The Puget Sound Action Agenda is the plan for cleaning up, restoring, and protecting Puget Sound by 2020

May 2014

Puget Sound Partnership
LEADING PUGET SOUND RECOVERY

Cover Photo: Kennedy Creek Estuary, courtesy of Brian Walsh
Snohomish-Stillaguamish Watersheds

Description of the Area

The Snohomish-Stillaguamish watersheds⁶ are located within the Whidbey Action Area. Each of these watersheds is described below.

Snohomish River Watershed

The Snohomish River watershed is the largest watershed in Snohomish County and the second largest in the Puget Sound region. The watershed’s varied topography ranges from low, rolling terrain next to the shoreline to steep foothills and mountains along the eastern border. The watershed lies in two counties—Snohomish and King—and covers an area of 1,856 square miles with 2,718 river miles. The two major tributaries, the Skykomish and Snoqualmie Rivers, originate in steep valleys of the Cascade Mountains and descend into broad floodplains where they converge near the City of Monroe. Over 90% of the original floodplain wetlands in the lower Snohomish have been drained, filled, or channeled to accommodate development and farming.

The Snohomish River empties into Puget Sound north of Everett, the region’s fourth largest city and a major industrial and commercial center that includes Naval Station Everett and the Port of Everett. Some of the richest agricultural soils remaining in western Washington are found near the Snohomish, Skykomish, and Snoqualmie Rivers. Forestlands and wilderness cover approximately 70% of the watershed, and agricultural uses covers about 5% of the watershed. Urbanization is concentrated primarily in communities along the rivers and in the western portion of the watershed. Incorporated areas within the watershed include the cities of Everett, Mukilteo, Marysville, portions of Arlington and Granite Falls, Snohomish, Lake Stevens, Monroe, Sultan, Gold Bar, Index, Duvall, Skykomish, Carnation, Sammamish, Snoqualmie, and North Bend. The Snohomish River watershed is one of the fastest growing areas in Puget Sound with projected population growth of 59% from 2000 to 2030. By 2040, population and employment in the watershed are forecasted to grow by approximately 350,000 residents and 150,000 jobs, respectively. Most of this growth will be located in the western portion of the watershed. In the central and eastern portions of the watershed, there are an estimated 361,187 acres of privately owned forestland. The majority of the forest area is in a protected status; however, as many as 151,709 acres are at risk for development.

⁶ Water Resource Inventory Areas (WRIAs) 5 and 7
The estuary, where the nutrient rich fresh water of the Snohomish River mixes with the saltwater of Possession Sound, is home to many kinds of birds including blue heron, terns, eagles, and osprey and numerous varieties of fish and animals including Dungeness crab, salmon, seals, sea lions, and otter. The estuary functions as a natural filter that cleans water before it passes into the Puget Sound, provides rearing habitat for juvenile salmon, and slows down floodwaters entering Puget Sound. In addition, a myriad of streams and creeks in the upper reaches of the watershed flow through abundant forestlands and wilderness including the Alpine Lakes and Wild Sky Wilderness Areas.
The watershed has a long history of broad collaboration on issues ranging from flood protection to integrating mitigation and restoration needs in the Snohomish River estuary. In recent years, this collaboration has focused on a floodplain management approach to reconcile salmon habitat recovery, agricultural land use, and tribal treaty rights and culture.

**Stillaguamish River Watershed**

The Stillaguamish River is approximately 3,100 miles in stream length with a watershed of nearly 720 square miles in Snohomish and Skagit Counties. The mainstem of the Stillaguamish River is formed by the North and South Forks, which descend from the foothills of the Cascades to a confluence at the city of Arlington and flow westerly into Puget Sound via two channels: Hat Slough and the North Channel. The four main tributaries to the lower Stillaguamish River are Church Creek, Portage Creek, Pilchuck Creek, and Armstrong/Harvey Creek. The Stillaguamish River is the fifth largest freshwater system in Puget Sound, dropping from an elevation of 6,854 feet on Three Fingers Mountain to sea level at Port Susan and Skagit Bay. Forestry and farming are major land uses in the watershed with rural residential and urban development in the city of Stanwood and portions of the cities of Arlington and Granite Falls. Two municipal wastewater treatment plants discharge into the Stillaguamish River.

Watershed health is addressed through several collaborative efforts including the Stillaguamish River Clean Water District and the Stillaguamish Watershed Council. Many local stakeholders, including Snohomish County, the Stillaguamish Tribe, farmers, forestland owners, citizens, and local agency representatives plan and take actions to improve local water quality. Major public landholdings are managed by the U.S. Forest Service, Washington State Department of Natural Resources, and Snohomish County. The Stillaguamish River provides spawning and rearing habitat for eight salmonid species. Two of the 22 populations of Chinook salmon in the Puget Sound listed as threatened under the Endangered Species Act reside in the Stillaguamish River during portions of their life cycle. Land use in the portion of the watershed inhabited by salmon is 61% forestry, 22% rural residential, 15% agricultural, and 2% urban. In the mid-1990s, with leadership from the Stillaguamish Tribe and Snohomish County, the Stillaguamish Watershed Council began addressing salmon habitat restoration issues in the watershed.

The major commercial and recreational shellfish resource in Port Susan is the eastern softshell clam. The Port Susan area is a complex system of marshes, mudflats, and channels that support a wide variety of wildlife. It is among the most important of a series of estuaries in Puget Sound that collectively supports large numbers of shorebirds during winter periods and spring and fall migration.

**Unique Ecosystem Characteristics and Assets**

The Snohomish-Stillaguamish watersheds are dominated by forestlands, particularly in the upper mountainous portions of the area. More than 50% of the watersheds are in the Mount Baker–Snoqualmie National Forest or in state-owned forests managed by the Washington State Department of Natural Resources. Recreation and tourism are important economic sectors in both watersheds, with opportunities for float trips, fishing, kayaking, camping, hunting, hiking, and backpacking. Although much of the forestland is in public ownership and protected from development, there is still a significant risk of conversion to residential development on the privately held lands.
In the rural Snoqualmie River portion of the Snohomish River watershed, over 500 forested parcels, totaling more than 20,000 acres, are at risk of being converted from forestry use to residential development.

The Snohomish and Stillaguamish Rivers, combined with the Skagit River, have the largest freshwater influence from within the Puget Sound (excluding the Fraser River). The Snohomish River watershed has the most returning coho spawners between the Columbia River and the Canadian border, and produces 25 to 50% of all coho salmon in Puget Sound. In addition, the Skykomish River Chinook population has the highest abundance target in the Puget Sound evolutionarily significant unit. Juvenile salmon from many rivers in Puget Sound use the pocket estuaries and nearshore areas to forage and rear as they adapt to saltwater conditions.

The Stillaguamish and Skagit River deltas were designated as areas of regional importance in the Western Hemisphere Shorebird Reserve Network in May 2012. Aerial surveys of wintering shorebirds conducted in the mid-1990s showed that this area is one of only four sites in Washington with seasonal concentrations of shorebirds exceeding 20,000 birds on a regular basis. Port Susan is the southernmost critical biodiversity area in Puget Sound, and The Nature Conservancy identified the shoreline and nearshore as a priority conservation area of high biodiversity importance. The area is also a major producer of forage fish such as herring, sand lance, and surf smelt. Eelgrass beds in the Snohomish River delta are among the largest in Puget Sound, providing important spawning and foraging habitat for forage fish, salmon, and other species. Upper reaches of the Stillaguamish and Snohomish River watersheds support numerous resident and overwintering populations of eagles and other raptors.

Local Implementation Structure and Planning Process

The Snohomish-Stillaguamish Local Integrating Organization (LIO) was recognized in March 2012 by the Puget Sound Partnership’s Leadership Council as the ninth LIO established in the Puget Sound region. In July 2012, the Snohomish County Public Work’s Surface Water Management Division was designated as the LIO’s fiscal agent and administrator and responsible for providing ongoing support for LIO work efforts. The Snohomish-Stillaguamish LIO collaboration extends across two large Water Resource Inventory Area (WRIA)—WRIA 5 (Stillaguamish River watershed) and WRIA 7 (Snohomish River watershed, including the Snoqualmie River watershed and the Skykomish River watershed).

The LIO is made up of a nine-member executive committee and a 21-member implementation committee, which operate under a set of approved bylaws established in July 2013.

The executive committee is the primary decision-making body that provides accountability, oversight, and a forum for jurisdictional collaboration on local efforts to advance the Action Agenda. The executive committee includes representatives from the following entities.

- City of Everett
- City of North Bend
- City of Snohomish
- City of Arlington
- City of Stanwood
- King County
- Port of Everett
- Snohomish County
- Stillaguamish Tribe
- Tulalip Tribes

The executive committee is supported by the implementation committee, which provides a local working knowledge of Action Agenda implementation in WRIAs 5 and 7. The implementation committee includes representatives from the following entities.
- City of Lake Stevens Planning Department
- City of Snohomish
- ECO Net Snohomish Camano
- Futurewise
- King County
- King Conservation District
- Port of Everett
- Snohomish Conservation District
- Snohomish County
- Snohomish County Agricultural Advisory Board
- Snohomish Marine Resources Advisory Committee
- Snohomish Basin Salmon Recovery Forum
- Snohomish County Health Department
- Snoqualmie Watershed Forum
- Snoqualmie Tribe
- Sound Salmon Solutions
- Stillaguamish Clean Water District
- Stillaguamish Tribe Natural Resources Department
- Stillaguamish Watershed Council
- Tulalip Tribes Natural Resources Department
- Tulalip Tribes Planning Department

For the 2014/2015 Action Agenda update, The Snohomish-Stillaguamish LIO focused its work on identifying and reaching consensus on recommended near-term actions. This effort began in June 2013 with a day-long workshop of the implementation committee to review and revise a list of over 100 potential near-term actions that were submitted by the members. By the end of the workshop, the list had increased to 114 potential actions. The implementation committee then agreed to 11 criteria for prioritizing near-term actions, which it forwarded on to the executive committee.
The implementation committee grouped the potential near-term actions under the Strategic Initiatives (Section 2, The Strategic Initiatives) to ensure that all three initiatives would be addressed. The committee then identified several overarching actions that resulted in the creation of a fourth strategic initiative called Strategic Planning and Coordination. The implementation committee divided into four subcommittees, each based on a strategic initiative. Each subcommittee was tasked with identifying the 10 highest priority actions for addressing the strategic initiative. To facilitate this effort, several separate, but related actions were combined under a single near-term action.

The resulting list of approximately 40 recommended near-term actions was reviewed by the executive committee, which further prioritized and grouped the actions. The resulting list of about 25 near-term actions was voted on to identify the 12 highest priority actions. On October 18, 2013, the executive committee discussed the results of this vote and reached consensus on a list of 16 recommended near-term actions.

Pressures

The Snohomish-Stillaguamish LIO discussed the following pressures on the local ecosystem.

Habitat Alteration

- **Marine/estuary**: Loss of estuary tidal marsh and habitat connectivity, with more than 80% of the Snohomish, and 85% of the Stillaguamish estuaries diked, cutting off tidal marshes and blind tidal channels; only 18% of historical wetlands remain; potential future impacts from tidal power generation.

- **Shorelines**: Development along lake shorelines, resulting in reduced habitat availability, increased heterogeneity, nitrification, and increases in invasive species and toxic algal blooms.

- **Marine nearshore**: 38% of marine shoreline armored; over 5,000 overwater structures; 5.6 miles of railroad grade; disconnected feeder bluffs and pocket estuaries, development in sensitive areas.

- **Freshwater**: Loss of large river habitat complexity and floodplain connectivity from diking, riparian clearing, and floodplain development, reducing wood debris jams, side channels, forested islands, and pools.

- **Uplands**: Loss of working farms and forests through conversion resulting in altered watershed hydrology and degraded habitat; 16% increase in impervious surface in the Snohomish River watershed from 1991 to 2001; potential future development pressure in nearshore, river valley, and upland areas.

Pollution

- **Toxics**: Groundwater contamination leaching from past industrial development.

- **Bacterial pollution**: 48% of impaired waters listings due to bacterial pollution.

- **Nutrient loading**: Contributes to eutrophication and low dissolved oxygen concentrations in Possession Sound; dissolved oxygen and temperate concerns found in streams.

- **Surface-water runoff impacts**: Pollutant loading from urban stormwater and agricultural runoff; emerging pre-spawn fish mortality concern.
Freshwater Resources

- **Limited water availability for people, farms, and fish:** Low summer flows in WRIAs 5 and 7.
- **Altered magnitude, frequency, and duration of peak flow events.**
- **Alteration of surface hydrology:** Major alteration for flow in Sultan River below dam.
- **Increased freshwater demand** from more people, resulting in decreased aquifer levels, saltwater intrusion, and decreased groundwater discharge.

Invasive Species

- Potential negative ecological impacts on native populations: Japanese knotweed, Spartina, purple loosestrife.

Artificial Propagation

- **Unknown impacts of hatchery production** on existing steelhead and other salmonid species threaten viability.
- **Unknown Impacts from straying hatchery** stocks in the Snoqualmie River watershed.

Harvest

- **Fishing and bycatch:** Fishing and poaching.

Localized Climate Change Impacts

- **Sea level rise:** Significant change and loss of estuarine habitat in Snohomish and Stillaguamish estuaries; risk of saltwater intrusion; potential loss of floodplain capacity from diking.
- **Changes in hydrology** due to reduced snow pack and forest cover.

**Local Near-Term Actions**

The table below presents the local near-term actions for Snohomish-Stillaguamish watersheds. Each local near-term action is listed with an identification code—which includes the area abbreviation and a number—followed by a description of the action. The performance measures represent important, measurable, dated components of implementing each action. The owner is the entity or entities responsible for implementation of the near-term action, with the primary owner being responsible for tracking and reporting progress toward completing the action. The final columns provide regional context for the local actions, identifying the pressure(s) that each action is intended to reduce and the primary sub-strategy to which it is most closely linked. Local near-term actions are also listed in Section 3, *Strategies and Actions*, in the context of their primary sub-strategies.
# Local Near-Term Actions in the Snohomish-Stillaguamish Watersheds

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<tr>
<th>Near-Term Action</th>
<th>Performance Measures</th>
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| SNST1 Improve regulatory effectiveness. Compile and evaluate results from existing studies and those currently being completed on the effectiveness of existing federal, state, and local regulations to protect habitat. Facilitate discussions and building trust among elected officials. Develop strategies to address common issues that are identified. | By September 2014, compile studies including Tribal Treaty Rights at Risk White Paper, Tulalip Regulatory Analysis, Stillaguamish Regulatory Analysis, King County Critical Areas Ordinance Effectiveness Study, Snohomish County Critical Areas Regulations Review.  
- By October 2014, synthesize results based on common issues identified and highlighted as most important.  
- By November 2014, establish LIO subcommittee consisting of stakeholders to develop a series of recommendations.  
- By November 2015, implement recommended actions, including enforcement.                                                                                     | Snohomish-Stillaguamish LIO (reporter)  
Tulalip Tribes, Snoqualmie Tribe, King County, Snohomish County                                                                              | Land development                      | A1.3       |
| SNST2 Identify existing data and prioritize needs.                               |  
- Water quality: Compile water quality data from the previous 10 years for streams in the Snohomish and Stillaguamish River watersheds, and evaluate available data to establish priority areas for water quality improvements.  
- Culverts: Collect and assess existing data on public and private stream culverts in the Snohomish and Stillaguamish basins to identify high priority culverts for replacement based on multiple factors, such as fish passage.  
- Map systems: Inventory and map stormwater facilities and conveyance systems in the Snohomish and Stillaguamish watersheds.  
- By December 2014, compile available stream water quality data and identify gaps in data.  
- By December 2015, analyze water quality data to identify priority areas for water quality improvements.  
- In 2014 and 2015, explore and facilitate partnerships.  
- By December 2014, compile available culvert data, including past analyses of fish passage and flooding conditions, as well as upstream habitat.  
- By February 2015, identify data gaps.  
- By December 2015, identify specific public and private priority culverts for replacement.  
- By December 2014, compile available inventory data for public and private stormwater facilities and conveyance systems and identify data gaps. | Snohomish-Stillaguamish LIO (reporter)  
King County and cities, Snohomish County and cities, Snohomish CD                                                                         | Pollution from runoff from built environment | C2.1       |
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| Stillaguamish basins, and begin to prioritize the need for public and private stormwater retrofits. | • By December 2015, evaluate existing public and private stormwater facilities in selected areas for their potential to be retrofitted to improve water quality or downstream flows. | Snohomish CD  
King CD  
*Pollution from agricultural runoff* | C3.2 |
| **SNST3 Agricultural runoff.** Engage with the WSCC Agriculture Stormwater Committee to develop implementation and monitoring priorities related to agricultural runoff in the Snohomish and Stillaguamish basins. Both the King CD and the Snohomish CD will work with agricultural producers and livestock owners to implement BMPs that will address water quality and habitat resource concerns. | • During 2014–2015, attend and participate in drafting of priorities.  
• During 2014–2016, share information with Snohomish-Stillaguamish LIO to include in Action Agenda.  
• During 2014–2016, assist landowners to voluntarily implement BMPs, including but not limited to, livestock fencing, off-stream and solar pumps for stock watering, nutrient management, manure bins, installation of hedgerows and riparian forest buffers, pasture management, and filter strips on their land to improve habitat and protect water quality.  
• During 2014–2016, assist landowners with compliance of existing water pollution and Critical Areas Regulations requirements. | Snohomish-Stillaguamish LIO  
*City of Snohomish, Snohomish County, Snohomish CD, Forterra, The Nature Conservancy, King County* | A2.1 |
| **SNST4 Local habitat protection and restoration.** Implement effective habitat protection strategies that have been identified in local plans, recommended by stakeholders, and approved by plan sponsors. Examples include the following.  
• Acquisition by the City of Snohomish of 20 acres at the confluence of the Snohomish and Pilchuck Rivers.  
• By December 2015, increase participation in Conservation Reserve Enhancement Program and explore other financial incentive programs. | Snohomish-Stillaguamish LIO  
*City of Snohomish, Snohomish County, Snohomish CD, Forterra, The Nature Conservancy, King County* | A2.1 |
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<td><strong>SNST5</strong> Onsite septic systems maintenance and retrofit. Seek stable funding and expand Snohomish Health District program to provide technical assistance to property owners with septic systems. Investigate role of failing onsite septic systems in elevating stream bacteria and nutrient loads in Kimball and Coal Creek subbasins. Explore upgrading or decommissioning septic systems and connecting to municipal sewer systems.</td>
<td>• By December 2015, implement a pilot free trees program to increase tree cover within both the Snohomish and Stillaguamish watersheds. • By September 2015, identify sustainable funding source(s) including no-cost loans for repairs. • During 2014–2016, educate homeowners about septic system maintenance. • During 2014–2016, investigate extent of failing septic systems. • During 2014–2016, repair/replace defective septic systems. • During 2014–2016, track homeowner compliance in King County with DOH septic system maintenance requirements. • During 2014–2016, perform surface/groundwater monitoring and modeling as needed in Kimball and Coal Creeks following review of existing data. • By November 2015, estimate corrective action costs and provide cost-share options (e.g., low-interest loans to pay for retrofits, sewer line extensions, hookup fees). • By December 2015, share findings/approaches with Snoqualmie Valley cities and King County.</td>
<td>LIO (reporter) Snohomish Health District, Snohomish County, King County, Seattle/King County Public Health, Snoqualmie Tribe</td>
<td>• Wastewater-failing septic systems • Land development: new and redevelopment</td>
<td>C5.3</td>
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<td><strong>SNST6</strong> Water quality monitoring for ocean acidification. Collect water quality data for temperature, salinity, dissolved oxygen, pH, CO₂ (pCO₂) to identify local trends.</td>
<td>• During 2014–2016, install, maintain, and present data collected from Sunburst Sensor SAM12-CO₂ sensor system. • During 2014–2016, install and maintain YSI 6600 data logger.</td>
<td>Tulalip Tribes Stillaguamish Tribe, King County</td>
<td>• Data gap²</td>
<td>C7.5</td>
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| SNST7 | **Floodplain management for farm-fish-flood.** Snohomish County, together with project partners, will complete the development of reach-scale plans for the Sustainable Lands Strategy project and begin the implementation of those plans.  
- Continue development of Farm-Fish-Flood Coordination efforts led by King County.  
- Utilize synergies between local and state agencies to coordinate and leverage efforts that deal with farm-fish-flood issues, such as Floodplains by Design. | **Performance Measures** | **Owner(s)** | **Pressure(s)** | **Regional Sub-Strategy** |
| --- | --- | --- | --- | --- | --- |
|  | - By July 2014, complete Sustainable Lands Strategy reach-scale plans for four individual reaches (lower Snohomish River, Snohomish River estuary, Stillaguamish River estuary and mainstem, and Lower Skykomish River).  
- By December 2014, complete a countywide plan and strategy for implementing reach-scale plans.  
- By December 2015, complete the design and construction of two high priority projects listed in the plans.  
- By December 2015, secure funding to help support a cost-share program for farm padds or elevated farm structures. | Snohomish County  
Snohomish CD, King County, King CD, The Nature Conservancy | Floodplain function, levees, agriculture, runoff | A5.2 |
| SNST8 | **Pollution identification and correction project.** Snohomish County, together with project partners, will conduct a pollution identification and correction project to identify specific sources of fecal coliform bacteria contamination in the Lower Stillaguamish sub-basin.  
- By December 2015, begin process of correcting some of the high priority sites that are sources of fecal coliform bacteria contamination.  
- By January 2016, expand project to the Snohomish Basin. | **Performance Measures** | **Owner(s)** | **Pressure(s)** | **Regional Sub-Strategy** |
|  | - By December 2015, complete investigation and identification of specific sources of fecal coliform bacteria contamination in the Lower Stillaguamish sub-basin.  
- By December 2015, begin process of correcting some of the high priority sites that are sources of fecal coliform bacteria contamination.  
- By January 2016, expand project to the Snohomish Basin. | Snohomish County  
Snohomish Health District, Snohomish CD | Wastewater-failing septic systems, Pollution from runoff | C5.3 |
| SNST9 | **Fisheries/watershed ecology education for officials and decision-makers.** Sound Salmon Solutions and partners will develop a branded education curriculum and program on ecology issues necessary for salmon recovery, targeted at elected officials. This is not a lobbying campaign but a science-based, politically neutral curriculum, allowing officials to make informed decisions about land use and development, with Puget Sound Salmon Solutions. | **Performance Measures** | **Owner(s)** | **Pressure(s)** | **Regional Sub-Strategy** |
|  | - By June 2014, determine what information stakeholders, such as the Stillaguamish Watershed Council members, feel is important for elected officials.  
- By June 2014, determine what information elected officials require to make decisions that will improve the health of Puget Sound and allow salmon recovery.  
- By September 2014, develop curriculum, making use of prior efforts where applicable. | Sound Salmon Solutions | Development, runoff and wastewater | D6.5 |
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| Sound and salmon recovery in mind. The training will also initiate a relationship between decision-makers and organizations with the expertise to provide information and decision support. By completing the training, officials earn a Salmon Savvy Certification, a brand they can use to demonstrate their efforts to constituents. The program would result in ongoing classes in Snohomish County and could serve as a model for other areas. | • By December 2014, review and refine curriculum with the members of the Stillaguamish Watershed Council Stewardship Committee.  
• By June 2015, publicize and promote the Salmon Savvy-branded curriculum with elected officials.  
• In 2015, hold classes with 10 to 15 officials to test curriculum and get feedback.  
• By December 2015, finalize curriculum.  
• In 2016 and beyond, land use decisions are made by a measurable number of officials (target of 15) commanding a basic level of understanding and a decision support network. | Snohomish-Stillaguamish LIO (reporter)  
*King County and cities, Snohomish County and cities, Snohomish CD* | • Pollution from runoff from built environment | C2.3 |
| SNST10 Inspections and maintenance. Provide regular inspections of public and private stormwater facilities in the Snohomish and Stillaguamish basins and identify prescriptive maintenance needs and retrofit opportunities. | • By December 2014, secure funding for local cities that are challenged to provide regular inspections of existing stormwater facilities.  
• By December 2015, conduct stormwater facility inspections to identify prescriptive maintenance needs and retrofit opportunities. | Snohomish-Stillaguamish LIO (reporter)  
*King County and cities, Snohomish County and cities, Snohomish CD* | | |
| SNST11 Coordinated education and outreach leading to behavior change. Snohomish County, together with local and regional partners, will develop a prioritized list of BMPs to promote through education and outreach programs. Implement strategies that target specific audiences and use targeted messages to achieve awareness and meet behavior change goals. The following programs will be considered. | • During 2015–2016, secure funding to offer WSU Extension classes and services in WRIA 7.  
• During 2014–2016, Sound Salmon Solutions and Snohomish CD will host and attend events, and provide technical consultation and site visits for streamside landowners to help improve salmon habitat.  
• During 2014–2016, Snohomish CD will host 25 educational workshops for agricultural landowners. | LIO  
*Snohomish County, King County, Sound Salmon Solutions, Snohomish CD, King CD, WSU Extensions in King and Snohomish Counties, STORM, ECO Net* | • Public not using best management practices | D5.2 |
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<td>Forest stewardship and sustainable agriculture.</td>
<td>In 2015, conduct nearshore and bluff landowner workshops and distribute an updated Guide for Shoreline Living.</td>
<td>Tulalip Tribes, Everett Community College, and Marine Resources Committee</td>
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<td>Riparian solutions program.</td>
<td>In 2015, Snohomish Marine Resources Committee will host a meeting/field trip for upland farmers and shellfish farmers.</td>
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<td>Community and youth education/outreach program.</td>
<td>During 2014–2015, conduct outreach on aquaculture at gatherings of farmers at events such as the Snohomish County Focus on Farming, Country Living Expo, and Washington State Tilth Producers Convention.</td>
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<td>Stormwater management training.</td>
<td>During 2014–2016, Sound Salmon Solutions, WSU Extension, Snohomish County, and others will design and focus education and outreach efforts to target suspected sources that contribute and threaten commercial shellfish farm water certification as well as commercial fishery operations.</td>
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<td>Nearshore and bluff behavior change outreach (WSU Extension) Connection of upland farmers with shellfish farmers to discuss clean water for safe shellfish harvest and consumption.</td>
<td>In 2015, identify the needs of participating homeowners through the pollution identification and correction program as a follow-up to corrective actions.</td>
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<td>Development and implementation of multiparty integrated water quality themed education and behavior change programs to address shellfish protection.</td>
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<td><strong>SNST12</strong> Riparian corridor knotweed control. Program leads will be divided among basins: Stillaguamish—Stillaguamish Tribe and Snohomish County; Skykomish/Snohomish—Tulalip Tribes and Snohomish County; Snoqualmie—Snoqualmie Tribe and King County. Leads will work to vet methods and strategies, and develop control and elimination plans, and monitoring programs.</td>
<td>By December 2014, develop methods and strategies that work best in their areas of concern including evaluation of effectiveness of biological control. By March 2015, finalize control and elimination plans. By June 2015, hire additional staff, if necessary, to implement the control and elimination plans. From June 2015–June 2018, implement control and elimination plans, using principles of adaptive management.</td>
<td>Snoqualmie Tribe, King County, Snohomish County, Tulalip Tribes</td>
<td>Invasive species</td>
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<td><strong>SNST13</strong></td>
<td><em>From June 2015–June 2019, implement monitoring programs concurrently with control and elimination actions.</em></td>
<td>Stillaguamish Lead Entity and Snohomish Lead Entity</td>
<td>Loss of habitat</td>
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<td>Salmon/multi-species recovery plans.</td>
<td></td>
<td>Snohomish County, Stillaguamish Watershed Council, Snohomish Basin Salmon Recovery Forum, King County, Snoqualmie Valley cities</td>
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<tr>
<td>Support priority projects as specified in the salmon recovery plan, salmon recovery 3-year work plans, and basin’s 10- and 50-year salmon recovery goals.</td>
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<tr>
<td><em>Identify and implement one to three top priority habitat restoration projects in each basin.</em></td>
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<td><em>Establish the baseline condition of key habitats such as forest cover, wetlands, riparian areas, floodplains, nearshore, and assess trends and rate of change. Use analysis to predict future anticipated gains/losses based on population and build out trajectories as well as evaluating current restoration and protection benchmarks.</em></td>
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<tr>
<td><strong>SNST14</strong></td>
<td><em>By December 2014, identify top habitat restoration projects that are ready to go in the next 2 years.</em></td>
<td>Snohomish County Marine Resources Committee</td>
<td>Loss of shoreline ecological functions</td>
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<tr>
<td>Port Susan Marine Stewardship Area conservation. Establish Port Susan as a Marine Stewardship Area and implement the conservation action plan.</td>
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<td><em>In 2014, achieve formal adoption by the Snohomish County Council.</em></td>
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<td><em>By 2016, work to prevent 100% of future shoreline armoring in Port Susan.</em></td>
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<td><em>During 2014–2016, work to implement the high priority action steps in the Port Susan Conservation Action Plan.</em></td>
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<tr>
<td>Near-Term Action</td>
<td>Performance Measures</td>
<td>Owner(s)</td>
<td>Pressure(s)</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
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<tr>
<td><strong>SNST15</strong> Low Impact Development. Provide funding for the construction of up to five Low Impact Development projects in the Snohomish and Stillaguamish basins, including the City of Everett’s Green Stormwater Infrastructure Implementation Program.</td>
<td>By December 2015, construct five low impact development projects.</td>
<td>Snohomish-Stillaguamish LIO (reporter)</td>
<td>Pollution from runoff from built environment</td>
</tr>
<tr>
<td><strong>SNST16</strong> Groundwater study. Identify the costs and potential funding sources for conducting an impairment analysis for groundwater resources in the Stillaguamish and/or Snohomish River basins.</td>
<td>By December 2015, identify the costs and potential funding sources for conducting an impairment analysis including saltwater intrusion and impacts of sea level rise for groundwater resources in the Stillaguamish and/or Snohomish basins.</td>
<td>Snohomish County</td>
<td>Water withdrawal, saltwater intrusion</td>
</tr>
</tbody>
</table>

1 Where secondary owners were identified, they are shown in italics after the primary owner.
2 Local concern.

BMP = best management practice; CD = Conservation District; ECO Net = Education, Communication and Outreach Network; LIO = Local Integrating Organization; STORM = Stormwater Outreach for Regional Municipalities; WRIA = Water Resources Inventory Area; WSCC = Washington State Conservation Commission; WSU = Washington State University.