

## Green/Duwamish and Central Puget Sound Watersheds 2010 Three-Year Work Plan

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### Watershed Questions to Answer for Three-Year Work Programs

*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?*

- Policy MS-1 in the WRIA 9 habitat plan recommends distributing funding to 40% in the transition zone, 30% for rearing habitat, and 30% for spawning habitats. Rearing habitat is provided in the Middle Green River, Lower Green River, Duwamish River and Marine Nearshore. Spawning habitat is provided in the Middle Green River and upper Lower Green River.
- Efforts in the transition zone have focused on North Wind's Weir acquisition and restoration. The project was completed in 2009 and created over two acres of shallow water habitat. An initial monitoring effort at the site by Dr. Jeff Cordell at the University of Washington School of Aquatic and Fishery Science has found that "a surprising diversity and number of fish... and that most of the chinook and coho lavaged also had prey in their stomachs".
- Current efforts in the transition zone are focused on Duwamish Gardens, located almost immediately upstream of North Wind's Weir at Rivermile 6.9. The 2.1 acre parcel was acquired in 2009, and the City of Tukwila is currently submitting a SRFB grant for design and permitting of a restoration at the site. The project is intended to increase the quantity and quality of transition zone habitat by creating shallow water habitat, emergent marsh and upland riparian vegetation.
- The goal for the Duwamish sub-watershed by the end of year 5 (2010) is restoration of 10 acres of shallow water habitat. The combined restoration of North Wind's Weir and proposed work at Duwamish Gardens will not still meet this intended goal. The difficulty and expense of acquiring property in the Duwamish is proving delay restoration efforts. One way that this has been addressed has been to fund a landowner willingness outreach in this area using 2007 Puget Sound Acquisition and Restoration Capacity Funding. Several landowners in the area have expressed an interest in further discussions however, the funding for acquisitions is currently not available.
- Projects previously begun in the lower Green as acquisition or feasibility are being supported through design, permitting and construction (e.g., Mill Creek – Kent, Mill Creek 5 K Wetlands - Auburn). SRFB and King Conservation District (KCD) grants in 2009 provided the local project sponsor match towards restoration at Riverview Park. The project will create a new side-channel area, placement of large woody debris, spawning gravel, and riparian vegetation. The Riverview Park project is located immediately across from the Mill Creek-Kent project with the goal of connecting freshwater instream habitat to increase the range and distribution of salmon.
- An evaluation of previous efforts determined that there had been a lack of effort in the nearshore. Recent efforts have been to increase the amount of protection and acquisition

in the nearshore for juvenile rearing and spawning fish foraging, including acquisitions at Point Heyer and proposed creosote bulkhead removal at Piner Point. An update to the previous 3-year workplan is the addition of four projects in Des Moines and Federal Way. The project proponents are moving forward with the projects and these have been added to the workplan in order to coordinate and support the projects. Current PSAR and NEP grants are being used to fund staff time for a nearshore ecologist to coordinate and provide support to the project sponsors.

- Four projects currently being designed and constructed through the King County Flood Control Zone District (KCFCZD) are included, although the project is completely funded through the district. Coordination with WRIA 9 staff is ensuring that the projects include benefits to salmon. A new project added to the workplan is acquisition and restoration at the Rosso Nursery site (LG-9) between RM 20.8 and 20. The King County Flood Control District is interested in acquiring the site for the planting of trees and placement of large woody debris as mitigation of levee projects. The opportunity also exists to remove fill, create off-channel refugium and plant wetland species however, outside funding would be needed for this additional work.
- Recent flood events and concerns about Howard Hansen dam have accelerated levee setback and repair projects, particularly within Auburn, Kent, Renton and Tukwila. This work has included removal of vegetation, which provides stream shading.
- Our goal is to develop a strategy for monitoring project effectiveness for the mainstem river and nearshore projects. Once this strategy is reviewed and adopted by the Implementation Technical Committee and Forum, monitoring will be coordinated with other organizations and funding pursued.

*What is the status of actions underway per your recovery plan chapter? Is this on pace with the goals of your recovery plan?*

We are behind our 5-year benchmark for implementing transition zone projects. This is primarily due to: lack of funding, property expense and availability, and inability to compete against private sector offers. Otherwise, efforts have made and are making progress on main stem levee setback projects, and marine nearshore acquisition and restoration projects. Major projects in the upper watershed sponsored by Tacoma Public Utilities (TPU) and the Army Corp of Engineers (ACOE) are also making progress.

*What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals? Progress can be tracked in terms of 'not started, little progress, some progress or complete' or in more detail if you chose.*

#### Habitat Restoration and Protection

We have adopted a project prioritization and sequencing methodology that was used to evaluate all of the WRIA 9 priority projects. The highest priority projects from this effort will be the focus of future restoration and acquisition efforts. As current projects on the 3-Year Workplan are completed, this prioritized list is being used to draw projects for addition to the workplan.

### H-Integration Status in WRIA 9

The WRIA 9 Forum of Local Governments approved the creation of an Implementation Technical Committee (ITC) in January 2007 and the ITC has recently begun meeting again following a year-long hiatus. Importantly, the ITC includes representatives from both co-managers (Washington State Department of Fish and Wildlife and the Muckleshoot Indian Tribe), as well Tacoma Public Utilities. All four “H’s” are therefore represented at the WRIA 9 table for the first time since work began on developing an ecosystem approach to recovering Chinook salmon in the Green-Duwamish system. A sub group of the ITC has been engaged since October 2007 in addressing H-integration, specifically the “6-Steps” and the H-integration tables. At this point (May 2009) drafts of the first 3 steps of H-integration have been completed for WRIA 9. A significant ITC Work Program task for 2010 is developing an H-integration strategy for WRIA 9. Consistent with the Puget Sound regional H-integration approach, WRIA 9 will address goals, objectives, and steps for advancing H-integration as follows:

#### ***Goals of H-Integration Process***

- Develop integrated strategies and suites of actions among the H-sectors that are consistent with predictions of moving salmon populations towards short, moderate, and long-term recovery goals
- Help decision-makers clearly see the interaction and cumulative effects of actions among the H-sectors

#### ***Six Steps in Advancing H-Integration...***

We are following the six step H-integration process and are almost complete with the fifth step of documenting the rationale, implementation steps and expected outcomes. This step is expected to be completed in December 2010 when the WRIA 9 Implementation Technical Committee. Step 6, building and implementing a verification, effectiveness and accountability system is dependent upon additional funding.

*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?*

- The top implementation priorities in our recovery plan are focusing our efforts at the appropriate ecological scale. For the riverine environment, we are attempting to coordinate efforts at a larger scale in order to work at a scale to improve the habitat conditions. In the nearshore environment, the drift cell is being used as the appropriate unit for work.
- We are working with project sponsors to identify projects that are within our priority project list and then assisting them with developing a funding strategy so that the appropriate grants can be pursued. This ensures that projects move rapidly towards completion and do not risk losing existing grants while the required match is being sought.

*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 and why?*

- Our focus has changed slightly based upon the project prioritization process by the Implementation Technical Committee in winter 2008. As currently active projects are completed, projects that rated high in the process will be added to future workplans.
- Four projects currently being designed and constructed through the King County Flood Control Zone District are included, although the project is completely funded through the district. Coordination with WRIA 9 staff is ensuring that the projects include benefits to salmon.
- Recent flood events and concerns about Howard Hansen dam have accelerated levee setback and repair projects, particularly within Auburn, Kent, Renton and Tukwila. The repair of levees and removal of all vegetation on the levees is proposed to be mitigated by the planting of vegetation elsewhere in the sub-watershed. However, this results in a net decline of riparian vegetation and reduced quality of habitat.
- King County policies regarding salmon restoration projects in the Agricultural Production Districts is impeding restoration opportunities in the Lower and Middle Green. Unless these issues can be resolved, the Habitat Plan goals for restoring off-channel habitat and levee setbacks will not be met.

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

Based upon WDFW adult return-estimates of the Green River (Duwamish) Chinook spawning population, the recent total escapement appears to be consistent with estimates dating back to 1986. The total escapement for recent years is estimated to be 4,089 in 2005, 10,157 in 2006, and 7,186 in 2007. The range from 1986 to present is 1,840 (1982) to 21,402 (2001). See: [http://wdfw.wa.gov/webmaps/salmonscape/sasi/full\\_stock\\_rpts/1160.pdf](http://wdfw.wa.gov/webmaps/salmonscape/sasi/full_stock_rpts/1160.pdf).

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

- The continuing challenge of the lack of funding and capacity, for both the lead entity and project sponsors, continues to limit salmon habitat recovery efforts in the region. In addition, there is very limited funding for monitoring efforts, which is the key to adaptive management.
- Resolving the conflict with constructing restoration projects within agricultural areas is not unique to the Green River and this issue should be addressed state-wide.
- In addition, the increased design criteria for levee construction and requirement for vegetation removal by the Army Corps of Engineers is resulting in a decline in salmon habitat in the Lower Green River sub-watershed.



**Three-Year Watershed Implementation Priorities - Puget Sound Salmon Recovery Plan  
WRIA 9 Habitat Work Schedule for Green/Duwamish and Central Puget Sound Watershed**

Project Name	Priority Tier	Project Description	Likely sponsor	Total cost of first three years/phases	Local Share	SRFB/PSAR	Source of Funds	Primary Limiting Factors	Habitat Type	Activity Type	Primary Species	Secondary Species	2011		2012		2013		Likely end date				
													Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost					
<b>Capital Projects</b>																							
<b>Duwamish Subwatershed: Enlarge Duwamish estuarine transition zone habitat by expanding shallow water and slow water areas, and expand/enhance the estuary, particularly vegetated shallow subtidal and intertidal habitats and brackish marshes. VSP parameters for this subwatershed focus on productivity.</b>																							
<b>North Wind's Weir (Project, DUW-10) COMPLETED!</b>	1	Shallow Water Habitat Rehabilitation at RM 6.3: Create two acres of off-channel, shallow water habitat in the transition zone	King County	\$3,200,000	\$1,974,000	950000 (2007)	King County \$325,000; US ACOE \$1,600,000; KCD \$325,000	Reduced habitat capacity. Competition with Hatchery origin juveniles.	Transitions zone estuary.	Shallow water habitat restoration.	Chinook	Steelhead, Bull trout, Orca	Construction	\$1,975,000	Monitoring/ Adaptive Management	\$85,000	Monitoring/ Adaptive Management	\$85,000	2009				
<b>Riverbend Hill (Project DUW-6)</b>	1	Reshape and revegetate the riverbank along South 115th Street at river miles 7.2 to 6.9, right bank, including relocation of South 115th. Set back the revetment where possible. The project would include placement of large woody debris and relocation of native vegetation.	Tukwila	Habitat project costs to be determined		Unknown at this time	CFT (2008, submitted)	Reduced habitat capacity. Competition with Hatchery origin juveniles.	Transitions zone estuary.	Shallow water habitat restoration.	Chinook	Steelhead, Bull Trout, Orca	Design, engineering.		Permitting		Construction		2011				
<b>Duwamish Gardens Shallow Water Habitat Creation at RM 7.0 Project DUW-7) Acquisition Completed!</b>	1	Acquire land within transition zone in order to create shallow-water habitat.	Tukwila	\$2,846,000	\$1,000,000	\$1,500,000		Reduced habitat capacity. Competition with Hatchery origin juveniles.	Transitions zone estuary.	Shallow water habitat restoration.	Chinook	Steelhead, Bull trout, Orca	Feasibility	WDFW Engineering Assistance; PSAR 5% Capacity Funding	Design and permitting	\$300,000	Construction	\$2,200,000	2012				
<b>Duwamish Gardens Shallow Water Habitat Creation at RM 7.0 Project DUW-7) Restoration in design phase</b>		Restore estuarine transition zone habitat to provide critical habitat for juvenile salmon in the Duwamish Transition Zone.	Tukwila				Proposed SRFB 2010 \$127,000; KCD \$150,000 (2010),																
<b>Riverton Creek Flaggate Removal and Restoration</b>	1	Removed flaggates and restore an open water connection of Riverton Creek to the Duwamish River. This will restore and enhance salmonid habitat within Riverton Creek and improve its connection to the Duwamish River using natural processes and habitat elements to facilitate upstream migration and to provide	Tukwila	Feasibility phase: \$50,000	\$7,500	\$42,500	Tukwila \$7500	Reduced habitat capacity. Competition with Hatchery origin juveniles.	Transitions zone estuary.	Fish passage	Chinook	Coho	Design, engineering.	\$300,000	Construction	\$750,000	Monitoring/ Adaptive Management	\$100,000	2013				
<b>Subtotals</b>				<b>\$3,250,000</b>	<b>\$1,981,500</b>	<b>\$992,500</b>							<b>\$1,975,000</b>			<b>\$85,000</b>		<b>\$85,000</b>					
<b>Lower Green River Subwatershed: Protect/restore refuge, habitat complexity and connectivity for juvenile salmon over range of flow conditions and variety of locations. VSP parameters for this subwatershed focus on productivity.</b>																							
<b>Riverview Park Restoration (Project LG-7) Design complete, construction planned for 2011</b>	1	Provide summer rearing habitat and high flow winter refuge through excavation of an off-channel area combined with placement of large woody debris and	Kent	\$3,500,000	KCD \$40,000 (2006) PENDING: \$50,000, PENDING: Kent \$617,000	\$150,000 (2006); 500,000 (2009);	ACOE (\$2,000,000) KCD (\$500,000), Kent	Altered stream flow, channel structure & complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout, Orca	construction	Funded	Monitoring/ Adaptive Management	\$200,000	Monitoring & Adaptive Management	\$50,000	2013				
<b>Riverside Estates Levee Setback Project LG-1)</b>	1	Levee setback, revegetation, benching, LWD.	King County	\$3,038,983			KCFCZD	Altered stream flow, channel structure & complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout, Orca	Construction	\$290,268	Construction	\$447,637	Construction	\$2,301,078	2011				
<b>Rosso Nursery Off-Channel Rehabilitation and Riparian Restoration Between RM 20.8 and 20 (LG-9)</b>	1	Acquire property and rehabilitate habitat by constructing an outlet at RM 20.1. Actions would include removing fill, excavating off-channel flood refugia for juvenile rearing habitat, and planting native wetland and riparian vegetation.	KCFCZD,	\$3,500,000	KCFCZD, CFT/Parks Levee, WWRP,		KCFCZD	Altered stream flow, channel structure & complexity, riparian areas, LWD.	Intream		Chinook	Steelhead, Bull Trout, Orca	Design	\$300,000	Design and permitting	\$300,000	Construction	\$2,000,000	2013				
<b>Downey Farmstead Restoration Project (formerly Lower Green River Acquisition) (Project LG-7)</b>	1	Acquire three properties immediately upstream of the Mullen Slough confluence and demolish buildings on one. A feasibility study will determine options for modifying Frager Road, reconnection of the upland to the river, and restoration of riparian habitat. Also acquire the Koch property on the left bank downstream of Riverview Park.	Kent (lead), King County, Green River Flood Control Zone District	\$1,200,000		\$975,085 (2003)	Kent \$180,000; King County \$25,000; Green River Flood Control Zone District \$25,000	Altered stream flow, channel structure & complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout, Orca	Final design and permitting	\$300,000	Construction	\$2,500,000	Monitoring	\$20,000					

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<b>Capital Projects</b>																							
Desimone Levee Phases 1-4 (Project LG-13)	1	Levee setback, revegetation, benching, LWD.	King County	\$2,844,256			KCFCZD	Altered stream flow, channel structure& complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout,Orca	Design	\$80,607	Engineering, design, permitting.	\$898,673	Construction	\$1,864,976	2011				
Mill Creek Floodplain Wetland and Off-Channel Habitat Rehabilitation (Project LG-7)	2	Restore lower 0.3 miles of Mill Creek and adjacent segments of currently armored riverbank.	Kent	\$1,500,000	no match required	\$100,000 (2006), \$200,000 (proposed 2010)	APPROVED: CFT: \$100,000 (2005 or 2006); City of Kent: \$100,000 (2005 or 2006)	Altered stream flow, channel structure& complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout,Orca	Complete Design & Permitting	\$100,000	Construct Project	\$1,400,000	Monitoring & Adaptive Management		2009				
Mill Creek - Wetland 5K	2	Restore the lower portion of Mill Creek - Wetland 5K, improve riparian vegetation	Auburn	\$3,500,000	\$1,210,000			Altered stream flow, channel structure& complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout,Orca	Construction	\$700,000	Monitoring	\$20,000	Monitoring	\$200,000	2013				
Mainstem Maintenance (Project LG 10)	1	Boeing Levee Setback and Restoration between RM 18 and 17.1 to enable extensive habitat rehabilitation.	Kent & King County	\$2,733,347			GRFCZD, KCD, Kent, ACOE	Altered stream flow, channel structure& complexity, riparian areas, LWD.	Intream	Instream flow	Chinook	Steelhead, Bull Trout,Orca	Design Restoration Construction, Permitting	\$150,000	Construction	\$1,075,211	Complete Construction	\$1,658,136	2012				
<b>Subtotals</b>				<b>\$11,518,586</b>	<b>\$3,781,256</b>	<b>\$1,225,085</b>								<b>\$1,920,875</b>		<b>\$6,841,521</b>		<b>\$8,094,190</b>					
<b>Nearshore Subwatershed: Protect, restore, or rehabilitate: sediment transport processes by reconnecting sediment sources and removing shoreline armoring; pocket estuaries, lagoons, and spits; and sediment quality, particularly in Elliott Bay. VSP parameters for this subwatershed focus on productivity.</b>																							
Pier 90 Shallow Water Habitat Rehabilitation (NS-1)	1	Protect and expand that area of shallow water habitat. The land comprising shoreline east of Pier 90 would need to be purchased. The riprap and fill would be moved in order to create additional shallow water habitat and the shoreline planted with riparian vegetation.	City of Seattle	\$2,500,000				Loss of habitat,	Nearshore beach.	Nearshore.	Chinook	Orca, forage fish	Feasibility, Technical Design	\$500,000	Design and permitting	\$750,000	Construction	1,250,000	2015				
Myrtle Edwards Park Small Pocket Beaches/Shallow Water Habitat Rehabilitation (NS-2)	1	Create pocket beaches in Myrtle Edwards Park on Elliott Bay in Seattle. Riprap armoring would be removed and the slopes would be graded back to create natural slopes. Pocket beaches have a mix of sediments placed on them. Riparian area would be planted with vegetation.	City of Seattle	\$6,000,000				Loss of habitat,	Nearshore beach.	Nearshore.	Chinook	Orca, forage fish	Feasibility, Technical Design	\$500,000	Design and permitting	\$750,000	Construction	\$4,000,000	2015				
Beaconsfield-On-The-Sound (project NS-11)	1	Feeder Bluff Protection and Restoration of Beach Feeding Processes in Normandy Park: Purchase and restore one of the last major privately held undeveloped feeder bluffs along the mainland marine shoreline.	Normandy Park	\$500,000	\$70,500	\$50,873 (2005-2006); \$100,000 (2006); \$380,739 (2007)	Cascade Land Conservancy \$2,977 (2005), KCD \$64,500 (2006); Normandy Park \$6,000 (2005), CFT (2008 submitted)	Loss of habitat,	Nearshore beach.	Nearshore.	Chinook	Orca, forage fish	Feasibility, Technical Design	\$100,000	Acquisition	\$150,000	Construction	\$250,000					
Piner Point Restoration Bulkhead Removal (Project NS-17) - Restoration	1	Remove creosote bulkhead,	King County	\$225,000	225,000	0																	
<b>Dockton Heights</b>																							
Burien Seahurst Park Shoreline Restoration, Phase II (Project NS-5) - Design Completed, proposed for construction in 2011, funding secured	1	Continue shoreline restoration actions conducted in southern portion of Seahurst Park in Burien by removing a portion of shoreline armoring in the central area of the park, restoring natural beach slopes, and adding	Burien		\$150,000		Burien, IAC, PSAW, KCD \$150,000 (2007)	Loss of habitat,	Nearshore beach.	Nearshore.	Chinook	Orca, forage fish			Feasibility	\$40,000	Design, engineering, permitting	\$100,000	Const. in 2011				
Dockton Road Removal and Feeder Bluff Restoration on Vashon Island (Project NS-19)	1	Remove road and intertidal fill. Acquire upland properties if threatened by erosion. Project depends on Roads deciding to abandon the road.	King County Roads Division					Loss of habitat,	Nearshore embayment.	Nearshore.	Chinook	Orca, forage fish	Feasibility, Technical Design										

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<b>Capital Projects</b>																							
Ellisport Creek Fish Passage Improvements on Vashon Island (proj NS-9 )	2	Improve fish passage, beach condition, and cleanup hydrocarbons. This is a two phase project: 1) acquisition and 2) cleanup.	King County and/or Vashon-Maury Island Land Trust	Acquisition \$20,000 Cleanup \$500,000 Culvert replacement \$500,000				Altered stream flow.	Instream, riparian.	Fish passage.	Chinook	Orca, forage fish	Acquisition	\$20,000	Cleanup	\$500,000	Culvert Removal	\$500,000	2011				
Evaluate How to Improve Habitat Value of Raab's Lagoon/Pocket Estuary on Maury Island (Project NS-14)	3	Work with property owner and neighbors to identify ways to improve habitat.	King County	Costs not available				Loss of habitat,	Nearshore embayment.	Nearshore.	Chinook	Orca, forage fish	Feasibility, Technical Design										
<b>Marine Nearshore Acquisition Capital Projects</b>																	Weed removal and revegetation	COST					
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Dockton (Project NS-17 )	2	Protect sites with high habitat resource values - Dockton	King County	Adequate funding secured			Conservation Futures, NOAA	Loss of habitat,	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition						2008				
Functioning Nearshore Habitat Protection - South Shoreline (Project NS -11)	1	Protect sites with high habitat resource values - Southwest Drift Cell - South Shoreline	Normandy Park	\$7,000,000	\$2,500,000			Loss of habitat,	Nearshore beach.	Acquisition	Chinook	Orca, forage fish	Feasibility	\$125,000	Acquisition	\$2,000,000	Acquisition	\$4,500,000	2014				
								Loss of habitat,	Nearshore beach.		Chinook	Orca, forage fish											
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Inspiration Pt. (Project NS-17)	2	Protect sites with high habitat resource values - Inspiration Pt.	King County	\$500,000			Conservation Futures, NOAA	Loss of habitat,	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition						2008				
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Neill Pt. (Project NS-17)	2	Protect sites with high habitat resource values - Neill Pt.	King County	\$500,000			Conservation Futures, NOAA	Loss of habitat	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition										
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Rabb's Lagoon (Project NS-17)	3	Protect sites with high habitat resource values - Rabb's Lagoon	King County				Conservation Futures, NOAA	Loss of habitat	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition										
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Piner Pt. (Project NS-17) Acquisition Completed!	2	Protect sites with high habitat resource values - Piner Pt.	King County	Adequate funding secured; need \$100,000 for bulkhead removal			SRFB	Loss of habitat	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition										
Functioning Nearshore Habitat Protection on Vashon/Maury Island-Northilla (Project NS-17)	3	Protect sites with high habitat resource values - Northilla	King County	Adequate funding secured			Conservation Futures, NOAA	Loss of habitat	Nearshore beach.	Land acquired	Chinook	Orca, forage fish	Acquisition										
Functioning Nearshore Habitat Protection on Vashon/Maury Island- Pt. Hever (Project NS-17 )	1	Protect sites with high habitat resource values - Pt. Hever Drift Cell	King County	\$2,400,000	\$1,200,000	250000 (2007)	KC SWM; CFT (2008, submitted); RCO ALEA (2008 , 2010 submitted; KC Park Levy (2008, 2010 submitted)	Loss of habitat,	Nearshore beach.	Land acquired	Chinook	Orca	Acquisition	\$1,500,000	Acquisition	\$1,500,000	Acquisition	\$1,500,000	2008				
													Acquisition cost determined		Acquisition								

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													Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost				
<b>Capital Projects</b>																						
				\$4,636,000	\$220,500	\$531,612								\$2,745,000		\$2,190,000		\$6,100,000				
<p><b>Middle Green River Subwatershed:</b> Protect/restore habitat that provides refuge and habitat complexity for juvenile salmon over a range of flow conditions and a variety of locations; enhance natural sediment recruitment by reconnecting sediment sources to river; protect and restore spawning and rearing habitat in lower Newaukum and Soos Creeks; maintain regional groundwater recharge and base flows to mainstem Green River.</p>																						
<b>Middle Green River Reach (Projects MG 12, MG-13, MG-14, MG-15, MG-16)</b>	<b>1</b>	Reconnect floodplain area of the Green River allowing natural processes to be re-established including the creation of side-channel habitat and the	King County																			
<b>Porter Levee Setback and Floodplain Reconnection (Project MG-17)</b>		Remove (modify) existing levee to facilitate river connection to floodplain. LWD placement and riparian revegetation would be included	King County	\$1,500,000			\$1,000,000 KCD; \$500,000 SWM	Loss of Habitat	Floodplain, riparian	Riparian, intream flow	Chinook	Steelhead	Design & Permitting	\$250,000	Construction	\$1,000,000	Construction	\$250,000	2014			
<b>Newaukum Creek Mouth Restoration Between Creek Miles 0.0 and 4.3 (Project MG-8) Completed!</b>	<b>1</b>	Place large woody debris and plant native trees along the lower 4.3 miles of the creek, and reconfigure the lower 1,800 feet of the creek near the mouth.	King County	\$1,175,000		\$788,581 (2004)	King County, ACOE	Riparian areas and LWD recruitment	Intream, riparian	Riparian, intream flow	Chinook	Steelhead, bull trout	Design & Permitting	\$100,000	Construction	\$1,075,000	Monitoring/Adaptive Management					
<b>Newaukum Creek Restoration Between Creek Miles 0.0 and 14.3 Both Banks (Project MG-6)</b>		Restore process-based ecological functions that include wetland and riparian restoration along Newaukum Creek (Enumclaw Plateau).	King County	\$300,000			\$200,000 KCD; \$100,000 SWM	Loss of Habitat	Riparian	Riparian, intream flow	Chinook	Steelhead	Construction	\$100,000	Construction	\$100,000	Construction	\$100,000	Ongoing			
<b>Promote the Planting of Native Trees (Program WW-5)</b>		Plant native trees in the riparian zone/floodplain of the Green River and Soos Creek	King County	\$450,000			\$300,000 KCD; \$150,000 SWM	Loss of Habitat	Riparian	Riparian	Chinook	Steelhead	Construction	\$150,000	Construction	\$150,000	Construction	\$150,000	Ongoing			
<b>Setback and Removal of Fenster and Pautzke Levees to Reconnect the Floodplain and Allow Channel Migration near RM 32 (Project MG-18) Completed!</b>	<b>1</b>	Fenster Levee Phase IA - Remove levees, lower the elevation of terraces and construct engineered logjams to reinstate floodplain connectivity and channel migration.	Auburn, King County	\$1,400,000		\$675,900 (2005-2006)	Green River Flood Control Zone District \$90,000; City of Auburn \$33,000	Channel structure/complexity	Intream, riparian	Riparian, intream flow	Chinook	Steelhead, bull trout	Construction	\$1,225,000	Monitoring/Adaptive Management	\$75,000	Monitoring/Adaptive Management	\$75,000	2008			
<b>Setback and Removal of Fenster and Pautzke Levees to Reconnect the Floodplain and Allow Channel Migration near RM 32 (Project MG-18) Construction planned for 2011/2012</b>	<b>1</b>	Fenster Levee Phase IB - Remove levees, lower the elevation of terraces and construct engineered logjams to reinstate floodplain connectivity and channel migration.		\$600,000 - \$800,000		\$250,000 (2007)		Channel structure/complexity	Intream, riparian	Riparian, intream flow	Chinook	Steelhead, bull trout			Design & Permitting	\$150,000	Construction	\$650,000	2010			
<b>Setback and Removal of Fenster and Pautzke Levees to Reconnect the Floodplain and Allow Channel Migration near RM 32 (Project MG-18) Construction completed!</b>	<b>1</b>	Pautzke Levee - Remove levees, lower the elevation of terraces and construct engineered logjams to reinstate floodplain connectivity and channel migration. Phases A - E.	King County	\$3,500,000				Channel structure/complexity	Intream, riparian	Riparian, intream flow	Chinook	Steelhead, bull trout			Design & Permitting	\$100,000	Construction	\$3,400,000				

CAVEAT: Subwatersheds listed in order of priority. Projects prioritized 1 through 3.

Project Name	Priority Tier	Project Description	Likely sponsor	Total cost of first three years/phases	Local Share	SRFB/PSAR	Source of Funds	Primary Limiting Factors	Habitat Type	Activity Type	Primary Species	Secondary Species	2011		2012		2013		Likely end date				
													Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost					
<b>Capital Projects</b>																							
Big Spring Creek Restoration (Project MG-7)	1	Construct new stream channel to replace ditch. Connect coldwater springs to Newaukum	King County	\$3,043,000 estimate			KCD: \$500,000 (estimate); SWM: \$250,000 (estimate); Corps: \$200,000	Stream flow patterns. High H2O temperature.	Intream, riparian	Water quality	Chinook	Coho	Construction	\$1,973,000	Construction	\$785,000	Construction	\$285,000	2008				
<b>Subtotals</b>				<b>\$20,520,000</b>																			
<b>Totals</b>				<b>\$39,924,586</b>																			
<b>Non Capital Programs-Not Prioritized</b>																							
Lead entity coordination			Lead entity	\$225,000									Staffing (1 FTE)	\$75,000	Staffing (1 FTE)	\$75,000	Staffing (1 FTE)	\$75,000	Ongoing				
Adaptive management and monitoring			Multiple stakeholders	\$600,000									Staffing (3 FTEs)	\$200,000	Staffing (3 FTEs)	\$200,000	Staffing (3 FTEs)	\$200,000	Ongoing				
Nearshore Habitat Workshop			King County	\$35,000																			
Support Seahurst Environmental Learning Center			City of Burien and Environmental Science Center	\$150-\$200K																			
Create incentives Program to Remove Failing Septic Systems on Vashon/Maury Island			King County																				
Project Management and Public Outreach			WRIA Staff																				
Stewardship & Educational Outreach			WRIA Staff																				
Water Conservation Incentive Programs			Multiple stakeholders																				
Work with jurisdictions and Department of Ecology to support a Shorelines Exemption for properties affected by salmon habitat restoration projects that would relocate the location of the ordinary high water mark.			Multiple stakeholders																				
Promote Planting of Native Trees - Soos Creek and Tributaries Knotweed and Riparian Habitat Revegetation, Mainstem River (RM 59-RM?) Knotweed Removal and Riparian Habitat Revegetation		Removal knotweed and revegetation using native trees within riparian buffer.	Multiple stakeholders	Current funding Ecology (Coastal Protection Grant, \$XXXXX) and USFWS (Recovery funding, \$XXXXXX)																			
Develop a Coordinated Acquisition Program for Natural Areas			King County																				
Increase/Expand Natural Yard Care Programs			Multiple stakeholders																				
Conduct Shoreline Stewardship Workshops and Outreach - Beach/Bluff Educational Programs, including HPA education to agency staff and citizens.			Multiple stakeholders																				
Create Soft Armoring Tech Assist/Cost Share			King County																				
Citizen Volunteer Forage Fish Monitoring Program			Multiple stakeholders																				
Promote Better Volunteer Carwash Practices			Multiple stakeholders																				
Increase Public Awareness about What Healthy Streams and Rivers Look Like and How to Enjoy Recreating on Them			Multiple stakeholders																				
Expand/Improve Incentives Programs			Multiple stakeholders																				
Increase Use of Low Impact Development and Porous Concrete			Multiple stakeholders																				
Develop Salmon Restoration Tools Consistent with Agricultural Land Uses			Multiple stakeholders																				
Work with Co-Managers to integrate Hatchery & Harvest Practices with Habitat Plan Objectives			Multiple stakeholders																				
Olympic sculpture park post construction monitoring in years 1 (2007), 2, 3 and 5.			City of Seattle	\$77,000 WDFW grant, SRFB, KCD																			
Water supply coordination per DOE/EPA Watershed assistance grant			Multiple stakeholders	\$50,000																			