

	NTA description	Substrategy Link	Island County LIO Pressure	Owner	Performance Measures
1	<p><b>Develop an implementation strategy for SMP compliance.</b> Island County will develop an implementation strategy for SMP compliance that includes the following elements: a) develop an accurate evaluation of shoreline health that meets the state requirement for “no net loss” and SMP effectiveness based on guidance from the Department of Ecology; b) retain a consultant to set a baseline percentage of shoreline armoring and percent vegetative cover that will be used to quantitatively and qualitatively evaluate shoreline health status, trends and compliance monitoring; c) conduct annual county-wide shoreline evaluations for trend analysis.</p>	<p>A1.3 Improve, strengthen and streamline implementation and enforcement of laws, plans, regulations, and permits consistent with protection and recovery targets</p> <p>B1.3 Improve, strengthen and streamline implementation and enforcement of laws, regulations, and permits that protect the marine and nearshore ecosystems and estuaries.</p>	Pressure Very High: Marine Shoreline Infrastructure	Island County Community Planning & Development	<p>By January 2014, obtain funding for SMP implementation program.</p> <p>By April 2014, develop baseline shoreline health report with trend analysis (no net loss measure) (ex. percent change shoreline armoring, change in vegetation in Island County).</p> <p>By July 2014, develop an SMP implementation strategy.</p> <p>By March 2015, develop and implement a SMP training program (target: 100 residents to attend per quarter).</p>
2	<p><b>Develop technical guidance document and trainings for residents on new SMP guidelines</b></p>	<p>A1.3 Improve, strengthen and streamline implementation and enforcement of laws, plans, regulations, and</p>	Pressure Very High: Marine Shoreline Infrastructure	Island County Community Planning & Development	<p>By December 2014, develop a residential SMP technical guidance manual.</p> <p>By March 2015, develop and implement a SMP training program (target: 100 residents to attend per quarter).</p>

		permits consistent with protection and recovery targets			
3	<b>Improve Island County GIS capability to support land use analysis, planning, permitting decisions, and enforcement with respect to Adaptive Management and Shoreline Master Program requirements.</b> Island County will develop Standard Operating Procedures for updating data and consistency in its data storage network to ensure usage consistency and relevant data.	<p>B1.1 Use complete, accurate and recent information in shoreline planning and decision making at the site-specific and regional levels.</p> <p>C2.1 Manage urban runoff at the basin and watershed scale.</p> <p>A1.2 Support local governments to adopt and implement plans, regulations and policies consistent with protection and recovery targets, and incorporate climate change forecasts</p>	Pressure Very High: Runoff from Built Environment	Island County Department of Natural Resources	<p>By September 2014, Develop GIS SOP for Island County departments that support GIS data management procedure described which would enable geographically tracking professional reports and permitting activity in shoreline areas.</p> <p>By September 2014, increase number of GIS license available to Island County staff.</p> <p>By December 2014, increase IC staff trained and utilizing GIS technology in their daily activities that result in geospatial data collection.</p> <p>By June 2015, develop a comprehensive GIS map of Island County detailing permits, buffers, and forest cover based on updated layers.</p> <p>By December 2015, develop a formal report recommending monitoring, restoration and habitat protection priorities.</p>
4	<b>Decrease the use of shoreline armor, or</b>	B2.3 Remove	Pressure	Island County	By December 2013, secure funding for armor avoidance and alternatives to hard shore armoring program.

	<p><b>in those instances where armor is absolutely necessary, increase the utilization of soft-shore protection to address shoreline protection concerns.</b> This effort will address two target audiences, Island County permitting staff and shoreline property owners. Education, outreach and behavior change strategies will be used.</p> <p>Island County will engage its permitting staff and shoreline property owners in an extensive education and outreach campaign to meet its target of decreasing the use of shore armor and soft-shore protection. The campaign will utilize appropriate behavior change strategies and technical/scientific data to support changes within the community. Island County will seek funding to provide technical assistance to landowners and to monitor program effectiveness.</p>	<p>armoring, and use soft armoring replacement or landward setbacks when armoring fails, needs repair, is non protective, and during redevelopment.</p>	<p>Very High: Marine Shoreline Infrastructure</p>	<p>Planning &amp; Community Development</p>	<p>By February 2014, establish an updated baseline map of shore armor in Island County using historical data.</p> <p>By February 2014, train Island County CP&amp;D staff on hard shore armoring alternatives. Including a checklist (evaluation of soft shore protection potential) for permit review and planning documents.</p> <p>By March 2014, develop shore protection landowner training program.</p> <p>By March 2014, develop soft shore protection guidance document for residents (all who come to CP&amp;D counter regarding shoreline armoring permit). This would include an interactive website for residents to learn the reasons for choosing alternatives to hard shore armoring.</p>
5	<p><b>Remove hard shore armor and, where feasible, replace with soft shore protection where erosion control is needed to protect houses.</b> Develop a program for education &amp; behavior change on shoreline armoring in Island County.</p>	<p>B2.3 Remove armoring, and use soft shore protection replacement or landward setbacks</p>	<p>Pressure Very High: Marine Shoreline Infrastructure</p>	<p>Island County Department of Natural Resources</p>	<p>By December 2013, secure funding for soft shore protection technical assistance and removal program (vouchers for removing bulkheads) (target: 5 properties to receive technical assistance per quarter).</p> <p>By December 2013, secure funding for forage fish spawning surveys to establish baseline data and effectiveness monitoring to validate decision for removing armoring. Monitoring to begin Spring 2014.</p>

	<p>Social marketing will be applied to program development. Financial incentives (i.e. free site visits from experts, and grants for cost share, design, permitting, etc) will be offered to implement armor removal and possibly install soft shore protection. This program will include monitoring beach ecosystem health on removal and conversion projects (from hard shore to soft shore) to provide justification.</p>	<p>when armoring fails, needs repair, is non protective, and during redevelopment</p>			<p>By January 2016, total amount of armor removed is greater than new armor installed (not including armor replacement).</p>
6	<p><b>Restore tidal inundation.</b> Island County will restore tidal inundation to one or more isolated pocket estuaries or tidal wetlands. The project selected will address either poor design or malfunctioning tidegates in order to improve habitat for juvenile salmon.</p>	<p>A6.1 Implement high priority projects identified in each salmon recovery watershed's three-year work plan.</p> <p>A6.4 Maintain and enhance the community infrastructure that supports salmon recovery</p>	<p>Pressure Very High: Marine Shoreline Infrastructure</p>	<p>WRIA 6 Lead Entity</p>	<p>By December 2014, one tidal wetland or pocket estuary to be reconnected to tidal influence.</p> <p>By December 2014, secure funding to monitor habitat changes and/or juvenile salmon for restoration project to monitor improvements.</p> <p>By July 2014, develop a prioritization of blockages, failing culverts, flood risks, etc. Prioritization report to include ecosystem benefits for each project.</p>
7	<p><b>The City of Oak Harbor will implement Freund Marsh restoration and stormwater improvement project.</b> The project will restore natural treatment functions to reduce nutrient loading and improve flow rates by increasing infiltration in Oak Harbor, the only urban watershed in</p>	<p>C2.1 Manage urban runoff at the basin and watershed scale</p> <p>C2.5 Provide focused</p>	<p>Pressure Very High: Runoff from Built Environment</p>	<p>City of Oak Harbor</p>	<p>By December 2015, restore 18.1 acres of wetland.</p> <p>By December 2015, reduce stormwater flow rates and nutrient and bacterial loading into Puget Sound.</p> <p>By December 2015, complete trails network around Freund Marsh and install interpretive center.</p>

	the County. The project will complete the Freud Marsh improvements including a trails network and interpretive center to educate public about stormwater, water quality and wetland issues.	stormwater-related education, training and assistance			
8	<b>Implement a small farm water quality improvement project in Ebey's Prairie.</b> The project will include water quality treatment technology (for example grassy swales, filter strips, phytoremediation) and landowner farm practices (ex. manure management, filter strips) to reduce non-point stormwater pollution.	C2.1 Manage urban runoff at the basin and watershed scale	Pressure Very High: Runoff from Built Environment  Pressure High: Agriculture	Whidbey Island Conservation District	By December 2013, secure funding for incentive-based program to assist BMP implementation for working farms.  By December 2015, reduce nutrient and bacteria levels in stormwater runoff.  By December 2015, implement five water quality BMPs in watershed.
9	<b>Stormwater technical assistance and incentive programs implementation.</b> Island County will implement a stormwater retrofit program to target private properties. The program will include designing and conducting workshops for landowners and providing incentives for compliance (incentives may include cost sharing for rain gardens, no-cost engineering).	C1.4 Provide education and technical assistance to prevent and reduce releases of pollution  C2.5 Provide focused stormwater-related education, training and assistance.	Pressure Very High: Runoff from Built Environment	Whidbey Island Conservation District	By June 2014, implement stormwater management and low-impact development program to assist urban and rural landowners (target: WICD will complete 25 low-impact plans as well as technical assistance site visits as needed for stormwater management).
10	<b>Develop and implement a stormwater monitoring Program.</b> Island County will enhance its stormwater monitoring	C2.5 Provide focused stormwater-related education, training	Pressure Very High: Runoff from Built	Island County Department of Natural Resources	Nutrient loading during storm events at outfalls and in streams (identified in watershed prioritization).  Decrease in percent of 303d listed impaired waters in Island County.

	<p>program to address stormwater discharges from the built environment. The monitoring is intended to focus community attention on source identification and key areas of concern. Based on the monitoring data, technical assistance will be provided to landowners.</p>	<p>and assistance</p> <p>C7.1 Improve water quality to prevent downgrade and achieve upgrades of important current tribal, commercial and recreational shellfish harvesting areas.</p>	<p>Environment</p> <p>Pressure High: Agriculture</p>		<p>Net increase in recreational shellfish harvest area.</p>
11	<p><b>Implement a noxious and invasive weed eradication program.</b></p>	<p>B5.3 Prevent and rapidly respond to the introduction and spread of terrestrial and aquatic invasive species.</p> <p>B5.4 Answer key invasive species research questions and fill information gaps.</p>	<p>Pressure High: Invasive Species &amp; Genes</p>	<p>Noxious Weed Control Board</p>	<p>By December 2014, secure funding to assess invasive species in Island County.</p> <p>By June 2015, create plan for eradication program.</p> <p>By December 2015, increase property owner's awareness about invasive species of concern, control methods for specific plants, and their legal obligations to control regulated species.</p> <p>By December 2015, increase acreage native vegetation restoration. .</p>
12	<p><b>Identify, map and prioritize blocked and failing culverts and replace 1-2 priority culverts using fish-friendly passage designs.</b></p> <p>Fish-blocking culverts are negatively affect flood risk, scouring, erosion, land slides, water quality. Island County will map all existing culverts noting which are blocked</p>	<p>A6.1 Implement high priority projects identified in each salmon recovery watershed's three-year work plan.</p>	<p>Pressure High: Culverts (C2.3) Fix problems caused by existing development</p>	<p>Island County Department of Natural Resources</p>	<p>By January 2014, hire a FTE to be project manager for culvert replacement with fish-friendly passage.</p> <p>By July 2014, develop a prioritization of blockages, failing culverts, flood risks, etc. Report to include ecosystem benefits for each project.</p> <p>By December 2015, reduce flood risk and remove fish blockage for top 2-3 prioritized culverts.</p>

	and failing, and will create a prioritization schedule for replacing these culverts.	C2.3 Fix existing problems from development			
--	--	---	--	--	--