

# ACTION AGENDA

*for the*

## PUGET SOUND CONSERVATION DISTRICTS

*FINAL REPORT*

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&  
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## 1.0 Executive Summary

On December 1, 2008, the Puget Sound Partnership (Partnership) released the “Puget Sound Action Agenda: Protecting and Restoring Puget Sound by 2020” (2020 Action Agenda). This document contains strategies and prioritized actions for conserving, restoring and preserving Puget Sound’s watersheds and estuaries, and points to implementation of local programs and activities as one of the essential components in making the plan successful.

The Washington Conservation Commission (Commission) contracted a consultant team to explore how the activities of the 12 Puget Sound Conservation Districts (Puget Sound Districts) are aligned with the 2020 Action Agenda, and where opportunities exist to improve the districts’ programs, planning and coordination in addressing major threats to Puget Sound. This document contains the results of personal interviews with staff from the Puget Sound Districts and the Commission, plus the consultants’ research and analysis of district programs and accomplishments. The ‘story’ of each district’s unique position and role within its county is highlighted, including hurdles and successes. Opportunities for improving or expanding the capacity for the Puget Sound Districts emerged primarily from discussions with staff, but also from the consultants’ perspectives as third-party observers.

A number of key messages emerged during interviews and analysis, including:

- 1. The Washington Conservation Commission is well-poised to be a focal point for delivering landowner incentive programs in the Puget Sound region.** The Commission Board consists of representatives from state regulatory and resource management agencies and has an established network of offices in each county in the region able to provide technical assistance and outreach to local landowners.
- 2. The Puget Sound Districts represent an essential piece of the Puget Sound recovery puzzle. Their work with landowners to implement on-the-ground conservation and restoration actions address many of the major threats to water quality and marine and freshwater habitat identified in the 2020 Action Agenda.** Districts have successfully established programs directed at farm and forestland conservation, and are increasingly turning their attention to more urban-related issues such as stormwater management and low impact development (LID). For example, in 2009-2011, the districts plan to offer 64 LID workshops, develop 110 stormwater management plans and build 25 LID demonstration sites. The districts are flexible in their capacity to respond to changes in landowner needs while maintaining the core mission of natural resource conservation.
- 3. Owing to their non-regulatory status, professional staff and diverse volunteer board members, Puget Sound Districts generally have positive relationships with local governments, citizen groups and private property owners.** District boards are served by volunteers who are respected members of the farming, forestry and rural communities. Most districts are working hard to promote and support the farming economies in their counties by participating in food policy groups, promoting farmers markets and supporting farm resource networks. It is evident from the research and interviews with district staff that the function and role of the

Puget Sound Districts in protecting and recovering the Puget Sound ecosystem is unique and invaluable. Their one-on-one assistance to landowners to address specific needs brings the districts to the source of *and* the solution to threats facing the environment.

4. **Funding and capacity limitations are universal challenges facing all Puget Sound Districts.** Most districts do not have stable, long-term funding for core programs but instead rely heavily on grants. This situation, coupled with population and associated development pressures occurring across Puget Sound, means that districts must constantly seek funding to maintain or expand their operations and programs. They have few resources to develop new programs, conduct much-needed effectiveness monitoring, track BMP implementation and landowner change of behavior, or implement plans beyond one year. All districts have many more landowners seeking their assistance than they can support, and even with creative cost-share and partnership approaches, the districts all point to funding as their greatest obstacle to meeting landowner needs and addressing key ecosystem threats.
5. **Puget Sound District programs and activities do not always include ecosystem monitoring.** Most granting entities provide short-term (one to two year) funding and many do not cover the cost of monitoring or long-term evaluation of programs. Puget Sound recovery efforts will rely on monitoring and other accountability reporting for future funding and other types of support.
6. **Increased regulatory enforcement would help the Puget Sound Districts be more successful in their resource protection efforts.** Closer collaboration between regulatory entities and the districts could help to ensure greater success in changing landowner behavior associated with specific threats to water quality, water quantity, and habitat.

The major ecosystem threats that the Puget Sound Conservation Districts are addressing is summarized in Table E.1. The table also indicates which of these threats are identified in the 2020 Action Agenda (shaded). Table E2 indicates the work Puget Sound Districts have proposed for state funding in 2009-2011 to address these major issues. In order for the Puget Sound Districts to continue to address key ecosystem threats and meet the growing needs of landowners across the region, the following opportunities are presented by district staff and/or contributed by the consultant team:

**Stabilize district funding** for long-term maintenance of core programs, professional development of staff, studies and programs. Ensure that there is adequate funding for all core programs to support effectiveness monitoring and program evaluation to a) evaluate a program's ecosystem effect and b) provide accountability information for funding purposes. Core programs should be run by all 12 Puget Sound Districts utilizing similar approaches, techniques and evaluation measures.

**Coordinate core programs** across Puget Sound Districts. There needs to be stronger connection and integration across the 12 Puget Sound Districts to streamline information collection and reporting. This could be accomplished by standardizing procedures, tracking core programs and accomplishments, and managing information so it can be easily found district websites and in the Commission's on-line resource library.

**Increase public awareness** of the Puget Sound Districts. The Commission should develop and implement a strategic public relations and outreach approach to market the role and services of the Puget Sound Districts. This would help the public better understand district services that are available to them and would help garner support for assessments and other funding opportunities undertaken by districts.

**Market local farm products** through a '100 mile diet' (or similar public awareness campaign) across Puget Sound to broaden the awareness of the public that supporting local farmers benefits the local economy, environment and human health of the community.

Reaching a healthy and resilient Puget Sound by 2020 will require significant commitment from landowners throughout the basin. The Puget Sound Districts are in a unique position to secure this commitment due to their history, established landowner relationships, and legacy of trust. Helping the districts be more successful will require significant additional financial, political and public support.

**Table E.1. Conservation Districts' proposed '09-'11 programs and activities to address 2020 Action Agenda Priorities.**

From 2020 Action Agenda for Puget Sound			District Activities	
Regional priorities		Rank	Action #	Puget Sound District programs and activities proposed for '09-'11 to implement priority actions
PRIORITY A Protect intact ecosystem processes, structures and function	Protect high-value habitat and land at immediate risk of conversion as identified through existing processes such as <u>salmon recovery plans and others.</u>	3	A.2 (1)	<b><i>Protecting forest landcover</i></b> -- 221 individual tree farm assessments (e.g. inventorying resources and prioritizing forestry plan development and implementation) --143 forest plans developed and implemented --65 activities related to cost share programs (e.g. Firewise, FFFPP, Conservation Corps)  <b><i>Farmland preservation</i></b> --38 geographic assessment activities (e.g. creating GIS layers identifying farmland at risk of conversion; identifying potential farmland for preservation) --543 technical assistance actions for farmers, agency staff and others (e.g. conservation easements, work sessions, soils mapping and information, identifying local solutions for farmland preservation, project monitoring etc.) --193 activities related to financial assistance for program implementation (e.g. fund distribution to high priority projects etc)
	Continue to implement existing forest practice plans and regulations consistent with the Action Agenda, including the state trust lands HCP, state forest practices rules, and road maintenance and abandonment plans as informed by the forest and fish plan, and others.	5	A.4 (4)	
	Purchase or transfer development rights or use conservation easements for working lands at immediate risk of conversion.	7	A.4 (1)	
	Support legislation that seeks to continue to direct growth away from rural and working resource lands and into cities.	8	A.1 (4)	
	Support the Conservation Commission's efforts to protect productive agricultural areas consistent with the Action Agenda priorities.	18	A.4 (3)	
	Convene a task force to develop a funding mechanism to rapidly acquire properties with high ecological value and imminent risk of conversion.	25	A.2 (3)	
PRIORITY B Restore ecosystem processes, structures and functions	Implement restoration projects in salmon recovery 3-year work plans and the Estuary and Salmon Restoration Program of the Nearshore Partnership.	1	B.1 (1)	Salmon recovery activities is reflected in multiple district program areas including CREP, education and outreach, farmland preservation, livestock management planning, etc.
	Implement coordinated incentive and technical assistance programs for private landowners through the Conservation Commission, Conservation Districts, DNR other state agencies, WSU extension, local governments, NGOs and others as appropriate.	4	B.3 (1)	<b><i>Puget Sound Caucus</i></b> Puget Sound Conservation Districts have established a caucus to better coordinate on delivery of technical support to landowners to address key Puget Sound ecosystem threats.
	Restore floodplain and river processes where there is a high likelihood of re-creating ecosystem function.	8	B.1 (3)	SEE NOTE
	Remove significant blockages of ecosystem processes and provide access to habitat.	9	B.1 (4)	SEE NOTE
PRIORITY C Reduce the Sources of Water Pollution	Implement immediate remediation actions to address Hood Canal's low DO	1	C.1 (8)	<b><i>Stormwater/LID:</i></b> --242 outreach and education activities (e.g. LID demonstration sites, trainings and classroom presentations) --65 comprehensive stormwater assessment activities (e.g. GIS layers for collection areas, discharge points etc) --174 activities related to technical assistance (e.g. stormwater plans) --18 projects related to monitoring and evaluation  <b><i>Nutrients and Pathogen loading from non-commercial agriculture:</i></b> --913 individual farm risk assessments (e.g. completing assessments and prioritizing lists for farm plan implementation) --257 activities related to geographic assessments (e.g. in inventorying producers and creating GIS layers of livestock operations; understanding sources of loadings) --1,246 activities related to developing standardized farm plans --503 outreach and education activities --55 water quality monitoring activities (e.g. validating TMDL reporting) --229 cost share activities (e.g. distribution of cost share funds to high priority projects)
	Implement priority strategies and actions to address low DO in south sound, targeted areas in Whidbey Basin and other vulnerable areas	5	C.1 (9)	
	Implement private property stewardship, incentive and technical assistant programs that focus on reducing sources of water pollution	11	C.2 (8)	
	Implement Shellfish Protection District plans, on-site sewage treatment plans in marine recovery areas, and related projects to restore water quality at commercial and recreational shellfish areas that are degraded or threatened.	13	C.1 (7)	

**NOTE:** Puget Sound Districts have programs to address floodplain/river process and ecosystem blockage priorities in '09-'11; however, quantifying information for these programs and projects was outside the scope of this project.

## Table E2. ECOSYSTEM THREATS IN EACH CONSERVATION DISTRICT

Shading indicates threat exists in district area. X indicates whether district has a program in place to address the threat.

		WHIDBEY ACTION AREA			STRAIT OF JUAN DE FUCA		S. CENTRAL		H. CANAL		SAN JUAN	S. SOUND	WHATCOM		
Local threats		Description of threat	Whidbey	Skagit	Snohomish	Jefferson	Clallam	King	Pierce	Mason	Kitsap	San Juan	Thurston	Whatcom	
Habitat Alteration	Marine/estuary	Loss of nearshore habitat (eelgrass, pocket estuaries, tidal marshes)					X	X				X			
		Derelict gear													
	Shorelines	Development along lake shorelines						X							
	Marine nearshore	Marine shoreline development/armoring etc				X	X	X	X		X	X	X		
	Freshwater	Loss of large river habitat complexity, floodplain connectivity				X	X	X	X	X					X
		Uplands	Loss of working farms and forests	X	X	X	X	X	X	X	X	X	X	X	X
		Impervious surface increase	X	X	X		X	X	X	X	X	X	X	X	
Pollution	Toxics	Potential for localized and/or significant spills													
		Groundwater and/or sediment contamination resulting from past industrial development													
	Bacterial pollution	Inadequate waste management; boater pollution							X	X	X				
		Shellfish closures; bacterial contamination	X	X	X		X	X	X		X		X	X	
	Nutrient loading	Eutrophication and low DO						X	X	X	X		X		
Surface water runoff	Pollutant loading from urban stormwater and/or ag runoff and/or CSOs	X	X	X		X	X			X		X	X	X	
Freshwater resources		Limited water availability for people, farms and fish					X								
		Altered magnitude, frequency and duration of peak flows				X	X								
		Alteration in surface hydrology										X			
		Increased freshwater demand and saltwater intrusion, decreased aquifer levels and groundwater discharge						X							
Other	Invasive Species	Invasive species including Japanese knotweed, spartina, tunicates, etc.			X		X	X							
	Salmon	Salmon production								X	X		X		
		Fishing and by-catch													
Climate	Sea level rise										X		X		

## 2.0 Background, purpose and approach

### 2.1 Background

Restoring and recovering Puget Sound has been a regional priority since the early 1970s when the state established the Puget Sound Water Quality Authority. In 2007, in response to a growing body of evidence pointing to the ongoing decline of the Sound's water quality, habitat and species, the legislature passed a bill that formed the Puget Sound Partnership (Partnership), a new state agency tasked with coordinating the state's efforts to restore and recover the Sound by 2020.

One of the primary functions of the Partnership is to hold entities with responsibilities to restore, protect and manage Puget Sound accountable. Determining how these various entities best fit together to deliver on a healthy Puget Sound by 2020 is a complicated task. Equally complicated is the task of determining how these entities fit into the new Partnership paradigm, and how they can most effectively and efficiently contribute to the overall goal of recovering the Puget Sound ecosystem.

Many agree that Puget Sound recovery will succeed only if citizens throughout the basin, particularly landowners, are engaged, involved, and willing to take meaningful action. The Puget Sound basin covers 13,700 square miles and is home to over 4 million people. Approximately 80 percent of the landscape is privately owned, the majority of which are natural resource lands such as agriculture and forestry. Landscape alterations to these and other lands to accommodate the economic, housing, and transportation needs of the region's citizens is occurring at a rapid rate; the rate of farmland loss in the Puget Sound basin is the fifth or sixth highest in the nation. Conversion of natural resource lands has been identified as a major contributor to the myriad of problems facing Puget Sound. As key entities providing direct technical assistance to private landowners to help better manage land and protect resources, *the 12 Puget Sound Conservation Districts are uniquely positioned to help the state deliver on its goal to recover Puget Sound by 2020.*

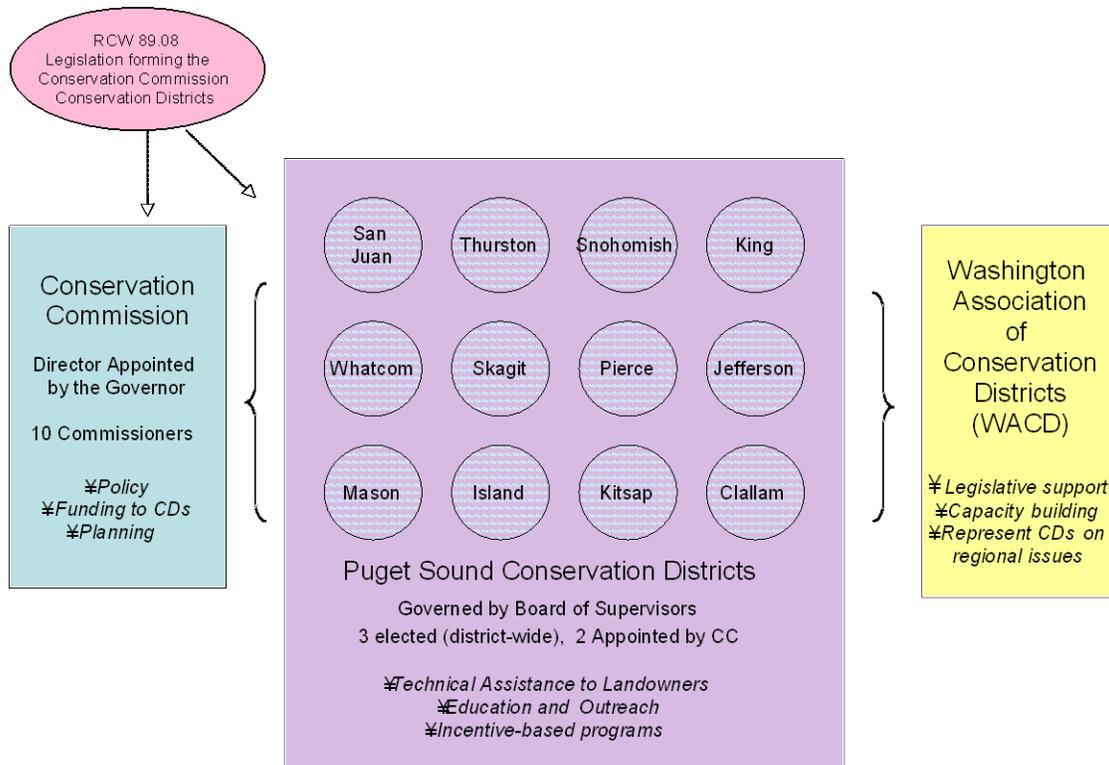
#### **Conservation Districts**

Conservation Districts are governmental subdivisions of the state. In establishing the Model Conservation Districts law, the legislature determined that "the lands of the state of Washington are among the basic assets of the state and that the preservation of these lands is necessary to protect and promote the health, safety, and general welfare of its people." Conservation Districts were tasked with providing the expertise and resources necessary to help landowners protect natural resources. There are 47 districts in the state and 12 in the Puget Sound basin. These 12 districts are the focus of this report.

The Puget Sound Districts work with a hundreds of different local, state and national partners. Two key partners include the Washington State Conservation Commission (Commission), which provides grant funds and helps districts coordinate programs and facilitate productive working relationships with other organizations; and the Washington Association of Conservation Districts (WACD), a non-profit organization that works on legislative issues and helps with capacity building. A third organization, the Natural Resources Conservation Service (NRCS), provides technical assistance to landowners on soil preservation and conservation and has been an

important partner in farmland protection over much of the last century. In 2006, at the request of the WACD and the Commission, the Puget Sound Districts formed a caucus to allow for more effective coordination and cooperation in light of the newly formed Puget Sound Partnership. Figure 1 provides an overview of the relationship between the Puget Sound Districts, the Commission, and the WACD.

Figure 1. The structural relationship between of Conservation Commission, the 12 Puget Sound Districts and Washington Association of Conservation Districts.



The structure of the districts is unique among conservation groups. Each district has a supervisory board comprised primarily of landowners, which greatly enhances their connections to and relationships with community members. District staff repeatedly point to this structure as being one of the keys to their success. Other characteristics highlighted by district staff that distinguishes them from other entities and organizations around the region include:

- Districts are non-regulatory and therefore staff members are typically well-received by landowners and are able to establish a high level of trust. They are viewed as a source of help to be valued rather than someone to be feared. Further, districts often act as a “liaison” or “mediator” between landowners and regulators.
- Most of the programs the districts offer are voluntary, incentive-based approaches.
- District staff members work with landowners on issues that are specific to a particular property. This on-the-ground, one-on-one assistance allows district staff to help

landowners develop site-specific solutions to environmental problems and has proven to be a successful approach to changing landowner behavior.

- District staff members have technical knowledge in a wide range of fields. Through staff-resource exchanges, this expertise is shared across districts (e.g. engineers, GIS specialists, agriculture experts, foresters, botanists, geologists, environmental scientists, horticulturalists, ecologists, education specialists, and others).
- The goals for district programs go beyond ecological protection to include economic viability and food security. Districts support sustainable farming, forest and shellfish harvest activities as valuable cultural economic activities that contribute to the maintenance of rural lifestyles, and are important in maintaining rural and native cover lands and their associated ecological functions throughout Puget Sound.
- Five of the 12 Puget Sound Districts are funded by special assessments for natural resource conservation, which represent an important source of stable funding. (Appendix B).

### ***Puget Sound Districts and the Puget Sound recovery effort***

All 12 Puget Sound Districts have decades of experience implementing programs and activities aimed at addressing key threats to Puget Sound. During this time they have partnered closely with a variety of state agencies, including the Partnership's predecessor entities, the Puget Sound Water Quality Authority and the Puget Sound Action Team. They have gained experience and expertise along the way and, perhaps most importantly, have established their reliability and credibility with local landowners. Like other entities working on natural resource protection and conservation issues in the Puget Sound basin, however, the districts' on-the-ground successes have not kept pace with rapid and large-scale changes in the region, changes such as population growth, conversion of forest and agricultural lands, and the transition of agricultural lands from larger scale operations to non-commercial uses. These regional trends have affected every county and every district in the Puget Sound basin, and are partially to blame for why the battle to restore and protect Puget Sound continues to be a losing one. *In short, the scale of the problem is far larger than the ability of existing efforts to address it, including efforts by entities such as the Puget Sound Districts.*

The Partnership recently completed a two-year planning process to take stock of current Puget Sound recovery issues and identify key threats and actions needed to address these threats. Their findings were published on December 1, 2008 as the "Puget Sound Action Agenda; Protecting and Restoring Puget Sound by 2020" (2020 Action Agenda).

## **2.2 Report purpose**

In anticipation of the publication of the 2020 Action Agenda, the Commission contracted a consultant team to help identify how well the Puget Sound Districts' programs and activities were aligned with the priority actions and activities identified in the 2020 Action Agenda. The consultant team was also asked to identify opportunities to improve district programs and planning and coordination activities in addressing major threats to Puget Sound. This document contains the results of that effort. This report tells the 'story' of each Puget Sound District and describes how they are successfully addressing key Puget Sound threats through

on-the-ground local programs. Opportunities for improving or expanding the capacity of the Puget Sound Districts to address threats are also included. These opportunities emerged primarily from discussions with staff but also reflect the consultants' perspectives as third-party observers.

Specifically, the report:

- Highlights existing Puget Sound District activities including technical assistance and education and outreach to landowners on water quality and habitat protection issues.
- Identifies programmatic and information gaps.
- Provides recommendations for addressing programmatic, scientific and management needs.

This document is also intended to serve as a tool to aid the Commission in leveraging federal, state and local funds to continue and broaden the important and valuable work of the Puget Sound Districts.

The Puget Sound Districts represent an essential piece of the Puget Sound recovery puzzle. This report is an attempt to provide a “fresh look” at the 12 Puget Sound Districts and to provide meaningful recommendations for how they can be even more effective and efficient in their contribution to Puget Sound ecosystem recovery.

## **2.3 Approach**

This report was developed based on interviews of district managers and key staff from the 12 Puget Sound Districts: Clallam, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, Whatcom and Whidbey. The consultant team asked district staff to submit detailed surveys related to their programs (Appendix C). The team also reviewed relevant information from each of the district's annual reports, 2009-2011 state budget requests, one and five-year workplans, County Comprehensive Plans, various additional natural resource information, and the 2020 Action Agenda. **Section 3** of the report provides an overview of each of the 12 Puget Sound Districts, including tables for each district that highlight current programs and activities that address key ecosystem threats identified in the 2020 Action Agenda. **Section 4** includes a summary of key findings and recommendations for how to improve and expand district efforts to address key threats to Puget Sound's ecosystem.

## **3.0 Conservation District summaries**

### **3.1 Clallam Conservation District**

#### **a. County overview**

Clallam County is the northernmost county on the Olympic peninsula and extends from the Pacific Ocean in the west, across the southern straits of Juan de Fuca to just west of Port Townsend. Roughly two-thirds of the county is contained within the Puget Sound basin; the western one-third of the county drains to the Pacific Ocean and lies outside the Puget Sound basin. The Elwha and Dungeness are the largest river systems in the county that drain to Puget Sound. Together, they provide important habitat to a wide range of species, including ESA-listed Puget Sound Chinook salmon, Hood Canal summer chum salmon (Dungeness and east), bull trout, and Puget Sound steelhead. With approximately 66,000 residents, Clallam is the third least populated county in the Puget Sound region. By 2025, the population is expected to increase by 14,705 people (22 percent).

Commercial forestland is the dominant land use in the county, covering some 56 percent of the landscape. Timber land is viewed as a long-term economic and environmental asset by local residents. Agriculture is another important economy, with most of the county's 1,252 farms located within the Dungeness Valley, where irrigation is necessary for production. Most current farming operations are hay and beef, a change from the recent past when there were hundreds of dairies.

Other natural resources in Clallam County include extensive kelp forests along the county's marine shorelines, and shellfish growing areas in Dungeness and Sequim bays. Dungeness Bay is partially closed to commercial shellfish harvesting due to fecal coliform contamination. The county includes important stopping grounds for numerous species of birds utilizing the Pacific flyway, and federally protected northern spotted owl and marbled murrelet rely on habitats within Clallam County. The rivers, nearshore and estuaries along the Strait are important areas for rearing and migration of salmonids from throughout Puget Sound.

Land conversion and loss of resource lands was identified as a key threat in the 2020 Action Agenda, which noted "the retention of working resource lands is an important environmental and economic strategy in the (area)." Threats from management of resource lands continue to impact water quantity, water quality and habitat. There are approximately 173 miles of irrigation ditches in the Dungeness Valley, some of which have delivered water to valley farms for over 100 years. These water withdrawals contribute to low stream flows in the Dungeness River in late summer, which is a limiting factor for ESA-listed Chinook salmon. Additionally, habitat in the Dungeness River and delta has been impacted by dikes and other channel modifications.

## **b. Conservation District Overview**

The Clallam Conservation District has been operating since 1959. The district lies within the Strait of Juan de Fuca and Hood Canal Action Areas. The district's predominant land users and recipients of the district's technical assistance are small scale non-commercial farm operators and rural residential landowners. The Clallam District is one of the smaller of the Puget Sound Districts, with five employees, three of whom are conservation planners. Annual revenues have averaged over \$2.5 million over the past three years with the bulk of expenditures for irrigation efficiencies projects. The district sponsors one to two Family Forest Fish Passage Program fish barrier removal projects each year, and in the past five years, has become increasingly involved with stormwater management. Technical and other assistance is provided on a request basis.

Irrigation is an important program for the district due to low in-stream flow in the Dungeness River during late summer months. Irrigation has been listed as a limiting factor for ESA-listed salmon. The district is working to improve the existing irrigation systems of the seven irrigation districts and other entities in the Dungeness Valley to conserve water by improving irrigation water conveyance and on-farm efficiencies.

The district participates in farmland preservation by serving on the agricultural commission that deals with the issue, and by providing technical assistance, including GIS assistance, to the county, local land trust, and others involved in the issue.

### ***Funding***

In an average year, approximately 95 percent of the district's revenues come from grants, although nearly all FY2007 funding came from grants. Total annual discretionary funding is only about \$40,000. The district has no assessment, but receives \$26,000 per year in non-project funds from the county.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

Table 1 (Appendix A) contains a summary of ecosystem threats in Clallam County and programs and activities that the Clallam District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Clallam District activities are linked to Partnership priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Clallam District has in place:

**Dungeness River water conservation.** One of the most notable achievements of the Clallam District is its work to improve in-stream flows in the Dungeness, which provides habitat for four species of threatened salmonids, including steelhead. Low-flows in the Dungeness in late summer have been identified as a major limiting factor for salmon, and up to 50 percent of the withdrawals are for irrigation. Over the past eight years, the district has provided technical and financial assistance to the seven irrigation districts and companies that withdraw water from the Dungeness River. One \$5.25 million effort involving two irrigation companies and one irrigation district resulted in water savings of six cubic feet per second. The total water savings for all of the District-assisted projects is

over 10 cubic feet per second of water, which amounts to approximately 10 percent of the instantaneous irrigation water diversions from the Dungeness River, or 10 percent of flows that occur during the critical late summer/early fall period. Considerable water quality improvements have also resulted from the piping of open irrigation ditches to eliminate polluted irrigation waters captured within the ditches.

**Water quality.** In order to most effectively and efficiently focus their work, the Clallam District recently conducted a “windshield” survey of farms within the county and identified 125 farms that have a medium or high likelihood of adversely impacting water quality. Of these, half are five acres or less and 96 are horse farms or include horses on the farms. As a follow-up to the farm survey, the district hosted a series of educational workshops targeted specifically at horse and livestock farmers to share information about land and water stewardship. At these workshops, many farmers requested technical and/or financial assistance to implement BMPs. The district’s goal for these workshops was to have 80-90 percent of the priority farms addressed.

**Stormwater manual for small residential plots.** In 2007, the district developed a small projects stormwater management manual for Clallam County that provides pre-engineered prescriptive stormwater BMPs for residential development tailored to the different precipitation/soil/ topographic zones throughout the county. It was intended to fill a critical void necessary for the county to adopt a stormwater management ordinance and is the only manual of its kind produced by a Puget Sound District.

**c. Hurdles and opportunities**

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Data management</b>	District needs to utilize water quality data for its programs. Existing monitoring and reporting structure is not conducive to easily accessing and applying the data.	Consistent and accessible water quality monitoring data is needed on a Sound-wide basis; federal, state and local governments need to better coordinate to collect and manage data.
<b>Funding</b>	Lack of long-term stable funding makes it difficult to conduct long-term planning, retain staff, or maintain core programs.	Secure stable funding for basic operations so district is not dependent on grants to maintain core programs.
<b>Regulatory enforcement</b>	Lack of enforcement at all levels. Many “high priority” farms are violating the CAO and there is limited county enforcement. This makes it challenging for the district to get work done.	Explore opportunities to increase political will and capacity of regulatory agencies to enforce existing regulations.
<b>Coordination</b>	State resource (including regulatory) agencies have limited staff assigned to Clallam County.	Increase presence and capacity of key state resource agencies. Create state agency field office in Olympic Peninsula

Category	Hurdle	Opportunity
		region similar to Ecology's Bellingham Field Office (BFO), and integrate state resource agencies on-site.
<b>Marketing</b>	Public (in general) does not understand the role of the district, and this is exacerbated by a lack of recognition by partner agencies and organizations. District is often confused with county or NRCS. Also, district tends to give credit to landowners to whom they provide assistance and does not receive recognition itself.	The Commission should explore the possibility of conducting a campaign to promote the work of the Puget Sound Districts and improve how they are viewed/identified.
<b>Measuring success</b>	Evaluation and tracking are two of the district's biggest challenges, especially for educational programs. Past efforts were time-consuming and results were not useful.	A set of core programs should be established, and the Commission should take lead in establishing and securing funding for effective monitoring/evaluation measures.

## **3.2 Jefferson Conservation District**

### **a. County Overview**

Jefferson County lies at the north end of Puget Sound and is skirted by Hood Canal to the east and the Strait of Juan de Fuca to the north. Watersheds in the west end of the county flow into the Pacific Ocean. The county is predominantly forest land, with pockets of agricultural areas along the river basins. Many of the rivers and streams in Jefferson County are salmon-bearing and are still highly productive. The eastern part of the county is predominantly in WRIA 17 and includes the northern portion of WRIA 16. The county has approximately 200 miles of marine shoreline and has several prime shellfish growing areas.

Urban development in the Jefferson County is concentrated in Port Townsend, Port Hadlock and Port Ludlow, which are situated along several bays in Puget Sound. Shoreline development is also growing more prominent along the eastern side of the county. The population is approximately 27,000 with an additional 15,000 expected by 2025. Port Townsend is the only incorporated area in Jefferson County and is a hub of boat builders and yacht enthusiasts, and a destination for tourists visiting the Olympic Peninsula.

Historically, forest products, farming, mineral extraction, fishing and shellfish harvest have been the major natural resource industries in Jefferson County. Over time, farming practices have shifted from a large number of large dairies and beef operations to an increasing number of small-scale agricultural and horse operations.

One of the key threats to conserving agricultural and forest land in the county is the economics of farming. When prime agricultural land is sold it does not usually remain active farmland, but is converted to housing developments and other urban land uses. The margin of profit is not compelling enough to keep farms active or to draw new farmers. Since the county is far from large markets and suppliers, transportation costs for farm products are higher than elsewhere, which makes profit margins even narrower.

### **b. Conservation District Overview**

The Jefferson Conservation District was created in 1948 to work with private landowners. While agricultural practices are less abundant and on a smaller scale than in other counties, most farms have salmon bearing streams, and many drain to shellfish harvesting areas. Thus, the district's technical assistance and outreach efforts target all landowners with salmon habitat and water quality issues to ensure that those streams and rivers remain healthy and intact. The district also provides technical assistance to shoreline bluff owners and works closely with community groups and other agencies on natural resource issues. The district lies within the Strait of Juan de Fuca and Hood Canal Action Areas.

The Jefferson District shares an engineer with Kitsap, Thurston and Mason districts, and has staff with expertise in forestry and water quality.

As with other districts, Jefferson District is well regarded among county landowners. Al Latham, the District Manager, shared an anecdote of visiting a shellfish grower in Discovery Bay with staff from several other agencies. As the car arrived, the shellfish grower said, “Well, a whole load of government folks -except Al. He works for the Conservation District - they get things done.”

The dedication of the Jefferson District’s volunteer supervisors is one of its strengths. The supervisors are well connected to and trusted by the community. Several supervisors have served for over 20 years, and one has served for more than 50 years. This strong dedication has helped the district work with a broad range of landowners in a region where there is a fair degree of government distrust.

### ***Funding***

Jefferson County does not have an assessment, but the district receives about half of the funds that it would receive from an assessment from the county general fund. The remaining funds are obtained from a variety of sources including grants from the Commission and other sources.

### ***District programs, ecosystem threats and the PSP Action Agenda***

Table 2 (Appendix A) contains a summary of ecosystem threats in Jefferson County and programs and activities that Jefferson District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Jefferson District activities are linked to the Partnership’s priorities.

The following programs are examples of unique or creative approaches that Jefferson District has developed to address water quality, habitat or land use issues:

**Innovative water quality monitoring.** Jefferson District is one of the few districts with its own water quality monitoring program to document the effectiveness of BMPs. Data is collected for fecal coliform, dissolved oxygen (DO), temperature, pH, conductivity, turbidity, and nutrients. Temperature data loggers record summer temperatures hourly. District staff pioneered a new parameter–intragravel DO–to determine DO levels within the gravel where salmon eggs are incubating. The district sends the data to landowners so they can actually see the outcome of their BMP implementation.

**Solar powered water pumps.** Jefferson District is partnering with livestock owners in an innovative solar powered water pump program that keeps livestock out of streams and protects water quality. To date, the district has installed two systems to supply drinking water for livestock and keep them fenced out of streams. The pumps are a solution to livestock watering in areas where grid power is not readily available. The district has a demo model that they use to demonstrate the pump’s effectiveness, and is currently seeking grants to install more.

**Partnerships.** Jefferson District has cultivated highly effective collaborative relationships with local community groups and agencies. One example, the “Chumsortium”, is a group of salmon recovery entities such as the Land Trust, Regional

Fisheries Enhancement Groups, Jefferson County, Tribes, and WDFW. The district provides technical assistance to groups within the Chumsortium and helps coordinate their projects and meetings.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed are from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Funding</b>	District staff spends a large amount of time and effort seeking grants. This makes it difficult to do long-term planning, retain staff, or maintain core programs.	The Commission should offer the district one comprehensive grant (rather than the four to five they currently provide).  Provide stable funding for basic operations so the district does not need to seek additional grants to maintain core programs.
<b>Regulatory</b>	Permitting process can be cumbersome and lengthy.	Expand and streamline the HPA permitting process for agriculture BMPs and salmon habitat projects.
<b>Capacity</b>	There are challenges with sharing one technical resource (engineer) across four districts. There is more demand for engineering services than one engineer can provide.	Fund additional engineering technical support to ensure that the demand for design and engineering for district projects can be met.

### **3.3 King Conservation District**

#### **a. County Overview**

King County lies in east central Puget Sound and its boundaries extend from the shores of Puget Sound to the crest of the Cascade Mountains. The county contains three major watersheds – the Snoqualmie (WRIA 7), the Cedar River (WRIA 8) and the Green River (WRIA 9) – and a portion of Puyallup (WRIA 10) that drains into Lake Washington and Puget Sound. Significant agricultural areas (approximately 42,000 acres) lie within the Snoqualmie Valley and Enumclaw Plateau. There are nearly 2,000 miles of shoreline along the county’s lakes, rivers and marine areas.

King County is the most populated county in the state. Over 1.8 million residents currently live there, and an expected 456,000 more are expected by 2025. Nearly 700,000 of the county’s residents live in one of 40 incorporated cities, and King County will absorb a large percentage of the 1.5 million additional residents expected in the Puget Sound basin by 2025. While this influx will occur primarily in the urban centers of Seattle, Bellevue, Issaquah and other cities, rural areas will also be under development pressure. As property values increase and development pressure continues, preserving rural, forest and farmland will become increasingly important and challenging.

Despite its highly urban nature, there is a thriving agricultural sector within the county, with approximately 1,500 large commercial and 10,000 non-commercial farms. King County has the largest number of horse farms of any county in the state.

The listing of Chinook salmon and Bull trout on the federal endangered species list has placed King County in the middle of a Sound-wide effort to develop recovery plans for these species. With the recent addition of Puget Sound’s orca whales on the endangered species list, King County and neighboring counties are increasingly coordinating their efforts to protect, restore and recover habitat and water quality to recover these and other species in decline.

Urbanization is a major threat to King County’s natural resources. As the population grows, the demands on the landscape increase as roads, housing developments, business parks and retail malls spread out from the urban areas. Efforts to contain urban sprawl through the Growth Management Act and Critical Areas Ordinance and other regulations have met with some success, but have not kept pace with the rate of growth in the county.

Shellfish areas within King County have been closed for decades due to poor water quality. Fecal pollution from CSOs, stormwater runoff, pet waste and other sources is making its way into King County’s waterways, closing beaches and preventing shellfish harvest. In addition, new and emerging toxic compounds including endocrine disrupting compounds, phthalates and flame retardants are now appearing in the county’s urban bays, marine waters, and wildlife.

## **b. Conservation District Overview**

### ***Overview***

King Conservation District has been working with landowners in the county since 1949. Over time, the district's programs have diversified to reflect changes in land use characteristics and demographics. An increasing portion of King Conservation District technical assistance and outreach is targeted to urban and shoreline landowners. Of the county's 40 incorporated cities, 35 are served by the King Conservation District.

### ***Funding***

The King Conservation District has a \$10 per parcel assessment that has been in place since 2007. This assessment provides approximately 75 percent of the district's annual budget; the remainder is derived from the Commission and competitive grants. Leveraging funds through partnering and cost-share arrangements with agencies, cities, organizations and landowners has allowed the district to support a wide range of projects in urban, rural and agricultural areas.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

Most of King Conservation District programs are built around the following components: 1) Information and education, 2) technical assistance, and 3) implementation incentives. King Conservation District's programs address the following broad issues:

- Salmon recovery
- Farmland preservation and protection
- Sustainable agriculture and rural economics
- Marine shoreline restoration
- Water quality protection
- Riparian habitat protection and restoration
- Urban and rural open space restoration

Table 3 (Appendix A) contains a summary of ecosystem threats in King County and programs and activities that King Conservation District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how King Conservation District activities are linked to the Partnership's priorities.

The following programs are examples of unique or creative approaches that King District has developed to address water quality, habitat or land use issues.

**Landowner Incentive Program:** The district's Landowner Incentive Program enables property owners to seek cost-share funds for over a dozen BMPs including forest health management, fencing, aquatic area buffer enhancement and nutrient management. This program targets the full range of landowners— those with marine shoreline, forest, upland, riparian, wetland and pasture land. King Conservation District funds between 50 and 90 percent of the cost of an approved BMP. Landowners must have a district-approved farm plan or technical assistance plan, or a King County approved forest stewardship plan to qualify for funding. This program has helped improve or resolve numerous water quality and habitat issues and is widely popular.

**Where the Water Begins:** The *Where the Water Begins* program educates marine shoreline landowners about the unique ecology of the nearshore environment, as well as nearshore impacts from common land use practices. Landowners receive site assessment assistance from district technicians and have access to cost-share funding to implement habitat enhancement practices such as marine riparian enhancement and bulkhead removal.

**Opportunity Fund:** King Conservation District’s Opportunity Fund is a grant program implemented in partnership with the Snoqualmie Watershed forum. Up to \$200,000 in funds are available annually to support land owner proposed projects that improve forest health, enhance fish and wildlife habitat, and address fish passage barriers. This program offers landowners an opportunity to undertake improvements that they could not otherwise do. The district offers about 15 grants each year and landowners are obliged to maintain the projects for the life of the practice.

**c. Hurdles and opportunities**

The following table summarizes hurdles and obstacles that emerged during interviews with King Conservation District staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Collaboration/ cooperation</b>	Puget Sound Districts are not well coordinated as a group and the Puget Sound CD Caucus function is not clear.	Clarify the Puget Sound Caucus’s role so that all districts are on board. Decide on a smaller number of problems and issues and do them well. Districts should not try to address everything. Piecemeal efforts do not add up to significant change.
<b>Funding</b>	Funding limitations hinder the district’s ability to meet the growing need for landowner assistance and outreach.	Secure stable funding for basic operations so the district does not need to seek additional grants to maintain core programs.
<b>Monitoring and accountability</b>	Available funds limit the district’s ability to conduct effectiveness monitoring. Meanwhile, the district relies on the knowledge that the BMPs planned and implemented through district programs are based on science, and when implemented, will have anticipated positive outcomes on the environment.	Ensure that grant funding includes adequate resources for effectiveness monitoring and program tracking.
<b>Regulations</b>	Permitting processes for on-the-ground work by landowners is cumbersome, particularly within critical areas. This impacts the district’s ability to engage landowners in implementation of BMPs and behavior change associated with district-developed conservation plans.	Various permitting processes should be streamlined, standardized across the state, and coordinated among districts. Programmatic permit tracking should be developed to assist with timely and efficient implementation of district-planned practices.
<b>Planning</b>	There is insufficient information regarding the regional impact to ecosystem processes and function from ongoing growth and development.	Invest time and resources in developing alternative futures scenarios for Puget Sound’s agricultural, rural and forest land to ensure programs and district efforts are heading in the right direction.

## 3.4 Kitsap Conservation District

### a. County Overview

Kitsap County is located in west central Puget Sound and is surrounded almost entirely by water: Hood Canal extends along the county's entire western side and Puget Sound lies to the east. With 228 miles of marine shoreline in close proximity to urban areas, Kitsap's shoreline is highly developed. The county has 9 major river and stream networks within its main watershed, WRIA 15. The county's natural resources include forest and agricultural products, fish and shellfish.

Kitsap County's population is approximately 250,000, and an additional 67,000 are expected by 2025. During the past few decades, the county has grown into a bedroom community for Pierce and King Counties due to its close proximity to Tacoma and Seattle and relatively affordable housing. A large number of short-term residents are employed by the naval base in Bremerton, so property turnover rates are high. With nearly 30 percent of the employed labor force in Kitsap commuting out of the county, the character of the county is changing quickly.

Farmland conversion in the county is occurring rapidly, but at the same time, there is a revival of small-scale agriculture and livestock farming. One of the hidden economies in Kitsap County is the farm-to-neighbor exchange or sale of locally-grown and produced farm products such as eggs, beef, vegetables, sheep wool and other farm products. For many, the proximity of Kitsap to major urban centers of employment offers the opportunity for residents to practice small-scale farming while commuting to a job elsewhere.

Water quality problems associated with urbanization, shoreline development and farming practices have led to 25 of the county's water bodies being listed on the 303d list. Given that most of the 1,600 farms in Kitsap County are small (the average parcel is 6.7 acres), the cumulative pollution from livestock and farming practices is a significant threat, particularly given that not all landowners have BMPs in place or seek assistance in farm management.

### b. Conservation District Overview

The Kitsap District lies within the North Central Puget Sound and Hood Canal Action Areas. The district conducts periodic farm inventories, but turnover in landownership (especially military personnel) makes it difficult to keep up with landowner needs. The district's priority is maintaining small farm operations and helping to support the farming community and farming economy.

#### ***Funding***

Kitsap District does not have an assessment. Approximately half of its budget comes from the county's Surface and Stormwater Management Program; other funding sources include the Commission, Ecology, EPA and Bainbridge Island. Roughly 60 percent of the district's budget is directed to agriculture and farm programs, and the remaining goes to education and outreach programs.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

Kitsap District's programs are directed at the following issues:

- Farmland preservation
- Pollution prevention
- Shoreline protection
- Shellfish growing areas
- Farm products marketing

Table 4 (Appendix A) contains a summary of ecosystem threats in Kitsap County and programs and activities that Kitsap District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Kitsap District activities are linked to the Partnership's priorities.

The following programs are examples of unique or creative approaches that Kitsap District has developed to address water quality, habitat or land use issue.

**Surface and Stormwater Management Program (SSMP).** The SSMP was formed in 1995 and is a collaborative program involving four local organizations (Kitsap Health District, Kitsap County Departments of Public Works and Community Development, and the district). The program's focus is to strategically address non-point source pollution problems. The SSMP identifies problem areas and works with landowners within those areas to correct issues through technical assistance, BMP implementation and education. The program also supports water quality monitoring to determine whether issues are resolved. The Kitsap District's contribution to the SSMP involves education and outreach, farm plans, and BMP implementation. A strength of the program is the enforcement role that the Health District plays. Landowners in problem areas are offered the option to fix problems themselves, work with the district to implement BMPs, or pay a fine.

**Agricultural Survey.** Sustaining small-scale agriculture is a goal of the district, and through its agriculture survey, the district can inventory productive agriculture land. The survey also serves as a tool to collect information on the types and quantities of fresh produce, livestock and other farm products available, and also helps farmers market their goods locally. This survey is one step in helping to improve the local farming economy by matching farmers with local consumers. Also, the district is helping to promote healthier lifestyle and better food choices. The agriculture inventory is updated every two to three years.

**Realtor Education Program.** Kitsap County has approximately 1,000 realtors. One of the challenges for potential land buyers is to understand a property's characteristics with regards to farming, livestock and forestry. Through grant funding, Kitsap District offers workshops for realtors to learn about forestry, wetlands, low impact development, septic systems, and livestock needs. Kitsap District has offered four workshop series over the last 12 years. This training helps ensure that future landowners know the limitations of their property and utilize the landscape

appropriately to protect water quality and minimize damage to the land. In return, realtors gain clock hours for maintaining their licenses and are likely to provide better service to their clients.

### c. Hurdles and Opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

<b>Category</b>	<b>Hurdle</b>	<b>Opportunity</b>
<b>Marketing and Advocacy</b>	Marketing of local farmers and their products is limited.	Commission could help market small farms through a '100 mile diet' and other such community programs that support locally grown products.
<b>Collaboration/ Cooperation</b>	There is a lack of leadership to tackle large regional problems.	Issues should be clearly described. The caucus is attempting to do this but needs more focus and direction. More leadership is needed at WACD for a targeted, focused approach for tackling problems collectively across Puget Sound Districts.
<b>Funding</b>	District staff must constantly seek new grants and funding sources to keep existing programs going and address emerging issues.	Steady, dedicated funding would allow the district to plan future work more creatively and develop long-term goals.
<b>Regulations</b>	Need to protect farmland and rural areas from development as farmers sell off their land.	Land use development regulations such as growth management are needed. An open space and farmland preservation trust program would be helpful, although it may not be enough.
<b>Planning</b>	More comprehensive land use planning across the region is needed.	Develop a Puget Sound Plan that addresses small farm protection and land use.

## **3.5 Mason Conservation District**

### **a. County Overview**

Mason County is located on the Olympic Peninsula between Hood Canal and the Olympic Mountains. The county is heavily forested and over a quarter of the land lies within Olympic National Park and Olympic National Forest. Agricultural lands make up a small fraction of the county's land area (roughly 3.5 percent). The county's boundary extends into the waters of Hood Canal, a fjord-like extension of Puget Sound that has been plagued for the past decade with low dissolved oxygen and high nutrient loads.

Approximately 52,000 people reside in Mason County, with an estimated 25,000 more expected by 2025. Thirty to 40 percent of residents commute outside the county for work. Privately owned land exists mainly in five to 10 acre parcels and includes forests, agricultural lands and shellfish growing areas. Over 11,000 acres of farmland are in food production, but growth and increasing land values pose a threat to small farm sustainability.

Watershed and shoreline alterations have been associated with water quality degradation in Hood Canal. Mason County, along with adjoining counties along the Canal, is working to reverse this trend. District staff believes that small farms lacking farm or nutrient management plans are contributing a large proportion of the water pollutants in the region.

### **b. Conservation District Overview**

Mason District focuses much of its current work on salmon habitat restoration, and also addresses water quality and farmland preservation. The district lies within the Hood Canal and South Puget Sound Action Areas, and is the Lead Entity for WRIA 14 salmon recovery efforts.

Because of the high number of smaller properties and fewer large landowners, tracking the impact of land use practices across the landscape is challenging. District staff shared their concerns that the cumulative impact of smaller farms may be more harmful than the impact of several large landowners. Most grant sources generally direct funds to programs targeting large landowners where the impacts are perceived to be more significant.

Given the county's extensive marine shoreline, there is a need for shellfish conservation plans. However, there is no clear source of funding for such programs. The shellfish industry is involved in tracking water quality improvements and BMP effectiveness implemented by the district, but there is no clear link between district programs and shellfish area water quality improvements. It is likely that BMPs implemented by landowners in Mason County have had a beneficial impact on water quality in shellfish areas, but this has not been quantified.

Mason District has a forester, biologist and engineer on staff, and these technical experts are shared with adjacent districts.

## **Funding**

Most of Mason District's funding comes from the Commission and through Ecology grants, and these funds typically target large landowners. An assessment was approved by the county but has been held up in litigation for several years. Unfortunately, the cost of litigation is absorbed by the district, funds that would otherwise be used to implement programs. Mason District has been successful in funding technical assistance to small land-owners through cost-sharing and partnerships with multiple organizations, municipalities and agencies.

## **District programs, ecosystem threats and the 2020 Action Agenda**

The Mason District offers technical assistance and outreach to address the following issues:

- Water quality
- Farm preservation
- Watershed and estuary restoration
- Salmon recovery
- Stormwater management and Low Impact Development

Table 5 (Appendix A) contains a summary of ecosystem threats in Mason County and programs and activities that Mason District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Mason District activities are linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Mason District has in place:

**Skokomish Estuary Restoration Project.** In partnership with the Skokomish Indian Tribe and Tacoma Power, the Mason District has finished the first phase of the Skokomish River Estuary restoration project. Phase Two will be underway in 2009 and will restore 330 acres of habitat in the Skokomish River estuary. The Skokomish Indian Tribe asked the district to be the intermediary in the project, and the district helped bring the two parties together, ending a 40-year long dispute. This project is one of several examples of how districts are viewed as neutral, non-regulatory partners.

**Low impact development project.** With an Ecology grant, the Mason District completed one major construction project that incorporated LID techniques into a building adjacent to a salmon-bearing stream. Landowner support and funding commitments, plus the good reputation of the Mason District engineer, helped make this project possible. This was the district's first major LID project, and they are looking for opportunities to conduct more such projects on non-commercial properties.

## **c. Hurdles and Opportunities**

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Collaboration/ cooperation</b>	<p>Mason County is divided across two of the Puget Sound Partnership’s Action Areas, and some programs are in place in one Action Area but not both. It is a challenge to devote the staff time to participate in Action Area planning activities in both areas.</p> <p>Puget Sound Caucus could be more helpful in getting the work of the districts recognized.</p>	<p>Additional staff resources to help staff the regional coordination needs.</p> <p>The Puget Sound Caucus should help the districts coordinate on a regional scale, given that the districts have the connections, track record and ability to implement projects on the ground. The Caucus could be a stronger platform and foundation to leverage funds and secure partners.</p>
<b>Monitoring and Accountability</b>	<p>Grants and other funding sources do not often provide adequate resources for monitoring.</p>	<p>Ensure that grant funding includes adequate resources for effectiveness monitoring and program tracking.</p>
<b>Funding</b>	<p>Mason District seeks grant funding opportunities to augment Commission funds. The district is a very reactive organization – it is hard to be proactive when funding is so tenuous. This forces the district to fix problems, rather than invest proactively to prevent pollution and habitat damage before it happens.</p> <p>Modifying BMPs to address a particular property owner’s needs often makes them ineligible for funding.</p> <p>Inadequate funding prevents Mason District from providing staff with regular training and professional development. Technical training is important for the organization to be credible, up-to-date and informed on new and emerging issues.</p>	<p>Steady, dedicated funding would allow Mason District to plan future work more creatively and develop long-term goals. It would also allow the district to support and maintain quality staff through competitive wages and opportunities for professional growth.</p> <p>Increased core funding to reach a greater number of landowners, especially small land-owners (more abundant in Mason) and follow-up to ensure BMPs are being implemented.</p>

## **3.6 Pierce Conservation District**

### **a. County Overview**

Pierce County stretches from the glaciers of Mount Rainier to Commencement Bay, a once highly productive estuary in Puget Sound fed by the Puyallup, White and Carbon Rivers. The landscape is characterized by forestland, agricultural river valleys, extensive marine shoreline and a unique patch of Ponderosa pine prairie that is not commonly found on the west side of the Cascade Mountains.

The Puyallup River watershed (WRIA 10), whose headwaters are in Mount Rainier National Park, provides important salmon habitat and was one of the first areas in Puget Sound to be settled by Europeans. Consequently, the Puyallup basin has experienced the full impacts of industrial, urban and agricultural development over the past 100 years. Pierce is the third most densely populated county in the state, with over 700,000 residents, two military complexes and the urban centers of Tacoma, Lakewood and Puyallup. The county is experiencing rapid and intensive growth and expects an additional 300,000 residents by 2025. Roughly 39,000 acres in Pierce County are well suited for agricultural production including vegetable, nursery and forage crops.

Along with most Puget Sound counties, population growth and associated urbanization is the biggest threat to natural resources in Pierce County. Since the last 1800s, nearly 98 percent of Commencement Bay's natural ecosystem processes have been altered or damaged through land use and urbanization. Water pollution is a significant concern in Pierce County—every water body in the county is on the state's 303d list for impaired waters. In addition, Commencement Bay is a national Superfund site, and much of the estuary and nearshore surrounding Tacoma has been degraded by industrial development. Rural farmland and forestland conversion is occurring throughout the county.

Urbanization is also threatening the agricultural community. Property values are increasing, but the value of farm products is not. This leaves farmers with a tough choice of either selling their land or continuing to draw a marginal living off their farms. New farmers are deterred by high land prices or leasing costs. With farmland lost to development, water quality degradation, habitat loss and fragmentation of the landscape are growing concerns.

### **b. Conservation District Overview**

Pierce Conservation District has been working with landowners since 1948. The district lies within the North Central Puget Sound, South Central Puget Sound and South Sound Action Areas. With rapid growth and development in the region, the Thurston District is working hard to maintain small farms in the Puyallup River basin in the face of encroaching development. The district works with farmers to help them maintain working farms through inventive programs and by supporting local farming economies (e.g. farmers markets).

The Puyallup River basin, the county's largest watershed, was historically a rich and productive salmonid bearing river system, and large scale regional recovery efforts are underway to help restore

habitat and water quality throughout the Puyallup. Pierce District is partnered with numerous groups and organizations to participate in improving water quality and habitat conditions in the watershed.

### ***Funding***

In 2004, Pierce County approved an assessment following a two and a half-year effort on the part of the Pierce District. These funds support the majority of the district's operational costs, and grants from the Commission make up the rest. The district seeks few outside grant sources, but funds its activities and programs through numerous partnerships and cost-share arrangements often involving multiple organizations, municipalities or agencies. The assessment is up for reauthorization in 2009 and the district is seeking an increase of the assessment fee to \$10 per parcel.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

Pierce Conservation District's programs address the following issues:

- Habitat restoration
- Water quality
- Stormwater run-off
- Low impact development
- Shoreline preservation and restoration
- Urban green space preservation
- Farmland preservation

Pierce District focuses its efforts on urban and shoreline issues including green open space protection and shoreline restoration. While the district has historically worked mainly with agricultural landowners, it currently directs about 30 percent of its efforts toward urban issues; the remainder is focused on agricultural and habitat restoration programs.

Table 6 (Appendix A) contains a summary of ecosystem threats in Pierce County and programs and activities that Pierce District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Pierce District activities are linked to the Partnership's priorities.

The following programs are examples of unique or creative approaches that Pierce District has developed to address water quality, habitat or land use issues.

**Senior Food Box Program.** The district has a very unique program in which it purchases produce from local farmers and distributes it to low income and disabled seniors. In 2008, the district purchased and distributed five tons of local produce and purchased \$20,000 in vouchers for seniors to use at local markets, CSA's and farm stands. Through this program, Pierce District has succeeded in helping farmers remain financially solvent. By buying directly from the farmer, the district supports local growers and helps keep farmland productive. In addition, local residents gain awareness of where their food comes from and in return, value the agricultural efforts in the county.

**Green Tacoma Partnership.** The City of Tacoma, Cascade Land Conservancy, Tacoma Audubon and Pierce District have partnered to help protect the green open spaces in the City of

Tacoma. This work involved creating a master catalog of all green spaces in the city, then developing a plan for how to manage and protect their natural resources. Pierce Conservation District’s involvement in this program points to the role that districts can (and increasingly are) bringing to urban environmental stewardship programs.

**Citizen Water Quality Monitoring.** Pierce District developed a water quality monitoring program as part of its Stream Team program, where citizens monitor water quality in local streams and creeks on a quarterly basis. The data is used by Ecology for its TMDL Program. The program offers residents an opportunity to become trained in water quality sampling in return for becoming stream ‘ambassadors’.

**c. Hurdles and Opportunities**

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table in section C of this report.

<b>Category</b>	<b>Hurdle</b>	<b>Opportunity</b>
<b>Marketing/ Advocacy</b>	Much of the public is unaware of the extent to which farmland is being converted and environmental degradation is occurring.	A regional, large-scale media campaign is needed to broadly market the value of farmland and rural land to the community, economy and environment.
<b>Collaboration</b>	The Puget Sound Caucus needs to be more coordinated, supported and focused. The Commission is too overextended to undertake this role.  Regional efforts to manage Puget Sound’s ecosystem threats lack focus. There are too many scattered issues to tackle.	Dedicate a staff position to the Puget Sound Caucus so it can be more effective. This individual could coordinate on key programs across the districts and advocate for districts across in the region.  Partnership should pick two or three key concerns and address them well.
<b>Funding</b>	Funding is far too limited to address all of the threats and problems associated with land use in Pierce County. For every \$10, the district could spend 10 times more. Pursuing grants is an ineffective use of district staff time and limits the amount of on-the-ground work that can be done.	Districts need more dedicated funding to address threats and problems identified in the 2020 Action Agenda.
<b>Regulations</b>	Enforcement of existing regulations is not adequate.	There needs to be a stronger approach on the part of federal and state regulatory agencies to notify landowners when their practices are damaging the environment.

## 3.7 San Juan Island Conservation District

### a. County overview

San Juan County is an archipelago of 428 to 700 (depending upon the tides) islands located in the south Georgia Straits, just north of the east end of the Strait of Juan de Fuca. It has the smallest land mass of any county in the state and the most miles of marine shoreline (>400) of any other county in the continental U.S. Its rural landscape, natural beauty and location at the gateway to the Pacific Ocean make the San Juan Islands one of the most unique communities and desirable vacation destinations in the region. The islands' geology is also unique compared to surrounding counties; 44 percent of the landscape is rock or rock outcrop, which means that only a very small percentage of land is suitable for agriculture. The majority (70 percent) of the landscape is forested, and lakes and freshwater wetlands cover an estimated four percent of the islands. There are only five year-round streams.

The county is well known for its phenomenal natural resources. It provides critical habitat for all 22 migrating populations of ESA-listed Chinook salmon, as well as for all three of Puget Sound's resident orca pods. There are 80 miles of potential forage fish spawning habitat in the county, and one third of all the kelp beds in Puget Sound are found there. The county also contains a large number of wetlands, though many remain unmapped. The area is heavily influenced by the Fraser River in British Columbia, which affects both temperature and sedimentation in San Juan County waters. The degree of influence is not entirely known although scientists suspect that the Fraser River sediment plume has contributed to the decline in eelgrass beds, which have completely disappeared in some of the islands' bays.

The famed beauty of the San Juan Islands draws huge summer crowds. The year-round population of 15,804 doubles in the summer months, making for unique resource management challenges unlike elsewhere in the region. An additional 8,436 people are expected to live in the county by 2025. The county's economy is driven largely by tourism, government, and residential construction, all of which have documented and often significant impacts on the islands' natural resources. Agriculture and forestry are important parts of the economy as well, but are not as significant as these three. In 2002, there were 225 farms, down three percent since the previous census. San Juan County farms are generally small (68 percent have annual sales less than \$10,000) and derive most of their income from forage and livestock. Apples, aquaculture, wine grapes and nursery/floraculture are other key agricultural products of the islands.

Key ecosystem threats within San Juan County include conversion of rural lands to suburban (including a loss of forest and agricultural lands), habitat loss (including eelgrass beds), decreasing availability of groundwater, risk of major oil spills in the Strait, invasive species (e.g. *Spartina*), saltwater intrusion into groundwater, climate change impacts, derelict gear and overwater structures. Species decline including salmon, marine birds, orca whales, and rockfish is also a concern. One of the more unique threats mentioned by district staff but not directly noted in the 2020 Action Agenda involves impacts from removal of vegetative cover. While terrestrial vegetative cover is important throughout the basin, it is particularly critical in the San Juan Islands because of the short distances from high elevation points to marine waters combined

with shallow soils (and reduced purification) of surface waters. Another major threat (not entirely unique to the San Juan Islands) is the combination of high real estate values and an aging farming population (average age is 57). In addition, many young people are moving to the islands and have an interest in farming, but they do not have the means to purchase or lease land.

## **b. Conservation District Overview**

The work of the San Juan District reflects the unique character and composition of the county's geography, economy, population, and natural resources. The district has served the county since 1947 (at that time the organization had a presence on Lopez, Orcas, and San Juan Islands as the San Juan County Soil and Water Conservation District). In 1964, these merged and in 2007 became the San Juan Islands Conservation District. The district is small relative to other districts, and staff has divergent expertise including engineering, farm and forest planning, landscaping, geology, hydrology, water resources, stormwater management, low impact development, and outreach/education. The San Juan District lies within the San Juan Action Area.

### ***Funding***

The District has a per parcel assessment of \$5. The assessment raises approximately \$72,000 per year and is slated for renewal in 2010. The district's annual budget is approximately \$241,000 with 71 percent coming from grant sources.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

The district programs address a range of issues including:

- Farmland preservation
- Low impact development—education, demonstration sites, policy
- Farm and forest planning
- Water quality monitoring and watershed planning

Table 7 (Appendix A) contains a summary of ecosystem threats in San Juan County and programs and activities that the district has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how San Juan District activities are linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the San Juan District has in place:

**Agricultural Resources Committee (ARC).** The district provided initial funding to staff a coordinator position for ARC, a unique advisory group to the county council tasked with finding opportunities to protect and restore agricultural resource lands. A permanent position on the ARC exists for a district staff member, and the district's farm/forest planner is currently volunteering as chair. The coordinator is housed in the district's offices, making internal coordination easier. ARC partners with multiple groups and utilizes many tools to help landowners keep land in agriculture. These tools include conservation easements, lease arrangements, tax relief programs, agricultural enterprise budgets, and farm/forest plans. ARC's work includes exploring a "no net loss of farmland" policy; an education campaign

for conservation easement programs; an early warning program to help farmland owners stay in the agricultural open space taxation program (similar to Whidbey District); assistance to San Juan County Land Bank for farmland leases; developing farm enterprise budgets; and tracking regulatory issues that impact local farmers. In 2008, the ARC facilitated the formation of the non-profit San Juan Islands Agricultural Guild to build food system infrastructure and assist island farmers in developing sustainable agriculture.

**Stormwater management and Low Impact Development (LID).** The district has taken the lead role in the county for implementing LID policies and practices. Its LID efforts are considered the district’s "growth" program due to increasing development pressures in the county. Two notable achievements include the district’s role in securing state funding to assist the county in revising its development regulations to allow for and encourage LID; and partnering with San Juan Public Works and the school district to build a demonstration rain garden at Friday Harbor High School.

**Water quality monitoring.** The district partners with the University of Washington’s Friday Harbor Labs to conduct water quality monitoring and data collection on the three major islands (San Juan, Lopez and Orcas). Five years of data has been collected so far, and monitoring parameters include DO, pH, fecal coliform, turbidity, flow, and temperature. Information is uploaded to Ecology’s EIM database and sampling and lab protocols meet Ecology’s quality assurance standards. The project was put in place to establish a baseline for water quality information in the San Juan Islands as well as to educate local students about watershed health.

**c. Hurdles and opportunities**

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Funding</b>	Lack of stable, long-term funding for core programs is the biggest hurdle. Relying on grant funds is challenging, as is the state’s funding equation based on population. The county has a small tax base and must replicate programs on at least three islands (which adds to both costs and staffing needs).	Stable funding should be provided for basic operations. The state should use more sophisticated funding equations that incorporate factors such as geography and demographics in addition to population.
<b>Capacity</b>	Landowner demand for technical assistance far exceeds available staff hours. Funding is needed for additional staff, particularly for LID site analysis and technical assistance and farm and forest plan implementation. A professional forester is also needed. High turnover is a challenge for San Juan District; the longest-term employee began working for the district in 2006.	Establish a regional core set of programs. Couple this with a large outreach effort aimed at landowners directing them to these core programs. Secure funding for a professional forester and other staffing.

<b>Category</b>	<b>Hurdle</b>	<b>Opportunity</b>
<b>Communication</b>	Communication is very challenging due to the isolation of the islands from each other and from the mainland. District staff must travel extensively for meetings and trainings. Funding is needed to implement real-time electronic participation in workshops, lectures and meetings.	State-level assistance is needed to establish real-time electronic workshop/ communication capacity in isolated areas of Puget Sound to be utilized by districts and key partners (e.g. WSU Extension).
<b>Capacity</b>	<p>The county has no natural resources department or staff person and the district often serves in a de facto capacity, fielding calls both from county staff and the public. This demands time and energy that cannot then be applied to district programs.</p> <p>The population of the islands is growing and there is a high turnover rate (50 percent every five years). This presents challenges for the district to provide adequate education and outreach and technical assistance to landowners.</p>	<p>State oversight and assistance is needed to address capacity issues in the county. This would help the district focus on core programs.</p> <p>In destination/second-home communities like the San Juans Islands, districts should receive adequate funding for education and outreach support so they can meet the shifting, growing demands. Resource impacts of the second-home market should be researched and solutions explored.</p>
<b>Data management</b>	San Juan County lacks baseline data on water quality and habitat conditions for wetlands, streams and agricultural lands. Such data would help them identify and prioritize areas for restoration. Existing data is not user-friendly or accessible.	Coordinate with regional and statewide agencies to merge natural resource data into one user-friendly GIS based system accessible and updateable via the web by staff and community volunteers.
<b>Coordination</b>	NRCS support is extremely important to the San Juan District and is challenging. The nearest NRCS office is located in Skagit County which makes it difficult to coordinate and meet regularly.	Improve NRCS coordination with San Juan District.

## 3.8 Skagit Conservation District

### a. County overview

Skagit County is bordered by Whatcom County to the north and Snohomish to the south and is home to the region's largest river basin: the Skagit. All five species of Pacific salmon utilize the Skagit River, which produces a significant proportion of salmon in Puget Sound. Maintaining and increasing salmon stocks in the Skagit is considered critical to the overall salmon recovery efforts in Puget Sound. An estimated 800 miles of fish bearing streams exist within the county's borders.

A large percentage of Skagit County's 1.1 million acre landscape is comprised of natural resources lands such as agriculture and forestry. Together, agriculture and forestry are considered to be the cornerstone of the county's economy, community and history. Agricultural lands cover eight percent of the total land base and are primarily located in the lower and mid-valley floodplains. The main agricultural products include apples, berries, floriculture, sod, potatoes, peas and dairy. Forest lands cover 32 percent of the landscape and are primarily located in the middle and upper elevations. The main forest products include raw logs, lumber, wood chips and hog fuel. Approximately 103,000 people reside in Skagit County, and an expected 62,000 more will move to the area by 2025.

Ecosystem threats within Skagit County include habitat loss, water pollution (including 303d listings in numerous water bodies throughout the basin), and invasive species (e.g. *Spartina*). Perhaps the biggest threat involves the agricultural and the forestry communities, both of which face significant challenges due to conversion to residential development.

### b. Conservation District Overview

The Skagit Conservation District was formed in 1942. The predominance of forest cover in the county is reflected in the work of the district, which has the only full-time forester working on forest conservation plans of any of the Puget Sound Districts. The Skagit Conservation District lies within the Whidbey Action Area (with a very small portion contained within San Juan Action Area).

The Skagit District's work covers three major categories:

- Water quality
- Forestry planning (less than 20 acres)
- Farm planning

According to district staff, the Skagit District is unique in its holistic approach to natural resource conservation, which includes watershed-based management. The district's manager serves on the Skagit Watershed Council (SWC) and has been an important partner in their salmon recovery efforts. Additionally, the district's commitment to leveraging resources and expertise through partnerships has contributed greatly to their success.

## **Funding**

The District's budget request for 2009-2011 is approximately \$1.7 million. The district does not have an assessment, although they do receive some funding from the Skagit County Clean Water Fund assessment, which the Skagit County Public Works Department administers at its discretion. This year, the district's funding from this program was cut by 35 percent. Like most other Puget Sound Districts, the Skagit District is funded primarily with grants.

## **District programs, ecosystem threats and the 2020 Action Agenda**

The Skagit District has a history of focusing its programs and activities on addressing many of the key ecosystem threats outlined above. For example, in response to a 303d listing of Samish Bay that threatened shellfish beds, the Skagit District focused a large part of its education and outreach program towards citizens within the Samish Watershed.

Table 8 (Appendix A) contains a summary of ecosystem threats in Skagit County and programs and activities that the district has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Skagit District activities are linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Skagit District has in place:

**Forestry program:** The district's forestry program is probably the most extensive of any of the Puget Sound Districts, and aims to protect and enhance the county's huge forestry base. Part of this effort involves implementing a cooperative forest stewardship program. In addition, the district has a certification program for sustainable forests, the first of its kind in the area, and one of the accomplishments of which district staff are most proud. The program has allowed forest land owners to be eligible for EQIP and other incentive programs, and has helped find workable solutions to allow forest landowners to continue to operate via forest conservation plans, forest roads programs, and the Firewise program.

**Outreach and education.** The Skagit District has a suite of outreach and education programs including watershed masters, backyard wildlife habitat, and Stream Team (used for shellfish water quality monitoring/Paralytic Shellfish Poisoning monitoring). Each of these programs has been extremely popular and successful in its own right and has shown increasing numbers of participants over the years. A brief overview of only one of these programs follows.

**Backyard wildlife habitat program:** Over 220 people have participated in this program so far, 90 percent of whom have made on-the-ground changes on their property since taking the course (e.g. eradicating noxious weeds, adding a compost bin and/or worm bin, reducing/eliminating use of pesticides, fertilizers, and herbicides, adding roosting boxes for bats and/or birds, and volunteering their time to assist at stream enhancement projects). The program has served as a catalyst for an additional program in the city of Anacortes, and has spawned two additional community groups: The Fidalgo Backyard Wildlife Habitat Group and the Skagit Valley Backyard Wildlife Habitat Team.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Marketing/ Advocacy</b>	The district lacks funding to do the type of broad outreach campaign needed to reach the majority of citizens.	The Commission should conduct a marketing campaign to promote the work of the Puget Sound Districts to help strengthen how districts are viewed/identified.
<b>Funding</b>	A lack of stable, reliable funding was highlighted as the key limitation preventing the district from accomplishing more. Most programs are funded by grants; this is a particular problem for education programs.	Provide secure, long-term funding to maintain staff and programs necessary to meet challenges of development pressures in Skagit County. As the population continues to grow in the county, associated land use changes will likely result in increased impairment of the water and habitat quality. Providing steady funding for on-going technical assistance, outreach and targeted programs (such as monitoring and research) will help prevent additional degradation.
<b>Capacity</b>	Additional engineering services are needed. The demand for engineering expertise is far greater than the district’s part-time “cluster” engineer, who covers 3 other counties, can provide. Also, staff cannot cover all the requests they receive, particularly by small scale farmers and forest landowners.	Expand cost-share programs for all residents to implement BMPs. Expand ability for district to conduct more forest planning. Forestry certification program should be enhanced with additional staff; program should serve as model for other districts with forest conversion issues.
<b>Planning</b>	Unresolved dike and drainage issues in the Skagit delta hinder the district’s ability to address water quality and habitat issues there.	High level and focused attention should be directed at this issue. A process is underway but has not achieved results.

## **3.9 Snohomish Conservation District**

### **a. County overview**

Snohomish County borders King County to the north and Skagit County to the south. It contains 22 cities and towns that, over the past few decades, have grown steadily in size and to some degree have become bedroom communities for King County's growing workforce. Over 600,000 people live in the county, with 300,000 more expected by 2025.

Two of the region's largest river systems are contained almost entirely within the county's borders. The Snohomish basin, the region's second largest, covers nearly 2000 square miles (some lies within King County) and contains abundant natural resources, fertile agricultural lands and extensive timber resources. It provides habitat for numerous species of salmon, including ESA- listed Chinook salmon, and is considered critical to the region's overall salmon recovery effort due to its relatively pristine condition (75 percent of the basin still remains in wilderness or forested landscape). The Stillaguamish basin, the region's fifth largest, covers 700 square miles (some lies within Skagit County), the vast majority of which is timberland. Camano Island (technically part of Island County but now covered by the Snohomish District after a successful petition in 1961) contains no salmon spawning streams, but does provide important nearshore habitat for migrating salmon.

Many species of birds and other wildlife are found throughout Snohomish County and Camano Island. The Snohomish estuary alone is home to at least 350 different kinds of birds and other wildlife including blue heron, eagles, osprey, and seals.

Forest lands account for approximately 80 percent of the land use within Snohomish County. The principal economic activities within the county have shifted over the last few decades from primarily agricultural and forestry to retail/services, manufacturing, government, and construction. Agricultural activities have shifted from large commercial operations to a combination of large commercial and small, non-commercial operations. District staff reports that they have witnessed an increase in the division of agricultural lands into smaller parcels as a result of growth. Within the district, there are 60 commercial dairies, a 15,000 acre private tree farm, commercial stables, and alpaca, mink, poultry and egg farms. There is also a growing compost industry that has lately been the focus of the district's attention.

Key ecosystem threats include urbanization and the accompanying loss of farm and forest lands (considered one of the biggest threats by district staff and others). Acreage in farming has fallen over the past 60 years from 195,000 in 1945 to 69,000 in 2002. The precipitous decline is slowing in part due to GMA (according to agricultural economists). Other threats include aquifer contamination (particularly on Camano Island) due to increasing development, saltwater intrusion into domestic wells, reduction in salmon populations, and extensive water quality impairments including numerous 303d listed water bodies.

## **b. Conservation District Overview**

The Snohomish Conservation District was established in 1941 as the Snohomish County Soil Conservation District. Its coverage expanded in 1947 to include most of the county (except cities and towns). When Camano Island was added to the district's coverage in 1961, it was renamed the Snohomish Conservation District. Over time, 10 of the county's 22 cities were brought into the district's territory, including Arlington, Brier, Lake Stevens, Lynnwood, Mukilteo, Mountlake Terrace, Mill Creek, Stanway, Woodway and Snohomish. The Snohomish District is one of the largest in the Puget Sound region, with a staff of 13. Their expertise is wide ranging and includes active farmers, soil experts, dairy planners, education/outreach experts, water quality experts, a certified farm planner, and an engineer. The district lies within the Whidbey Action Area.

### ***Funding***

Like most other Puget Sound Districts, the Snohomish District receives most of its funding from grants. The district does not currently have an assessment but is in the third year of pursuing one. District staff report that should the assessment pass, revenue should be approximately \$1 million per year. The district currently receives approximately \$450,000 from the county, which would disappear should an assessment pass, so an assessment represents a doubling of local funding.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

The district's largest program area is farm planning and district staff writes approximately 100 plans each year. The district's programs address the following issues:

- Commercial and non-commercial agricultural land preservation and conservation
- Farmland preservation and conservation
- Water quality (including monitoring)
- Native plant conservation

One notable program area that the district does not cover is forest planning. Part of the reason is that the WSU Snohomish Extension office has a professional forester on staff. Recently, the district conducted a needs assessment to identify opportunities for the district to help address forestry issues. The district's work to get an assessment is being done in part to hire a forester to help continue and develop an intensive Firewise program as well as a small forest lot landowner assistance program.

Table 9 (Appendix A) contains a summary of ecosystem threats in Snohomish County and programs and activities that Snohomish District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Snohomish District activities are linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Snohomish District has in place:

**Tree and plant sale.** The district's annual plant sale is the biggest in the state, with over \$90,000 worth of sales last year. The income generated covers staff time and the cost of the

plants. The purpose of the program is to encourage residents to plant native vegetation to help address water quality and habitat issues.

**Urban outreach/education:** The district has expanded its outreach and technical assistance to urban dwellers to help address the natural resource impacts resulting from the county’s rapid urbanization. The district now offers a green living/backyard conservation program to help urban landowners learn about and implement practices that protect the environment. The district received an Ecology grant to implement the program, which covers the cities of Snohomish, Lynnwood and Bothell. They also held a spring workshop entitled “Features and Feathers” to help landowners learn beneficial backyard conservation practices; and held two events to distribute rain barrels.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed are from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Funding</b>	As in other districts, funding was identified as the biggest hurdle. In some cases, grant sources (such as Ecology grants) are water quality focused so they usually cannot be used for programs like Firewise. This results in programming inefficiencies.	Long-term, core funding is needed. Where feasible, state granting programs related to Puget Sound recovery should be reevaluated and reconfigured to reflect local needs.  Expand funding for cost-share programs for all residents to implement BMPs.
<b>Lack of regulatory enforcement</b>	Lack of regulatory enforcement at all levels of government impacts the district’s effectiveness. According to staff, a regulatory hammer is a necessary backstop. District assistance is voluntary and many landowners will not utilize their services unless regulations require them to do so.	Create a task force to fully explore the issue of regulatory enforcement related to Puget Sound protection. The task force should develop recommendations for increasing regulatory capacity at all levels of government.
<b>Marketing and district identity</b>	Most people do not have a good idea of the services districts provide. A portion of the public believes that districts address only agricultural issues, while others think that the districts should <i>only</i> focus on agriculture. As land use patterns have changed, the district has had to re-craft its programming, but has not necessarily had the funding or expertise to “re-brand” around their new functions.	The Commission should explore the possibility of conducting a campaign to promote the work of the Puget Sound Districts and improve how they are viewed/identified.
<b>Capacity</b>	The demand for engineering expertise is currently greater than Snohomish’s part-time “cluster” engineer, who covers 3 other counties, can provide. Also, staff cannot cover all the requests they receive, particularly by small scale farmers and forest landowners.	Forestry certification program should be enhanced with additional staff; the program should serve as model for other districts with forest conversion challenges.

Category	Hurdle	Opportunity
	<p>There needs to be better training for boards, especially around passing assessments. The learning curve on this issue was very steep. Boards also need to be educated regarding Puget Sound issues.</p>	
<p><b>Monitoring</b></p>	<p>Very few grants fund effectiveness monitoring. For farm planning (the majority of the district's focus), the lack of monitoring makes it impossible to measure the impact plans are making on the environment.</p>	<p>The proposed assessment includes funding for monitoring past farm plans to determine their effectiveness. The legislature and Commission should support the district's efforts to secure this assessment.</p>

## **3.10 Thurston Conservation District**

### **a. County Overview**

Thurston County lies at the southern-most end of Puget Sound and is characterized by forestland (about 65 percent), agricultural lands, wetlands and several major river drainages including the Deschutes and the Nisqually. The county contains 128 miles of marine shoreline along four peninsulas, and has extensive shellfish growing areas owing to the characteristically long tides, shallow bays and nutrient-rich waters in southern Puget Sound.

Thurston is the eighth most populated county in the state with over 220,000 residents. An additional 130,000 people are expected by 2025, which represents the highest growth rate in the Puget Sound region. The population increase has primarily been focused near the cities of Olympia, Lacey and Tumwater, where over half of the population of Thurston currently resides, but is occurring in rural areas as well. The county anticipates nearly 12,000 acres of resource land to be converted to development in the next five years.

Farmland represents about 15 percent of the land in Thurston County and produces over \$120 million in products annually. Shellfish growing is another economically important industry. There are approximately 40 shellfish operations in the county that, together, produce more oysters than any other Puget Sound county.

Key ecosystem threats in the county include water pollution from stormwater run-off and failing septic tanks; conversion of farmland and forest land; invasive species such as Japanese Knotweed, and degraded riparian habitat along rivers and streams associated with farming and forestry practices and shoreline hardening structures. In recent years, water pollution has resulted in restricted or closed shellfish harvest, and the state Department of Health has prohibited or conditionally closed harvesting on over 520 acres in Henderson Inlet. In addition, 17 water bodies are on the 303d list for impaired waters, including Budd Inlet, Capital Lake, the Deschutes River, and the Henderson Inlet watershed.

### **b. Conservation District Overview**

The Thurston Conservation District has been in operation since 1948. As land use patterns have shifted, so too has the focus of the district's programs. Historically, the district worked primarily with agricultural landowners, but has broadened its scope to include urban landowners, shellfish growers and shoreline homeowners.

Thurston District has a history of targeting its programs and services to address known ecosystem threats. The district is working with residents of the Henderson, Nisqually, Eld, Totten, and Budd/Deschutes watersheds to address specific water quality problems traced to land use activities within these basins. In addition, the district is working with the Thurston Department of Health to help landowners in Henderson and Nisqually Shellfish districts manage their septic systems properly. The Thurston District lies within the South Sound Action Area.

## **Funding**

In 2007, the Board of County Commissioners approved a 10-year assessment beginning in 2008. The district receives grant funding from the Commission as well as through competitive grants.

## **District programs, ecosystem threats and the 2020 Action Agenda**

The district's programs address the following issues:

- Low impact development
- Shellfish growing areas
- Water quality
- Shoreline habitat improvement
- Farmland preservation

Table 10 (Appendix A) contains a summary of ecosystem threats in Thurston County and programs that the Thurston District has in place or is planning to implement to address the threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Thurston District activities are directly linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Thurston District has in place:

**Septic Program.** The Septic Program is considered by district staff to be one of the biggest success stories in the county. The program is funded in part by district assessment funds that are dedicated for water quality improvements in shellfish growing areas. Funding is administered through the county's Environmental Health Department. The district's role is to conduct technical assistance and outreach efforts to septic system owners to teach them how to do septic inspections, measure tanks, install septic risers, and conduct other maintenance activities. The program's incentive-based approach is credited with its success. Incentives include rebates on septic risers, cost-share for low-income residents, and training for homeowners to inspect their own systems.

**Clear Choices for Clean Water Pledge Program.** Funded by the Thurston District and Thurston County Environmental Health, this program invites landowners to pledge to make changes on their property to improve water quality. Since its inception in 2004, the program has drawn 93 pledge participants who have implemented over 1,300 actions such as managing pet waste properly and using fewer lawn and garden chemicals. Thurston District provides incentives such as plants and pet waste collection bags, and provides technical assistance, outreach (including workshops), and one-on-one assistance. The district tracks implementation of actions, and landowners may receive public recognition for their efforts.

**South Sound GREEN (Global Rivers Environmental Education Network).** South Sound GREEN is a watershed education program that involves over 1,200 students (grades 4-college) annually. The program is offered to 35 teachers and their students in local schools and colleges and includes home-schooled students. The program provides both real data and

hands-on training for students and teachers who conduct water quality monitoring, sample for benthic invertebrate populations and engage in nearshore education. Data is used by the county to track water quality and summaries of invertebrate inventories are found on the Thurston District website.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Monitoring and Accountability</b>	BMP tracking and program evaluation is limited due to funding and granting constraints.	Expand targeted monitoring and effectiveness monitoring to track recovery of water quality and habitat following restoration activities, monitor land-owner behavior change, and keep an eye on ambient conditions.
<b>Funding</b>	Staff is constantly seeking funding to support on-going programs and maintain current operations. Long-term funding is hard to come by, so planning and implementing long-term projects is nearly impossible.  Hard to maintain staff without adequate funding for competitive salaries and professional development.	Provide secure, long-term funding to maintain staff and programs necessary to meet challenges of development pressures in Thurston County.  Fund cost-share programs for all residents to implement BMPs that would protect water quality, habitat and shorelines. Ensure adequate funding is available to support and sustain quality staff.
<b>Regulatory</b>	While numerous ordinances, laws and policies are in place to protect water quality and habitat in Thurston County, enforcement of these regulations is lacking. Most enforcement agencies are stretched thin.	Increased regulatory enforcement would likely result in greater improvements in water quality and habitat protection.
<b>Planning</b>	Most district programs are reactive, but information on sources and loading in South Puget Sound would help in developing more preventive measures.	Address loading of nutrients, toxics and pathogens into Thurston’s watersheds from stormwater and surface water run-off and identify sources of contaminants.  Develop source control strategies for toxics of concern.
<b>Capacity</b>	The district is limited in the number of landowners to whom it can provide assistance. Demand for assistance is greater than the district’s ability to provide it.	Adequate support is needed so that district staff can reach all landowners interested in outreach and technical assistance.

## **3.11 Whatcom Conservation District**

### **a. County overview**

Whatcom is the north-easternmost county in the Puget Sound basin, bordering British Columbia to the south and Skagit County to the north. Two regional icons dominate the landscape: Mount Baker, which towers at 10,778 feet, and the Nooksack River, the third largest in the Puget Sound basin. The county contains 3,000 miles of freshwater courses, including streams, rivers, lakes, ponds, and wetlands, and over 155 miles of marine shoreline. Approximately 82 percent of the county is considered rural, with over 1 million acres of forest land and 148,000 acres of agricultural lands.

The area provides habitat for a number of marine species, including all species of Pacific salmonids, pacific herring (Cherry Point is one of Puget Sound's most important spawning grounds), and numerous species of shellfish. The region's most popular recreational shellfish area is at Birch Bay, and some important commercial shellfish industries exist in Drayton Harbor and Portage Bay. The county also contains some of the state's largest remaining tracts of grizzly bear habitat as well as critical stopover habitats for numerous migratory bird species (including several species at-risk) that utilize the Pacific flyway.

Whatcom County has a thriving agricultural industry dominated by dairies, beef, berries, silage crops and seed potato production. Whatcom is the second largest dairy county in the state and is in the top five percent of dairy production nationwide. The county also contains 40 percent of the region's livestock and produces 65 percent of the nation's raspberries. There are an estimated 3,000 small farms in the county, including 500 small dairy, dairy replacement, beef and other miscellaneous livestock operations, and 2500 horse farms. 167,000 people reside in Whatcom County, with an additional 80,000 expected by 2025.

Major ecosystem threats in the county include loss of river mainstem and floodplain habitat; nutrients and pathogens from livestock; surface water runoff in Birch Bay and Drayton Harbor; low instream flows; conversion of agricultural and forest lands to rural residences, and increasing numbers of non-commercial farms. The large number of livestock in the county presents particular resource challenges, most notably nutrient loading into Puget Sound. Fecal coliform loading is especially problematic for shellfish areas in Drayton Harbor and Portage Bay, as well as for recreational shellfish harvesters in Birch Bay.

### **b. Conservation District Overview**

The Whatcom District has served the county since 1946 and is one of the largest districts in the region with nine full-time staff. Staff expertise is wide-ranging and multi-disciplinary, and includes environmental science, business, animal science, horticulture, engineering, geology, botany and forestry. The Whatcom District lies within the San Juan Action Area, although Whatcom County appears as its own Action Area in the 2020 Action Agenda.

## ***Funding***

The Whatcom District receives funding from multiple sources, including federal and state agencies and private granting entities. The district has no assessment and recently lost county funding due to budget shortfalls. This is a significant loss since the county typically provided approximately \$110,000 per year. The district recently enrolled in NRCS's EQIP program and will be receiving about \$1 million per year to install BMPs on agricultural lands.

## ***District programs, ecosystem threats and the PSP Action Agenda***

Given the predominance of agriculture in the county, particularly dairies, the district's biggest program area involves livestock management and stream rehabilitation. Whatcom District provides programs that address the following issues:

- Water management (water quality, quantity and water rights/drainage)
- Land stewardship (small acreage farms)
- Shoreline restoration and protection
- Farmland Protection
- Salmon recovery
- Shellfish area protection
- Air quality

The district does not currently address forestry issues, but does have a request in the 2009-2011 for approximately \$86,000 to develop a prioritized list for forestry plan development and implementation. With over 200,000 acres of forest land in private ownership in the county, this is an important program area for the district.

The Whatcom District has taken steps to pursue the issue of atmospheric deposition of nitrogen. Although airborne pollutants received little attention in the 2020 Action Agenda, they were addressed briefly in the threats section as a widespread source of loading for some chemicals of concern. The Whatcom District recently hired a scientist in livestock environmental management with an air quality expertise to pursue funding to address atmospheric deposition of nitrogen. If successful, the district could serve as a model for other districts to address the problem regionally.

Table 11 (Appendix A) contains a summary of ecosystem threats in Whatcom County and programs and activities that the Whatcom District has in place to address them. Also included in this table are Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Whatcom District activities are linked to Partnership priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Whatcom District has in place:

**Dairy nutrient management and Portage Bay Shellfish Closure Response.** The 1997 closure of Portage Bay for shellfish harvesting represented a major setback in local and

regional water quality efforts. The 2003 reopening of 75 percent of the shellfish beds was considered one of the greatest water quality successes in the region’s history and the Whatcom District played a key role in this upgrade. (see EPA website: [http://www.epa.gov/owow/nps/Success319/state/wa\\_nook.htm](http://www.epa.gov/owow/nps/Success319/state/wa_nook.htm)) Specifically, the district led the development of the initial shellfish closure response strategy and worked with dairy producers to develop and implement over 260 dairy operations on 50,000+ acres.

**Anaerobic digesters/methane recapture.** The district is taking a progressive stance on the issue of energy and climate change and is trying to address the problem locally by investigating opportunities for anaerobic digesters to capture and clean the methane that rises from manure lagoons to create renewable sources of natural gas.

**Buffer alternative/Drainage Improvement District program.** The district is working with the county’s drainage improvement districts to improve habitat along hundreds of miles of artificial channels. To date, the district has been instrumental in planting and maintaining 26 miles of hedgerows, which has offered an alternative to CAO buffers, a highly contentious issue. The district established a standard checklist and offers all the necessary materials. They also produced the *Draft Drainage Management Guide for Whatcom County Farmers and Drainage Districts*, the first of its kind in the region. The manual dovetails with the county’s Shoreline Master Program as well as salmon recovery efforts within the Nooksack basin.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed were from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Advocacy and Marketing</b>	There is a lack of a ubiquitous, visual, sustained, reinforced message regarding Puget Sound District activities. District staff noted that a huge outreach push on these issues is needed at the state level.	A large, high-level outreach effort is needed. The Puget Sound Caucus is important but is challenged by: <ul style="list-style-type: none"> <li>• Funding for districts to participate (attend meetings, work on common solutions)</li> <li>• Additional support staff dedicated to making it work</li> </ul>
<b>Collaboration</b>	Whatcom County is located far from the regional “centers” of Seattle and Olympia, where most meetings and trainings are held. Staff is expected to participate in many of these, but funding is not usually provided to cover participation, including travel expenses.	Web-cam or internet-based options should be available for regional meetings that are important for district staff to attend.

Category	Hurdle	Opportunity
<b>Data and information management</b>	The district lacks an integrated tool to easily generate plans, track BMP installation, or make payments/report on accomplishments. The “database project” undertaken by the Commission is a good tool, but is better used by other agencies to capture information regarding the districts, and does not serve to help the districts easily manage their data and other information. The district is trying to work on an excel program to address these issues.	Utilize NRCS CSP Toolkit and contracting software to reduce vouching/reporting problems.  Common metrics between years and among districts are needed to measure programmatic success.
<b>Funding</b>	There is a lack of stable, long-term funding for core programs. The district no longer receives county money and has no assessment. Transition from biennial to annual funding for the state is also challenging.	District board should be given authority to make its own assessment without going to county government. State timing for funding should be reevaluated.
<b>Regulations</b>	Lack of regulatory enforcement at all levels of govt. <u>State</u> : transfer of the Dairy Nutrient Mgmt Program from Ecology to the Dept of Agriculture has resulted in fewer on-the-ground inspections of agricultural activities for CWA compliance. Also, penalties are impossible to assess for this program. <u>County</u> : Reduction in inspection staff for CAO compliance.	Need added inspection capacity at the county and state levels.

## 3.12 Whidbey Conservation District

### a. County overview

Island County lies at the eastern end of the Straits, directly west of Snohomish and Skagit counties. It is comprised of Whidbey and Camano islands and is the second smallest county in Washington State. The Whidbey Conservation District covers only the Whidbey portion of the county as Camano Island successfully petitioned to be supported by the Snohomish District in 1961 (and is therefore addressed in the Snohomish Conservation District chapter). Whidbey is the largest island in the state and third largest in the U.S., covering over 172 square miles and stretching over 40 miles north to south.

Island County has abundant natural resources, including over 200 miles of marine shoreline that provide important habitat for a variety of nearshore-dependent species, including ESA-listed Chinook salmon. Almost all Puget Sound salmonid populations from watersheds in southern and central Puget Sound are believed to utilize the county's shorelines for refuge and feeding during their migration to and from the ocean. A small group of six to ten gray whales spend spring and summer feeding on ghost shrimp and tubeworms on beaches on southern Whidbey Island and the east side of Port Susan. An active shellfish harvest occurs throughout the eastern shores of Whidbey Island, including mussels, clams, and oysters. Commercial and recreational fisheries for Dungeness crab and shrimp occur throughout the island. Important marine bird populations utilize Whidbey Island habitats, including a population of 900 pigeon guillemots. The deltas and floodplain farmlands of the three major rivers support overwintering populations of tens of thousands of snow geese and ducks, thousands of swans, and many raptors and passerines.

In 1982, the EPA designated Island County with "Sole Source Aquifer" status. This special status is granted when more than 50 percent of the county population relies on an aquifer system as their principal source for drinking water, and contamination of the source would create a significant public health hazard.

Approximately 72,000 people live in Island County, with an additional 30,000 expected by 2025. The county's largest employer is the Naval Air Station in Oak Harbor, with the construction industry a close second. Agriculture and forestry have historically been important land uses, though both sectors are changing rapidly. Larger farming operations are being subdivided and replaced with smaller operations. Currently, there are two dairy operations on the island and six fairly substantial beef operations. The remaining farming operations are smaller, and community supported agriculture through local markets are increasing on the island. Whidbey Island contains a large amount of forest cover, including private forestry operations.

Ecosystem threats on Whidbey Island include loss of working farms and forests to development, stormwater runoff, and poorly sited and designed new development. Water quality issues are a key threat, and there are 95 303d listed water bodies throughout the county (this figure includes Camano Island). Fecal contamination is the most common listing parameter, and this has affected shellfishing and swimming opportunities within Penn Cove and Holmes Harbor. Nitrogen pollution from agricultural activities is also a concern. A 1997 study conducted by the

Island County Health Department found agricultural practices to be the largest contributors of elevated nitrate concentrations in Whidbey's waterways.

Shoreline modification is another key threat on the island, with approximately 22 percent of the shoreline altered. Numerous residential developments have been constructed on sand spits and 80 percent of the parcels along the county's marine shoreline have been developed or are slated for development. Another threat involves lack of maintenance of existing forests contributing to increased potential for fire and wind damage.

## **b. Conservation District Overview**

The District was organized as a subdivision of state government in 1967. It is one of the smallest districts in the basin, with only 2.5 FTEs. Because of its small size, the district has had to be creative and innovative about how best to focus its limited resources. Owing to the largely rural nature of the county and the predominance of forest and agricultural lands, the county has focused most of its efforts on forest and farm planning, although it has recently begun advocating for and implementing low impact development practices. The Whidbey District lies within the Whidbey Action Area.

### ***Funding***

The Whidbey District receives the majority (approximately 95 percent) of its funding from grants. There is no assessment, although the district has hired a consultant to put together an evaluation analysis to share with the public the benefit of having one. It will be a year before the assessment will move forward.

### ***District programs, ecosystem threats and the 2020 Action Agenda***

The district's three key program areas include farm planning, forest planning, and low impact development. District staff provides education, outreach and technical assistance for all three of these program areas, which they describe as a "three-pronged approach". The district serves landowners, land operators, the general public, government entities, and local interest groups to promote a conservation ethic and resolve natural resource issues within the district. They do not conduct monitoring or collect data themselves, but contract with the county to conduct needed data collection and monitoring, then utilize the results to target their programs.

The Whidbey District has a history of addressing key ecosystem threats within the island. All of the district's forest and farm planning projects are prioritized based on water quality information, (e.g. 303d listed water bodies or TMDLs) to identify where there is a critical area in need of protection. Every area in which they work has a known water quality problem. For example, the district is working to secure a grant for Partridge Point to address fecal contamination issues within a threatened shellfish growing area. In Holmes Harbor, which has been closed for harvest for the past three years, the district is partnering with the county to address water quality pollution sources.

The district has responded quickly and efficiently to the increasing threats from stormwater runoff by working to advance LID on the island. Specifically, district staff provides education/outreach and technical assistance in the use of LID practices to residents and

technicians. Advancing LID techniques has a secondary but equally important effect of enhancing aquifer recharge, which is important given the island's sole-source aquifer status.

Table 12 (Appendix A) contains a summary of ecosystem threats in Island County and programs and activities that Whidbey District has in place to address these threats. Also included in this table are the Priority Action Area Strategies identified in the 2020 Action Agenda to reference how Whidbey District activities are linked to the Partnership's priorities.

The following programs are a few examples of unique approaches to managing natural resource threats that the Whidbey District has in place:

**Advancing stormwater management and LID.** The district has played a key role in advancing Low Impact Development within the county. For example, the City of Langley was the first local government in the region to adopt LID guidelines as part of its development code. Funding for this project was secured by the Whidbey District, which also entered into an agreement with Langley to provide a unique program for Langley residents to implement LID practices. One aspect of this agreement is the development of an LID demonstration project at the Highlands-Anderson Road site. The district also initiated a year-long workshop program to feature LID strategies for Langley residents. In addition, the district is conducting a technical LID and backyard conservation program called "Green Ground" to provide individual landowners planning and design services to conserve natural resources and protect water quality.

**Partnerships.** District staff noted that the NRCS office in Mount Vernon is very supportive of their work, particularly in specific activities or programs such as soil updates and the EQIP program. Another key partner is the Whidbey/Camano Land Trust. When the land trust identifies parcels that need to be preserved, the district helps pursue funding and serves as a link between the land trust and landowners. Transitions Whidbey is another key partner, and the two entities are currently working to identify agricultural lands that are in and out of production and to prioritize key properties that should be preserved.

**Conserving forestry, farming, and open space.** The Island County assessor has recently begun tracking landowners enrolled in the Public Benefit Rating System (PBRS) to make sure that they are in compliance with tax benefit requirements. In many cases, landowners have made changes on the ground that threaten their continued eligibility and need to develop and implement a farm or forest plan to remain in the program. The Assessor's office refers these cases to the district, which provides planning and technical assistance. This relationship with the Assessor's office enables the district to help people keep lands in open space and forest.

### c. Hurdles and opportunities

The following table summarizes hurdles and obstacles that emerged during interviews with district staff. Opportunities listed are from staff and/or the consultant team. For a summary of all hurdles and opportunities from across the 12 Puget Sound Districts, please see Table 2 in section 4.0 of this report.

Category	Hurdle	Opportunity
<b>Collaboration</b>	NRCS office in Mount Vernon is very supportive of the district but the district could use more assistance.  Districts often work in isolation; there needs to be better sharing of info to avoid duplication of efforts etc.	Commission should provide more training opportunities for districts to learn about tools and programs in use by other districts.
<b>Capacity</b>	Technical assistance to forest landowners is sorely needed. At the moment, forest planning is extremely expensive.	Fund additional technical support to ensure that projects are planned, permitted and completed in a timely manner.
<b>Data management</b>	There is a notable lack of GIS mapping information in the county. The district is trying to get mapping done (e.g., agricultural lands in and out of production; key sites that should be on the list for preservation).	Provide support for mapping/GIS. This could be modeled on the Snohomish effort, but probably needs to be done on a county by county basis.
<b>Funding</b>	Lack of long-term, stable funding emerged as the key limiting factor to the district in terms of being efficient and accomplishing more on the ground.	Staff noted that getting the assessment is <i>the</i> most important thing the district needs to address this issue. Support for this should be a priority of the Commission, Partnership, legislature etc.

## 4.0 Summary and Conclusions

Restoring and protecting Puget Sound has been a regional priority since the early 1970s; however, despite large investments of both public and private resources over the decades, key ecological indicators continue to point to an ecosystem in decline.

A December 2008 report issued by the Puget Sound Partnership identified the rapid conversion of forest, agriculture and rural lands to development as *the* biggest threat facing Puget Sound. The Puget Sound area is one of the fastest growing regions in the nation, and rapid land conversion is occurring in all twelve Puget Sound counties. Loss of farmland in the Puget Sound region is the fifth or sixth highest in the nation.

Throughout the region, many examples exist of successful efforts to address environmental problems associated with conversion of resource lands: problems such as water quality and quantity, loss of habitat, and species decline. Although often less visible than other entities, the Puget Sound Conservation Districts have contributed significantly to efforts to address these problems, all of which have been identified as key ecosystem threats by the Partnership.

The unique position of the Puget Sound Districts -- non-regulatory, locally placed in the community, well-regarded -- coupled with their on-the-ground outreach skills and technical expertise, has led to significant progress in conservation of natural resources around the region. The districts have designed creative approaches to funding and implementing programs that are relevant, and have maintained flexibility to adapt to emerging issues such as urban stormwater, non-point pollution and the shift to smaller scale, non-commercial agriculture. For example, across Puget Sound in 2009-2011, districts will implement:

- Over 350 individual farm risk assessments on non-commercial farms
- Over 300 plans to control and eliminate nutrients and pathogens from livestock
- 110 engineered plans for stormwater management
- 16 interlocal agreements to manage stormwater
- 277 project monitoring activities.

In addition, they will provide funding assistance to nearly 100 high-priority projects. Additional details on the projects and activities planned by Puget Sound Districts in 2009-2011 are provided in Appendix B.

While districts have been successful in their mission to provide outreach, technical assistance and funding to numerous landowners in their areas, the effort is not commensurate with the scale of the problems facing Puget Sound. Funding and capacity limitations and lack of regulatory enforcement are a few of the barriers that limit the districts from meeting the growing demand for their services. Through discussions with staff at the Commission and the 12 Puget Sound Districts, many suggestions were made for expanding and broadening the good work of the districts. The following table lists the major challenges ('hurdles') that most of the districts experience and suggestions ('opportunities') for how districts could be even more successful.

Table 2. Summary of major obstacles/hurdles facing Puget Sound Districts and recommended opportunities.

Issue	Obstacles/Hurdles	Opportunities
<b>Advocacy/ Marketing</b>	Landowners are not always fully aware of the services that the districts provide, especially to suburban and urban property owners.	A marketing campaign that describes the districts' services and target all landowners.
	It can be difficult for districts to take credit for their work. For some areas, landowners see any state or federally funded entity (including districts) as regulatory.	The Commission or another entity should evaluate options to "toot the horn" of Puget Sound Districts, collectively and individually.
	The public is not fully aware that buying from local farms is a safe and healthy food choice, supports local economies, and is better for the environment than purchasing from conventional food outlets.	Broaden current local efforts to promote '100 mile diet' or other incentive. Market the health benefits of eating locally. Supporting local farmers supports local economies instead of sending money to other regions or out of state.
<b>Collaboration</b>	Puget Sound Districts are not well coordinated across programs and activities, and the caucus function is not clear.	Clarify the role of the Puget Sound Caucus so that all districts are on board and that there is a clear purpose and goal.
<b>Data/Information Management</b>	Information on district accomplishments and measures of success of implemented programs are difficult to find on district and Commission websites. Annual reports provide a snapshot of each district, but a thorough report on each program and measurable successes of these programs is hard to locate or not readily available.	Create a portal of district data, programmatic outcomes, accomplishments and program tracking information available to the public and other organizations via the Commission website.  Create consistent formatting of district reports and website materials. Include budget information.
	Puget Sound-specific information is not compiled in one place. It is hard to determine which district programs are aimed at specific Puget Sound threats. Districts have different approaches to managing data.	Create a Puget Sound Caucus web page on Commission's website to incorporate outcomes of core district programs that address threats to Puget Sounds' water quality and habitat.
<b>Funding</b>	Districts struggle with securing adequate funding to address key problems. Programs are stretched thin and all districts could reach many more landowners with additional funding. Most districts find creative ways to share the cost of programs through partnerships with other agencies/ organizations. This is labor-intensive and requires a lot of staff time.	One grant from the Conservation Commission instead of four or five.  Provide stable funding for core district programs and operations without districts needing to seek additional grants.
	County Assessments are not in place across all districts. Political will and local commitment is lacking in some counties.	Districts without assessments should be provided legislative and Commission support for local funding.
	Maintaining qualified staff and providing professional staff training is challenging since districts are constantly seeking funding to support ongoing programs and operations.	Districts need steady budgets for operations, staffing and core program maintenance that are aligned with the market place (competitive salaries). Districts could also keep staff longer by offering competitive salaries and professional development and training. Also need funds for district staff participation in existing processes that address regional issues, such as the WRIA watershed planning.

Issue	Obstacles/Hurdles	Opportunities
<b>Monitoring and Accountability</b>	Targeted research and monitoring is difficult to fund because most grant sources seek new programs or more short-term programs that meet the mission of the granting organizations. Monitoring for effectiveness of programs is financially challenging.	Provide adequate funding to start new targeted programs such as monitoring, BMP effectiveness assessments, and other long-term studies.
<b>Regulatory</b>	Protection of farmland, water quality and habitat are often exacerbated by current regulations and laws that are not enforced by regulatory agencies.	Need stronger land protection laws to protect working farmland. Need an expanded “streamlined HPA” permitting process for agriculture BMPs and salmon habitat projects
	In some areas, landowners are not as willing as others to adopt voluntary measures to protect habitat and water quality on their land, which is why a state regulatory presence is important.	Solutions are needed to improve compliance of existing regulations, particularly in high-threat areas. Closer collaboration between regulatory entities and the districts is necessary to create appropriate solutions to specific problems. Districts could serve as the focal point for service delivery of incentive programs.
<b>Planning</b>	Individual districts are pulled in many different directions in order to respond to landowner needs. This can limit the Puget Sound Caucus’ ability to target key threats occurring across the basin in a coordinated and efficient manner.	In the context of the Partnership’s recovery efforts, Districts should coordinate on fewer core programs to address key threats.  Develop alternative scenarios based on projected changes in land use given future population growth. This can help identify areas of concern and prioritize programs and activities.
	Some districts are better than others in ensuring that programs and activities are addressing key threats (such as farm plans and technical assistance at 303d listed water bodies). Others are more opportunistic.	Develop guidelines to ensure that district programs incorporate existing management priorities such as 303d listings.
<b>Capacity</b>	Due to funding limitations, districts often share technical staff (e.g. foresters, engineers). This can make it challenging to complete projects efficiently.	Core funding to districts should include adequate support for technical staff.

# **APPENDIX A**

## Table 1. CLALLAM CONSERVATION DISTRICT

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Strait of Juan de Fuca Action Area, and indicates Clallam District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in Clallam District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Habitat alteration</b>	<i>Marine/ estuary</i>	Loss of estuary habitat and pocket estuaries	<b>Restore ecosystem structures, processes and functions.</b> <ul style="list-style-type: none"> <li>• Protect high value habitat</li> <li>• Implement regulatory programs (Critical Areas Ordinances)</li> </ul>	<ol style="list-style-type: none"> <li>1. Action Plan development.</li> <li>2. Restoration projects</li> </ol>	<ol style="list-style-type: none"> <li>1. 3-year assessment, including development of an action plan, to address flood hazards, water quality problems and habitat enhancement opportunities in the Three Crabs area near Dungeness Bay.</li> <li>2. Sponsor one or two FFFPP projects each year.</li> </ol>	
	<i>Marine nearshore</i>	Shoreline modification; overwater structures; railroad along marine shorelines				
	<i>Freshwater</i>	Blocked habitat in mainstem and tributaries; disruption of river processes through dikes.				
	<i>Upland</i>	Loss of working farms and forests through conversion	<b>Protect and restore ecosystem processes, structures and functions</b> <ul style="list-style-type: none"> <li>• protect and support long-term stewardship of working farms, forests and shellfish farms</li> <li>• Implement conservation district work plans</li> </ul>	<ol style="list-style-type: none"> <li>1. Farmland preservation</li> <li>2. Farm conservation planning</li> <li>3. CREP</li> </ol>	<ol style="list-style-type: none"> <li>1. District has a seat on the agricultural commission that deals with farmland preservation and provides GIS assistance to partners.</li> <li>2. District works with farmers to develop conservation plans that identify BMP opportunities etc.</li> <li>3. District works with farmers to implement riparian plantings to protect streams and salmon.</li> </ol>	
<b>Pollution</b>	<i>Toxics</i>	Misc contaminated sites; threats from oil spills and other contaminants	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Update and manage wastewater treatment plants</li> <li>• Manage on-site sewage systems</li> <li>• Manage stormwater run-off.</li> </ul>	<ol style="list-style-type: none"> <li>1. LID</li> </ol>	<ol style="list-style-type: none"> <li>1. Workshops and demonstrations on low impact development and stormwater management techniques.</li> </ol>	

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat	Priority Action Area Strategies for addressing threat ( <i>from 2020 Action Agenda</i> )	Current program or activity in Clallam District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Pollution</b>	<i>Bacterial Pollution</i>	High levels of pathogen contamination in lower Dungeness River and Dungeness bay resulting in shellfish bed closures	<b>Reduce the sources of water pollution</b> <ul style="list-style-type: none"> <li>• Implement clean water district strategies to address TMDLs and shellfish downgrades</li> <li>• manage stormwater runoff</li> </ul>	<ol style="list-style-type: none"> <li>1. Technical assistance and educational programs for farmers</li> <li>2. Stormwater management manual</li> <li>3. Sequim/Dungeness Clean Water District <ul style="list-style-type: none"> <li>• educational workshops</li> <li>• riparian restoration</li> <li>• stream fencing</li> </ul> </li> <li>4. Irrigation ditch water quality improvements</li> </ol>	<ol style="list-style-type: none"> <li>1. Priority farms i.d.'d (those most at risk of polluting water bodies) and technical assistance and educational workshops provided to help farmers implement BMPs.</li> <li>2. Small projects stormwater management manual developed to provide pre-engineered prescriptive stormwater BMPs for residential development</li> <li>3. Implementation of education, restoration and stream fencing actions identified by Sequim/Dungeness CWD to address water quality and habitat.</li> <li>4. Piping open irrigation ditches to eliminate polluted tailwater discharges</li> </ol>	Number of school education contacts. Number of participants in natural landscaping, stormwater, horse and livestock workshops. Number of feet of stream fencing, acres of riparian restoration. Feet of irrigation ditch piped.
<b>Freshwater resources</b>		Limited water availability for people, farms and fish, low in-stream flows etc	<b>Protect and restore ecosystem processes, structures and functions</b> <ul style="list-style-type: none"> <li>• protect and conserve water flows; improve aquifer resources in the Dungeness and other flow limited basins</li> </ul>	<ol style="list-style-type: none"> <li>1. Dungeness River water conservation.</li> <li>2. Native plant sales and workshops</li> </ol>	<ol style="list-style-type: none"> <li>1. Irrigation water conservation program in place to increase in-stream flows by providing technical and financial assistance to improve irrigation water conveyance and use efficiencies, especially in Dungeness Valley.</li> <li>2. Natural landscaping workshops to reduce demand for landscape irrigation</li> </ol>	
<b>Invasive species</b>		Potentially negative impacts on native populations.	<b>Protect intact ecosystem processes, structures and functions</b> <b>Restore ecosystem processes, structures and functions.</b>	<ol style="list-style-type: none"> <li>1. Knotweed removal projects.</li> </ol>	<ol style="list-style-type: none"> <li>1. District partners with Noxious Weed Control board and others on knotweed eradication and revegetation projects. Completed a project on Clallam River in 2007.</li> </ol>	
<b>Artificial propagation</b>	These threats are not currently addressed by Clallam District					
<b>Harvest</b>						
<b>Local Climate change impact</b>						

**Table 2. JEFFERSON CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Strait of Juan de Fuca Action Area, and indicates Jefferson District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Jefferson District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Marine/ estuary</i>	Loss of estuary habitat	<b>Restore ecosystem structures, processes and functions.</b> <ul style="list-style-type: none"> <li>• Protect high value habitat</li> <li>• Implement regulatory programs</li> </ul>	1. Habitat restoration  2. Shoreline bluff technical assistance	1. and 2. Working with landowners, community groups to improve/protect habitat along shorelines and nearshore and in estuaries.	
	<i>Nearshore</i>	Shoreline modification				
	<i>Freshwater</i>	Blocked habitat, riparian development, vegetation removal.	<b>Restore ecosystem structures, processes and functions.</b> <ul style="list-style-type: none"> <li>• Protect high value habitat</li> <li>• Implement regulatory programs</li> </ul>	1. Technical assistance and conservation plans	1. Working with landowners to prevent degradation of streams and creeks and restore ecosystems for multiple species.	Acres of habitat restored. Number of landowners receiving assistance.
	<i>Uplands</i>	Loss of working farms and forests through conversion	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect long-term stewardship of working farms and forests.</li> </ul>	1. Salmon habitat restoration 2. CREP 3. Forest plant sales 4. Forest conservation plans	1. Assist tribes, landowners, community groups and agencies salmon habitat restoration. 2. Aquatic vegetation management plan in Chimacum Creek. 3. Annual sale of native tree and shrub species to community to encourage native plants and maintain forests and woodlands. 4. Assist forest land owners with forest conservation planning.	Acres/miles of riparian and salmon habitat restored. Number of aquatic vegetation management plans implemented. Number of trees and shrubs purchased by landowners. Number of forest conservation plans completed. Number of farmers reached through technical assistance and education.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Jefferson District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Pollution</b>	<i>Toxics</i>	Mill operations; Threats from oil spills	This threat not currently addressed by Jefferson District			
	<i>Bacterial pollution and pathogens</i>	Loadings from human and animal waste.	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Address TMDLs and shellfish downgrades</li> <li>• Update and manage wastewater treatment plants</li> <li>• Manage on-site sewage systems</li> <li>• Manage stormwater run-off.</li> </ul>	<ol style="list-style-type: none"> <li>1. Farm and livestock plans/ tech assist.</li> <li>2. Water quality monitoring</li> <li>3. Shellfish growers assistance</li> </ol>	<ol style="list-style-type: none"> <li>1. Assist livestock farm operators with planning and implementation of nutrient management plans and BMPs.</li> <li>2. Conduct water quality monitoring on streams and tributaries, and provide water quality reports to adjacent landowners.</li> <li>3. Water quality monitoring data is also available to assist shellfish growers assess water quality.</li> </ol>	Number of farm and livestock management plans implemented. Water quality monitoring data for fecals, nutrients and dissolved oxygen. Number of farmers reached through technical assistance and education.
	<i>Nutrient loading</i>	Low dissolved oxygen conditions				
	<i>Surface water run off</i>	Run off from impervious surfaces, agricultural and forestry practices. CSO events				
<b>Freshwater resources</b>	<i>Surface and groundwater supply and availability</i>	Limited water availability for farms, people and fish. Low summer flows. Alteration of surface hydrology.	<b>Protect and restore ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect and conserve water flows.</li> </ul>	<ol style="list-style-type: none"> <li>1. Improve irrigation efficiencies</li> <li>2. Watershed plans</li> </ol>	<ol style="list-style-type: none"> <li>1. Assist agricultural operations with irrigation efficiency.</li> <li>2. Work with watershed planning groups to coordinate water use</li> </ol>	
<b>Invasive Species</b>	<i>Invasive Species</i>	Potential negative impacts on native populations	<b>Protect intact ecosystem processes, structures and functions.</b>	<ol style="list-style-type: none"> <li>1. Technical Assistance</li> <li>2. Habitat improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. Aquatic vegetation management plan in Chimacum Creek.</li> <li>2. Assist landowners with permits.</li> </ol>	
<b>Localized climate change impacts</b>	These threats are not currently addressed by Jefferson District					
<b>Artificial Propagation Harvest</b>	These threats are not currently addressed by Jefferson District					

**Table 3. KING CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the South Central Action Area, and indicates King Conservation District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in King County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in place in King District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Marine/estuary</i>	Loss of habitat in the Duwamish estuary; artificial estuary created by Ballard Locks.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect and restore Duwamish estuary transition zone habitats.</li> <li>• Let levees back along Cedar, Sammamish, Green Rivers.</li> </ul>	<ol style="list-style-type: none"> <li>1. Shoreline program</li> <li>2. Member Jurisdiction &amp; WRIA Watershed Forum Grant Program</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide workshops and assist marine estuarine shoreline and bluff landowners with planning and implementing BMPs for water quality improvements and fish and wildlife habitat restoration that will result in invasive plant species control; improved spawning and rearing habitat; and less nutrients; pathogens and pollutant entering the estuaries and nearshore.</li> <li>2. Award grants to jurisdictions and watershed forums within the boundary of the District to protect and restore the marine nearshore and associated fish and wildlife habitat.</li> </ol>	Acres (or other measurement) of bulkhead or armoring removed. Number of shoreline homeowners reached with outreach materials.
	<i>Marine nearshore</i>	Shoreline modification and marine vegetation removal.				
	<i>Freshwater</i>	Blocked habitat with dams, and diversions; alteration of rivers, shorelines and flood plains; alteration of surface hydrology; diversion of drinking water.	<b>Restore ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Implement Salmon Recovery three-year work plans for WRIA 8,9, 10, 11.</li> <li>• Implement existing basin protection and restoration plans in King County.</li> <li>• Implement large-scale flood plain reconnection projects.</li> </ul>	<ol style="list-style-type: none"> <li>1. <b>Shoreline Program</b></li> <li>2. CREP</li> <li>3. Fish Passage Barrier Removal</li> <li>4. Member Jurisdiction &amp; WRIA Watershed Forum Grant Program</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide workshops and assist freshwater stream and wetland landowners with planning and implementing BMPs for water quality improvements and fish and wildlife habitat restoration that will result in invasive plant species control; improved stream and wetland buffers; improved fish and wildlife habitat; and less nutrients, pathogens and pollutants entering aquatic areas.</li> <li>2. Restore riparian habitat along salmon bearing streams on lands capable of supporting agricultural activities.</li> <li>3. Work with landowners to improve fish passage along creeks and streams.</li> <li>4. Award grants to jurisdictions and watershed forums within the boundary of the District to protect and restore the freshwaters stream and wetlands and associated fish and wildlife habitat</li> </ol>	Acres of restored salmon habitat on streams and tributaries. Number of fish blocking obstacles removed. Number of waterway opened for spawning salmonids to pass through.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in King County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in place in King District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Upland</i>	Loss of working farms and forests through conversions impervious surface in urban growth areas; increasing development in rural areas.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect and support long-term stewardship of working farms, forests and shellfish farms.</li> </ul>	<ol style="list-style-type: none"> <li>1. Wetland Plant Cooperative</li> <li>2. Farm Management Planning</li> <li>3. Backyard conservation and urban initiatives</li> </ol>	<ol style="list-style-type: none"> <li>1. Assist landowners, community groups, and organizations with planning and implementing freshwater and marine aquatic area protection and enhancement projects Provides information, opportunities to learn about the benefits of native plants, and plant material for restoration projects.</li> <li>2. Assist agricultural landowners with managing natural resources through conservation planning, technical assistance, outreach and cost-share incentives. Free soil testing.</li> <li>3. Assist urban, suburban &amp; rural landowners with planning and implementing resource conservation practices.</li> </ol>	Number and types of plants purchased by landowners. Change in farmland acreage. BMPs implemented. Number of urban/suburban residents contacted.
<b>Pollution</b>	<i>Toxics</i>	Duwamish Bay superfund sites; recontamination of cleaned-up sites; risk of pollution from maritime activities.	This threat not currently addressed by King District.			
	<i>Bacterial pollution</i> <i>Nutrient loading</i>	Failing septic systems in nearshore areas and throughout watersheds; agricultural runoff.	<b>Reduce sources of water pollution.</b> <ul style="list-style-type: none"> <li>• Work with local public health departments and homeowners to restore shellfish beds.</li> <li>• Prevent pollution: implement existing clean water plans and watershed management plans.</li> <li>• Manage on-site sewage systems.</li> </ul>	<ol style="list-style-type: none"> <li>1. Livestock and Dairy and other livestock Nutrient Management Planning</li> <li>2. Manure Share Program and Manure Management Programs</li> </ol>	<ol style="list-style-type: none"> <li>1. Assist dairies and other livestock and agricultural landowners with managing nutrients through conservation planning, technical assistance, outreach and cost-share incentives</li> <li>2. Connect urban and suburban landowners with sources of composted manure from local agricultural operations. Provide guidance on on-site manure composting to manage waste.</li> </ol>	

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in King County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in place in King District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Pollution</b>	<i>Surface water runoff impacts</i>	Major source of urban stormwater run-off and pollutants into Puget Sound.	<b>Reduce sources of water pollution.</b> • Manage stormwater run-off; implement retrofits; implement LID strategies; implement NPDES permits.	1. Low impact development	1. Provide outreach and technical assistance to homeowners on LID techniques.	
	<i>Air pollution</i>	This threat not currently addressed by King District.				
<b>Surface and groundwater supply and availability</b>		This threat not currently addressed by King District.				
<b>Invasive Species</b>		Potentially negative impacts on native populations.	<b>Protect intact ecosystem processes, structures and functions</b>  <b>Restore ecosystem processes, structures and functions.</b>	1. Shoreline Program 2. CREP 3. Farm Management Planning Program 4. Member Jurisdiction & WRIA Watershed Forum Grant Program	1. Control locally listed and state listed invasive plant species on properties where the District plans and implements marine and freshwater aquatic area enhancement projects. 2. Control locally listed and state listed invasive plant species on properties where the District plans and implements CREP projects 3. Control locally listed and state listed invasive plant species on properties where the District develops and supports the implementation of Farm Management Plans 4. Support the control locally listed and state listed invasive plant species as proposed through grants submitted by member jurisdictions and watershed forums	
<b>Localized climate change impacts</b>	These threats not currently addressed by the King Conservation District					
<b>Artificial Propagation</b>						
<b>Harvest</b>						

**Table 4. KITSAP COUNTY CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Hood Canal Action Area, and indicates Kitsap District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Kitsap County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Kitsap District to address threat	Program description	Program tracking or effectiveness monitoring?
<b>Habitat Alteration</b>	<i>Marine/estuary</i>	Loss of estuary habitat; loss of shellfish beds	These threats are not currently addressed by Kitsap District Programs			
	<i>Marine Nearshore</i>	Disruption of marine nearshore processes				
	<i>Freshwater</i>	Blocked habitat Loss of wetlands, riparian habitat.	<b>Restore ecosystem processes, structures and functions.</b> • Implement species recovery plans, forest practices HCPs, Conservation District work plans and Marine Resource Plans.	1. Fish stream blockage inventory  2. Gable Creek Restoration Project	1. Identify fish blocking structures on private land. 2. Coarse woody debris is installed to improve salmon spawning habitat and water quality. Gamble Creek is one of three stream enhancement projects targeted to benefit salmon and water quality in Hood Canal	Number of blocking structures in county's streams and creeks.  Plants are observed regularly for mortality - dead trees are replace.
<i>Upands</i>	Loss of working forests and farms through conversion.	<b>Protect Intact Ecosystem processes, structures and functions.</b> • Protect and conserve stream flows. • Growth and devt: implement local portions of Puget Sound Regional Council Vision 2040 Plan. • Protect high-value habitat. Update and implement regulatory plans. • Protect and support long-term stewardship of working farms, forests, and shellfish farms.	1. Farm land inventory 2. Kitsap Agriculture Survey 3. Tree sale 4. Farm Plans	1. Every 2-3 years, KCD conducts a farmland inventory to determine change/loss in agriculture land use. 2. The survey will result in an inventory the types of products that small farms in Kitsap County generate. The information from the survey will help the District link farmers to potential markets within the County to keep farm products locally produced and locally consumed. 3. Offer native shrubs and tree species to landowners for forest restoration and conservation. 4. Technical assistance to landowners in farmland conservation, restoration and resource protection.	Tracking food crops and livestock generated from farms in Kitsap County. Change in farmland acreage across the district. Number of trees and shrubs sold. Number of farm plans in place.	

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Kitsap County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Kitsap District to address threat	Program description	Program tracking or effectiveness monitoring?
<b>Pollution</b>	<i>Toxics</i>	Threats from oil spills.	This threat is not currently addressed by Kitsap County			
	<i>Bacterial pollution and pathogens</i>	Loadings from human and animal waste.	<b>Reduce the sources of water pollution</b> <ul style="list-style-type: none"> <li>• Prevent pollution develop and implement Watershed Management Plans and 303d list plans.</li> <li>• Investigate Hood Canal as a no-discharge zone for boats.</li> <li>• Manage stormwater runoff</li> <li>• Continue PIC programs Mangle stormwater run-off; expand LID techniques; implement retrofits.</li> </ul>	<ol style="list-style-type: none"> <li>1. Surface and Stormwater Management Program</li> <li>2. Pollution Investigation and Correction (PIC) Projects</li> <li>3. Shoreline program</li> </ol>	<ol style="list-style-type: none"> <li>1. Kitsap District, Health District, Community Development and Public Works team up on this program. Kitsap CD manages farm planning, BMP implementation, and education and outreach portions of the program.</li> <li>2. Prioritized BMP and corrective actions for targeted water quality problems.</li> <li>3. Assist shoreline landowners with BMPs for water quality improvements and habitat restoration that will result in less nutrients and pathogens entering the estuaries.</li> </ol>	Site visits to check if BMPs are implemented.
<b>Freshwater Resources</b>		Alterations in flow.	These threats are not currently addressed by Kitsap County			
		Limited water availability for farms, people and fish.				
<b>Invasive Species</b>		Negative ecological impacts on native species.	<b>Protect Intact Ecosystem processes, structures and functions.</b>	1. Knotweed Control Program	1. Removal of invasive Knotweed along Kitsap's roads, streams and creeks.	Monitoring for the presence of Knotweed one year after treatment
<b>Climate</b>	These threats are not currently addressed by Kitsap County					
<b>Artificial Propagation</b>						
<b>Harvest</b>						

## Table 5. MASON CONSERVATION DISTRICT

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Hood Canal Action Area, and indicates Mason District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Mason County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in place in Mason District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Marine/estuary</i>	Loss of estuary habitat; loss of shellfish beds through habitat modifications.	<b>Protect intact ecosystem processes, structures and functions.</b> Protect high value habitat. Acquire high priority marine and freshwater habitat.	1. Shoreline landowner outreach (planned, not current)		
	<i>Marine nearshore</i>	Disruption of marine nearshore processes from roads, homes and shoreline armoring.	This threat not currently addressed by Mason District			
	<i>Freshwater</i>	Blocked habitat including Skokomish River from dams, culverts and other blockages. Loss of floodplains processes, wetlands; altered hydrology.	<b>Restore ecosystem processes, structures and functions.</b> • Implement priority ecosystem restoration projects including Hood Canal summer chum, Skokomish Chinook and other spp., • Implement Shoreline Master Program restoration plans.	1. Kennedy Creek Restoration 2. WRIA 14 Salmon Recovery Lead Entity 3. CREP/critical area buffer restoration.	1. Completed trail along Kennedy Creek for educational tours of Chum salmon spawning. Restored habitat along Kennedy Creek. 2. Working in partnership with fed, state, local and citizen groups on salmon recovery. 3. Restore riparian forest habitat on salmon-bearing streams.	Acres/stream miles restored. Number of restoration plans implemented and completed.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Mason County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in place in Mason District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Upland</i>	Loss of working farms and forest through conversion.	<p><b>Protect intact ecosystem processes, structures and functions.</b></p> <ul style="list-style-type: none"> <li>• Implement local portions of Puget Sound Regional Council Vision 2040 Plan.</li> <li>• Protect high value habitat</li> </ul> <p><b>Restore ecosystem processes, structures and functions</b></p> <ul style="list-style-type: none"> <li>• Complete Skokomish River Ecosystem Restoration and Flood Damage Reduction Study and restoration projects.</li> <li>• Implement Forest Practices HCP plans</li> </ul>	<ol style="list-style-type: none"> <li>1. Farmland Preservation Plans.</li> <li>2. Kids with Conservation Knowledge (KWIC)</li> <li>3. Oakland Bay Riparian Assessment Program</li> <li>4. Tree and plant sale</li> <li>5. Food and farm network</li> </ol>	<ol style="list-style-type: none"> <li>1. Cost-Share agreements with landowners that support BMPs to protect farmland. Also provides education and outreach to connect the community with local agriculture through Mason County Farm Map and the Harvest Celebration Farm Tours</li> <li>2. School program to teach kids about resource conservation.</li> <li>3. Restore salmon-bearing stream riparian buffers</li> <li>4. Native tree and shrub species available for reduced cost to county residents</li> <li>5. Link local farms and products with community</li> </ol>	<p>Farm plans (Acres of farmland in production; number of Farmland plans implemented; number of landowners/farms participating in workshops; number of BMPs implemented).</p> <p>Number of restoration plans developed.</p> <p>Numbers of trees/shrubs sold.</p> <p>Number of participants in Forest Festival Field Day.</p>
<b>Pollution</b>	<i>Toxics</i>	Prevent pollution; prioritize in-water and upland toxic clean up sites.	This threat not currently addressed by Mason District			
	<i>Bacterial pollution and pathogens</i>	Loadings from human and animal waste lead to shellfish and recreational swimming beach closures.	<p><b>Reduce sources of water pollution.</b></p> <ul style="list-style-type: none"> <li>• Prevent pollution - implement PIC program in Mason County; Develop and implement Watershed Management Plans and 3030d plans; Investigate Hood Canal as a no-discharge zone for boats.</li> <li>• Manage stormwater run-off, expand LID techniques, implement retrofits.</li> <li>• Manage on-site sewage</li> </ul>	<ol style="list-style-type: none"> <li>1. Horses for Clean Water</li> <li>2. Shellfish Recovery Plans for Anna's and Oakland Bays.</li> <li>3. Low impact development.</li> <li>4. Salmon Safe Marina</li> <li>5. Skokomish Watershed cost-share incentive program</li> </ol>	<ol style="list-style-type: none"> <li>1. Workshops on managing horses and livestock using BMPs for water quality protection.</li> <li>2. Improving water quality in shellfish growing areas.</li> <li>4. Boater use of pump-out stations in marinas.</li> <li>5. Protecting Hood Canal's watersheds and Bays by working with landowners on reducing nutrient inputs from properties.</li> </ol>	<p>Number of participants in programs.</p> <p>Number of BMPs implemented.</p> <p>Number of attendees at workshops.</p> <p>Shellfish industry conducts water quality monitoring (can link back to BMPs).</p> <p>Acres of shellfish areas upgraded or downgraded.</p>
<b>Pollution</b>	<i>Nutrient loading</i>	Significant low dissolved oxygen problems.				
<b>Surface and groundwater</b>	These threats not currently addressed by Mason District					
<b>Invasive species</b>						
<b>Climate</b>						
<b>Artificial Propagation</b>						
<b>Harvest</b>						

**Table 6. PIERCE CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the South Central Action Area and indicates Pierce District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Pierce County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Pierce District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat alteration</b>	<i>Marine/estuary</i>	Loss of major estuary habitat in the Puyallup River estuary	This threat not currently addressed by Pierce District.			
	<i>Marine nearshore</i>	Shoreline modification and marine shoreline vegetation removal.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect and restore Puyallup estuary transition zone habitats.</li> <li>• Let levees back along Puyallup Sammamish, Green Rivers.</li> </ul>	<b>1.</b> Shoreline restoration	<b>1.</b> Provide outreach and technical assistance to shoreline homeowners about removal of shoreline armoring.	Number of homeowners reached (?)
	<i>Freshwater</i>	Blocked habitat with dams, and diversions; alteration of rivers, shorelines and flood plains; alteration of surface hydrology; diversion of drinking water.	<b>Restore ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Implement large-scale flood plain reconnection projects.</li> </ul>	<b>1.</b> South Prairie Creek Restoration <b>2.</b> CREP <b>3.</b> Stream Team Program	<b>1 (and 2).</b> Create a fully protected corridor along six miles of the Puyallup River. <b>3.</b> Riparian buffer restoration with native plants.	Plants are observed regularly for mortality - dead trees are replace. Acres of riparian habitat restored.
	<i>Upland</i>	Loss of working farms and forests through conversions impervious surface in urban growth areas; increasing development in rural areas.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect and support long-term stewardship of working farms, forests and shellfish farms.</li> </ul>	<b>1.</b> Senior Food Box Program <b>2.</b> Pierce County Community Foods Network, Meat Producers Cooperative. <b>3.</b> FARM (Farming Assistance, Revitalization and Marketing) <b>4.</b> Green Tacoma Partnership	<b>1.</b> Purchase food and food vouchers from local farmers to give to low-income seniors and disabled residents. This helps keep farmers in business thus keeping agricultural lands in production. <b>2./3</b> Marketing activities, food policy development. <b>4.</b> In partnership with local cities, governments and NGOs, protect urban habitat and open space.	Measured value of sales of local agricultural products. Acres of farmland maintained. Number acres of urban open space protected or restored.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Pierce County	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current or proposed plan, strategy or program in Pierce District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Pollution</b>	<i>Toxics</i>	Commencement Bay superfund sites; recontamination of cleaned-up sites; risk of pollution from maritime activities.	This threat not currently addressed by Pierce District.			
	<i>Bacterial Pollution</i>	Failing septic systems in nearshore areas; run-off from agriculture lands.	<b>Reduce sources of water pollution.</b> 1. Work with Puyallup Tribe, local public health departments and homeowners to restore shellfish beds. 2. Prevent pollution: implement existing clean water plans 3. Manage on-site sewage systems.	1. Farm Plans 2. Stream Team Program	1. Provide technical assistance and outreach to livestock farmers near shellfish growing areas and salmon habitat to protect water quality from point and non-point pollution sources. 2. Citizen monitoring of water quality in 303d-listed water bodies.	Site visits to check if BMPs are implemented. Citizen data is incorporated in Ecology's water quality database.
	<i>Nutrient loading</i>	Areas with limited flushing.				
	<i>Surface water run-off impacts</i>	Major source of urban storm water run-off and pollutants into Puget Sound.	This threat is not currently addressed by Pierce District.			
	<i>Air pollution</i>	Auto emissions				
<b>Surface and groundwater</b>		Limited water availability for farms, people and fish.				
<b>Invasive Species</b>		Potential negative impact on native marine and freshwater species by invasive.	<b>Protect intact ecosystem processes, structures and functions.</b>	1. Knotweed Removal Program	1. Remove invasive Knotweed in restoration areas. Provide guidance for landowners to properly remove Knotweed	Acres of Knotweed removed.
<b>Climate</b>	These threats are not currently addressed by Pierce Conservation District					
<b>Artificial Propagation</b>						
<b>Harvest</b>						

## SAN JUAN CONSERVATION DISTRICT

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Strait of Juan de Fuca Action Area, and indicates San Juan District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat (from 2020 Action Agenda)	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in San Juan District to address threat	Description of program or activity	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Marine</i>	Derelict gear	District does not have program or activity in place to address this threat			
	<i>Marine/estuary</i>	Loss of eelgrass habitat; 11 of 27 historical pocket estuaries at risk of degradation	<b>Protect and restore intact ecosystem processes, structures and functions</b>	1. Bi-directional tidegate on Lopez Island	1. Staff engineered and installed a bi-directional tidegate on Lopez Island that restored daily tidal flow for the first time since the early 1960s to improve water quality and wildlife habitat and reduce winter storm flooding.	
	<i>Marine nearshore</i>	Limited soft shoreline sensitive to modification; loss of high value beach habitat including potential forage fish habitat	District does not have program or activity in place to address this threat			
	<i>Upland</i>	Loss of working farms through conversion; *loss of forest cover/working forest lands through conversion	<b>Protect and restore intact ecosystem processes, structures and functions</b>	1. Farmland Preservation 2. Agricultural Resources Committee 3. Farm/Forest planning	1. Partnership with Assessor's Office to assist landowners in keeping agricultural and open space designations. 2. District provided initial \$20K to fund SJ Ag Resources Committee coordinator (cmte advises the county on agricultural issues and is focused on farmland preservation and farmer enrichment) 3. District provided cost share/matching funds to landowners to improve ag practices.	

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of threat (from 2020 Action Agenda)	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in San Juan District to address threat	Description of program or activity	Program tracking or effectiveness monitoring
<b>Pollution</b>	<i>Toxics</i>	Potential for localized oil spills; potential for significant pollution from major spill in Strait.	District does not have program or activity in place to address this threat			
	<i>Bacterial pollution</i>	Inadequate waste management to handle summer crowds; boater pollution in bays/marinas; potential problems from BC outfall.	<b>Reduce sources of water pollution</b>	1. Conservation education	1. Outreach and information provided to individuals, businesses, and the community on conservation practices via website information, newsletters, articles, workshops, county fair, and other events.	Number of people reached with our conservation/stewardship message. Number of workshop attendees and follow-up actions.
	<i>Surface water runoff</i>	Localized pollutant loading from stormwater runoff.	<b>Reduce sources of water pollution</b>	1. Green Ground program (LID) 2. Water quality monitoring and data collection 3. Watershed planning/conservation planning	1. LID education and technical assistance; demonstration raingarden at San Juan High School; workshops; newsletter articles. District played key role in securing state funding for LID technical assistance for county. 2. Eight years of water quality monitoring and data analysis on 3 major islands to identify high priority areas (partnering with UW Friday Harbor Labs) 3. District was only entity in county to implement all of their identified actions in Watershed Action Plan, including developing a conservation plan for Cascade Creek	Stormwater education: Number classroom presentations and field tours. Number volunteers, drains labeled. Number groups using carwash kits. Number trainings held/attended. Number of participants.
<b>Freshwater resources</b>	San Juan Island CD has section on website: <a href="http://www.sanjuancd.org">www.sanjuancd.org</a> devoted to climate change District does not have program or activity in place to address this threat					
<b>Invasive species</b>						
<b>Artificial propagation</b>						
<b>Harvest</b>						
<b>Climate</b>						

**Table 8. SKAGIT COUNTY CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Whidbey Action Area, and indicates Skagit District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)	Description of threat *indicates not listed in 2020 Action Agenda	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in Skagit District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?	
<b>Habitat alteration</b>	<i>Marine/ estuary</i>	Loss of estuary tidal marsh and habitat connectivity with more than 75% of the Skagit estuary diked.	<b>Protect intact ecosystem processes, structures and functions</b>	1. Conservation Education <ul style="list-style-type: none"> <li>•Backyard wildlife habitat</li> <li>•Low Impact Development</li> </ul>	1. Workshops, training and certification on a variety of resource issues, including Low Impact Development, backyard wildlife habitat practices, etc.	Number of workshops held. Number of participants.
	<i>Shorelines</i>	Development along lake shorelines, reducing habitat availability	These threats are not currently addressed by Skagit District			
	<i>Marine nearshore</i>	Shoreline armoring; overwater structures; disconnected feeder bluffs /pocket estuaries				
	<i>Freshwater</i>	Loss of large river habitat complexity and floodplain connectivity	<b>Protect and restore ecosystem processes, structures and functions</b> <ul style="list-style-type: none"> <li>• Implement priority restoration projects/</li> <li>• Implement large-scale floodplain projects to re-connect side channels and provide mainstem rivers with ability to migrate</li> </ul>	1. Upper watershed restoration 2. Skagit Watershed Council and Skagit River salmon recovery	1. Forest roads repaired, culverts that block fish passage replaced or removed 2. District manager has seat at Watershed Council table (council is lead entity for salmon recovery in WRIAs 3/4); district involved in restoration projects identified in recovery plan.	Miles of forest roads treated. Number of culverts removed or replaced.
	<i>Uplands</i>	Loss of working farms and forests through conversion; increase in impervious surfaces	<b>Protect intact ecosystem processes, structures and functions</b> • Protect and support working farms and forests ; support TDR/PDR programs; provide technical assistance to landowners	1. Forest conservation planning/forestry stewardship 2. Conservation Futures Advisory Committee 3. Stormwater/LID education	1. Promotes forestry conservation plans and BMP implementation by providing information on available programs and assistance. 2. Helps preserve and protect prime farmland and support sustainable agriculture. 3. 2 LID workshops held in 2007	Number of plans completed.Number of acres treated.Number of BMPs installed.Number of projects funded. Strategic plans completed and implemented.

Category of threat (from 2020 Action Agenda - Action Area Priorities)	Description of threat *indicates not listed in 2020 Action Agenda	Priority Action Area Strategies for addressing threat (from 2020 Action Agenda)	Current program or activity in Skagit District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?	
<b>Pollution</b>	<i>Toxics</i>	This threat is not currently addressed by Skagit District				
	<i>Bacterial pollution</i>	Impaired water bodies due to bacterial pollution; shellfish closures (Samish Bay, Similk Bay, Port Susan Bay in Skagit Co.)	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• Implement shellfish protection plans</li> <li>• Implement watershed mgmt plans addressing bacteria impairments</li> <li>• Provide support for technical assistance and cost-share programs for small</li> </ul>	<ol style="list-style-type: none"> <li>1. Samish Bay Technical Advisory Committee</li> <li>2. Watershed masters</li> </ol>	<ol style="list-style-type: none"> <li>1. Staff organized and facilitate Samish Bay TAC to address bacterial pollution issues in Samish Bay.</li> <li>2. Train volunteers to increase public awareness of water quality issues and to engage in water quality improvement projects.</li> </ol>	
	<i>Surface water runoff impacts</i>	Pollutant loading from urban stormwater and agricultural runoff; shellfish bed closures  *25 water bodies on 303d list (WRIAs 3/4). Most involve fecal coliform; phosphorus, temperature and DO.	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• Implement shellfish protection plans</li> <li>• Implement watershed mgmt plans addressing temp, DO, mercury, and bacteria impairments</li> <li>• Provide support for technical assistance and cost-share programs for small farms and commercial ag.</li> </ul>	<ol style="list-style-type: none"> <li>1. Stormwater/LID</li> <li>2. Ag BMPs/farmland preservation</li> </ol>	<ol style="list-style-type: none"> <li>1. Storm drain stenciling program, workshops on LID including site tours</li> <li>2. CREP is a voluntary program to establish forested buffers along streams to improve salmon and steelhead habitat. Technical assistance provided to dairies, livestock and poultry producers (farm plans, BMPs, regulatory compliance). Workshops provided to small acreage farmers to improve practices.</li> </ol>	Number of storm drains stenciled. Number of workshops/attendees. Number of projects completed/BMPs installed . Number of desired biological outcomes achieved. acres or CREP buffers installed. Number of recommendations implemented.
<b>Freshwater resources</b>	Limited water availability, altered hydrology	see programs listed under "freshwater" in habitat alteration section above				
<b>Invasive species</b>	These threats are not currently addressed by Skagit District					

**Table 9. SNOHOMISH CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Whidbey Action Area and indicates Snohomish District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threat in Snohomish County	Priority Action Area Strategies for addressing threat	Current program or activity in Snohomish District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Habitat alteration</b>	<i>Marine/ estuary</i>	Loss of estuary tidal marsh and habitat connectivity	<b>Protect intact ecosystem processes, structures and functions</b>	<b>1.</b> Shoreline landowner education <b>2.</b> Commercial and non-commercial agriculture/farmland preservation	<b>1 and 2.</b> District works with landowners in floodplains, flood control districts, diking districts and also on Camano Island and other properties on Puget Sound.	
	<i>Shorelines</i>	Development along lake shorelines, reducing habitat availability				
	<i>Marine nearshore</i>	Shoreline armoring; overwater structures; disconnected feeder bluffs /pocket estuaries				
	<i>Freshwater Uplands</i>	Loss of working farms and forests through conversion; increase in impervious surface				
<b>Pollution</b>	<i>Toxics</i>	This threat is currently not addressed by Snohomish District				
	<i>Bacterial pollution</i>	Impaired water bodies, many due to bacterial pollution; shellfish bed closures	<b>Reduce sources of water pollution</b> • Provide tech support to small farm and commercial ag landowners	<b>1.</b> Commercial and non-commercial agriculture/ farmland technical assistance <b>2.</b> Water quality monitoring <b>3.</b> Conservation plant program	<b>1.</b> District provides technical assistance, education and funding opportunities for producers to apply BMPs <b>2.</b> District has done consistent water quality monitoring for many years to evaluate effectiveness of BMPs <b>3.</b> District provide residents with reasonably priced plants for erosion control, restoration projects and conservation landscaping.	Number of plants sold

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threat in Snohomish County	Priority Action Area Strategies for addressing threat	Current program or activity in Snohomish District to address threat	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Pollution</b>	<i>Nutrient loading</i>	Contributes to eutrophication and other problems	This threat is not currently addressed by Snohomish District			
	<i>Surface water runoff impacts</i>	Pollutant loading from urban stormwater and agricultural runoff; emerging pre-spawn fish mortality concern	<b>Reduce sources of water pollution</b> • Provide tech support to small farm/commercial ag landowners	<ol style="list-style-type: none"> <li>1. Commercial and non-commercial agriculture/ farmland technical assistance</li> <li>2. Water quality monitoring</li> <li>3. Conservation plant program</li> </ol>	<ol style="list-style-type: none"> <li>1. District provides technical assistance, education and funding opportunities for producers to apply BMPs</li> <li>2. District has done consistent water quality monitoring for years to evaluate effectiveness of BMPs</li> <li>3. District provide residents with reasonably priced plants for erosion control, restoration projects and conservation landscaping.</li> </ol>	
<b>Freshwater resources</b>	Limited water availability	This threat is not currently addressed by Snohomish Conservation District				
<b>Invasive species</b>		Potentially negative impacts on native populations.	<b>Protect intact ecosystem processes, structures and functions</b>  <b>Restore ecosystem processes, structures and functions.</b>	<ol style="list-style-type: none"> <li>1. Noxious weed education</li> </ol>	<ol style="list-style-type: none"> <li>1. District works proactively with the Noxious weed board, and provides a lot of landowner education and technical assistance for noxious weeds including both pasture and riparian areas (toxics, knotweed, blackberry, etc).</li> </ol>	
<b>Artificial propagation</b>	These threats not currently addressed by Snohomish Conservation District					
<b>Harvest</b>						
<b>Localized climate change impacts</b>						

**Table 10. THURSTON CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the South Sound Action Area, and indicates Thurston District programs in place to address these threats

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Thurston County	Priority Action Area Strategies for addressing threat	Current program or activity in Thurston District to address threat	Program description	Program tracking or effectiveness monitoring
<b>Habitat Alteration</b>	<i>Marine/estuary</i>	Loss of riparian and estuary habitat.	<b>Restore ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Complete restoration of Nisqually estuary.</li> <li>• Restore estuaries and pocket estuaries throughout South Puget Sound.</li> </ul>	1. Partner w/Nisqually Tribe on delta restoration.	1. Working with Nisqually Tribe to restore natural delta habitat on Nisqually River.	Progress toward Nisqually Delta Restoration Plan. (See plan)
	<i>Marine nearshore</i>	Shoreline modification.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect undeveloped shoreline and support efforts to prevent development in flood plains.</li> <li>• Revitalize waterfront communities; support and encourage the Port of Olympia strategic redevelopment plans including stormwater retrofits.</li> </ul>	1. Shoreline restoration activities	1. District works with landowners along shoreline to remove bulkheads and other structures.	Aces of shoreline restored.
	<i>Freshwater</i>	Blocked habitat including dams and culverts on the Deschutes River; fill for I-5 on Nisqually delta.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Complete Deschutes estuary restoration.</li> </ul>	1. South Sound GREEN Program	1. Student program aimed at water quality protection and habitat restoration and in Henderson and Nisqually watersheds.	Number of farm plans developed and implemented. Number of BMPs implemented. Number of students participating Number of plants installed.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Thurston County	Priority Action Area Strategies for addressing threat	Current program or activity in Thurston District to address threat	Program description	Program tracking or effectiveness monitoring
	<i>Upland</i>	Loss of prairie habitat through land conversion; loss of hydrologic function from existing and expanding impervious surface.	<b>Protect intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• Protect high value habitat</li> <li>• Implement Critical Areas Ordinances</li> </ul>	<ol style="list-style-type: none"> <li>1. Farm Conservation Plans</li> <li>2. Low Impact Development* (*Proposed in '09-'11)</li> <li>3. Forest Plans</li> </ol>	<ol style="list-style-type: none"> <li>1. Plans to preserve and protect prime farmland and support sustainable agriculture in Thurston County.</li> <li>2. Offer workshops and technical training on LID techniques.</li> <li>3. Development of forestry conservation plans and BMPs for forest implementation</li> </ol>	<p>Number of farm plans.</p> <p>Number of participants in workshops, trainings, and LID techniques implemented.</p> <p>Number of forest plans.</p>
Pollution	<i>Toxics</i>	Industrial pollution in bays and contaminated sediments.	This threat not currently addressed by Thurston District.			
	<i>Bacteria Contamination</i>	Bacteria and pathogens from human and animal waste.	<b>Reduce sources of water pollution.</b> <ul style="list-style-type: none"> <li>• Prevent pollution: implement existing Watershed Action Plans, Shellfish Protection Districts and other water pollution clean up plans in a coordinated way.</li> <li>• Reopen key shellfish areas in Henderson Inlet.</li> </ul>	<ol style="list-style-type: none"> <li>1. South Sound GREEN Program</li> <li>2. Shellfish Program - Clear Choice for Clean Water (pledge program)</li> </ol>	<ol style="list-style-type: none"> <li>1. Student program aimed at water quality protection and habitat restoration and in Henderson and Nisqually watersheds.</li> <li>2. Targeted outreach and technical assistance to landowners within shellfish conservation districts and other sensitive water bodies.</li> </ol>	<p>Number of students participating.</p> <p>Number of pledge participants.</p> <p>Fecal contaminant levels are monitored by Thurston Health and Ecology.</p>
	<i>Nutrient Loading</i>	Low dissolved oxygen in Budd, Case and Carr Inlets.	<ul style="list-style-type: none"> <li>• Manage stormwater run-off.</li> <li>• Upgrade and Manage LOTT.</li> <li>• Manage on-sites</li> </ul>	<ol style="list-style-type: none"> <li>1. Manure Brokering Program</li> </ol>	<ol style="list-style-type: none"> <li>1. Match manure generators with compost users to help manage nutrient run-off.</li> </ol>	
	<i>Air quality</i>	Poor air quality due to particulate pollution.	This threat not currently addressed by Thurston District.			
	<i>Invasive Species</i>	Potential negative impact on native marine and freshwater species by invasives.	Protect intact ecosystem processes, structures and functions.	<ol style="list-style-type: none"> <li>1. Exotic Species Program</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide guidance to landowners on identifying and removing invasive species.</li> </ol>	Acres of Knotweed removed.
	<i>Climate</i>	These threats are not currently addressed by Thurston Conservation District				
	<i>Artificial Propagation</i>					
	<i>Harvest</i>					

**Table 11. WHATCOM CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Whatcom Action Area and indicates Whatcom District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Whatcom County	Priority Action Area Strategies for addressing threats	Current program or activity by Whatcom District to address threats	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Habitat alteration</b>	<i>Marine</i>	Derelict gear		These threats are currently not addressed by Whatcom District		
	<i>Marine/estuary</i>	Loss of native eelgrass meadows due to shoreline modification				
	<i>Nearshore</i>	Shoreline modification				
	<i>Freshwater</i>	Loss of mainstem and floodplain river habitat; culverts and dams disrupt hydrology/block habitat; loss of riparian function and straightening of stream channels  *Loss of working farm and forest lands  *Increase in # of hobby farms				

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Whatcom County	Priority Action Area Strategies for addressing threats	Current program or activity in Whatcom District to address threats	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Habitat alteration</b>	<i>Upland</i>	Loss of forest cover and extensive forest road drainage resulting in landslides and adding to high water temps that cause pre-spawn mortality	<b>Protect intact ecosystem processes, structures and functions</b> <ul style="list-style-type: none"> <li>• update/implement regulatory programs (CAO, SMPs)</li> <li>• protect and support long-term stewardship of working farms, forests and shellfish farms; limit forest and farm conversions; ensure forest practices are enforced</li> </ul>	<ol style="list-style-type: none"> <li>1. CREP</li> <li>2. CAO Technical Advisory Committee</li> <li>3. Drainage improvements</li> </ol>	<ol style="list-style-type: none"> <li>1. As of 2005, 137 CREP projects implemented, improving 1,245 acres and 73.6 miles of riparian habitat.</li> <li>2. District Manager served on county's CAO technical advisory cmte to ensure issues were addressed</li> <li>3. Technical assistance to Drainage Improvement Districts to install hedgerows and conduct dredging in as environmentally benign manner as practicable.</li> </ol>	<ul style="list-style-type: none"> <li>Number of stream miles planted</li> <li>Number of plans implemented</li> <li>Number of contacts</li> <li>Number of plants sold</li> </ul>
<b>Pollution</b>	<i>Toxics</i>	Industrial pollution in Bellingham Bay	<b>Air pollution</b> (not included in 2020 Action Agenda list of local threats by Action Area)	<ol style="list-style-type: none"> <li>1. Air pollution program</li> </ol>	<ol style="list-style-type: none"> <li>1. District co-chairs Agricultural Initiative to the Georgia Basin/Puget Sound International Airshed Strategy. Scientist hired to lead a new program to address these issues.</li> </ol>	
	<i>Bacterial pollution</i>	Nutrients and pathogens from human and animal waste lead to shellfish closures in Drayton Harbor, Portage Bay, Chuckanut Bay and Birch Bay	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• clean up Drayton Harbor, Birch Bay and Portage bay by implementing shellfish plans</li> </ul>	<ol style="list-style-type: none"> <li>1. Farm planning for dairies</li> <li>2. Water quality monitoring</li> <li>3. Low-impact livestock operation planning</li> </ol>	<ol style="list-style-type: none"> <li>1. Technical assistance for dairy operators in all 3 affected watersheds to implement BMPs and control manure pollution.</li> <li>2. District worked with partners to track local water quality trends in support of the Nooksack TMDL.</li> <li>3. BMPs for livestock management.</li> </ol>	
	<i>Surface water runoff impacts</i>	Bellingham Bay, Birch Bay, Drayton Harbor	<b>Reduce sources of water pollution</b> <ul style="list-style-type: none"> <li>• clean up Drayton Harbor, Birch Bay and Portage bay by implementing shellfish plans</li> </ul>	<ol style="list-style-type: none"> <li>1. Farm planning for dairies</li> <li>2. Water quality monitoring</li> <li>3. Nutrient Management</li> </ol>	<ol style="list-style-type: none"> <li>1. Tech assistance for dairy operators in all 3 affected watersheds to implement BMPs.</li> <li>2. District worked with partners to track trends to support Nooksack TMDL.</li> <li>3. Participated in Int'l Aquifer Task Force and Portage Bay &amp; Drayton Harbor Shellfish Protection Districts.</li> </ol>	

Category of threat (from 2020 Action Agenda - Action Area Priorities)	Description of ecosystem threats in Whatcom County	Priority Action Area Strategies for addressing threats	Current program or activity in Whatcom District to address threats	Description of program or activity	Program tracking or effectiveness monitoring?
<b>Freshwater Invasive Species Artificial propagation/harvest</b>	These threats are currently not addressed by Whatcom District				
<b>Localized climate change impact</b>	Sea level rise	<b>1.</b> Anaerobic digester exploratory work	<b>1.</b> District is investigating opportunities for anaerobic digesters to capture and clean methane from manure lagoons.		

**Table 12. WHIDBEY CONSERVATION DISTRICT**

This table lists the threats identified in the Puget Sound Partnership's 2020 Action Agenda for the Whidbey Action Area and indicates Whidbey District programs in place to address these threats.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Island County	Priority Action Area Strategies for addressing threats	Current program or activity by Whidbey District to address threats	Description of program or activity	Program tracking or effectiveness monitoring
<b>Habitat alteration</b>	Marine/estuary	District does not have programs or activities in place to address these threats				
	Shorelines					
	Marine nearshore					
	Freshwater					
	<i>Uplands</i>	Loss of working farms and forests through conversion; increase in impervious surface area	<b>Protect intact ecosystem processes, structures and functions</b> <ul style="list-style-type: none"> <li>• protect and support long-term working farms, forests etc</li> <li>• provide technical assistance to landowners</li> </ul>	<ol style="list-style-type: none"> <li>1. Collaborative partnership with Whidbey/ Camano land trust</li> <li>2. Partnership with County Assessor's office to keep forest land in forest cover via PBRS program</li> <li>3. Technical Assistance to agricultural community</li> </ol>	<ol style="list-style-type: none"> <li>1. District helps procure funding for land trust to acquire at-risk forested areas</li> <li>2. Assessor refers clients to District to develop farm and forest plans to help keep lands as resource lands to maintain PBRS program status.</li> <li>3. Technical (BMP) and planning assistance provided to farmers</li> </ol>	
<b>Pollution</b>	<i>Toxics</i>	Groundwater contamination from past industrial activities	This threat is not currently addressed by the Whidbey District			
	<i>Bacterial pollution</i>	Impaired water bodies due to bacterial pollution; shellfish closures in Holmes Harbor and Penn Cove	<b>Protect and restore intact ecosystem processes, structures and functions.</b> <ul style="list-style-type: none"> <li>• protect and support long-term working farms, forests etc</li> <li>• provide technical assistance to landowners</li> </ul>	<ol style="list-style-type: none"> <li>1. Farm Sustainability Program</li> <li>2. Shellfish protection</li> </ol>	<ol style="list-style-type: none"> <li>1. Coordinate approximately 20 farms to open to the public on one weekend in October for the Whidbey Island Farm Tour. Participate in local and regional agriculture value added and sustainability groups.</li> <li>2. District is partnering with county to address Holmes Harbor shellfish issues</li> </ol>	Number of attendees.

Category of threat (from 2020 Action Agenda - Action Area Priorities)		Description of ecosystem threats in Island County	Priority Action Area Strategies for addressing threats	Current program or activity by Whidbey District to address threats	Description of program or activity	Program tracking or effectiveness monitoring
	<i>Nutrient loading</i>	Low DO in Penn Cove; DO and temperature concerns in streams	<b>Reduce source of water pollution</b> • Evaluate low DO levels in Penn Cove and Holmes Harbor • Provide technical assistance for small farms and commercial ag	<b>1.</b> Technical Assistance to agricultural and forest community <b>2.</b> Farm tours	<b>1.</b> District provides technical (BMP) and planning assistance to farmers throughout island <b>2.</b> District implements farm tour program to help maintain economic viability of local farming community	
	<i>Surface water runoff</i>	Pollutant loading from urban stormwater and agricultural runoff	<b>Reduce source of water pollution</b> •Manage stormwater runoff; use and increase site-appropriate LID techniques	<b>1.</b> Stormwater/LID education	<b>1.</b> District provides education/outreach and technical assistance in the use of LID practices to residents and technicians. District has served a key role in advancing LID in Island County (see chapter).	
<b>Freshwater resources</b>	These threats are currently not addressed by Whidbey District					
<b>Invasive species</b>						
<b>Harvest</b>						
<b>Localized climate change impacts</b>						

# **APPENDIX B**

**Table E.1. Conservation Districts' proposed '09-'11 programs and activities to address 2020 Action Agenda Priorities.**

From 2020 Action Agenda for Puget Sound				District Activities
Regional priorities		Rank	Action #	Puget Sound District programs and activities proposed for '09-'11 to implement priority actions
PRIORITY A Protect intact ecosystem processes, structures and function	Protect high-value habitat and land at immediate risk of conversion as identified through existing processes such as <u>salmon recovery plans and others.</u>	3	A.2 (1)	<b>Protecting forest landcover</b> -- 221 individual tree farm assessments (e.g. inventorying resources and prioritizing forestry plan development and implementation) --143 forest plans developed and implemented --65 activities related to cost share programs (e.g. Firewise, FFFPP, Conservation Corps)  <b>Farmland preservation</b> --38 geographic assessment activities (e.g. creating GIS layers identifying farmland at risk of conversion; identifying potential farmland for preservation) --543 technical assistance actions for farmers, agency staff and others (e.g. conservation easements, work sessions, soils mapping and information, identifying local solutions for farmland preservation, project monitoring etc.) --193 activities related to financial assistance for program implementation (e.g. fund distribution to high priority projects etc)
	Continue to implement existing forest practice plans and regulations consistent with the Action Agenda, including the state trust lands HCP, state forest practices rules, and road maintenance and abandonment plans as informed by the forest and fish plan, and others.	5	A.4 (4)	
	Purchase or transfer development rights or use conservation easements for working lands at immediate risk of conversion.	7	A.4 (1)	
	Support legislation that seeks to continue to direct growth away from rural and working resource lands and into cities.	8	A.1 (4)	
	Support the Conservation Commission's efforts to protect productive agricultural areas consistent with the Action Agenda priorities.	18	A.4 (3)	
Convene a task force to develop a funding mechanism to rapidly acquire properties with high ecological value and imminent risk of conversion.	25	A.2 (3)		
PRIORITY B Restore ecosystem processes, structures and functions	Implement restoration projects in salmon recovery 3-year work plans and the Estuary and Salmon Restoration Program of the <u>Nearshore Partnership.</u>	1	B.1 (1)	Salmon recovery activities is reflected in multiple district program areas including CREP, education and outreach, farmland preservation, livestock management planning, etc.
	Implement coordinated incentive and technical assistance programs for private landowners through the Conservation Commission, Conservation Districts, DNR other state agencies, WSU extension, local governments, NGOs and others as appropriate.	4	B.3 (1)	<b>Puget Sound Caucus</b> Puget Sound Conservation Districts have established a caucus to better coordinate on delivery of technical support to landowners to address key Puget Sound ecosystem threats.
	Restore floodplain and river processes where there is a high likelihood of re-creating ecosystem function.	8	B.1 (3)	SEE NOTE
	Remove significant blockages of ecosystem processes and provide access to habitat.	9	B.1 (4)	SEE NOTE
PRIORITY C Reduce the Sources of Water Pollution	Implement immediate remediation actions to address Hood Canal's low DO	1	C.1 (8)	<b>Stormwater/LID:</b> --242 outreach and education activities (e.g. LID demonstration sites, trainings and classroom presentations) --65 comprehensive stormwater assessment activities (e.g. GIS layers for collection areas, discharge points etc) --174 activities related to technical assistance (e.g. stormwater plans) --18 projects related to monitoring and evaluation  <b>Nutrients and Pathogen loading from non-commercial agriculture:</b> --913 individual farm risk assessments (e.g. completing assessments and prioritizing lists for farm plan implementation) --257 activities related to geographic assessments (e.g. inventorying producers and creating GIS layers of livestock operations; understanding sources of loadings) --1,246 activities related to developing standardized farm plans --503 outreach and education activities --55 water quality monitoring activities (e.g. validating TMDL reporting) --229 cost share activities (e.g. distribution of cost share funds to high priority projects)
	Implement priority strategies and actions to address low DO in south sound, targeted areas in Whidbey Basin and other vulnerable areas	5	C.1 (9)	
	Implement private property stewardship, incentive and technical assistant programs that focus on reducing sources of water pollution	11	C.2 (8)	
	Implement Shellfish Protection District plans, on-site sewage treatment plans in marine recovery areas, and related projects to restore water quality at commercial and recreational shellfish areas that are degraded or threatened.	13	C.1 (7)	

**NOTE:** Puget Sound Districts have programs to address floodplain/river process and ecosystem blockage priorities in '09-'11; however, quantifying information for these programs and projects was beyond the scope of this project.

**Table 2. ECOSYTEM THREATS IN EACH CONSERVATION DISTRICT**

Shading indicates threat exists in district area. X indicates whether district has a program in place to address the threat.

		WHIDBEY ACTION AREA			STRAIT OF JUAN DE FUCA		S. CENTRAL		H. CANAL		SAN JUAN	S. SOUND	WHATCOM			
Local threats		Description of threat		Whidbey	Skagit	Snohomish	Jefferson	Clallam	King	Pierce	Mason	Kitsap	San Juan	Thurston	Whatcom	
Habitat Alteration	Marine/estuary	Loss of nearshore habitat (eelgrass, pocket estuaries, tidal marshes)						X	X				X			
		Derelict gear														
	Shorelines	Development along lake shorelines							X							
	Marine nearshore	Marine shoreline development/armoring etc					X	X	X	X		X	X	X		
	Freshwater	Loss of large river habitat complexity, floodplain connectivity					X	X	X	X	X				X	
	Uplands	Loss of working farms and forests		X	X	X	X		X	X	X	X	X	X	X	X
		Impervious surface increase		X	X	X		X	X	X	X	X	X	X	X	
Pollution	Toxics	Potential for localized and/or significant spills														
		Groundwater and/or sediment contamination resulting from past industrial development														
	Bacterial pollution	Inadequate waste management; boater pollution								X	X	X				
		Shellfish closures; bacterial contamination		X	X	X		X	X	X		X			X	X
	Nutrient loading	Eutrophication and low DO							X	X	X	X		X		
	Surface water runoff	Pollutant loading from urban stormwater and/or ag runoff and/or CSOs		X	X	X		X	X		X			X	X	X
Freshwater resources		Limited water availability for people, farms and fish						X								
		Altered magnitude, frequency and duration of peak flows					X	X								
		Alteration in surface hydrology												X		
		Increased freshwater demand and saltwater intrusion, decreased aquifer levels and groundwater discharge							X							
Other	Invasive Species	Invasive species including Japanese knotweed, spartina, tunicates, etc.				X		X	X							
	Salmon	Salmon production									X	X		X		
		Fishing and by-catch														
Climate	Sea level rise												X		X	

**Table 3. NON-COMMERCIAL AGRICULTURE  
2009-2011 Puget Sound District Proposals**

	TOTALS	Clallam	Jefferson	King	Kitsap	Mason	Pierce	San Juan	Skagit	Snohomish	Thurston	Whatcom	Whidbey
<b>Geographic Assessment</b>													
Establish an inventory of producers	59	1	50	2	1	2			1	2		2	1
Create GIS Layer of livestock operations *	61	1	50		1	2			1	2		2	
Understand potential sources of loading	8			2	1	4			2			2	
Aid in development of effective outreach program	67		50	2	2	4	2			2		2	1
Establish baseline for program effectiveness	62		50		2	2	2			2		2	
<b>Individual Farm Risk Assessments</b>													
Complete farm risk assessments	373	40			15	32	36		40	50		100	60
Quantify potential need for TA	257	40			15	24	36		40	2		100	
Quantify potential need for CS	257	40			15	24	36		40	2		100	
Generate a prioritized list for farm plan development & implementation	18	1			2	4	6		1	2		2	
Quantify legislative accountability	8				2		2		1	2			1
<b>Develop Standardized Farm Plans</b>													
Establish path & timeline for control/elimination of nutrients & pathogens by livestock operations	431	20	3	40	15	24	1		20	60	8	100	40
Create completed tasks maps	210		3		2	24	1		20	60		100	
Quantify actual implementation/cost-share needs	223		3		15	24	1		20	60		100	
Quantify Engineering needs	223		3		15	24	1		29	60		100	
Engineering	159	10		4	15	24	1		5			100	
<b>Information/Education</b>													
Educate landowners on BMPs	380	10	50	200	2		48		2	60		8	
Educate landowners on Districts/assistance available	108	12	50		4		2		2	30	4	4	
Validate District capabilities to legislators	15		2		3	2	2		1	4	2		
<b>Water Quality Monitoring</b>													
Prioritize workload/watersheds	34	1			1	8			1	20		2	1
Validate comparable data between Districts	10					8				2			
Validate TMDL reporting	11					8			1	2			

	TOTALS	Clallam	Jefferson	King	Kitsap	Mason	Pierce	San Juan	Skagit	Snohomish	Thurston	Whatcom	Whidbey
<b>Implement Standardized Farm Plans/Cost share</b>													
Control/eliminate nutrients & pathogens from livestock operations **	395		10	12	15	24	36		10	60	8	100	20
Monitor/follow-up of farm plans and recommended BMPs	251	10	10		15		36		20	60		100	
Verify appropriate standards/specifications	91	10	10		15	20	36					100	
Cultural Resource Investigations	146	3	10	12	15	10	36			60			
Monitor implemented projects	277	10	10	36	15	10	36			60		100	
<b>Cost Share Program Implementation</b>													
Distribution of cost share funds to high priority projects	99	15			2	10	24			16	8	24	
Approval of contracts & reimbursement	65				15	10				16		24	
Oversee practice implementation	65				15	10				16		24	

**Table 4. STORMWATER / LID**  
2009-2011 Puget Sound District proposals

	TOTAL	Clallam	Jefferson	King	Kitsap	Mason	Pierce	San Juan	Skagit	Snohomish	Thurston	Whatcom	Whidbey
<b>Outreach and Education</b>													
Site and water checklist, # members	4	1				2							1
Properly implemented site & water elements	5	1											4
LID demonstration sites	25	2			2	4		2		4	2	1	8
# Tours conducted & participation (or on-going maintenance)	23	3			2	4		2	2	4	2		4
# Publications distributed	21	10			1	2		4		2	1		1
Workshop syllabi, # participants, # certified backyard habitats	64	20				4		2	4	8	2		24
# classroom presentations / field tours	22	2				2				8			10
# volunteers, drains labeled	42	2								40			
# groups using carwash kits	12					8							4
# trainings held/ attended, # participants	24					4					4		16
<b>Comprehensive Stormwater Assessment</b>													
Interlocal agreements	16	3				2				8	2		1
GIS layer of stormwater collection areas and discharge points	5					2				2	1		
GIS layer	7	4				2					1		
GIS layer of road stormwater collection areas and discharge points	9	4				2				2	1		
Prioritized list of stormwater problems and GIS layer	11	6				2				2	1		
Projects Identified	17	2				8					1		6
<b>Technical Assistance</b>													
Project / program plans developed	46	3				16		2			1		24
Stormwater BMP standards, pre-engineered BMPs, ordinances	10	1				4		4					1
Engineered plans for stormwater management	110	12			2	48		2				6	40
Cultural resource investigations	8					8							
<b>Monitoring and evaluation</b>													
Monitoring and evaluation data	18	1			2	4				2	2	1	6
<b>Cost share program</b>													
Distribution of cost share funds to high priority projects	26	6			2	8				4		6	
Approval of contracts & reimbursement	14				2	8				4			
Oversee practice implementation	54				2	48				4			

**Table 5. FARMLAND PRESERVATION**  
2009-2011 Puget Sound District Proposals

	TOTALS	Clallam	Jefferson	King	Kitsap	Mason	Pierce	San Juan	Skagit	Snohomish	Thurston	What-com	Whid-bey
<b>Geographic Assessment</b>													
Work with Local Government officials on a GIS layer of agriculture lands under threat of development	14	1			2	4	1	2	1	2			1
Identify potential farmland for preservation	24	1			4	12	1	2	1	2			1
<b>Local Government &amp; Groups Technical Assistance</b>													
Soils and other natural resource information provided	40	1			10	12			12		1		4
Work sessions for local government & groups & farmers	73	1			20	4	6	8	6	2		24	2
Identify local solutions for farmland preservation	31	1			2		1	24	1	2			
Identify funding sources for farmland preservation	21	1			4		1	12	1				2
Support and recommendations enlisted from farmers	23	1			4		16		2				
<b>Farmer Technical Assistance</b>													
Technical Assistance for farmers wanting to preserve farmland including development of a conservation plan	90	2	10		4	6	16	24	12	8	8		
Locally acceptable concepts for farmland preservation developed	12				4		1	2	1	2			2
Farmers assisted with conservation easements and other strategies	52				4	8	16	4	20				
Identify funding sources for conservation easements & other programs	31	2			4		16	6	1	2			
Monitor implemented projects	170				4		16	6	144				
<b>Financial Assistance Program Implementation</b>													
Distribution of funds to high priority projects	57				2	6	1	2	40		6		
Approval of contracts & reimbursement	68				4	6	16	2	40				
Oversee agreement implementation	68				4	6	16	2	40				
<b>Administration</b>													
Completed vouchers, reports, effective administration, training, overhead	19		10		4		1		1	2	1		
overhead	4				4								
Perform appraisals to determine PDR and easement cost	40								40				
<b>Financial/Cost Share Assistance</b>													
Easements & Development Rights	58		10						40		8		
Distribute CS funds to high priority projects	6				2	4							

**Table 6. ASSESSMENTS BY DISTRICT**

<b>DISTRICT</b>	<b>Assessment?</b>	<b>cost/parcel</b>	<b>Annual revenue from Assessment</b>	<b>Other</b>
<b>Clallam</b>	NO	N/A	N/A	N/A
<b>Jefferson</b>	NO	N/A	N/A	N/A
<b>King</b>	YES	\$9.98/parcel plus acreage charge	\$6.03 million	The current assessment expires 12/31/09.
<b>Kitsap</b>	NO	N/A	N/A	N/A
<b>Mason</b>	YES			Assessment was passed in 2005 but has been held up in litigation for several years by landowners who feel the fee is unfair.
<b>Pierce</b>	YES		\$800,000	Would like to increase the assessment to \$10/parcel in next reauthorization in 2009.
<b>San Juan</b>	YES	\$5/parcel	\$72,000	The assessment is up for renewal in 2010. Note that this district encompasses many acres of water and relatively few acres of land, thus many fewer parcels. District staff reported that there is a possibility that the County Council may decide to submit the decision to voters rather than approve "in-house", as has been done in the past.
<b>Skagit</b>	NO			Skagit CD gets some funding from the county's Clean Water Fund assessment.
<b>Snohomish</b>	NO			District staff are in 3rd year of pursuing an assessment, which should bring in ~\$1M annually should it pass.
<b>Thurston</b>	YES	\$5/parcel		Approved in 2008; lasts for 10 yrs.
<b>Whatcom</b>	NO			Used to receive ~\$110K/yr from the county but recently lost funding.
<b>Whidbey</b>	NO			Recently hired a consultant to analyze public benefit of having an assessment.

# **APPENDIX C**

# Conservation District Survey

## A. Overview

1. In this document, we're trying to tell the story of the Puget Sound Conservation Districts, individually and collectively. Are there any stories you can tell us about successes you've had in your district?
2. What have been some of the biggest hurdles that you've faced over the years?
3. What changes would help you be more successful? (regulatory, budgetary, other) List 2-3 minimum
4. The 12 Puget Sound CDs are coming together as a caucus to improve their collective efforts to protect and preserve Puget Sound. What is your vision for the Puget Sound Conservation Districts in terms of working collectively to address existing and emerging regional issues related to the Sound? Do you have suggestions for how the 12 Puget Sound CDs could better coordinate to address these issues?

## B. Data and other information

1. What types of data or other information are you collecting through your programs?
  - a. Monitoring, research,
  - b. BMP tracking
  - c. Number of dairies, acres and types of land use, etc.
  - d. other
2. Where is this information and what form is it in (graphs, raw data, charts, etc.)?  
Are you measuring the success of your programs? If so, briefly describe how (surveys, inventories, questionnaires, etc.). Is this information available?  
Have you provided this information to the Puget Sound Partnership through your respective Action Area? (Is there additional information that was not included in the Partnership Inventory that we should know about?)

## C. Programmatic and planning information

1. Do you have a comprehensive list of your programs?
  - a. (Please list your programs here or point us to this information. Also note if these programs are geographically targeted or directed to specific land-user types)
  - b. Please list any planning or policy-related activities that you or your staff are involved in (e.g. watershed groups, advisory committees, local planning efforts, etc.)  
Who are your partners? Are there additional programs that are funded through collaborations or partnerships that we should know about?
2. Do you have new programs planned or in mind to address emerging Puget Sound issues?
3. What limitations prevent your CD from doing more? (capacity etc)