmon-Safe Farms
20	07-ER-013	Blue Heron Slough Habitat Conservation Bank
21	07-HRA-008	South Fork Snoqualmie Road Decommissioning
22	07-HRA-009	Bessemer Mtn Road Decommissioning
23	07-HSP-004	Miller River Restoration
24	07-HSR-020	Harlan Creek Road Obliteration
25	07-ER-038	Bigelow Creek Rechannelization and Enhancement and the South Wetland Complex
26	07-MPR-108	Tolt River Focus Area 5 Protection
27	07-MPR-119	Raging River Kerriston Reach Restoration
28	07-MPR-176	Snohomish Estuary Edge Enhancement Phase II
29	07-RSR-048	Storybook Creek Stream Enhancement
30	07-MPR-183	People's Creek Riparian
31	07-MPR-184	Snoqualmie River Nature's Last Stand riparian restoration
32	07-MPR-190	Tolt River Riparian Restoration & Invasive Removal (RM 1.7-2.0)
33	07-MPR-207	Oxbow Farm wetland enhancement
34	07-MPR-204	Fern Bluff Levee Enhancement.
35	07-MPR-216	Raging River Knotweed Control and Revegetation
36	07-MPR-220	Herb Co. Farm Riparian Restoration
37	07-MSR-016	Kuhlman Creek Culvert Replacement
38	07-NR-003	Jetty Island South Extension Phase II
39	07-NR-005	Renourish Existing Jetty Island Berm
40	07-RPR-016	NF Cherry Creek Restoration
41	07-RPR-018	Cherry Valley Dairy Stream Enhancement
42	07-MPR-315	Cherry Valley Stream Restoration
43	07-HSR-029	Alpine Baldy Road Decommissioning - U.S. Forest Service Roads 6066 & 6067
44	07-MPR-314	French Creek Basin Riparian Enhancement
45	07-ER-042	Assess and improve mainstem channel habitat connectivity
46	07-USR-039	Coho Creek Restoration
47	07-NR-011	North Mukilteo Nearshore Restoration and Creosote Removal
48	07-USR-047	Jones Creek Restoration
49	07-MPR-321	McElhoe-Person Levee Setback
50	07-MPR-322	Snoqualmie Riparian Restoration
51	07-HSR-015	Anthracite Creek Enhancement and Awareness
52	07-ER-037	Smith Island Estuary Restoration - Construction
53	07-MPR-300	Pilchuck River Assessment and Project Design
54	07-NR-008	Nearshore Sediment Nourishment Feasibility Study Aong Railroad
55	07-MPR-301	Tolt River Riparian Restoration & Invasive Removal (RM 3.7-4.2 & 4.95-5)
56	07-MPR-302	Stillwater Floodplain Restoration - Construction
57	07-MPR-318	Riley Slough Culvert Replacement Project
58	07-RPR-022	West Fork and Lower Woods Creek Restoration Partnership
59	07-NR-009	Light House Park Phase 2 Beach Restoration
60	07-MPR-325	Coe Clemmons Creek Restoration Phase 2
61	07-ER-036	Qwuloolt Estuary Restoration Project
62	07-RPR-025	Woods Creek Habitat Conditions Survey
63	07-RSR-045	Riparian Restoration on farmland - Harris Creek
64	07-MSR-019	Trout Creek Road Erosion Control
65	07-ER-039	Quilceda Estuary Restoration

66	07-NR-014	Priest Point Pocket Estuary Restoration
67	07-RSR-051	Harris Creek Barrier Removal and Off-Channel Habitat Restoration
68	07-MPR-324	Raging River Tributary Fish Barrier Removal and Stream Habitat Restoration
69	07-ER-040	Steamboat Slough Tidal Marsh Enhancement
70	07-ER-053	Everett Riverfront North Wetland Complex and adjacent proposed Public Park
71	07-MPR-365	Fall City Park Riparian Restoraiton Phase 2
72	07-MPR-366	South Fork Skykomish Knotweed Control and Riparian Restoration
73	07-HRA-030	Upper Snoqualmie River Knotweed Control and Riparian Restoration
74	07-MPR-214	Upper Tychman Slough Restoration
75	07-MPR-370	Lower Skykomish Restoration Phase I
76	07-MPR-373	Lower Skykomish Restoration Phase II
77	Needs ID	Weiss Creek Barrier Removal
78	07-MPR-372	Middle Pilchuck River Habitat Enhancement Project
79	07-ER-058	Smith Island/Union Slough Estuarine Habitat Restoration
80	07-MPR-371	Snoqualmie Mainstem and Cherry Creek bank restoration
81	07-NR-012	Tulalip Nearshore Acquisition and Restoration
82	07-RPR-030	Sorgenfrei Fish Passage Project
83	07-USR-059	Olaf Strad Relocation and Restoration
84	07-MPR-363	Maloney Creek Restoration Plan
85	07-MPR-364	Maloney Creek Restoration I
86	07-RPR-031	Upper Waterwheel Restoration (Phase I-Design)

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-BW-003	Non-Capital Projects	Multiple SBSGs	Fish Passage Barrier Prioritization - (Phase II)	Expand the number of basins represented on the WRIA-07 BPMS web based mapping system (a web system designed to make prioritizing anthropogenic barriers in WRIA 7 easier and faster for federal, state, and tribal agencies and for local biologist, municipalities, citizen groups and private land owners). Information which may be missing, unclear, or outdated on known culverts crossing waters supporting anadromous fish species in WRIA 7 will be updated as needed and as funding allows.	Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage, Biological Processes	Pressing need	Rivers/Streams/Shoreline	Activity Type - Fish Passage: Rocked ford - road stream crossing (10 Each)	10 culverts replaced	Coho	Feasibility Pending	Feasibility	$37,834					3/31/2012	Wild Fish Conservancy	$104,058	$104,058	SRFB, KC, SC, NFWF
07-BW-006	Non-Capital Projects	Multiple SBSGs	Skykomish Forks Restoration Plan	Design to at least 30% for multiple instream and riparian restoration projects in North and South Fork Skykomish Rivers and selected tributaries (e.g., Miller River).	Degraded habitat - structure and complexity, Degraded habitat - riparian areas, LWD recruitment	Most pressing need	Rivers/Streams/Shoreline	Activity Type - Feasibility (1 plan)	1 plan	Chinook	Feasibility Pending	Feasibility							10/1/2011	US Forest Service	$350,000	$350,000	Natural Resources Damage Assessment
07-BW-007	Non-Capital Projects	Non-capital	WRIA 07 Water Type and Assessment Project	Through visual and electrofishing surveys, Wild Fish Conservancy (WFC) will determine and correct water type classifications in ~45 watersheds in prioritized portions of WRIA 07 using state-sanctioned protocols.		Most pressing need				Chinook								12/31/2014		$109,290		
07-ER-058	Restoration Projects	Estuary Restoration	Smith Island/Union Slough Estuarine Habitat Restoration	The joint City of Everett and Corps of Engineers project will restore riverine and tidal influence to 93 acres of intertidal riverine habitat. The project is divided into 35 acres as part of the cost-shared Federal Section 1135 project, and 58 acres as a mitigation project of the City of Everett. The project is designed to restore intertidal salmon rearing habitat that historically existed along Union Slough. The construction of the setback dike was completed in 2004 and the three 180 ft breach openings of the existing levee were completed in Fall 2007. Since then two years of monitoring for the City's mitigation site have been completed. There have been a number of issues with the drainage of the site between tide cycles and the bridges that were constructed at the dike breach openings. In 2010 the project team is in the process of design and permitting to remove the bridges and relocate the pedestrian trail. Construction is anticipated during the fish window of 2011.	Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (93 Acres)	3 bridges removed 1 improved drainage 1 relocated pedestrian access	Chinook	Design Completed, Monitoring	Design, construction	$1,500,000					12/31/2011	City of Everett	$1,500,000		
07-ER-013	Restoration Projects	Estuary Restoration	Blue Heron Slough Habitat Conservation Bank	Reconnect and enhance 320 acres of off-channel habitat, 13,500 ft of edge habitat restoration through hydrologic and sediment process restorationand riparian enhancement. The project requires a short cross dike of 4,232 ft.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Non-Habitat Limiting Factors, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (350 Acres), Activity Type - Estuarine & Nearshore: Channel Modification/Creation (13500 Linear Feet)	350 acres 13,500 feet channel modification	Chinook	Design Completed, Permitting Completed	Construction	$2,700,000	Continue planting; invasives control; monitoring	0			12/31/2011	Port of Everett, Wildlands, Inc.	$2,700,000	$2,700,000	Mitigation
07-ER-033	Acquisition/Restoration (Combination)	Estuary Restoration and Acquisition	Ebey Island Feasibility, Acquisition, and Restoration	Study how ecological functions can best be restored on Ebey Island on the 1237-acres south of State Route 2 presently owned by WDFW, with possible additional acquisitions.	Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Estuary (River Delta)	Feasibility study and conceptual design evaluation	1 feasibility plan	Chinook	Feasibility Pending							12/31/2012	Washington Department of Fish and Wildlife	$10,000,000		SRFB, ESRP
07-ER-035	Acquisition/Restoration (Combination)	Estuary Restoration	Diking District 6 Inter-tidal Restoration Project	Construct setback dike and breach current dike to restore tidal influence to at least 230 acres of wetland, with additional non-tidal wetland enhancement behind the setback dike.	Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Snohomish Basin Estuary: Tidal Marsh: Restoration of tidal marsh (LC) (230 Acres)	230 acres	Chinook	Feasibility Completed	Design	$2,500,000	Construct setback dike, fill ditches	$7,500,000	Breach dike	$2,500,000	12/31/2015	City of Everett	$12,500,000		ACOE, National Coastal Wetlands, City of Everett, Snohomish County
07-ER-036	Restoration Projects	Estuary Restoration	Qwuloolt Estuary Restoration Project	Broad-based interagency and community effort to restore 350 acres of critical estuary and stream habitats within the Snohomish River estuary and improve salmon access to 16 miles of stream channel.	Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Snohomish Basin Estuary: Tidal Marsh: Restoration of tidal marsh (LC) (350 Acres)	350 acres	Chinook	Construction	Construction	$7,600,000	Construction/Monitoring	$1,800,000	Monitoring/maintenance	$300,000	12/31/2012	Tulalip Tribes	$16,700,000 (with acquisition)	$16,700,000	ACOE, NOAA, ESRP, ARRA, Tulalip Tribes, SRFB, NFWF, NRDA
07-ER-037	Restoration Projects	Estuary Restoration	Smith Island Estuary Restoration - Construction	Restore over 300 acres of tidal marsh through setback dike construction, breaches of existing dike , filling/blocking of existing drainage ditch network, enhancement/extension of existing tidal channels, large woody debris and log-jam complexes, edge habitat complexity features, and native revegetation.	Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Snohomish Basin Estuary: Tidal Marsh: Restoration of tidal marsh (LC) (437 Acres)	437 acres	Chinook	Design, permitting	Design, permitting	$478,921	Construct setback dike, fill ditches	$5,000,000	Construct setback dike, fill ditches, construct other features	$5,000,000	1/1/2014	Snohomish County of	$10,000,000	$7,505,000	ESRP, SRFB, NCWC, Snohomish County, mitigation
07-ER-038	Restoration Projects	Estuary Restoration	Bigelow Creek Rechannelization and Enhancement and the South Wetland Complex	Restore over 800 feet of Bigelow Creek into a more natural meandering channel, with 6.9 acres of floodplain/wetland area. See also Project Id 07-ER-* for restoring tidal connection at the Riverfront south wetland complexes.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Estuary (River Delta)	Activity Type - Channel floodplain: Hydrological Manipulation (6.9 Acres), Activity Type - Channel modification (800 feet), Activity Type - Culvert removal (2 each)	6.9 acres 800 feet 2 culverts	Chinook	Feasibility Pending, Design Completed, Land Acquisition Completed	Construction	$435,000	Monitoring/maintenance				12/31/2012	City of Everett, Tulalip Tribes	$435,000	$435,000	Pacific Salmon Commission
07-ER-039	Restoration Projects	Estuary Restoration	Quilceda Estuary Restoration	Restoration of historic estuary to approximately 5-10 acres of tidal marsh along Quilceda Creek, Snohomish River Delta Estuary.	Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (10 Acres)	10 acres	Chinook	Conceptual Design	Conceptual Design	$250,000	Design	$500,000			12/31/2015	Tulalip Tribes	$250,000	$250,000	PSNERP
07-ER-040	Restoration Projects	Estuary Restoration	Steamboat Slough Tidal Marsh Enhancement	This project will evaluate opportunities to improve mainstem habitat and habitat connectivity through an analysis of physical processes at work, particularly at channel junctions. Opportunities will be identified and ranked, and three (at a minimum) will be designed to a level to support permitting, setting the stage for implementation. Hydrodynamic modeling will be conducted to inform project alternatives analysis and design.	Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Improved fish access and floodplain connectivity (hydraulic performance)	Feasibility	Chinook	Feasibility pending	Feasibility	$219,500	Design	$500,000			12/31/2012	Tulalip Tribes	$719,500	$219,500	PSNERP
07-ER-042	Restoration Projects	Estuary Restoration	Assess and improve mainstem channel habitat connectivity	Assess and improve connectivity to tidal marsh habitats located along mainstem and distributary sloughs.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Instream	Improved fish access and floodplain connectivity (hydraulic performance)	Feasibility	Chinook	Feasibility pending	Feasibility	$219,500	Design	$500,000			12/31/2012	Tulalip Tribes	$719,500	$219,500	PSNERP

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-ER-053	Restoration Projects	Estuary Restoration	Everett Riverfront North Wetland Complex and adjacent proposed Public Park	Restore up to 21.6 acres of tidal marsh habitat in the south wetland complexes, as part of the Everett Riverfront Development.	Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (21.60 Acres)	Feasibility	Chinook	Feasibility Completed, Design Completed, Land Acquisition Completed	Feasibility	$200,000	Design				12/31/2015	City of Everett	$2,004,048	$200,000	PSNERP #1127
07-ER-102	Restoration Projects	Estuary Restoration	Smith Island Estuary Restoration - Permitting and Design	The goal of this project phase is completion of final design and permitting to facilitate project implementation. This Project will ulimately recover and restore between 313 to 414-acres of tidal marsh, a significant percentage of the 1,200-acre target in the Snohomish River Basin Salmon Conservation Plan (June, 2005), thus helping address the loss of approximately 85 percent of Snohomish Basin estuarine wetland, a key factor contributing to the decline of Chinook salmon (Haas et al., 2001).	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Estuary (River Delta)	Design Permits	Feasibility	Chinook	Feasibility Completed	Design	$759,800					5/31/2011	Snohomish County of	$759,800	$759,800	Snohomish County, SRFB
07-HRA-008	Restoration Projects	Headwaters Above Falls and Dam	South Fork Snoqualmie Road Decommissioning	Reduce erosion potential and road density in South Fork Snoqualmie by decommissioning 24 miles of Forest Service roads and treating another 24 miles before placing them into storage for potential future use. Nineteen of these miles would be converted to trail.	Degraded Habitat-Stream Substrate	Pressing need	Upland	Activity Type - Upland Habitat: Road abandonment and obliteration (48 Miles)	48 miles	Rainbow, Cutthroat	Feasibility Pending, Design Completed, Construction Completed	Construction	$1,194,000					10/15/2014	Mountains to Sound Greenway Trust, US Forest Service	$1,194,000	$1,194,000	USFS, ARRA, Mountains to Sound Greenway Trust
07-HRA-009	Restoration Projects	Headwaters Above Falls and Dam	Bessemer Mtn Road Decommissioning	Decommission 9.5 miles, and convert 5.6 miles of roads to trails on Bessemer Mtn (North Fork Snoqualmie). The work would mostly be pulling culverts with some embankment pullback, ripping some of the surface and partially recontouring some of it.	Degraded Habitat-Stream Substrate	Pressing need	Upland	Activity Type - Upland Habitat: Road abandonment and obliteration (15 Miles)	15 miles	Rainbow, Cutthroat	Design Completed, Permitting Completed	Construction	$500,000					9/30/2011	WA Dept. of Natural Resources , US Forest Service	$600,000	$600,000	USFS, ARRA
07-HSR-015	Restoration Projects	Headwaters Secondary Restoration	Anthracite Creek Enhancement and Awareness	Remove culvert and enhance streambank on private land along Anthracite Creek. Enhancement includes removal of road fill material, bank shaping, installation of large woody debris and other enhancement structures, and volunteer riparian planting in 0.1 acre.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Substrate	Need	Riparian, Instream	Activity Type - Fish Passage: Culvert installed (1 Each), Activity Type - Riparian Habitat: Planting (0.10 Acres)	2 Culverts 0.1 acres	Steelhead	Design Completed	Construction	$32,800					12/15/2011	Stilly Snohomish Fisheries Enhancement Task Force	$32,800	$32,800	KCD, homeowners
07-HRA-030	Restoration Projects	Headwaters Above Falls and Dam	Upper Snoqualmie River Knotweed Control and Riparian Restoration	Treat knotweed infested sites and replant appropriate areas along up to 16 river miles on major tributaries in the Upper Snoqualmie Basin. The project will involve 6 river miles of initial treatment and up to 16 river miles of maintenance retreatment along with 6,000 linear feet per year of riparian restoration.	Degraded Habitat-Riparian Areas and LWD Recruitment	Need	Riparian	Activity Type - Riparian habitat (1 acre)	1 acre	Rainbow, Cutthroat	Feasibility Pending	Feasibility						12/31/2013	King County DNR & Parks	$460,000		King County
07-HSP-004	Restoration Projects	Headwaters Secondary Protection	Miller River Restoration	King County will conduct a feasibility analysis and work with local partners to explore options to reestablish river flow patterns, meanders, and floodplain channels that have been altered or obstructed by the transportation network that bisects the Miller River alluvial fan.	Degraded Habitat - Channel structure and complexity, Degraded Habitat - Floodplain connectivity and function	Need	Instream	Activity Type - Instream Habitat: Channel reconfiguration and connectivity (5000 Feet), Snohomish River Basin Other Sub-basins Restoration: Restored Off-channel Habitat: Summer off- channel habitat restoration (LC) (2 Acres), Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Riparian planting (LC) (7 Acres)	5,000 feet instream 2 acres off-channel 7 acres riparian	Bull Trout	Feasibility Pending	Feasibility	$280,000					12/31/2013	US Forest Service, King County DNRP	$280,000		King County
07-HSR-019	Acquisition Projects	Acquisition - Headwaters Secondary Restoration	South Fork Skykomish Acquisitions	Miller, Beckler, Foss, Tye Reach acquisitions	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Pressing need	Rivers/Streams/Shoreline	Snohomish River Basin Mainstem: Restored Edge: Acquisition in the Mainstem Sub-basin Strategy Groups (LC) (35 Acres), Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Acquisition (LC) (35 Acres)	70 acres acquired	Chinook	Conceptual							12/31/2011	Cascade Land Conservancy, King County DNRP	$500,000		
07-HSR-020	Restoration Projects	Headwaters Secondary Restoration	Harlan Creek Road Obliteration	Obliteration of up to 10 miles of logging roads on steep, unstable slopes adjacent to Harlan Creek, a salmon-bearing tributary to the Beckler River. Road densities in these two sections acquired by the Forest Service are very high, 8 miles per square mile each, and road-related sediments are entering Harlan Creek, degrading spawning and rearing habitats.	Degraded Habitat-Stream Substrate	Pressing need	Upland	Activity Type - Upland Habitat: Road abandonment and obliteration (10 Miles)	10 miles road decomissioned	Chinook, Coho, Bull Trout, Steelhead	Feasibility Completed	Design/construction	$491,000	Construction	$109,000			10/15/2013	Mt. Baker-Snoqualmie National Forest	$600,000	$491,000	USFS, Natural Resources Damage Assessment
07-HSR-029	Restoration Projects	Headwaters Secondary Restoration	Alpine Baldy Road Decommissioning - U.S. Forest Service Roads 6066 & 6067	This project would decommission the following Forest Service road segments: the upper 1.4 miles of FS Rd 6066; the entire 4.6 miles of FS Rd 6067; an additional 1.0 mile of spur roads on FS Rd 6067; and the last 2.0 miles of FS Rd 6570 (aka the San Juan Hill road).	Degraded Habitat-Stream Substrate	Pressing need	Upland	Activity Type - Upland Habitat: Road abandonment and obliteration (9 Miles)	9 miles road decomissioned	Chinook, Coho, Bull Trout, Steelhead	Feasibility Pending	Design	$100,000	Construction	$580,000			10/28/2013	US Forest Service	$680,000	$680,000	USFS, Natural Resources Damage Assessment
07-MPR-072	Acquisition Projects	Acquisition - Mainstem-primary Restoration	Raging River Upper Preston Reach Acquisitions	Work with willing landowners to protect 24 acres of stream corridors	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Rivers/Streams/Shoreline	Snohomish River Basin Mainstem: Restored Edge: Acquisition in the Mainstem Sub-basin Strategy Groups (LC) (24 Acres)	24 acres acquired	Chinook	Conceptual	Acquisition	$500,000					12/31/2011	King County DNRP	$500,000		
07-MPR-108	Restoration Projects	Acquisition - Mainstem-primary Restoration	Tolt River Focus Area 5 Protection	Preservation (proximate to aquatic habitat): 30 acres; work with willing landowners to protect the stream corridor	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases : Wetland areas protected (30 Acres)	30 acres acquired	Chinook	Feasibility Pending	Acquisition	$250,000	Acquisition	$250,000			12/31/2015	King County DNRP	$500,000		
07-MPR-119	Restoration Projects	Mainstem-primary Restoration	Raging River Kerriston Reach Restoration	Placing large woody debris in the channel and floodplain as well as 15 acres of riparian enhancement.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (15 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (15 Acres)	30 acres riparian	Steelhead	Feasibility Pending	Construction	$100,000	Construction	$100,000			12/31/2011	King County DNRP	$200,000	$100,000	King County
07-MPR-176	Restoration Projects	Mainstem-primary Restoration	Snohomish Estuary Edge Enhancement Phase II	Restore 1 acre tidal marsh and install another 20 log jams.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Pressing need	Riparian	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (1 Acres)	1 acre	Chinook	Feasibility Pending	Monitoring	$0	Design and permitting	$250,000	Construction		12/31/2012	Snohomish County of	$250,000		

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-MPR-183	Restoration Projects	Mainstem-primary Restoration	People's Creek Riparian	The project will restore a 1,600 foot section of Peoples Creek at Hollandia Farm, a tributary to the Snoqualmie River. As part of this project, the farm will be evaluated to become 'Salmon-Safe' certified, a labeling program that recognizes farmers for their commitment to fish-friendly farming practices and salmon habitat restoration.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Fish Passage	Pressing need	Riparian	Activity Type - Fish Passage: Bridge installed (2 Each), Activity Type - Instream Habitat: Channel reconfiguration and connectivity (0.20 Feet), Activity Type - Riparian Habitat: Fencing (0.20 Feet), Activity Type - Riparian Habitat: Plant removal/ control (1 Acres), Activity Type - Riparian Habitat: Planting (1 Acres)	2 bridges 200 feet channel 200 feet fencing 1 acre riparian	Coho	Design Completed	Construction	$215,000					12/31/2012	Snohomish Conservation District, Stewardship Partners	$215,000		
07-MPR-184	Restoration Projects	Mainstem-primary Restoration	Snoqualmie River Nature's Last Stand riparian restoration	Mainstem Primary - Snoqualmie River Nature's Last Stand riparian restoration	Degraded Habitat-Riparian Areas and LWD Recruitment Degraded Habitat - Water Quality	Pressing need	Riparian	Activity Type - Riparian habitat (1 acre)	1 acre	Chinook	Design Completed	Construction	$25,000					12/31/2007	Stewardship Partners	$25,000		
07-MPR-190	Restoration Projects	Mainstem-primary Restoration	Tolt River Riparian Restoration & Invasive Removal (RM 1.7-2.0)	Mainstem Primary - Remove nonnative species of Buddleia (common name butterfly bush), Himalayan blackberries, Scotch broom and purple loosestrife from the riparian area. These areas will then be replanted with native conifers, hardwoods, and shrubs that are currently represented on portions of the property. Within the 5 acres work area, all nonnative vegetation will be treated and 2 acres will be planted with native vegetation. Because native vegetation is well established in patches within the work area, revegetation is proposed for approximately 2 of the 5 acres. Community outreach will occur to neighbors and with local schools in addition to volunter planting events. All salmonid and trout species will benefit from restored riparian habitat, including Chinook and coho salmon and steelhead trout. RM 1.7-2.0	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Riparian planting (LC) (2 Acres)	2 acres riparian	Chinook	Design Completed						9/30/2010	Seattle City Light	$61,521		
07-MPR-207	Restoration Projects	Mainstem-primary Restoration	Oxbow Farm wetland enhancement	wetland enhancement on 1-2 acres	Degraded Habitat-Water Quality	Pressing need	Wetland			Chum, Coho, Steelhead								12/31/2007	Stewardship Partners	$150,000		
07-MPR-214	Restoration Projects	Mainstem-primary Restoration	Upper Tychman Slough Restoration	The Task Force proposes to implement restoration activities on the upper reaches of Tychman Slough. Conceptual designs have been prepared for priority project elements including instream and floodplain wood placement, channel excavation and enhancement, weed control, and riparian planting. Restoration activities will focus on improving habitat conditions for native Pacific salmon and trout.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Riparian, Instream	Activity Type - Estuarine & Nearshore: Large Wood Placement (80 Each), Activity Type - Upland Habitat: Invasives/ weed control (7 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (4.50 Acres)	80 LWD 7 acres riparian	Chinook	Design completed	Construction	$187,148	Construction	$187,148			12/31/2013	Stilly-Snohomish Fisheries Enhancement Task Force	$374,296	$374,296	Task Force, NRDA, SRFB
07-MPR-204	Restoration Projects	Mainstem-primary Restoration	Fern Bluff Levee Enhancement.	Acquisition; increase flow in off channel slough behind levee; enhance tributary	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Flow	Pressing need	Instream, Wetland, Rivers/Streams/Shoreline	Design	Design	Chinook	Feasibility Pending	Acquisition	$300,000	Design and permitting	$200,000			12/31/2012	Washington Department of Fish and Wildlife	$500,000		
07-MPR-216	Restoration Projects	Mainstem-primary Restoration	Raging River Knotweed Control and Revegetation	Treat approx. 30 acres knotweed infested sites and replant appropriate areas.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Riparian	Activity Type - Riparian Habitat: Plant removal/ control (30 Acres)	30 acres riparian	Chinook	Feasibility Pending	Invasives control	$40,000	Monitoring/maintenance	$20,000			12/31/2012	Mountains to Sound Greenway Trust	$100,000		
07-MPR-217	Acquisition/Restoration (Combination)	Acquisition - Mainstem-primary Restoration	Upper Raging River Protection and Restoration	To protect and restore 7000 acres of instream, riparian, and upland habitat	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Fish Passage	Pressing need	Instream	Activity Types - Acquisition/Easements/Leases : Wetland areas protected (7000 Acres)	7,000 acres	Chinook	Feasibility Pending	Acquisition	$1,500,000	Design	$50,000	Construction	$350,000	12/31/2012	Cascade Land Conservancy, WA Dept. of Natural Resources , Mountains to Sound Greenway Trust, King County DNRP	$1,900,000		
07-MPR-220	Restoration Projects	Mainstem-primary Restoration	Herb Co. Farm Riparian Restoration	To improve .5 ac riparian habitat	Degraded Habitat - Riparian	Pressing need	Riparian	Activity Type - Riparian Habitat (0.5 Acres)	0.5 acre riparian	Chinook	Design Completed	Construction	$18,000					12/31/2007	Stewardship Partners	$18,000		
07-MPR-300	Restoration Projects	Mainstem-primary Restoration	Pilchuck River Assessment and Project Design	Conduct an assessment of the geomorphic and habitat conditions on 8 miles of the Pilchuck River.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate	Most pressing need	Instream, Rivers/Streams/Shoreline	Feasibility study and conceptual design evaluation	Feasibility	Chinook	Feasibility Pending	Feasibility	$316,425					12/31/2012	Snohomish County of	$316,425	$316,425	SRFB, Snohomish County
07-MPR-301	Restoration Projects	Mainstem-primary Restoration	Tolt River Riparian Restoration & Invasive Removal (RM 3.7-4.2 & 4.95-5)	Seattle City Light (SCL) in partnership with the Stilly Snohomish Fisheries Enhancement Task Force (TF) will control nonnative species including Himalayan blackberries, then replant 3 acres of riparian habitat on the Tolt River from RM3.7-4.2 and RM4.95-5.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Riparian planting (LC) (3 Acres)	3 acres riparian	Chinook	Design Completed							12/31/2012	Seattle City Light	$72,185		
07-MPR-302	Restoration Projects	Mainstem-primary Restoration	Stillwater Floodplain Restoration - Construction	Project actions include the removal of bank armament, the reconstruction of shoreline edge habitat with LWD installations and plantings, and potentially the construction of 1 engineered log jam.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow	Most pressing need	Riparian, Instream	Snohomish River Basin Mainstem: Restored Edge: Removal of armoring/levee within 5 meters of the ordinary high water mark (LC) (3500 Feet)	3,500 feet levee removal	Chinook	Feasibility Pending	Construction	$650,000		$0		$0	12/31/2013	Wild Fish Conservancy	$650,000	$685,814	SRFB, PSAR, KCD

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-MPR-304	Restoration Projects	Mainstem-primary Restoration	Pilchuck River Riparian Restoration and Fish Habitat Enhancement	The Stilly-Snohomish Fisheries Enhancement Task Force will control invasives and replant 6.5 acres of riparian area, install 4,200 feet of exclusionary fencing and improve edge habitat along 1,000 feet of the Pilchuck River.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors	Most pressing need	Riparian, Instream	Activity Type - Instream Habitat (1,000 feet), Activity Type - Riparian Habitat (6.5 acres), Exclusionary Fencing (4,200 feet)	1,000 feet instream 6.5 acres riparian 4,200 feet fencing	Chinook	Feasibility Completed, Permitting Completed							12/31/2013	Stilly Snohomish Fisheries Enhancement Task Force	$240,000	$249,174	Task Force, SRFB
07-MPR-305	Acquisition/Restoration (Combination)	Acquisition - Mainstem-primary Restoration	Snoqualmie Fall City Reach Reconnection	5280 ft. edge, 5 ac. Off-channel, 12 ac. Riparian	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Biological Processes	Most pressing need	Rivers/Streams/Shoreline	Activity Type - Estuarine & Nearshore: Channel Modification/Creation (5280 Linear Feet), Activity Type - Estuarine & Nearshore: Hydrological Manipulation (5 Acres), Activity Type - Riparian Habitat: Planting (12 Acres), Snohomish River Basin Mainstem: Restored Edge: Removal of armoring/levee within 5 meters of the ordinary high water mark (LC) (5280 Feet), Snohomish River Basin Mainstem: Restored Off-channel Habitat: Winter/Spring off-channel habitat restoration (LC) (5 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (12 Acres)	5,280 feet channel 5 acres hydrologic mod 12 acres riparian	Chinook	Feasibility Pending	Design	$100,000	Construction	$1,500,000	Construction	$1,500,000	12/31/2012	King County DNRP	$4,000,000		
07-MPR-307	Restoration Projects	Mainstem-primary Restoration	Skykomish Braided Reach Restoration Phase II	Design and implement a suite of projects, (e.g., wood complexes and flood fences) to increase edge habitat on the mainstem, reconnect side channels, improve riparian conditions and create pools. The selection and design of these projects will be guided by the SRFB funded Braided Reach Restoration Assessment, which identified strategic points in the reach that would serve to reduce intervention impacts while maximizing results.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Instream	Activity Type - Instream Habitat: Channel structure - Off-channel habitat (350 Feet), Activity Type - Instream Habitat: Channel structure - Wood structure / log jam (7 Feet)	350 Feet Off-channel 7 log jams	Chinook	Design completed	Construction	$350,000					12/31/2012	Snohomish County of	$350,000	$350,000	SRFB, Snohomish County
07-MPR-308	Restoration Projects	Mainstem-primary Restoration	Snoqualmie Riparian Restoration with Salmon-Safe Farms	Stewardship Partners will conduct riparian restoration with agricultural landowners along 2.8 miles of the Snoqualmie River, a priority salmon recovery strategy as identified in the Snohomish River Basin Salmon Recovery Plan (2005) This will assist farmers in achieving and maintaining "Salmon-Safe" certification, an emerging Northwest labelling program that recognizes fish-friendly farming practices in the marketplace. Salmon-Safe certification provides credibility, exposure, and marketing opportunities for participating farmers, and also serves to educate a broad constituency about salmon recovery in the agricultural landscape.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Fish Passage	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (16.70 Acres)	16.7 acres riparian	Chinook	Design completed	Outreach, Construction, and Maintenance	$208,633	Outreach, construction and maintenance	$208,633			12/31/2013	Stewardship Partners	$319,960	$319,960	Stewardship Partners, SRFB, King Conservation District
07-MPR-311	Habitat Restoration	Mainstem Primary Restoration	Lower Tolt River Floodplain Reconnection	The Lower Tolt River Floodplain Reconnection Project will restore connectivity between the Tolt River and 48 acres of floodplain habitat on County-owned land.				Activity Type - Estuarine & Nearshore: Channel modification / creation (2500 Yardst), Activity Type - Estuarine & Nearshore: Hydrological manipulation (12 Acres), Activity Type - Riparian Habitat: Planting (6 Acres)		Chinook	Monitoring, Construction Completed	Monitoring and Maintenance		Monitoring and Maintenance		Monitoring and Maintenance			10/1/2009	$4,094,601	$ 1,000,000	SRFB
07-MPR-312	Acquisition Projects	Acquisition - Mainstem-primary Restoration	Tolt River Habitat Acquisitions (City of Carnation)	Acquire and protect from future development riparian areas on the Lower Tolt River mainstem containing significant in-stream habitat value for Chinook salmon.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Upland, Riparian, Wetland, Rivers/Streams/Shoreline	Snohomish River Basin Mainstem: Restored Edge: Acquisition in the Mainstem Sub-basin Strategy Groups (LC) (5 Acres)	5 acres acquired	Chinook	Feasibility Pending	Acquisition	$100,000	Acquisition	$100,000	Acquisition	$200,000	12/31/2012	Seattle City Light	$400,000	$400,000	Seattle City Light
07-MPR-314	Restoration Projects	Mainstem-primary Restoration	French Creek Basin Riparian Enhancement	Recently Ducks Unlimited and the NRCS, working with a number of private landowners, have secured conservation easements and completed substantial floodplain restoration on over 1000 acres within the French Creek Watershed of the Snohomish River Basin. DU is currently seeking funds to complement this large scale restoration effort, by incorporating approximately 88 acres of riparian plantings along recently restored main channel and associated floodplain wetland habitat. Proposed riparian plantings will occur on three distinct, but contiguous parcels; Cripple Creek ~80acres of restored riparian areas, French Creek ~4acres of additional riparian plantings, Mallard Marsh ~4acres of riparian restoration. Through this proposal, funds are being sought for site prep, materials (trees/shrubs/herbivory protection) and labor for this riparian restoration effort.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Need	Riparian	Activity Type - Riparian Habitat: Planting (88 Acres)	88 acres planted	Coho	Feasibility Pending, Design Completed	Planting, materials and labor	$180,000	Monitoring, maintenance and replacement	$200,000	Monitoring and Maintenance	$20,000	3/31/2010	Ducks Unlimited - Vancouver	$220,000		
07-MPR-315	Restoration Projects	Mainstem-primary Restoration	Cherry Valley Stream Restoration	Remeandering Cherry creek through WDFW property and connecting with WFC project. Substantial riparian planting.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Instream	Activity Type - Instream Habitat: Channel reconfiguration and connectivity (1 Feet), Activity Type - Riparian Habitat: Planting (66 Acres)	100 feet channel 66 acres riparian	Chum, Chinook, Coho, Bull Trout, Steelhead	Feasibility Pending	Construction	$530,000	Reporting/monitoring	$35,000			12/31/2012	Ducks Unlimited - Vancouver	$615,000		
07-MPR-318	Restoration Projects	Mainstem-primary Restoration	Riley Slough Culvert Replacement Project	Replace one crushed and buried culvert on Riley Slough with a bridge to allow access to horse pasture across Slough. This will limit the ability of the horses to enter the slough. This project will also include a reveg on the south side of the slough and use exclusion fencing.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Fish Passage	Pressing need	Riparian	Activity Type - Fish Passage: Bridge installed (1 Each), Activity Type - Fish Passage: Road-crossing removal (1 Each), Activity Type - Riparian Habitat: Planting (1 Acres)	1 Culvert 1 acres	Coho	Feasibility Pending							12/31/2010	Snohomish Conservation District	$50,000		

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-MPR-321	Restoration Projects	Mainstem-primary Restoration	McElhoe-Person Levee Setback	Levee setback to restore 2500 ft. of edge habitat, 2.5 acers off-channel habitat, and 2 acres riparian vegetation.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Rivers/Streams/Shoreline	Activity Type - Estuarine & Nearshore: Channel Modification/Creation (2500 Linear Feet), Activity Type - Estuarine & Nearshore: Hydrological Manipulation (2.50 Acres), Activity Type - Riparian Habitat: Planting (2 Acres), Snohomish River Basin Mainstem: Restored Edge: Removal of armoring/levee within 5 meters of the ordinary high water mark (LC) (2500 Feet), Snohomish River Basin Mainstem: Restored Off-channel Habitat: Summer off-channel habitat restoration (LC) (2.50 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (2 Acres)	2,500 feet channel 2.5 acres off-channel 2 acres riparian	Chinook	Feasibility Pending	Feasibility							12/31/2012	King County DNRP	$918,000		
07-MPR-322	Restoration Projects	Mainstem-primary Restoration	Snoqualmie Riparian Restoration	Mainstem Primary - Snoqualmie Riparian Restoration on Agriculture Lands to restore 10 acres riparian habitat.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (10 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (10 Acres)	10 acres riparian	Chinook	Design Completed							12/31/2012	King County DNRP	$100,000		
07-MPR-324	Restoration Projects	Mainstem-primary Restoration	Raging River Tributary Fish Barrier Removal and Stream Habitat Restoration	Remove a fish passage barrier (6-inch culvert) and replace with a passable culvert, and restore 150 feet of natural stream channel.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Riparian, Instream, Wetland, Rivers/Streams/Shoreline	Activity Type - Fish Passage: Culvert installed (1 Each)	1 culvert replaced	Coho	Completed							6/1/2013	Tulalip Tribes	$37,400		
07-MPR-325	Restoration Projects	Mainstem-primary Restoration	Coe Clemmons Creek Restoration Phase 2	Installation of control structures for bank stabalization on Coe Clemmons Creek, a west-flowing tributary to the Snoqualmie River. Improvements to channel stability and sediment transport that will benefit habitat and adjacent slope stability. Associated benefits will include reduced sediment transport and downstream drainage impacts and improved stream and wetland habitat and water quality.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate	Pressing need	Instream	Activity Type - Riparian Habitat: Planting (2 Acres), Activity Type - Upland Habitat: Erosion control structures (0.20 Each)	2 acres riparian 2 structures	Coho	Feasibility Pending	Construction	$10,000	Construction	$28,000			10/31/2011	City of Duvall	$50,000	$50,000	KCD, Duvall
07-MPR-326	Restoration Projects	Mainstem-primary Restoration	CC Phase II. Cherry Creek Floodplain Restoration	Reconnect Cherry Creek's intact historic channel, and consolidate three floodplain ditches into a single naturalized stream channel to address compromised habitat conditions in lower Cherry Valley.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Fish Passage	Pressing need	Riparian, Instream	Snohomish River Basin Mainstem: Restored Off-channel Habitat: Summer off-channel habitat restoration (LC) (15 Acres)	15 acres off-channel	Chinook	Feasibility Pending	Construction	$485,000	Construction	$50,000			12/31/2013	Wild Fish Conservancy	$535,000	$535,000	SRFB, KCD, NFWF, KC, Ducks Unlimited
07-MPR-328	Non-Capital Projects	Mainstem-primary Restoration	Investigation of Low Dissolved Oxygen in the Cherry Creek Floodplain	Characterize the dissolved oxygen, biological oxygen demand, and sediment oxygen demand in three Cherry Valley ditches both before and after they undergo extensive excavation (a funded restoration project).		Pressing need	Instream	Identification of measures to improce water quality			Feasibility Completed	Monitoring/Implementation	$63,710	Monitoring/ Implementation	$63,710	Monitoring/ Implementation	$63,710	12/31/2014	Wild Fish Conservancy	$191,130		
07-MPR-338	Acquisition/Restoration (Combination)	Mainstem-primary Restoration and Acquisition	Everett Marshland Tidal Wetland Restoration	Restore over 400 acres of diked land to tidally-influenced wetland that will connect to the Snohomish River through Lowell- Snohomish River Road.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Estuary (River Delta), Wetland, Rivers/Streams/Shoreline	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (400 Acres)	400 acres	Chinook	Feasibility Pending, Conceptual							1/1/2020	City of Everett	$62,283,340		
07-MPR-363	Restoration Projects	Mainstem-primary Restoration	Maloney Creek Restoration Plan	Design and NEPA for construction of a wetland, sediment detention ponds, and instream restoration	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate	Pressing need	Instream, wetland				Feasibility Pending	Design	$300,000					6/15/2011	Skykomish, Town of	$300,000	$300,000	Natural Resources Damage Assessment
07-MPR-364	Restoration Projects	Mainstem-primary Restoration	Maloney Creek Restoration I	Maloney Creek Restoration will involve three parts: (1) wetland creation; (2) construction of sediment detention ponds; (3) instream restoration.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate	Most pressing need	Instream, Wetland	Activity Type - Instream Habitat: Channel structure - Wood structure / log jam (2000 Feet), Activity Type - Wetlands: Upland wetland creation (1 Acres)	2000 feet LWD 1 acre off-channel	Coho, Steelhead, Rainbow, Cutthroat	Feasibility Pending			Construction	$500,000			9/30/2013	Mt. Baker-Snoqualmie National Forest, Skykomish, Town of	$500,000	$500,000	Natural Resources Damage Assessment
07-MPR-365	Restoration Projects	Mainstem-primary Restoration	Fall City Park Riparian Restoraiton Phase 2	Control invasive plants and restore 9 acres of riparian area at King County's Fall City Park along the Snoqualmie River. Phase 1 was completed in 2010 and phase 2 will extend downstream.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (9 Acres)	9 acres riparian	Chinook	Design Completed	Construction	$140,000	Construction	$140,000			12/31/2012	Snoqualmie Tribe	$280,000		
07-MPR-366	Restoration Projects	Mainstem-primary Restoration	South Fork Skykomish Knotweed Control and Riparian Restoration	Treat knotweed infested sites and replant appropriate areas along approxi. Treatment will occur along the river and major tributaries connected to the South Fork Skykomish River. The project will include 3.5 river miles of initial treatment and up to 14 river miles of maintenance retreatment as well as riparian plantings along 3,000 linear feet per year.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian			Chum, Chinook, Coho, Bull Trout, Steelhead, Cutthroat, Pink	Feasibility Pending							12/31/2013	King County DNR & Parks	$278,500		
07-MPR-370	Restoration Projects	Mainstem-primary Restoration	Lower Skykomish Restoration Phase I	Snohomish County has completed a reach scale geomorphic analysis of the lower Skykomish River below Sultan (RM 0 to RM 13.5). Implement four projects along 1 mile and 1.5 miles of side channel on the Skykomish River, including installation of flood fencing in the stream and on the flood plain, the installation of large wood materials, and plantings to create a healthy riparian buffer and complex edge habitat	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	Most pressing need	Riparian, Instream	Snohomish River Basin Mainstem: Large Woody Debris (new log jams): Placement of new log jams (new log jams) (LC) (8 Each), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (9.10 Acres)	8 log jams 9.1 acres riparian	Chinook	Feasibility Completed	Design	$161,700	Construction	$121,800			12/31/2015	Snohomish County of	$283,500	$283,500	SRFB, Snohomish County, Landowners
07-MPR-371	Restoration Projects	Mainstem-primary Restoration	Snoqualmie Mainstem and Cherry Creek bank restoration	(1) a feasibility study for restoration of the trenched reach of Cherry Creek; (2) a reach analysis and feasibility study for restoration of the river mainstem; (3) revegetation of ¾- mile of the steep 15-foot high mainstem river bank; and (4) planting to accomplish at least one row of trees on 1.5-miles of river banktop pasture area.	Degraded Habitat-Channel Structure and Complexity	Pressing need	Riparian, Instream, Rivers/Streams/Shoreline	Feasibility, Activity Type - Riparian Planting (3.6 acres)	Feasibility 3.6 acres riparian	Chinook, Coho, Cutthroat	Conceptual			Feasibility	$125,000	Construction	$115,000	12/31/2015	Stilly Snohomish Fisheries Enhancement Task Force	$250,000	$40,000	KCD

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-MPR-372	Restoration Projects	Mainstem-primary Restoration	Pilchuck River Habitat Enhancement Project	This project proposes to continue the Pilchuck River Riparian Fish Habitat Restoration Project, developing 30% contstruction designs for Site A and Site C. Site A is a 600' streambank enhancement project using large wood and riparian planting. Site C is a 200' streambank enhancement project using large wood and riparian planting. This new project will advance the designs to 100%, pursue and acquire all required permits and fund the construction of the two large wood projects.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors	Most pressing need	Riparian, Instream, Rivers/Streams/Shoreline	Design	Design	Chinook	Feasibility	Design	$100,000	Construction	$175,000			12/31/2014	Stilly Snohomish Fisheries Enhancement Task Force	$275,000		
07-MPR-373	Restoration Projects	Mainstem-primary Restoration	Lower Skykomish Restoration Phase II	Snohomish County has completed a reach scale geomorphic analysis of the lower Skykomish River below Sultan (RM 0 to RM 13.5). Implement four projects along 1 mile and 1.5 miles of side channel on the Skykomish River, including installation of flood fencing in the stream and on the flood plain, the installation of large wood materials, and plantings to create a healthy riparian buffer and complex edge habitat	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	Most pressing need	Riparian, Instream	Snohomish River Basin Mainstem: Large Woody Debris (new log jams): Placement of new log jams (new log jams) (LC) (8 Each), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (9.10 Acres)	8 log jams 9.1 acres riparian	Chinook	Feasibility Completed			Construction	$189,000			12/31/2015	Snohomish County of	$189,000		
07-MSR-016	Restoration Projects	Mainstem-secondary Restoration	Kuhlman Creek Culvert Replacement	Replacing two culverts, native plantings and installation of LWD as necessary between along Kuhlman Creek in vicinity of culverts.	Degraded Habitat-Fish Passage	Pressing need	Instream	Activity Type - Fish Passage: Culvert installed (2 Each)	2 culverts	Steelhead	Feasibility Completed, Permitting Completed							12/31/2011	Snohomish Conservation District, Snohomish County of	$250,000		
07-MSR-019	Restoration Projects	Mainstem-secondary Restoration	Trout Creek Road Erosion Control	This project would decommission 2.2 miles of Trout Creek Road (Forest Road 6320) and 3.6 miles of associated spurs in the Trout Creek subwatershed within the North Fork Skykomish River watershed. The goal is to reduce road-related sedimentation and associated impacts to fish habitats in Trout Creek, a stream with documented bull trout, steelhead, coho, and rainbow.	Degraded Habitat-Stream Substrate	Pressing need	Upland			Bull Trout, Steelhead	Conceptual							10/29/2010	US Forest Service, Sustainable Fisheries Foundation	$395,000		
07-NR-003	Restoration Projects	Nearshore Restoration	Jetty Island South Extension Phase II	Use clean dredged material to extend Jetty Island 2,200 ft to the south along the west side of the existing rock jetty. This project is a continuation of the February 2007, 1000-foot extenstion of the island, constructed using approx 60,000 cy of sand dredged from the lower settling basin. The planned 2009 - 2010 action will extend the island an additional 2,200 feet to the south and will add material to increase the width and elevation of the 2009 extension. Project will be jointly funded by the Corps of Engineers and the Port of Everett. People for Puget Sound will do project monitoring in cooperation with the Port and Pentec Environmental.	Degraded Habitat-Riparian Areas and LWD Recruitment, Non-Habitat Limiting Factors, Estuarine and Nearshore Habitat	Most pressing need	Nearshore (Beaches)	Activity Type - Estuarine & Nearshore: Beach Nourishment (1 Acres), Snohomish Basin Nearshore: Beaches and Shoreline: Enhancement of nearshore armoring (LC) (2200 Feet)	1 acre beach nourishment 2,200 feet armoring enhancement	Chinook	Implementation	Construction	$900,000	Monitoring		Monitoring		12/31/2010	Port of Everett, US Army Corps of Engineers	$900,000	$900,000	Port of Everett, US Army Corps of Engineers
07-NR-005	Restoration Projects	Nearshore Restoration	Renourish Existing Jetty Island Berm	The Jetty Island berm, originally constructed in 1990 with 323,000 cy of clean river sand, requires periodic renourishment with to maintain its integrity and to protect the productive depositional mudflat and fringing salt marsh in the lagoon formed by the berm. Renourishment most recently occurred in January/February 2007 and in February 2009. Next renourishment is not likely to be required before 2011. Quantities of sediment placed for each renourishment is typically 20,000 to 40,000 cy.	Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Estuary (River Delta), Nearshore (Beaches), Nearshore (Embayments)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (15 Acres)	15 acres beach	Chinook	Design Completed	Construction	$725,000	Monitoring		Monitoring		12/31/2020	Port of Everett	$725,000	$725,000	Port of Everett
07-NR-008	Restoration Projects	Nearshore Restoration	Nearshore Sediment Nourishment Feasibility Study Aong Railroad	Identify the most suitable locations along the railroad impounded shoreline (from Pigeon Creek #1 to the unnamed stream west of Japanese Gulch in Mukilteo) for habitat restoration.	Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Most pressing need	Nearshore (Beaches)	Feasibility	Feasibility	Chinook	Feasibility Pending	Feasibility	$167,480			Design	$300,000	1/1/2012	Snohomish County of, Snohomish County Marine Resources Committee (MRC)	$10,000,000	$167,480	Snohomish County MRC, Northwest Straits Commission, SRFB
07-NR-009	Restoration Projects	Nearshore Restoration	Light House Park Phase 2 Beach Restoration	Provide an additional waterfront access, 340 lineal feet of riparian shoreline vegetation, accessible pathways, a picnic table, open lawn, low impact development (LID) storm drainage swales for water quality at the Mukilteo Lighthouse Park.	Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes, Estuarine and Nearshore Habitat	Pressing need	Riparian, Nearshore (Beaches)	Snohomish Basin Nearshore: Beaches and Shoreline: Enhancement of nearshore armoring (LC) (340 Feet)	340 feet beach	Chinook	Design Completed, Permitting Completed	Construction	$33,600					12/31/2010	Mukilteo City of	$33,600		
07-NR-011	Restoration Projects	Nearshore Restoration	North Mukilteo Nearshore Restoration and Creosote Removal	Remove all cresoate pilings from around the tank farm and improve area	Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Pressing need	Nearshore (Beaches)	Activity Type - Estuarine & Nearshore: Overwater Structure Removal / Modification (5 Acres)	5 acres overstructure removed	Chum, Chinook, Coho, Bull Trout, Cutthroat	Conceptual	Engineering, Design, Permitting	$4,200,000					12/31/2017	Washington State Ferries	$21,700,000		
07-NR-012	Acquisition/Restoration (Combination)	Acquisition - Nearshore Restoration	Tulalip Nearshore Acquisition and Restoration	Protect and restore critical areas along the Tulalip shoreline and nearshore.	Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Pressing need	Nearshore (Beaches), Nearshore (Rocky Coast), Nearshore	Activity Type - Estuarine & Nearshore: Revegetation, Activity Type - Estuarine & Nearshore: Shoreline armor removal or modification	Feasibility	Chinook	Conceptual							1/1/2014	Tulalip Tribes			
07-NR-014	Restoration Projects	Nearshore Restoration	Priest Point Pocket Estuary Restoration	Reconnect tidal lagoon within private properties. Project will require considerable public outrach with the neighboring landowners. Project may require construction of a cross-dike.	Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Pressing need	Nearshore (Beaches)	Activity Type - Estuarine & Nearshore: Revegetation, Activity Type - Estuarine & Nearshore: Shoreline armor removal or modification		Chinook	Conceptual							12/31/2015	Tulalip Tribes			
07-RPR-016	Restoration Projects	Rural Streams Primary Restoration	NF Cherry Creek Restoration	Mainstem Primary - NF Cherry Creek Restoration to protect and enhance 1,300 ft of channel by installing livestock exclusion fencing and planting approx. 4 acres of native riparian corridor along NF Cherry Creek.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow	Pressing need	Riparian	Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Riparian planting (LC) (4 Acres)	4 acres riparian	Coho	Feasibility Completed	Construction	$30,000	Construction	$20,000		$0	12/31/2012	Wild Fish Conservancy	$50,000	$50,000	King County, KCD, Wild Fish Conservancy, Landowner
07-RPR-018	Restoration Projects	Rural Streams Primary Restoration	Cherry Valley Dairy Stream Enhancement	Rural Streams Primary- Cherry Valley Dairy Stream Enhancement to improve 1 acre riparian habitat and remove 1 barrier	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Fish barrier (1 barrier), Activity Type - Restored riparian habitat: Riparian planting (1 acre)	1 barrier removed 1 acre riparian	Coho	Feasibility Pending							12/31/2007	Stewardship Partners	$120,000		
07-RPR-022	Restoration Projects	Rural Streams Primary Restoration	West Fork and Lower Woods Creek Restoration Partnership	The Habitat and Geomorphic Assessment of Woods Creek, currently being conducted by Snohomish County, will identify priority restoration actions for Woods Creek. Several multi-landowner in-stream and riparian projects will result from this priorization process and will be completed by Snohomish County and other partners working in the watershed.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Pressing need	Riparian, Instream	Feasibility	Feasibility	Chinook	Feasibility Pending							12/31/2015	Snohomish County of	$850,000		
07-RPR-025	Restoration Projects	Rural Streams Primary Restoration	West Fork and Lower Woods Creek Habitat and Geomorphic Assessment	Snohomish County Surface Water Management (SWM) is conducting a habitat and geomorphic assessment of the West Fork and Lower Woods Creek basin. This comprehensive assessment will include data collection and analysis of channel morphology, floodplain topography, hydrology, hydraulics, riparian conditions, and habitat for salmonids. The results will provide SWM staff and project partners with the information necessary to site and design restoration projects that address the needs of the creek and have the greatest chance of success.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Pressing need	Riparian, Instream	Activity Type - Riparian Habitat: Planting (15 Acres)	feasibility	Chinook	Feasibility Completed							6/30/2011	Snohomish County of	$33,000	$33,000	Snohomish County

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-RPR-030	Restoration Projects	Rural Streams Primary Restoration	Sorgenfrei Fish Passage Project	Remove a partial barrier to fish migration on Sorgenfrei Creek.	Degraded Habitat-Fish Passage	Pressing need	Instream, Rivers/Streams/Shoreline				Conceptual								Adopt A Stream Foundation			
07-RSR-045	Restoration Projects	Rural Streams Secondary Restoration	Riparian Restoration on farmland Harris Creek	Livestock exclusion fencing, riparian planting, invasive species removal. Cooperative partnerships with multiple landowners.	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (5.30 Acres)	5.3 acres riparian	Coho								3/23/2012	Stewardship Partners	$150,000		
07-RSR-046	Acquisition Projects	Acquisition - Rural Streams Secondary Restoration	Grand Ridge Acquisition	Acquire 75 acres on Canyon Creek in the Patterson Creek sub basin	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases : Wetland areas protected (75 Acres), Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Acquisition (LC) (75 Acres)	75 acres acquired	Steelhead	Conceptual							12/31/2010	King County DNRP	$2,400,000		
07-RSR-048	Restoration Projects	Rural Streams Secondary Restoration	Storybook Creek Stream Enhancement	Partner with landowner to relocate channelized trib restoring 950 feet of this tributary to Patterson Creek and restore 1.4 acres of riparian habitat	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	Need	Riparian	Activity Type - Instream Habitat: Channel reconfiguration and connectivity (950 Feet), Activity Type - Riparian Habitat: Planting (1.40 Acres), Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Riparian planting (LC) (1.40 Acres)	950 feet instream 1.4 acres riparian	Coho	Feasibility Pending							12/31/2012	King County DNRP	$25,000		
07-RSR-049	Acquisition Projects	Acquisition - Rural Streams Secondary Restoration	Patterson Creek Protection on Stevlingson Property	Work with landowner to protect 10 acres property on the alluvial fan of Patterson. Would include significant floodplain/riparian restoration & structure removal.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Instream	Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Acquisition (LC) (10 Acres)	10 acres acquired	Steelhead	Feasibility Pending	Acquisition	$425,000					12/31/2012	King County DNRP	$425,000		
07-RSR-050	Acquisition Projects	Acquisition - Rural Streams Secondary Restoration	Patterson Creek State DNR Land Acquisition	Work with State DNR to protect 160 acres	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Pressing need	Instream	Snohomish River Basin Other Sub-basins Restoration: Restored Riparian Habitat: Acquisition (LC) (160 Acres)	160 acres acquired	Steelhead	Conceptual							12/31/2012	King County DNRP	$2,500,000		
07-RSR-051	Restoration Projects	Rural Streams Secondary Restoration	Harris Creek Barrier Removal and Off-Channel Habitat Restoration	Restore fish access tooff-channel rearing habitat in the Harris Creek watershed by removing a road prism that currently acts as a fish passage barrier.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Need	Instream, Wetland, Rivers/Streams/Shoreline	Snohomish River Basin Other Sub-basins Restoration: Restored Off-channel Habitat: Winter/Spring off-channel habitat restoration (LC) (7 Acres)	7 acres off-channel	Coho	Feasibility Completed							6/1/2013	Tulalip Tribes	$45,620		
07-RSR-061	Restoration Projects	Rural Streams Secondary Restoration	Patterson Creek Culvert Replacement (s)	Replace, retrofit, and/or remove up to three anthroprogenic barriers in the Patterson Creek basin.	Degraded Habitat - Fish Passage	Need	Instream	Activity Type - Fish Passage Barrier (3 culvert upgrade/improvement)	3 culverts	Coho	Feasibility Pending	Design	$50,000	Construction	$150,000			12/31/2014	Wild Fish Conservancy	$200,000		
07-USR-039	Restoration Projects	Urban Streams Restoration	Coho Creek Restoration	Restore and enhance 6,000 feet of stream channel, 8 acres of riparian forest and improve connectivity to adjacent forest communities.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Estuarine and Nearshore Marine	Pressing need	Instream	Activity Type - Instream Haibtat (6,000 feet), Activity Type - Riparian Habitat (5 acres)	6,000 feet channel 5 acres riparian	Coho	2500 feet channel constructed, 5 acres planted							12/31/2011	Tulalip Tribes	$1,175,000		
07-USR-044	Restoration Projects	Urban Streams Restoration	Allen Creek Stewardship Project	Landowner outreach to implement water quality and riparian best management practices and conduct instream restoration.	Degraded Habitat-Fish Passage	Pressing need	Instream			Coho	Conceptual							10/31/2012	Adopt A Stream Foundation	$186,000		
07-USR-047	Restoration Projects	Urban Streams Restoration	Jones Creek Restoration	Restore riparian vegetation along Jones Creek on Marysville School District property.	Degraded Habitat-Riparian Areas and LWD Recruitment	Need	Riparian	Activity Type - Riparian Habitat: Planting (5 Acres)	5 acres riparian	Coho	Design Completed							12/1/2011	Stilly Snohomish Fisheries Enhancement Task Force	$10,000		
07-USR-059	Restoration Projects	Urban Streams Restoration	Olaf Strad Relocation and Restoration	Move 1000' of Olaf Strad Creek out of a roadside ditch onto private property, re-establish riparian vegetation, and install instream habitat features.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	Need	Upland, Riparian, Instream, Wetland, Rivers/Streams/Shoreline				Conceptual								Adopt A Stream Foundation			
07-RPR-031	Restoration Projects	Rural Streams Primary Restoration	Upper Waterwheel Restoration (Phase I-Design)	Project development, conceptual design, and permitting for fish-passage barrier removal, and re-naturalization and reconnection of primary and off-channel salmon and juvenile rearing habitats on Waterwheel Creek a tributary to Cherry Creek.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Fish Passage, Biological Processes	Need	Riparian, Instream	Activity Type - Fish Passage: Culvert Improvements/Upgrades (1 Each)	1 barrier removed	Coho	Feasibility Pending							12/31/2013	Wild Fish Conservancy	$50,000		
Needs ID	Restoration Projects		Weiss Creek Barrier Removal	Remove a fish passage barrier and improve riparian habitat on Weiss Creek, a tributary to the Snoqualmie River.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Fish Passage		Riparian, Instream, Rivers/Streams/Shoreline	Activity Type - Fish Passage: Culvert Improvements/Upgrades (1 Each)		Coho	Feasibility Pending							12/31/2013	Wild Fish Conservancy	$31,800		
New ID Needed	Non-Capital Projects		Fish Passage Barrier Prioritization (Phase III)	Expand the number of basins represented on the WRIA-07 BPMS web based mapping system (a web system designed to make prioritizing anthropogenic barriers in WRIA 7 easier and faster for federal, state, and tribal agencies and for local biologist, municipalities, citizen groups and private land owners). Add a ranking ability to the existing BPMS interactive webpage.	Degraded Habitat-Fish Passage					Cutthroat	Conceptual							8/31/2014	Wild Fish Conservancy	$150,000		
	Habitat	Fish passage	Passage of adult fish arouond Sunset Falls velocity barrier	Trap and haul adult fish around Sunset Falls to utilize spawing and rearing habitat throughout the South Fork Skykomish system						Chinook, coho steelhead	underway	Trapping and hauling	[NEED FROM WDFW]	Trapping and hauling	[NEED FROM WDFW]	Trapping and hauling	[NEED FROM WDFW]	Ongoing	WDFW		[NEED FROM WDFW]	WDFW

Project ID	Plan Category	Plan Category - Level 2	Project Name	Project Description	Limiting Factors	Sequence Rank	Habitat Type	Activity Type and Project Performance	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Budget	2012 Activity to be funded	2012 Estimated Budget	2013 Activity to be funded	2013 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Known Funding secured	Source of funds (PSAR, SRFB, other)
07-NC-002	Habitat - protection and restoration	Non-Capital: BMP Implementation	Implement the Targeted Stewardship Model - King County and PRKC	Implement EPA funded Targeted Stewardship grant in Patterson Creek and Raging River subbasin then export to other subbasins			Restoration, outreach, education, technical assistance.			Chinook	Implementation	Restoration, outreach, education, technical assistance	$500,000	Restoration, outreach, education, technical assistance	$200,000	Restoration, outreach, education, technical assistance	$200,000	Ongoing	KC, Partnership for Rural King County	$900,000		
07-NC-003	Habitat - protection and restoration	Non-Capital: BMP Implementation	Land-use specific stewardship	Provide specific stewardship for key land uses, such as urban areas (LID), forestry and agriculture.	Across all limiting factors.		Restoration, outreach, education, technical assistance.			Chinook	Implementation	Restoration, outreach, education, technical assistance	$210,000	Restoration, outreach, education, technical assistance	$210,000	Restoration, outreach, education, technical assistance	$210,000	Ongoing	SC, KC, Tulalip Tribes, local jurisdictions, SCD, KCD, CLC, WSU	$630,000	$630,000	
07-NC-004	Habitat - protection and restoration	Non-Capital: BMP Implementation	NPDES implementation	Including STORM							Implementation								all local jurisdictions			
07-NC-005	Habitat - protection and restoration	Non-Capital: BMP Implementation	Provide basin steward staff.	Stewards provide technical assistance, project development, behavior change across the basin. Staffing would be for SC, KC.	Across all limiting factors.		Restoration, outreach, education, technical assistance.			Chinook	Implementation	Restoration, outreach, education, technical assistance	$210,000	Restoration, outreach, education, technical assistance	$210,000	Restoration, outreach, education, technical assistance	$210,000	Ongoing	SC, KC	$630,000	$630,000	
07-NC-006	Habitat - protection and restoration	Non-Capital: BMP Implementation	Snoqualmie Watershed Water Quality Synthesis Report Implementation	Implement actions from the Water Quality Report including monitoring, restoration and BMP implementation.							Implementation	Restoration, outreach, education, technical assistance	$50,000	Restoration, outreach, education, technical assistance	$50,000	Restoration, outreach, education, technical assistance	$50,000	Ongoing	Snoqualmie Watershed Forum and King County	$150,000		
07-NC-007	Habitat - protection and restoration	Non-Capital: BMP Implementation	WSU Extension Beach Watchers Program	Increase capacity for research, restoration and education relating especially to the nearshore, estuarine and marine environments. Provide workshops and engage the Beach Watchers in 1,000 hours of community service.	Nearshore and estuarine restoration, monitoring.		Outreach and education.			Chinook	Implementation	Implement.	$210,000	Implementation	$70,000	Implementation	$70,000	Ongoing	WSU Extension	$350,000	$110,000	
07-NC-008	Habitat - protection and restoration	Non-Capital: Outreach for Awareness	Outreach specialist - Tulalip Tribes								Implementation								Tulalip Tribes			
07-NC-009	Habitat Protection	Non-Capital: Incentives	PBRS and landowner current use tax incentives	Assist King County in enrolling landowners in PBRS and other landowner current use tax programs							Implementation	Implementation	$100,000	Implementation	$100,000	Implementation	$100,000	Ongoing	King County	$300,000		
07-NC-010	Habitat - protection and restoration	Non-Capital: Outreach for Awareness	Public Beach Naturalist Program and Shore Stewards	WSU Beach waterchers will engage with general visitors and organized school groups at public beaches to increase Puget Sound literacy and reduce visitor impacts.							Implementation	Implementation	$7,000	Implementation	$7,000	Implementation	$7,000	Ongoing	WSU extension			
07-NC-011	Habitat - protection and restoration	Non-Capital: Outreach for Awareness	Puget Sound Starts Here Campaign	Public awareness and BMP implementation campaign						Not salmon-specific	Implementation											
07-NC-012	Habitat - protection and restoration	Non-Capital: Outreach for Awareness	School outreach: King County; Snohomish County; Nature Vision Blue Teams, SSTF REYs education program	Raise Awareness among school-aged children	Across all limiting factors.		REYs education programork with 4 schools and approximately 450 community members			Chinook	Implementation	Implementation	$90,000	Implementation	$90,000	Implementation	$90,000	Ongoing	Stilly-Snohomish Fisheries Enhancement Task Force	$270,000	$9,000	
07-NC-013	Habitat Protection	Non-Capital: Incentives	Snoqualmie Conservation Strategy	Identify a common conservation vision, map key resources, identify viable funding sources, and evaluate ecosystem services in the Snoqualmie Basin							Implementation								Stewardship Partners			
07-NC-014	Habitat Protection	Non-Capital: Planning	Habitat Protection Strategy	Develop a protection strategy to address the challenges of development and climate change by conducting a watershed characterization, reach-scale process analysis, working with a stakeholder group to develop a protection vision, and implementing early action elements.	nearshore connectivity, forest cover, hydrology, sediment.		Strategic, actionable habitat protection plan			Chinook	Implementation		$220,000	Implement.	$220,000	Implement.	$220,000	Ongoing.	SC, KC, Tulalip Tribes		$869,090	EPA, Snohomish County, King County, Tulalip Tribes
07-NC-015	Habitat Protection	Non-Capital: Planning	Skykomish Valley Conservation Projects	Identification of priority large forest land acquisitions, fund acquisitions of forested river front parcel, and identify funding for GIS work to assess smaller priority parcels along the Skykomish River Valley.															Cascade Land Conservancy			
07-NC-016	Habitat - protection and restoration	Non-Capital: Policy	Advocacy / watchdog?	Environmental Priorities Coalition, Clean Water Act / Pollution Enforcement and Education															People for Puget Sound, Wild Fish Conservancy, Puget Soundkeepers Alliance			
07-NC-017	Habitat - protection and restoration	Non-Capital: Policy	Policy work conducted by basin partners?																KC, SC, TT, SCL			
07-NC-018	Habitat Protection	Non-Capital: Policy	Shoreline Master Program Updates and Restoration Plans	Assist cities in updating SMP regulations and developing SMP restoration plans							Implementation	Planning	$50,000	Planning	$50,000			2011	Cities in WRIA 7	$100,000		Cities, Snoqualmie Watershed Forum and DOE grants
07-NC-019	Habitat Protection	Non-Capital: Policy	TDR and PDR Development																Cascade Land Conservancy, King County, Snohomish County			
07-NC-020	Habitat - protection and restoration	Non-Capital: Social Capital	Cascade Agenda	The addition of a Cascade Agenda Leadership City and the Cascade Agenda Community Stewards Program						Not salmon-specific									Cascade Land Conservancy			

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07-NC-021	Habitat - protection and restoration	Non-Capital: Social Capital	General Program Maintenance	Provide staffing capacity for the Snohomish Basin salmon recovery effort						Chinook	Implementation	Staffing	$300,000	Staffing	$300,000	Staffing	$300,000		Econet Participants...	$900,000		
07-NC-022	Habitat - protection and restoration	Non-Capital: Social Capital	General Program Maintenance	Build skills and knowledge of basin staff and project sponsors: basin workshops, facilitated discussions, tours and a "grant" fund for sponsors to use for specific training.						Chinook	Implementation	Technical assistance	Not quantified	Technical assistance	Not quantified	Technical assistance	Not quantified					
07-NC-023	Habitat - protection and restoration	Non-Capital: Social Capital	Information Sharing	Supporting econet and project working group						Not salmon-specific									EcoNet, STORM, PWG, TC, PDC, Forum			
07-NC-024	Habitat - protection and restoration	Non-Capital: Social Capital	Snohomish County Beach Watchers	Build volunteer capacity on marine, estuarine, and aquatic education, research and restoration in communities through out Snohomish County and Camano Island.							Implementation	Implementation	$90,000	Implementation	$90,000	Implementation	$90,000	Ongoing	WSU extension	$270,000	MRC	
07-NC-025		Non-capital: Planning	Habitat Protection: Pilchuck Pilot	Implement a pilot project on the Pilchuck River to test the Snohomish Basin hydrologic protection technical methodology, using less public involvement.				Pilot protection study	Pilot study final report	Chinook	Implementation	Implementation	$65,000						Tulalip Tribes SC, KC	$65,000	$65,000	U.S. EPA tribal grants
	Hatchery	Monitoring	Direct assessment of gene flow in chinook	Relative productivity and reproductive success of hatchery- and natural-origin Snohomish Chinook salmon using genetic-based parentage analysis: Collect and analyze tissues for DNA analysis from outmigrating smolts and natural Chinook spawners and hatchery broodstock, assign parentage & estimate relative productivity						Chinook	High Priority Not Funded	Genetic tissue sampling and data analysis	$75,000	Genetic tissue sampling and data analysis	$75,000	Genetic tissue sampling and data analysis	$75,000	2015	Tulalip	$225,000	US Fish and Wildlife Service, Hatchery Reform	
	Hatchery	Monitoring	Analysis of stock assessment samples	Annually operate Tulalip Stock Assessment Laboratory (TSAL) for stock assessment: otoliths, coded-wire tags, scales, GSI						Chinook, coho	underway	Sample analysis	$75,000	Sample analysis	$75,000	Sample analysis	$75,000	ongoing	Tulalip	$225,000	US Fish and Wildlife Service, WDFW	
	Hatchery	Monitoring	Annual Snoqualmie and Skykomish smolt trap operations	Annually operate smolt traps on Skykomish and Snoqualmie Rivers						Chinook, coho	underway	Smolt enumeration and biological sampling	$400,000	Smolt enumeration and biological sampling	$400,000	Smolt enumeration and biological sampling	$400,000	ongoing	Tulalip	$1,200,000	US Fish and Wildlife Service, Hatchery Reform, WDFW, in kind contributions	
	Hatchery	Monitoring	Straying reduction study	Tulalip Hat. Chin. imprinting study to further reduce straying						Chinook, coho	Not Funded	N/A	$0	Differential tagging, imprinting and sampling	$60,000	Differential tagging, imprinting and sampling	$60,000	2016 for funding, 2021 for data recovery	Tulalip	$300,000	Hatchery Reform	
	Hatchery	Marking	Mass marking improvements	Rewiring for adipose fin mass marking trailer and purchase and replacement of chillers for otolith thermal marking of all (100%) Tulalip hatchery production (all species)						Chinook, coho, chum	Not Funded	Replace 12 old, small chillers (one marking system) with two commercial-grade chiller/marking systems. Replace & upgrade wiring at hatchery to enable mass adipose fin marking without electrical fires	$169,254	Differentially thermally mark 100% oall (100%) Tulalip hatchery production (all species)	$0	Differentially thermally mark 100% oall (100%) Tulalip hatchery production (all species): No funding requested	$0	2011 for funding, thereafter no funding but needed for annual thermal 100% marking, sample recovery, analysis, contribution rate analyses (hatcheries, fisheries, or natural escapements), gene flow, hat/wild ecol/genet interactions	Tulalip	$169,254	Hatchery Reform	
	Hatchery	Monitoring	Analysis of stock assessment samples	Construct and equip room for CWT extraction and reading at TSAL						Chinook, coho	Not Funded	N/A	$0	Construct and equip room for CWT extraction and reading at TSAL	$60,000	Annually analyze CWTs extracted from Chinook/Coho in terminal fisheries/hatcheries/natural escapement: No funding requested	$0	2012 for funding, thereafter no funding but equipment will be used annually to analyze CWTs extracted from Chinook/Coho in terminal fisheries/hatcheries/natural escapement	Tulalip	$60,000		

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	Hatchery	Monitoring	Analysis of stock assessment samples	Purchase CWT Reading Equipment: V Detector with transit case, Magniviewer, Illuminator, Tag Reading jig with magnetic pencils						Chinook, coho	Not Funded	Purchase tag-reading equipment	$6,100	Annually analyze CWTs extracted from Chinook/Coho in terminal fisheries/hatcheries /natural escapement: No funding requested	$0	Annually analyze CWTs extracted from Chinook/Coho in terminal fisheries/hatcheries/natural escapement: No funding requested	$0	2011 for funding, thereafter no funding requested to annually analyze CWTs extracted from Chinook/Coho in terminal fisheries/hatcheries/natural escapement	Tulalip	$6,100	WDFW, Tulalip, federal grants	
	Harvest, Hatchery	Monitoring	Hatchery escapement monitoring	Sample Wallace and Tulalip Hatcheries for scales, otoliths, and coded-wire tags to assess hatchery contribution rates						Chinook	Underway	State and Tribal hatchery sampling	$10,000	State and Tribal hatchery sampling	$10,000	State and Tribal hatchery sampling	$10,000	ongoing	Tulalip and WDFW	$30,000	Tulalip, WDFW, Hatchery reform projects, NOAA	
	Harvest, Hatchery	Monitoring	Natural escapement monitoring	Sample Snohomish natural escapement for scales, otoliths, and coded-wire tags to assess hatchery contribution rates						Chinook	Underway	State and Tribal escapement sampling	$60,000	State and Tribal escapement sampling	$60,000	State and Tribal escapement sampling	$60,000	ongoing	Tulalip and WDFW, Sno. PUD	$180,000	Multiple	
	Hatchery	Broodstock Management	Skykomish chinook broodstock integration							Chinook	Underway	Collection of NOR broodstock and incorporation into WRH hatchery broodstock	$12,000	Collection of NOR broodstock and incorporation into WRH hatchery broodstock	$12,000	State and Tribal hatchery genetic NOR broodstock collection and incorporation into WRH hatchery broodstock	$12,000	ongoing	Tulalip and WDFW	$36,000	WDFW	
	Hatchery	Marking and monitoring	Thermal marking of Tulalip hatchery production	Therrmally mark otoliths of Tulalip chinook and coho						Chinook	Underway	Thermal marking during egg incubation	$7,500	Thermal marking during egg incubation	$7,500	Thermal marking during egg incubation	$7,500	ongoing	Tulalip	$22,500	Coastal salmon recoevery grant	
	Hatchery	Fish Passage	Tokul Creek Fish Passage - Phase 2	[NEED PROJECT INFORMATION FROM WDFW]						Chinook	Underway							ongoing	WDFW		Pacific Salmon Treaty Implementation, Hatchery Reform	
	Harvest	Regulation/Enforcement	Develop, communicate, and enforce fishing regulations	Convert the results of the annual fishery planning process into regulations and platforms for communicating those (e.g. recreational fishing pamphlet) and disseminate the same. Enforce regulations through on-the-water presence of uniformed officers, sanctions for violations, etc..						Chinook, coho, chum, pink	ongoing	Convert the results of the annual fishery planning process into regulations and platforms for communicating those (e.g. recreational fishing pamphlet) and disseminate the same. Enforce regulations through on-the-water presence of uniformed officers, sanctions for violations, etc..	Hard to tally up all components of this.	Convert the results of the annual fishery planning process into regulations and platforms for communicating those (e.g. recreational fishing pamphlet) and disseminate the same. Enforce regulations through on-the-water presence of uniformed officers, sanctions for violations, etc..	Hard to tally up all components of this.	Convert the results of the annual fishery planning process into regulations and platforms for communicating those (e.g. recreational fishing pamphlet) and disseminate the same. Enforce regulations through on-the-water presence of uniformed officers, sanctions for violations, etc..	Hard to tally up all components of this.	ongoing	WDFW, Tulalip		Pacific Salmon Treaty Implementation Funds, Hatchery Reform	
	Harvest	Assessment	Estimate exploitation rates, reconstruct run sizes	Analyze information from coast-wide fishery sampling to compute exploitation rates after the fact.						Chinook, coho	ongoing	Assemble CWT data into coast-wide database. Use these, plus information on the amount of fish harvested and escapement to estimate exploitation rates. Where there are mark-selective fisheries also need to use methods developed for double-index CWT analysis.	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	Assemble CWT data into coast-wide database. Use these, plus information on the amount of fish harvested and escapement to estimate exploitation rates. Where there are mark-selective fisheries also need to use methods developed for double-index CWT analysis.	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	Assemble CWT data into coast-wide database. Use these, plus information on the amount of fish harvested and escapement to estimate exploitation rates. Where there are mark-selective fisheries also need to use methods developed for double-index CWT analysis.	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	ongoing	WDFW, Tulalip		WDFW	
	Harvest	Annual planning	Preseason fishery planning	Develop annual abundance predictions. Use these, plus models of mixed-stock fishery effect to develop fishery regulation package consistent with conservation objectives for multiple stocks. Includes Pacific salmon Commission, Pacific Fishery managemenet Council, North of falcon, and local comanager meetings.						Chinook, coho, steelhead, chum, pink	underway	Annual planning	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	Annual planning	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	Annual planning	Very difficult to compute enire amount for west coast planning or to separate portion attributable to Snohomish chinook	ongoing	WDFW, Tulalip		[WDFW SHOULD BE ABLE TO PROVIDE]	
	Harvest, Hatchery	Marking	Adipose fin removal	Remove adipose fins from chinook and coho at Tulalip and Wallace River hatcheries before release (note, currently, cost only includes Tulalip)						Chinook, coho	underway	Adipose fin removal	$60,000	Adipose fin removal	$60,000	Adipose fin removal	$60,000	ongoing	Tulalip	$180,000	$48,750	

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	Habitat, Hatchery	Monitoring	Assessment of ecological interactions between hatchery and wild fish	Sample estuary habitats to monitor presence, size and growth rates of hatchery and wild fish to assess interactions						Chinook, coho, steelhead	underway	Sampling and data analysis	$150,000	Sampling and data analysis	$150,000	Sampling and data analysis	$150,000	ongoing	Tulalip	$450,000	$60,000	
	Harvest, Hatchery	Marking	Coded-wire tagging	Acquire and apply 200,000 CWTs to chinook and 50,000 CWTs to coho at Tulalip Hatchery and 450,000 CWTs to chinook and 50,000 to coho at Wallace River. (Note. Listed cost only inlcudes Tulalip)						Chinook, coho	underway	Tagging	$40,000	Tagging	$40,000	Tagging	$40,000	ongoing	Tulalip	$120,000	$250,000	
	Harvest, Hatchery	Monitoring	Fishery monitoring	Sample tribal harvest for scales, oroltihs, and coded-wire tags to assess hatchery contribution, age distribution, exploitation rates, size of fish caught, etc.						Chinook	Underway	Tribal fishery sampling	$60,000	Tribal fishery sampling	$60,000	Tribal fishery sampling	$60,000	ongoing	Tulalip	$180,000		
	Harvest, Hatchery	Monitoring	Recreational fishery monitoring	Sample recreational harvest for coded-wire tags to assess hatchery contribution and exploitation rate s						Chinook, coho	Underway	base recreational fishery sampling	[MAY BE ABLE TO GET THIS FROM WDFW]	base recreational fishery sampling	[MAY BE ABLE TO GET THIS FROM WDFW]	base recreational fishery sampling	[MAY BE ABLE TO GET THIS FROM WDFW]		WDFW			
	Harvest, Hatchery	Monitoring	Selective fishery monitoring	Sample selective fisheries in areas 8-2 and Skykomish river to estimate harvest and encounters						Chinook	Underway	Selective fishery sampling	[WDFW SHOULD BE ABLE TO PROVIDE]	Selective fishery sampling	[WDFW SHOULD BE ABLE TO PROVIDE]	Selective fishery sampling	[WDFW SHOULD BE ABLE TO PROVIDE]		WDFW		WDFW, in kind contributions from others	
07-NC-025	H-integration	Basin Planning	Develop Steelhead Recovery Plan with NOAA.	Work with NOAA to develop the local input, local site and project selection and prioritization for the Steelhead Recovery Plan.	Across all limiting factors.		Recovery planning.			Steelhead	Under development	Recovery plan development.	$50,000	N/a	$0	N/a	$0	2010	NOAA with Tulalip Tribes, WDFW, SC, KC	$50,000	Coastal salmon recoevery grant	
07-MON-01	H-integration	Validation Monitoring	Baseline monitoring of Juvenile Fish Use of Nearshore and Coastal Streams	Continue coordinated monitoring of juvenile fish use of nearshore and coastal streams.	Across all limiting factors.		Monitoring - develop monitoring plan.			Chinook	Implementation	Implementation	$60,000	Implementation	$60,000	Implementation	$60,000	41274	Tulalip Tribes	$180,000	Hatchery Reform, (expansion to CWT reading depends on new funds to be requested from US)	
07-MON-02	H-integration	Status and Trend Monitoring	Monitoring Fish (Smolt Traps)	Continue coordinated monitoring of fish in the basin, particularly monitoring juvenile fish using the smolt traps on the Skykomish and Snoqualmie Rivers.	Across all limiting factors.		Monitoring - develop monitoring plan.			Chinook	Implementation	Implementation	$250,000	Implementation	$250,000	Implementation	$250,000	ongoing	Tulalip Tribes	$750,000		
07-MON-03	H-integration	Validation Monitoring	Whidbey Basin Juvenile Salmon Origins	Genetic identification of distribution of stocks using Whidgey Basin reaches.																		
07-MON-04	H-integration	Validation Monitoring	Whidbey Basin Nearshore Marine Juvenile Salmonid Distribution	Assessment of distribution of outmigrating fish																		
	H-integration	Monitoring	Estimate magnitude and spatial distribution of natural spawning escapement	Assess spawner escapement throughout the system using a combination of foot, boat, and aerial surveys and application of standard methods.						Chinook, coho steelhead, chum, pink	underway	Natural escapement surveys and data analysis	[NEED FROM WDFW]	Natural escapement surveys and data analysis	[NEED FROM WDFW]	Natural escapement surveys and data analysis	[NEED FROM WDFW]	ongoing	WDFW			
	H-integration	Monitoring		Assess abundance and timing of juenile outmigrants in the lower Skykomish and Snoqualmie Rivers						Chinook, coho, steelhead	underway	Sampling and data analysis	$150,000	Sampling and data analysis	$150,000	Sampling and data analysis	$150,000		Tulalip			
	H-integration	Monitoring	Tulalip Stock Assessment Laboratory	Read otoliths and scales to determine age and origin of fish sampled in fisheries, and escapement						Chinook	Underway, Seeking expansion to CWT reading in 2011	Read scales and otoliths	$25,000	Read scales and otoliths	$75,000	Read scales and otoliths	$75,000	ongoing	Tulalip			

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07-MPR-039	Restoration Projects	Mainstem-primary Restoration	Weiss Creek (Lower) Restoration Project Maintenance - Phase 2	Maintain an existing habitat restoration project, installed in 1999.								12/31/2012	Wild Fish Conservancy			
07-MPR-182	Restoration Projects	Mainstem-primary Restoration	Stillwater Floodplain Restoration - Riparian	Mainstem-primary - Stillwater Floodplain Restoration to restore 25 ac riparian habitat	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (25 Acres)	25 acres riparian	Chinook	Construction Completed	6/30/2010	Stilly Snohomish Fisheries Enhancement Task Force	$150,000	$150,000	King Conservation District, Seattle City Light, Task Force, WDFW Volunteer and Cooperative Projects Program
07-MPR-213	Restoration Projects	Mainstem-primary Restoration	Tychman Slough Assessment and Design	Enhance edge habitat complexity and riparian forests	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Riparian	Current Project Status: Feasibility Pending (1)	Feasibility	Chinook	Feasibility Pending	12/31/2012	Stilly Snohomish Fisheries Enhancement Task Force	$99,000	$81,303	Task Force, SRFB
07-MPR-313	Restoration Projects	Mainstem-primary Restoration	Lower Snoqualmie Restoration - Duvall Reach Riparian Awareness	Enhance degraded floodplain riparian habitat conditions along a one-mile section of the lower Snoqualmie River on public land owned by the City of Duvall.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (15 acres)	15 acres riparian	Chinook	Design Completed, Monitoring	10/1/2008	Stilly Snohomish Fisheries Enhancement Task Force	$82,200	$82,200	City of Duvall, King Conservation District
07-MPR-368	Restoration Projects	Mainstem-primary Restoration	Middle Pilchuck Riparian Enhancement - Sor	Enhance edge habitat using large wood placement. Increase riparian vegetation where it is lacking. Enhance existing riparian cover via understory planting.	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Most pressing need	Riparian	Activity Type - Riaparian Habitat Planting (1 acre), Activity Type - Mainstem: Instream (200 feet wood placement)	1 acre riparian 200 feet edge habitat	Chinook	Construction Completed	12/31/2012	Stilly Snohomish Fisheries Enhancement Task Force	$100,000		
07-MPR-374	Restoration Projects	Mainstem-primary Restoration	Middle Pilchuck Restoration - Hendrickson	Enhance salmonid habitat in the Pilchuck River by placing large wood following a bioengineering design and riparian planting. Invasive weed control was completed and a riparian buffer was established. The riparian buffer, planted by community volunteers and students from a local school, consists of trees	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow	Most pressing need	Riparian, Instream	Activity Type - Instream Habitat: Channel structure - Large woody debris (200 Feet), Activity Type - Riparian Habitat: Plant removal/ control (0.30 Acres), Activity Type - Riparian Habitat: Planting (1 Acres)	200 feet LWD 1 acres riparian	Chinook	Construction Completed	9/30/2010	Stilly Snohomish Fisheries Enhancement Task Force	$75,000	$75,000	NFWF, Task Force, Landowner
07-USR-046	Restoration Projects	Urban Streams Restoration	Cemetery Creek Restoration Project	Control invasive blackberry along 3 acres of Cemetery Creek near Snohomish and re-plant	Degraded Habitat - Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (3 Acres)	3 acres riparian	Coho	Design Completed	12/31/2012	Stilly Snohomish Fisheries Enhancement Task Force	$60,000		Sustainable Fisheries Fdn
07-HRA-029	Restoration Projects	Headwaters Above Falls and Dam	Wetland Enhancement and Community Outreach – North Bend	Improve fish passage by assisting with culvert replacement, recruit community volunteers to enhance riparian forests by planting native plants across 1 acre, engage up to 10 families during project implementation, organize one	Degraded Habitat-Fish Passage	Need	Riparian, Wetland	Activity Type - Fish Passage: Rocked ford - road stream crossing (1 Each), Habitat Type: Riparian (1)	1 Culvert 0.1 acres	Cutthroat	Feasibility Completed, Design Completed, Permitting Completed	12/30/2011	Stilly Snohomish Fisheries Enhancement Task Force	$41,445		
07-MPR-306	Restoration Projects	Mainstem-primary Restoration	Skykomish Braided Reach Restoration Phase I	Implement a suite of projects (flood fencing, apex jam augmentation, and riparian plantings) to improve salmonid refuge and side channel habitat along the Skykomish River, from Gold Bar to three miles downstream, through the restoration of dysfunctional reach processes, (gravel aggradation and scour, woody debris recruitment, and side channel abandonment).	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Instream	Activity Type - Instream Habitat: Channel reconfiguration and connectivity (2000 Feet), Activity Type - Instream (3 LWD)	2,000 feet channel 3 log jams	Chinook	Feasibility Completed, Design Completed, Construction Completed	12/30/2011	Snohomish County of	$300,000	$300,000	SRFB, Natural Resources Damage Assessment, Snohomish County
07-MPR-331	Restoration Projects	Mainstem-primary Restoration	Full Circle Farm Snoqualmie River Riparian Restoration	2.5 acres of planting along the Snoqualmie River	Degraded Habitat-Riparian Areas and LWD Recruitment	Pressing need	Riparian	Activity Type - Riparian Habitat: Planting (2.50 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (2.50 Acres)	2.5 acres riparian	Chinook	Construction Completed	12/1/2010	Stewardship Partners			
07-MPR-332	Restoration Projects	Mainstem-primary Restoration	Jubilee Farm Snoqualmie River Riparian Restoration					Activity Type - Riparian Habitat: Planting (2 Acres), Snohomish River Basin Mainstem: Restored Riparian Habitat: Riparian planting (LC) (2 Acres)				12/1/2010	Stewardship Partners			
07-NR-010	Restoration Projects	Nearshore Restoration	Japanese Gulch Fish Passage Improvements	Recreate a fish passable stream system that feeds into Possession Sound by addressing numerous fish passage blockages along Japanese Gulch Creek.	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Flow	Pressing need	Instream	Activity Type - Fish Passage: Fish ladder Installed / improved (3 Each)	3 barriers removed	Chum, Coho, Bull Trout, Rainbow, Cutthroat	Feasibility Pending, Feasibility Completed, Design Completed, Construction Completed	3/16/2015	Mukilteo City of	$2,500,000		
07-MPR-192	Restoration Projects	Mainstem-primary Restoration	Lower Skykomish River Restoration Assessment and Design	Identify and immplement projects that will restore and protect habitat (e.g.: riparian, edge, off-channel habitat) in the Lower Reach Skykomish.	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Most pressing need	Riparian, Rivers/Streams/Shoreline		Feasibility	Chinook	Feasibility completed	12/31/2015	Snohomish County of	$80,000	$80,000	Snohomish County