

Narrative to South Puget Sound 3-Year Project List

The goal of the South Puget Sound Salmon Recovery Group is to use an ecosystem-based, multi-species approach to restore Chinook, coho and other salmon species in the South Sound to a sustainable, harvestable level by ensuring that there are properly functioning nearshore and freshwater habitats that serve their spawning, rearing, refuge, feeding, physiological transition, and migratory needs.

For the short term, the plan addressed threatened Chinook salmon and bull trout in nearshore habitats. The South Sound Recovery Plan identified the following action objectives to address the human-induced stressors that are contributing to the status of the salmon in the nearshore and their hypothesized effect on the Viable Salmonid Population:

- Shoreline Armoring
- Overwater Structures and Ramps
- Stormwater and wastewater
- Riparian Loss
- Wetland and Estuarine Modification
- Boat Traffic
- Invasive Species
- Shellfish Aquaculture

Since submission of the recovery plan, we have continued our efforts to understand how ecosystem stressors affect salmon populations, and identify specific recovery actions for specific geographic areas. The 3-year project list includes actions that address the nearshore stressors. We hypothesize that these projects will benefit multiple species, including Chinook, bull trout, coho, chum, pink, steelhead, other salmonids, and forage fish.

In addition to the nearshore actions, we include freshwater actions that address habitat concerns identified in limiting factors reports and lead entity strategies. Again, we believe these projects will benefit multiple species. A hypothesized list of the species benefited is included for each freshwater project.

The technical committee has continued to expand their analysis of the South Sound to better understand how habitat alterations have affected the Viable Salmonid Population parameters for multiple species, hypothesized use of the nearshore by salmonids, and interactions between hatchery and naturally produced fish. The group is currently working on a landscape based model to more closely tie habitat features with juvenile Chinook use. We have included as a programmatic action ongoing facilitation of the technical committee, further development of the stressor models to be more explicit about effects on VSP parameters, and additional GIS data development. A future outcome of the technical committee will be the development of an adaptive management plan.

Successes in 2007:

Over the course of the last year, the lead entities in WRIA's 13 and 14 of the South Sound have completed 11 of the projects identified on the South Sound 2007 three-year work program. These projects garnered \$965,200 in grant funds and leveraged those dollars with another \$485,100 in match.

The projects cover a variety of types all concentrated in the highest priority areas in the nearshore and freshwater. The projects include:

- The installation of two culverts restored connectivity and passage to the estuary while passage to 2.5 miles of habitat and re-establish a functioning estuary.
- Two watertyping assessments of portions of the WRIA's will inventory 95 watersheds and provide information to adequately protect systems that may otherwise be unmapped and therefore untouched by existing regulations.
- Two projects will restore a total of six acres of pocket estuary habitat and begin the dialogue with residents regarding the removing of existing bulkheads.
- A derelict boat ramp is being removed on Hammersley Inlet
- Within Frye Cove, two separate projects will remove a protruding bulkhead and restore 400' of shoreline, while adding over 100 pieces of LWD.
- Within the highest priority freshwater, three separate projects: planted 3000' of riparian habitat, 1500' of fencing, placed large woody debris along 3500' of Skookum creek, and assessed the habitat on Sherwood creek.

Puget Sound Review

The intent of this document is to provide a strategic short term frame work that is based upon the long term goals contained in the South Puget Sound Chinook Recovery Plan chapter. The list included is an update of the three year list submitted to Shared Strategy in 2006 that underwent NOAA Technical Recover Team (TRT) review. Because this is an update the South Puget Sound Technical Team (SPSTT) utilized the TRT comments from the 2006 review in formulating this list. Included below are comments from the TRT and the SPSTTs' response that were used in the 2007 project selection process.

I. Puget Sound Technical Recovery Team Review CommentsConsistency with the hypotheses and strategy in the May 2005 plan

Comment- little information is provided to determine why specific projects were chosen in freshwater and nearshore parts of South Sound

Response- Chapter four of the South Sound recovery chapter contains the conceptual models that guide what types of projects are chosen in the nearshore. Chapter five

contains the maps that are the outputs of the GIS database used to guide where actions are prioritized in the nearshore environment. Because the document is an all species recovery and sustainability plan, existing plans and strategies from freshwater systems were included in the selection process. To clarify this issue during the selection and review process the SPSTT has been working on creating a prioritization process/model based upon, among other things, fish use, project type, project location, cost, expected benefit and land owner willingness.

Comment- Why are there so many projects in deeper South Sound rather than in the northern parts of South Sound, where there are likely to be more benefits to Nisqually and White River fish?

Response- The relative lack of projects in the northern parts of South Sound in 2006 was generally due to lack of effort in identifying projects in this area, lack of land owner willingness, and lack of information along the eastern Nisqually Reach. To rectify this in 2007, the SPSTT group placed a greater emphasis on identifying projects in the WRIA 15 portion of South Sound and began using the draft products generated by the Nisqually to Point Defiance Nearshore Assessment conducted by the South Puget Sound Salmon Enhancement Group. As this is early in the process land owner willingness is still an issue that is being addressed by outreach.

Comment- Projects that improve habitat structure within streams are important, but higher benefits for Chinook would be realized were protection of nearshore and freshwater quantity and quality improvements to receive higher priority ranking.

Response- The South Sound chapter and list is an all species freshwater and marine recovery and sustainability plan. To help clarify project benefits for review and selection a line has been added to the list with the hypothesized species being benefited.

Comment- There are more studies/assessments and restoration projects listed than protection/acquisition projects for both nearshore and freshwater areas.

Response- The South Sound chapter and list is intended to be inclusive of restoration and protection projects that generally have some form of land owner willingness and are at least somewhat likely to be ready in the next three years. However, all assessments that have been identified as a need to fill a data gap, not just those that could happen in the next three years, are listed to provide a framework for applying to multiple funding sources. Protection and acquisition in high priority areas are an integral part of the chapter but we are constrained by land owner willingness.

Comment- Not enough information is provided to enable reviewers to understand how prioritization of projects within and among sub-basins, freshwater vs. nearshore, would, would proceed if the full funding is not attained for the projects on their list.

Response- SPSTT has acknowledged this as a weakness in the submitted chapter. The group has been working on an update to the chapter that is intended to fill this data gap.

Currently, project prioritization would be accomplished by the SPSTT using all available information.

Sequence and timing

Comment- Justification for some of the high priority projects is not clear. For example, why is a LWD project in the Deschutes (hatchery fish benefit) a high priority?

Response- As stated previously the South Sound work includes all species in freshwater and marine. A species benefited line has been added to the list to help clarify which species are being benefited. In the case of the Deschutes River LWD hatchery origin and natural spawning Chinook, among other species, will benefit from the project.

Comment- Higher benefits to Chinook would be realized were projects that protect the nearshore and freshwater quantity and quality improvements ranked more highly than those that improve habitat structure within streams.

Response- The South Sound chapter and list is an all species freshwater and marine recovery and sustainability plan. To help clarify project benefits for review and selection a line has been added to the list with the hypothesized species being benefited.

Significant components missing

Comment- The hypothesized interaction between hatchery and wild fish in the South Sound region is not spelled out. As habitat recovery and hatchery improvement actions are put in place, what is the expected effect on hatchery and wild fish interactions? Where are hatchery origin and wild fish likely to co-occur, in what numbers, and for how long? What will be the likely outcomes of those interactions? How will they monitor these and make needed adjustments in hatchery or habitat strategies over time?

Response- The technical team has also identified this as a shortcoming of the South Sound planning process and is currently working on a chapter update to address these comments.

Comment- The work program would be strengthened by addressing how harvest strategies interact with hatchery and habitat strategies and how they may be adjusted over time as needed, e.g. fishing rates on hatchery stocks and their effects on wild fish recovery. Another question to be addressed is how harvest rate targets affect release numbers for hatchery fish, and how those rates affect the anticipated benefits of habitat projects.

Response- The technical team has acknowledged the statement put forth by the TRT. As of this time the co-managers have stated dealing with harvest issues will be their responsibility.

II. Policy Review Comments

Comment- There is a continuing need to identify which geographic areas within South Sound should be targeted for priority protection and restoration actions.

Response- The SPSTT has also identified this as a data gap and is currently updating the recovery chapter to address this need.

Comment- Water quality remains a significant concern. The extent to which water quantity and water quality issues are being addressed is not evident in the work program project list and narrative.

Response- The SPSTT shares these same concerns. In an effort to address this the South Sound group successfully applied for a grant that will allow us in part to link areas of marine water quality concerns with potential upland sources. This will be a first effort to more closely tie in water quality concerns with habitat based projects.

Comment- Plan refinement and implementation will benefit from addressing the need to develop an organizational structure and capacity for technical-policy discussions and deliberations.

Response- The SPSTT agree with the above comment and has obtained a grant that will help further the creation of a South Sound structure.

Three-Year Watershed Implementation Priorities for WRIA's 13 and 14																					
										2008		2009		2010		For Habitat projects (see key for categories)					
Species	WRIA	Priority Tier	Primary Limiting Factors Addressed	Action name and description	Likely sponsor	Total cost of first three years	Proposed SRFB (or grant) share	Local share or other funding	Source of other funds	Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed	Performance	
CAPITAL PROJECTS																					
Habitat Capital Projects																					
All	11	1	2	Nisqually Refuge Estuary Restoration	Nisqually Tribe	10,000,000	\$8,000,000	\$2,000,000	Ducks unlimited/Feds									Dike removal	Estuary		
All	12	2, 7		Estuary Restoration - Replace culvert/tidegate through BNSF railroad to improve connectivity and	SPSSEG, Metro Parks Tacoma	\$700,000	\$400,000	\$100,000	Metro Parks Tacoma, BNSF	Conceptual design	\$50,000	Design, permitting	\$75,000	Construction	\$575,000	2010		P, M	Marine shoreline (pocket estuary)	~ 5 acres restored	
All	12	2,7		Marine nearshore - pocket estuary restoration project (based on the results of the Nearshore Assessment). Chambers Bay, Sequelichew, Solo Point and numerous unnamed tributaries to the Puget Sound are examples. Restoration will provide access to small estuarine habitat, restore natural tidal hydrology and freshwater inputs to the treated reaches and improve sediment transport to adjacent beaches.	SPSSEG	\$1,500,000	\$1,000,000	\$500,000	ESRP	Assesment and Feasibility	200,000	Final Design and permitting	300,000	Construction	1,000,000	2011		M	Marine Shoreline	~ 5 miles of shoreline restored	
Coho, chum, steelhead, cutthroat, Chinook	13	1	1,3,4,5,6	Habitat acquisition on the Deschutes River - acquire 6,000 acres of Weyerhaeuser land on the upper Deschutes on Huckleberry Creek.	Capitol Land Trust, numerous	\$6,000,000			unknown								AP	mainstem	6,000 acres protected in perpetuity		
Coho, chum, steelhead, cutthroat, Chinook	13	1	1,3,4,5,6	LWD placement on the Deschutes - Stewart property LWD projects, 93rd and Deschutes River Rd.	SPSSEG, WFC	\$350,000	\$350,000		unknown	Scoping		Designs		Funding / permitting				I,R	mainstem	1 mile of stream treated	
Coho, chum, steelhead, cutthroat	13	1	3,4,5	Spurgeon creek riparian planting and fencing - Spurgeon creek - Lattins property.	WFC, SPSSEG	\$30,000	\$30,000		unknown	Replacement of Thurston County culvert		Landowner negotiations		implementation				R	tributaries	1500 lineal feet, 50 ft wide corridor	
Coho, chum, steelhead, cutthroat	13	1	3,4,6,7	Culvert at Bentley property on Spurgeon creek, needed prior to funded NFWF riparian project implementation	WFC	\$93,500	\$90,000	\$3,500	SRFB project development grant	Full designs / permitting		Implementation		Monitoring				R,P	tributaries		
Coho, chum, steelhead, cutthroat	13	1	3,4,6,7	Green Cove creek fish passage project - restore fish passage by removing the blocking culvert on Green Cove Creek at Country Club rd.	SPSSEG, Thurston County, Stream Team, TCD, etc	\$1,700,000	\$1,300,000	\$400,000	Thurston County	Full designs / permitting		Implementation		Monitoring				P	mainstem	Remove total blocking culvert, opening up 2 miles of spawning and rearing habitat.	
Coho, chum, steelhead, cutthroat	13	1	3,4,6,7	Phase II of Ellis creek fish passage: remove blocking culvert on Gull Harbor Rd	Thurston County, WFC, SPSSEG, TCD, Stream Team	\$1,300,000	\$780,000	\$520,000	Thurston County	Full designs / permitting		Implementation		Monitoring				P	mainstem	Remove total blocking culvert, opening up 2 miles of spawning and rearing habitat.	

Species	WRIA	Priority Tier	Primary Limiting Factors Addressed	Action name and description	Likely sponsor	Total cost of first three years	Proposed SRFB (or grant) share	Local share or other funding	Source of other funds	2008		2009		2010		For Habitat projects (see key for categories)						
										Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed	Performance		
All		13	1	2,3,4,6,7	Remove road prism barrier at mouth of Simmons Creek	SPSSEG, TC, WFC	\$120,000	\$120,000		unknown	Preliminary designs		Full Designs		implementation			P	Estuary	Open up >1 mile of habitat		
All		13	1	1,3	Off-channel habitat creation - develop and implement off-channel habitat creation and re-establishment opportunities 0.25 acres total per year on Spurgeon creek and the Deschutes	SIT, SPSSEG, TCD	\$100,000	\$100,000		unknown	landowner negotiations		Full Designs		implementation			I,F	tributaries	0.75 acres created		
All		13	1	1,3	Green Cove Habitat Acquisition - 50 acres on Green Cove	Capitol Land Trust	\$500,000			unknown							AP	L	mainstem	50 acres protected		
All		13	1	2	WRIA 13 bulkhead removals - five sites	SPSSEG, SIT, PSAT, PPS	\$840,000	\$840,000		unknown	landowner negotiations		Full Designs / permitting		implementation				M,E	marine shorelines, estuary	Restore 600 feet of shoreline	
All		13	1	2	Two estuary connectivity projects in WRIA 13 -1)Butler Cove	SPSSEG, SIT, PSAT, TC	\$125,000	\$125,000		unknown	Full designs / permitting		Implementation						E	Estuary	recreate ~150 acres of estuary	
All				2)	Gull Harbor	SPSSEG, SIT, PSAT, TC	\$125,000	\$125,000		unknown	landowner negotiations		landowner negotiations		Full Designs				E	Estuary		
All		13	1	2	Gull Harbor Acquisition, Phase III - protect through easements 2 unprotected parcels (25 acres) within Gull Harbor	Capitol Land Trust	\$1,200,000			unknown	landowner negotiations		landowner negotiations		Purchase		AP	L	Estuary	25 acres protected		
Coho, chum, steelhead, cutthroat		13	1	2	Woodard Bay, Gull Harbor, Burfoot Park connectivity - habitat corridor that connects Henderson with Budd Inlets, salt and fresh water habitats	Capitol Land Trust					Phasing		Planning / negotiations		Landowner Negotiations		AP	L	Estuary, marine shorelines, mainstem, tributaries			
All		13	1	2	Phase I Eastbay nearshore revegetation - restore 2000' of nearshore shoreline habitat, planting	People for Puget Sound, SPSSEG, Stream Team, City of Olympia, TCD	\$125,000	\$113,000	\$12,000	unknown	30% designs / permits /installation								M	marine shorelines	2000' linear feet planted and stored	
All		13	1		West Bay Restoration - restore shoreline at previous Reliable site inclusive of bulkhead removal in tandem with public access, reshape beach profile, acquisition at railroad site	City of Olympia													M,E	marine shorelines		
Coho, chum, steelhead, cutthroat		13	1		Olympia Brewery Restoration - purchase and restore property adjacent to old Olympia brewhouse	Capitol Land Trust														marine shorelines		
All		13	1	2	Derelict creosote structure removal - remove derelict creosote overwater structures and pilings. Southern Budd Inlet, Port property, Percival Landing	SIT, USACOE, DNR, TC, MC, City of Olympia	\$300,000			unknown									M,E	marine shorelines	Remove X pilings	
All		13	1		Mud Bay bulkhead removal - remove failing bulkhead at Buzz's Bar	SPSSEG, WFC	\$75,000	\$75,000		unknown	scoping		landowner negotiations		landowner negotiation						estuary, marine shorelines	
All		13	1		Beachcrest - reconnect tidal influence to a pond and spring fed creek	SPSSEG	\$178,500		\$3,500	SRFB project development grant	Permitting, project completion							2008	M,E	estuary, marine shorelines		
All		13	1		Shoreline restoration at the mouth of Snyder Creek - remove the barrier to passage on TESC Evergreen beach property and remove existing bulkhead, Squaw Point	WFC, SPSSEG, SIT	\$258,000	\$258,000	\$18,000	NOAA, SRFB	permitting, complete										marine shorelines	restore passage for spawning and rearing
All	13??		1		Youngs Cove - remove pond and derelict boat ramp	SPSSEG	\$100,000	\$100,000	\$3,000	SRFB				Landowner negotiations							marine shorelines	restore 1500 sq ft of shoreline

Species	WRIA	Priority Tier	Primary Limiting Factors Addressed	Action name and description	Likely sponsor	Total cost of first three years	Proposed SRFB (or grant) share	Local share or other funding	Source of other funds	2008		2009		2010		For Habitat projects (see key for categories)			
										Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed
All	13	1	2	Lower Eld Inlet - McLane creek estuary acquisition - 35 acre parcel	CLT, SIT, SPSSEG	\$600,000			unknown							AP	E	Estuary	protect 35 acres of estuary
Coho, chum, steelhead, cutthroat	13-14	1	2,3,5	Alternate water sources for livestock- work with Mason and Thurston CD's to implement alternate water sources for livestock	TCD, MCD, SPSSEG, SIT, WDFW	\$150,000	\$150,000		unknown								R,U	Estuary, marine shoreline, mainstem, tributaries	150 acres fenced and livestock exclusion
Coho, chum, steelhead, cutthroat	14	1	1,3,4,5	LWD placement on Skookum creek - treat 3500' of stream with woody debris	SIT	\$240,000	\$240,000		unknown	Designs / permitting	implementation		implementation				I,R	mainstem	3500' of stream treated
Coho, chum, steelhead, cutthroat	14	1	1,3,4,5	Plant 3500' riparian corridor along both sides of Skookum Creek LWD projects	SIT					Designs / permitting	implementation		implementation				I,R	mainstem	3500' both sides of stream treated
Coho, chum, steelhead, cutthroat	14	1	1,3,4,5	Skookum creek habitat acquisition - easement on McDonald property, 300 acres with restoration to follow.	CLT, SIT, SPSSEG, MCD	\$450,000			unknown	landowner negotiations	landowner negotiations		purchase			AR	L	mainstem	300 acres restored and protected
All	14	1	2	Bulkhead removal on Arcadia Point - two soft armoring demonstration projects: 1)Arcadia Point, 100 feet of nearshore total - Demonstrating project adjacent to boat ramp	SPSSEG, SIT, PSAT	\$50,000	\$50,000		unknown	landowner negotiations	landowner negotiations		designs / permitting				E,M	marine shorelines, estuary	100 linear feet of shoreline armoring removed and replaced with habitat enhancing structures and used as pilot sites for future involvement.
All				2)Case Inlet bulkhead, WDFW property (beyond Flapjack Pt.)	SPSSEG, SIT, PSAT	\$50,000	\$50,000		unknown		landowner negotiations		landowner negotiations						
All	14	1	2	Estuary connectivity project on Eld Inlet - remove blockages on tributaries to Eld inlet at two sites	SPSSEG, SIT, PSAT, MC	\$500,000	\$500,000		unknown	landowner negotiations	landowner negotiations		designs / permitting				E,M	marine shorelines, estuary	restore function and passage at two sites, opening up at least two miles of freshwater habitat.
All	14	1	2	Totten Inlet habitat acquisition - acquire 80 acres of intact habitat on Totten Inlet	Capitol Land Trust, SIT, SPSSEG, MCD	\$700,000			unknown							AP	E	estuary	Protect 80 acres of estuary / tidelands
All	14			East Hammersley Inlet, at the mouth, acquire / create conservation easement 30 acres - several different sites: 18 acres with restoration to follow; other properties are across the water.	CLT	\$400,000				18 acre site: easement complete. Others continue negotiations									
All	14	1	2	Oakland Bay habitat protection - two options being discussed: 1)Rhodie property - 132 acres 2) Tri Vo 36 acres, 25 waterfront lots	CLT, SIT	\$1,900,000			unknown							AP	E,M	estuary, marine shoreline	Protect either 132 or 36 acres of estuary / marine shorelines
All	14	1		Skookum Inlet Dike Removal - remove existing dikes on X acres of existing farmland to restore to estuary function	SPSSEG, SIT												E,M	Estuary, marine shorelines	
All	14	1		Sanderson Cove bulkhead removal - remove bulkhead on shoreline in Sanderson Cove on Steamboat Island													E,M	Estuary, marine shorelines	

Species	WRIA	Priority Tier	Primary Limiting Factors Addressed	Action name and description	Likely sponsor	Total cost of first three years	Proposed SRFB (or grant) share	Local share or other funding	Source of other funds	2008		2009		2010		For Habitat projects (see key for categories)					
										Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed	Performance	
Coho, chum, steelhead, cutthroat	15	1	7	*Rocky Creek Fish Passage Project	SPSSEG	375,000		375,000		Construct Project	360,000	Project Closeout	15,000	-	-	2010		P	Passage	5 miles	
All	15	1	2	*Taylor Bay Acquisition	Key Peninsula Park Dist.	1,500,000	500,000	1,000,000	ESRP, TPL	landowner negotiations, assessment	25,000	fee simple acquisition	1,475,000			2010	AP		Marine	40 acres, 1000 ft shoreline	
All	15	1	2,7	*Nearshore Habitat Restoration Projects	SPSSEG, Pierce County	700,000	500,000	200,000	ESRP	Identify and Develop Projects	100,000	Design and Permitting	100,000	Construct Multiple Projects	\$500,000	2012		E, M	Marine	.3 mile shoreline	
All	15	2	2,7	*Silver Bow Farms Estuary Restoration	SPSSEG, Pierce County	450,000	250,000	200,000	ESRP	Scoping and Landowner negotiations	10,000	Final designs and permitting	40,000	Construct Project	\$400,000	2010		M	Marine	5 acres	
All	15	2	2,7	*East Oro Bay Dam Removal	SPSSEG, Pierce County	350,000	150,000	100,000	ESRP	Scoping and Landowner negotiations	10,000	Final designs and permitting	40,000	Construct Project	\$300,000	2010		M	Marine	3 acres, .5 miles shoreline	
All	15	2	2,7	*Moorelands Estuary Restoration	SPSSEG, Pierce County	650,000	610,101	39,899	ESRP	Final Design and Permitting	40,000	Construct Project	600,000	Project Closeout	10,000	2009		M	Marine	1.3 acres	
All	15	2	2,7	*Victor Beach Stream Restoration	SPSSEG, Pierce County	350,000	250,000	100,000	ESRP	Scoping and Landowner negotiations	10,000	Final designs and permitting	40,000	Construct Project	\$300,000	2010		M	Marine	3 acres, .5 miles	
Coho, chum, steelhead, cutthroat	15	2	7	*Dutcher Cr Fish Ladder Replacement	SPSSEG	450,000	382,500	67,500	Unknown	Final Design and Permitting	67,500	Construct Project	380,000	Project Closeout	\$2,500	2009		I	Passage	2 miles	
Coho, chum, steelhead, cutthroat	15	2	7	*Little Minter Fish Passage Project	SPSSEG	200,000	150,000	50,000	Unknown	Final Design and Permitting	20,000	Construct Project	170,000	Project Closeout	\$10,000	2009		P	Passage	2 miles	
Hatchery Capital Projects																					
TOTAL CAPITAL NEED:																					
						35,785,000	\$17,588,601	53,373,601													
NON-CAPITAL PROGRAMS																					
Harvest Management support																					
Future Habitat Project Development																					
All	13-14	1	1,2,3,4,5,6,7	WRIA 13 and 14 Watertyping Assessment - Target Puget Sound drainages facing development pressures, build off on-going projects. Local gov'ts acknowledge the need for data to help them protect critical areas	WFC, SPSSEG, Thurston County, SIT, TCD	\$350,000			unknown									I, W, E, L, R, U, P, M, F	marine shorelines, mainstem, tributaries	On average, 35 miles of streams 'found' and appropriately protected. Generates a ranked list of restoration / acquisition projects	
All	13-14	1	1,2,3,4,5,6,7	Habitat modeling for South Sound - Employ modeling tools Ecopath and Ecosim for nearshore modeling	SIT, TC, MC, SPSSEG, USACOE	\$75,000			unknown	scoping		begin modeling		modeling				I, W, E, L, R, U, P, M, F	estuary, marine shoreline, mainstem, tributaries	Prioritized project list	
All	13	1	1,2,3,4,5,6,7	Update WRIA 13 LFA	TCD, WDFW, SIT, SPSSEG, WFC, WSCC	\$150,000			unknown	Literature search		complete project						I, W, E, L, R, U, P, M, F	estuary, marine shoreline, mainstem, tributaries	Prioritized project list	

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										Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed	Performance
Coho, chum, steelhead, cutthroat	14	1	1,2,3,4,5,6	Habitat assessment on Campbell and Deer creeks	SPSSEG, MCD, SIT	\$100,000			unknown	Assessment								I, W, E, L, R, U, P, M, F	mainstem, tributaries	Prioritized project list
Habitat protection -- monitoring of habitat quality																				
All	13	1	2,5	Woodard Bay Habitat Assessment - feasibility to assess the effects of the log dump, inclusive of the seal pullout, bat habitat, etc. Chemical stressors, biological components, creosote pilings - pilot for application elsewhere to inform fixes at other sites	DNR														Marine shoreline	
Coho, chum	13	1	5	Weekly surveys during spawning of Ellis, Schneider, Green Cove and Indian / Moxlie creeks for: pre-spawn mortality, escapement and redd mapping. No WDFW monitoring of these streams currently	WFC	\$45,000	\$30,000	\$15,000	City of Olympia	survey		survey		survey					mainstem, tributaries	
Habitat protection -- monitoring of regulatory programs																				
Habitat protection -- participation in policy or regulatory updates																				
All	15	1		(all*) West Sound Watersheds SMP Updates		560,000	280,000	280,000	Gig Harbor, Pi	None	80,000	Inventory & Analy	80,000	Policy & regulatio	\$120,000	2011				
Watershed Plan Implementation																				
All	13	1	1,3,4,5,6	Deschutes River, Henderson, Totten, Eld nutrient reduction and TMDL implementation	TCD, DOH, TC, DOH	\$350,000			unknown									I, R	mainstem	
Outreach & Education																				
All	15	1		*Shoreline Community Outreach	SPSSEG	60,000	30,000	30,000	NFWF	Design program	10,000	Manage program	10,000	Manage Program	\$10,000	ongoing				
Outreach & Education -- stewardship																				
Coho, steelhead, cutthroat, chum	14	1	3,5	Schumocher creek carcass augmentation - place carcasses to meet state guidelines	ASEG, SIT	\$38,000			unknown									I	Mainstem	
Coho	14	1	1,2,3,4,5	Begin mass marking on Coho in Sherwood / Schumocher creeks	ASEG, SIT	\$45,000	\$45,000		local volunteer time	discussion with co-managers		discussion with co-managers - outline scope		purchase equipment, train volunteers, begin marking		indefinite				
Instream Flow protection																				
Salmon Recovery coordination/implementation																				
All	13-14	1		South Sound coordination of a sub-regional organization	SIT, TCD, MCD, SPSSEG, TC, PC, KC, Nisqually, etc															
Habitat Project Monitoring																				
All	13	1		Woodard Bay Bulkhead Removal study- bulkhead removal monitoring data where current data exists with funds needed for continued monitoring	DNR														Marine shorelines	

Species	WRIA	Priority Tier	Primary Limiting Factors Addressed	Action name and description	Likely sponsor	Total cost of first three years	Proposed SRFB (or grant) share	Local share or other funding	Source of other funds	2008		2009		2010		For Habitat projects (see key for categories)				
										Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost	Likely end date	Acquisition	Restoration type, if applicable	Location w/in watershed	Performance
All		13		Fish Passage project monitoring, post and pre-project continuation	WFC	\$30,000	\$30,000		unknown		\$10,000		\$10,000		\$10,000					
All	13-14	1		Nearshore project monitoring - monitoring partnership to monitor South Sound nearshore project sites for adaptive management and future project development. Possible publication or website for comparison	WFC, SPSSEG, SIT, PPS													estuary, marine shorelines		
		15	1	*Nearshore Effectiveness	SPSSEG	75,000		75,000	ESRP, DOE, D	Develop plan .	25,000	Monitor and asses	25,000	Monitor and asses	\$25,000	Ongoing				
Stock Monitoring Support																				
All	13-14	1		Salmonid species usage and distribution - expand current beach seining work to Totten and Eld Inlets	WDFW, SIT, Nisqually	\$37,000	\$37,000		unknown		\$12,500		\$12,500		\$12,500			E,M	estuary, marine shoreline	
Coho	14	1		Outmigrant study of Coho in Mill, Goldsborough and Sherwood creeks - acoustic tagging of Coho for tracking in the Sound	SIT, Nisqually, WDFW	\$270,000			unknown		\$90,000		\$90,000		\$90,000			Study	mainstem, estuary, marine shorelines	lead to appropriate actions in the nearshroe
Chinook	11		1,2,3,4,5	Nisqually Estuary Otolith Analysis	Nisqually	\$130,000	\$110,000	\$20,000	Nisqually Tribe	Methodolgy and 2004 analysis	?	Analysis of high priority adult and juvenile otoliths	\$130,000	Lower priority otolith analysis	?					
All	13-14-15	1		Tacoma Narrows Bridge Modificaton	Squaxin Island Tribe	27,500	22,500	5,000	UAS, SITNR	Construction	27,500					Sep-07				
TOTAL NON-CAPITAL NEED:						\$2,342,500	584500	425000												
TOTAL CAPITAL & NON-CAPITAL NEED:						\$38,127,500	\$18,173,101	425000												
PRIORITY PROJECTS AND PROGRAMS BENEFITTING NON-LISTED SPECIES																				
TOTAL NON-LISTED SPECIES NEED:																				