

Hood Canal Action Area

Description of the Action Area

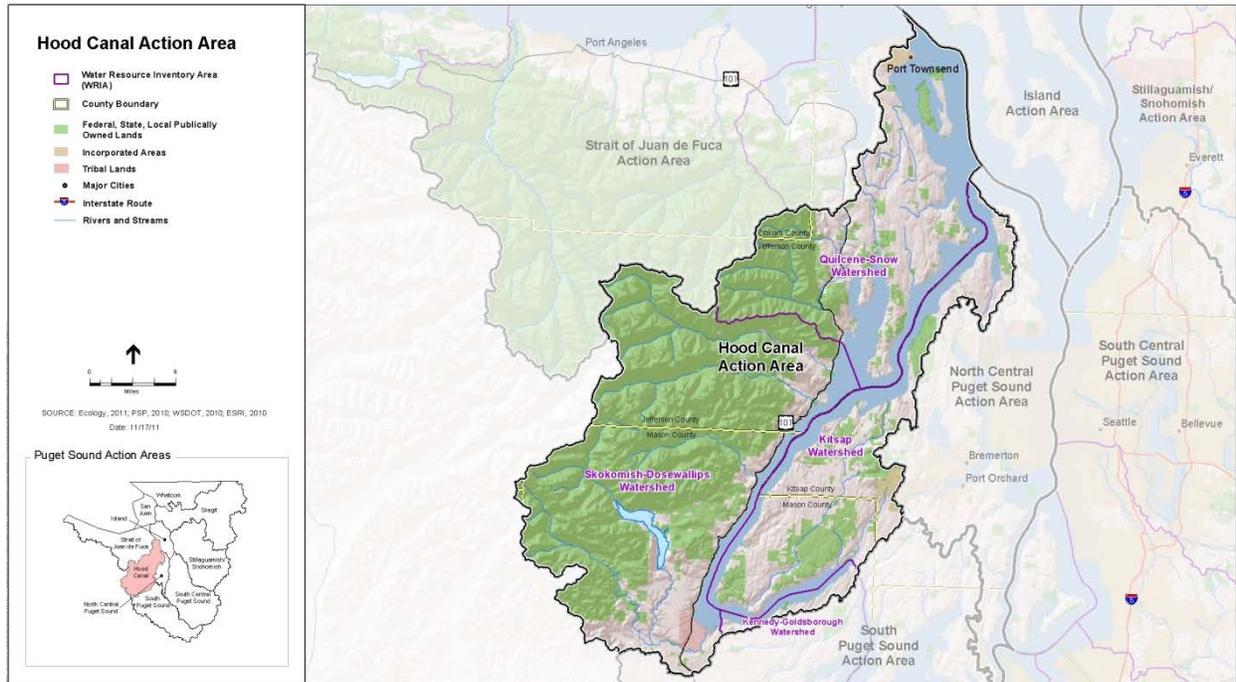
Hood Canal is a long, narrow, natural L-shaped fjord that separates the Olympic and Kitsap Peninsulas. This marine water body extends southward from Foulweather Bluff, at the northern tip of the Kitsap Peninsula, and Tala Point to its southern terminus at Lynch Cove. Hood Canal is approximately 68 miles long and 1.5 to 2 miles wide. The Hood Canal Action Area includes the canal and the uplands and streams that enter into the canal from both sides and extends north to Point Wilson in the city of Port Townsend. On the west side of the canal, major rivers including the Skokomish, Dosewallips, and Big Quilcene drop rapidly from the Olympic Mountains, while smaller streams such as the Dewatto and Tahuya drain the west side of the Kitsap Peninsula. Precipitation along the canal varies from 75 inches annually at Skokomish to only 19 inches in Port Townsend.

Although the average depth of Hood Canal is 177 feet, the underwater topography can be as deep as 600 feet. Marine water circulation in Hood Canal is naturally poor, particularly in the southern 20 miles. A relatively shallow, underwater sill south of the Hood Canal Bridge limits water exchange with incoming marine water from the Strait of Juan de Fuca. Hood Canal also has poor vertical mixing as fresh water entering from rivers and streams can form a distinct layer at the surface. Dense algal blooms die off, sink, and decay, reducing the dissolved oxygen in deeper layers and degrading water quality for many marine species. In general, these oceanographic conditions present special challenges in managing nutrient and other inputs deriving from human activities, in pursuit of water quality that supports both a healthy ecosystem and a healthy economy in the communities surrounding Hood Canal.

NOTABLE ACCOMPLISHMENTS

- Skokomish and Quilcene River estuary restoration projects
- Regional Hood Canal Pollution, Identification, and Correction Program
- Development of the In Lieu Fee Mitigation Program
- Stormwater Retrofit Prioritization Project
- Regional Riparian Planting and Invasive Species Control Programs
- Regional conservation planning including the Kitsap Forest and Bay Project of up to 7,000 acres of forest and 1.8 miles of shoreline

[The figure below is being updated.]



The Skokomish, Port Gamble S'Klallam, Jamestown S'Klallam, Lower Elwha Klallam, and Suquamish Tribes retain treaty fishing rights in the Hood Canal region. The Port Gamble S'Klallam Reservation is located at the north end of Hood Canal, and the Skokomish Reservation is located at the south end. The eastern shore of Hood Canal is home to the U.S. Navy Submarine Base at Bangor, the largest industry and development on the canal. Populated centers in west Kitsap County include Port Gamble and Seabeck. Southern Hood Canal begins in Belfair and the Tahuya Peninsula and runs along relatively developed lower Hood Canal toward the Skokomish estuary and Potlatch.

Much of the west side of Hood Canal borders Olympic National Forest and Park. U.S. Highway 101 and the population centers of Quilcene, Brinnon, Hoodport, and the Skokomish Valley lie along the narrow fringe of land on the west shore of the canal. The Hood Canal Bridge is a critical transportation link between the Kitsap and Olympic Peninsulas. The proximity to Olympic National Park and Forest, cultural attractions in Port Townsend and Union, and hunting, fishing, and camping opportunities have generated a significant tourism industry and the proliferation of recreational homes.

Unique Ecosystem Characteristics and Assets

Hood Canal is famous for its shellfish as it is characterized by prime growing conditions for oysters and other shellfish species. Rivers flowing from the Olympic Mountains mix with brackish waters at ideal temperature and water conditions that support some of the largest shellfish hatcheries and productive growing areas in the world. The native Olympia oysters (*Ostreola conchaphila*) of Hood Canal were largely overharvested by 1870, although several small populations in the area are being nurtured back to life. Oyster growers introduced the larger, faster-growing Pacific oysters (*Crassostrea gigas*) to compensate, and shellfish farms were staked out throughout Hood Canal. Today the oysters of Hood

Canal are internationally famous, and connoisseurs identify them by place names including Quilcene, Dabob, and Hama Hama, much like fine wines from specific regions and vineyards. Oysters and other bivalve species are filter feeders, processing hundreds of gallons of water daily, and are thus highly valuable for their ability to clean the water. However, this also makes them vulnerable to pollutants and toxic contaminants.

The human population of the Hood Canal region is generally low, as a majority of the uplands are managed as private and public forestlands. Relatively larger population concentrations are found along lower Hood Canal and around Lynch Cove. Though affected by dissolved oxygen problems and other modifications to rivers and shorelines, fisheries and aquaculture remain economically significant to the Hood Canal region. Commercial and recreational fisheries exist for salmon, spot prawn, Dungeness crab, clams and oysters, and geoduck. Fishing is closed for rockfish and flatfish, due in part to recent low dissolved oxygen problems.

Hood Canal is home to several other important and unique marine and upland species. An evolutionarily significant unit of chum salmon that returns in the summer spawns only in the rivers and creeks of Hood Canal and the eastern Strait of Juan de Fuca. Skokomish and Mid Hood Canal Chinook salmon spawn, rear, and migrate in Hood Canal, along with steelhead; other populations of chum, coho, and pink salmon; and bull, and cutthroat trout. Many of these salmonid species spend a large part of their early lives in the estuary, and water quality conditions in the canal are essential to their continued survival. Hood Canal is also used by marine mammals, and has unusual timing periods for birthing and pupping of some seal species. Orca whales occasionally enter Hood Canal for short periods of time to feed on prey species indigenous to Hood Canal. In places, patches of old growth and other intact forest provide unique habitats for bird species and mammals in close proximity to the marine shoreline. Herds of elk in the eastern Olympics migrate seasonally along the river corridors.

The natural beauty and relatively warm summer water conditions of the canal draw many visitors for boating, sailing, water-skiing, swimming, and diving. A unique blend of year-round and seasonal residents and visitors comprise the watershed's population and often promote activities to restore Hood Canal's water quality, species, and other ecosystem features.

Local Implementation Structure and Planning Process

The Hood Canal Coordinating Council (HCCC) is the local integrating organization (LIO) for the Hood Canal Action Area. The Puget Sound Partnership's Leadership Council formally recognized the HCCC as the action area's LIO in September 2010.

The HCCC is a watershed-based council of governments with a mission to advocate for and implement regional and local actions intended to protect and enhance the environmental and economic health of Hood Canal. The HCCC includes representatives from the following entities.

- Jefferson County
- Kitsap County
- Mason County
- Port Gamble S'Klallam Tribe

- Skokomish Tribe
- State and federal agencies (ex officio, nonvoting members)

The HCCC has a board of directors and two steering committees.

The HCCC Board of Directors includes the county commissioners of each member county and the tribal chairperson or a duly authorized representative of each member tribe.

The HCCC Board Integrated Watershed Plan (IWP Steering Committee is charged with the development of an integrated strategic plan for Hood Canal. The HCCC Board IWP Steering Committee includes governmental members and non-governmental organizations, including representatives from the following entities.

- Skokomish Tribe
- Jefferson County
- Mason County
- Puget Sound Partnership
- Washington Sea Grant
- Long Live the Kings, and other community partners
- HCCC staff

An HCCC Board Steering Committee was formed in February 2013 to engage Hood Canal communities in work supporting and improving environmental and economic well-being of the action area. Objectives of the committee are to establish clear community engagement priorities, provide HCCC Board support and involvement in community engagement implementation, with implementation assistance from HCC staff. The HCCC Board Steering Committee includes governmental members and non-governmental organizations, including representatives from the following entities.

- Skokomish Tribe
- Port Gamble S'Klallam Tribe
- Mason County
- HCCC staff

The HCCC serves a variety of functions and operates in a number of capacities. First, as an interlocal agency under Chapter 39.34 of the Revised Code of Washington (RCW), the HCCC coordinates the activities of its members and other public entities and Indian tribes in their efforts to protect and restore the Hood Canal watershed. The HCCC was formed as a nonprofit, public-benefit corporation under RCW 24.03, Washington's Nonprofit Corporations Act, to serve as the interlocal agency's fiscal agent. The Internal Revenue Service has recognized the HCCC's nonprofit corporation as a public charity under Section 501(c)(3) of the Internal Revenue Code. Finally, the HCCC serves a variety of functions pursuant to RCW 90.88, the Aquatic Rehabilitation Act, which designates the HCCC as the local management board for Hood Canal rehabilitation under RCW 90.88.010(3). The HCCC is the inter-WRIA coordinator for watershed planning under RCW 90.88.030(1)(b) as well as the lead entity and regional recovery

organization for summer chum salmon recovery under RCW 90.88.030(1)(a). As the lead entity, HCCC develops both short- and longer-term project lists, solicits sponsors to implement the programs, and evaluates and ranks project proposals.

Originally established in 1985, the HCCC was created to address community concerns about water quality problems and related natural resource issues in the watershed. As such, the HCCC provides an effective, well-established forum in which many of the issues anticipated to be under the purview of LIOs can be addressed. The HCCC has worked through a series of public outreach efforts, partner workshops, and consultations with its board to help the community find common ground on a vision for Hood Canal's future. Through collaboration with partners and the community, the HCCC has also identified the most critical ecological and socioeconomic focal components that should be fostered into the future, the most imminent pressures diminishing those priorities, an initial list of key strategies and actions important to protecting and restoring the environmental and economic health of Hood Canal, and an initial set of human well-being indicators. This information is contained in the IWP.

The IWP is an organizational concept of integrating existing plans and programs, as well as identified gaps, through a strategic planning framework to meet the stated goals. The IWP is an interactive tool that provides a framework to guide strategies and actions towards reaching the HCCC vision; accounting of existing work underway to improve the health of Hood Canal and Hood Canal communities and identification of gaps where work is needed; and tools and common strategies for advancing regional planning. The development of the IWP is led by the HCCC Board, building on extensive collaboration and communication with the Hood Canal community.

For this 2014/2015 Action Agenda update, The HCCC focused on updating and refining the near-term actions presented in the 2012/2013 Action Agenda.

The IWP identifies the highest priority strategies and actions for Hood Canal recovery and will provide the basis for development and tracking of future near-term actions. However, given continued development of the IWP (scheduled for draft completion in mid-2014), the HCCC Steering Committee chose to not solicit widely for new near-term actions for this update. The list of near-term actions (see *Local Near-Term Actions and Opportunities* below) primarily represents updates to the 2012/2013 list, with some new near-term actions determined to be of high priority for the HCCC Board.

Development of the near-term actions and other opportunities¹ focused on the pressures identified below.

Pressures

The community has defined 17 ecological and socioeconomic focal components that together cover the scope of the LIO's vision statement and must be conserved.

- **Ecological focal points:** estuaries, beaches, shellfish, rivers and streams, bottom fish, riparian areas, forest, and salmon.

¹ The prioritization of strategies and actions that most effectively alleviate these pressures still needs to be completed for the Integrated Watershed Plan.

- **Socioeconomic focal points:** water for human health, sustainable employment, commercial fishing, livable communities, forestry, cultural heritage, recreation, agriculture, and commercial shellfishing.

Eleven regional pressures were identified through community workshops in which participants ranked pressures that were of local significance as endangering the ability of the focal components to function and persist into the future.

The following were classified as *very high* pressures the local ecosystem.

- Residential and commercial development
- Transportation and service corridors
- Climate change and severe weather

The following were classified as *high* pressures on the local ecosystem.

- Shoreline infrastructure (marine and freshwater)
- Shoreline levees (marine and freshwater)
- Water withdrawal and diversions
- Invasive species
- Wastewater
- Stormwater
- Timber production
- Oil and hazardous spills

Local Near-Term Actions and Opportunities

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

Local Near-Term Actions in the Hood Canal Action Area

Near-Term Action	Performance Measures	Owner(s)	Pressure(s)	Regional Sub-Strategy
HC1 HCCC Integrated Watershed Plan. In coordination with local and tribal governments, state and federal government agencies, nonprofit organizations, and other community partners, HCCC will continue to develop and implement the IWP through June 30, 2014. The IWP is the roadmap and organizing concept for ecosystem recovery, protection, and restoration in Hood Canal and will include identification of the highest priority focal components, goals, actions and strategies, and indicators for measuring progress. Based on critical, high priority strategies and actions identified in the IWP, HCCC will develop and revise local near-term actions for incorporation into the 2016 Action Agenda.	<ul style="list-style-type: none"> By spring 2014, HCCC will complete development of Phase I of the IWP website and will publicly launch the site. By fall 2015, HCCC will publish the first State of Hood Canal report based on measuring progress towards goals as outlined in the IWP and utilizing the indicators adopted in the IWP. This analysis is anticipated to be conducted by HCCC staff with the assistance of consultants. By fall 2015, HCCC will develop a set of new or revised near-term actions and performance measures based on the final IWP for incorporation into the 2016 Action Agenda using the Open Standards for Conservation method adopted by Puget Sound Partnership. 	LIO	<ul style="list-style-type: none"> Marine shoreline infrastructure Runoff from built environment 	D2.1
HC2 HCCC in lieu fee mitigation. The HCCC established an In Lieu Fee Mitigation Program and will continue to manage it to provide	<ul style="list-style-type: none"> Ongoing through spring 2016, HCCC (LIO) will continue to work with local jurisdictions for the implementation of the In Lieu Fee Mitigation 	LIO (reporter)	<ul style="list-style-type: none"> Freshwater shoreline infrastructure Marine shoreline 	A2.2

Near-Term Action	Performance Measures	Owner(s)	Pressure(s)	Regional Sub-Strategy
<p>mitigation for unavoidable adverse impacts from development projects within the program’s service area. Specific mitigation projects and progress of the program will be reported as part of the 2016 Action Agenda.</p>	<p>Program as a mitigation alternative for project applicants. HCCC staff will meet with county staff at least once per year to review the implementation of the program within each local jurisdiction.</p> <ul style="list-style-type: none"> • Ongoing through spring 2016, HCCC will strive to implement mitigation projects within the 3-year post-credit sale timeframe. Project implementation could include one marine project and one freshwater wetland project. • Ongoing through spring 2016, HCCC will continue to work with watershed partners to identify potential receiving areas and place acceptable sites on a roster of potential mitigation receiving areas. HCCC will target two receiving areas per service area for a total of eight. 		<p>infrastructure</p>	
<p>HC3 Hood Canal Pollution Identification and Correction Program. By April 2014, HCCC will complete Phase I of a regional Hood Canal Pollution Identification and Correction Program to determine the needs for a comprehensive regional program and advance funding proposal(s) for implementation. If funding is secured, Phase II of the program will be advanced. Phase II may include (depending on funds), program work in priority areas, monitoring, and education and outreach. The program will provide information about the sources of pollution, including failing septic systems.</p>	<p>Phase I</p> <ul style="list-style-type: none"> • By April 2014, HCCC will complete Phase I of a regional Hood Canal Pollution Identification and Correction Program to determine the needs for a comprehensive regional program and advance funding proposal(s) for implementation. <p>Phase II</p> <ul style="list-style-type: none"> • By summer 2014, HCCC will collaborate with jurisdictions to identify and secure funding. • By fall 2014, or as funding is available, HCCC will collaborate with jurisdictions to develop strategy for regional coordination and documentation. • By fall 2014, or as funding is available, HCCC will collaborate with jurisdictions to identify priority areas for projects. • By December 2016, or as funding is available, HCCC will collaborate with jurisdictions to 	<p>LIO</p>	<ul style="list-style-type: none"> • Runoff from the built environment • Onsite sewage systems 	<p>C9.4</p>

Near-Term Action	Performance Measures	Owner(s)	Pressure(s)	Regional Sub-Strategy
	identify priority areas and implement six shoreline surveys.			
HC4 HCCC stormwater retrofit plan. Stormwater retrofit and Low Impact Development practices improve water quality, help protect shellfish beds, decrease flooding risks, and increase aquifer recharge. HCCC is developing a Hood Canal Regional Stormwater Retrofit Plan to coordinate stormwater and Low Impact Development retrofit efforts on a regional scale. The plan will include conceptual designs for 10 to 12 retrofit projects in the Hood Canal Action Area, which will be implemented by the county governments or other partners as funding is available.	<ul style="list-style-type: none"> • By fall 2014, HCCC will complete and distribute the Hood Canal Regional Stormwater Retrofit Plan with priority retrofit projects to jurisdictions, regional partners, and relevant state agencies. • Through spring 2016, HCCC will provide support to Hood Canal jurisdictions to plan and seek funds for implementing two priority retrofit projects. • Through spring 2016, HCCC will track jurisdiction implementation and barriers to implementation (such as funding constraints) of priority retrofit projects. 	LIO (Coordination /Facilitation)	<ul style="list-style-type: none"> • Runoff from the built environment • Industrial, domestic and municipal wastewater 	C2.3
HC5 HCCC climate change adaptation. HCCC will convene a climate change forum with our members to identify unique vulnerabilities and potential adaptation strategies for the Hood Canal Action Area. As part of the Integrated Watershed Plan process and working with our members and partners, HCCC will determine climate adaptation approaches that can be incorporated into the Integrated Watershed Plan and various plans in progress.	<ul style="list-style-type: none"> • By December 2014, distribute Hood Canal climate change report, summarizing the results of the conference to Hood Canal community. • By fall 2015, incorporate climate change mitigation and adaptation strategies and actions into relevant focal components of the Integrated Watershed Plan. • By fall 2015, incorporate climate change related indicators into relevant focal components of the Integrated Watershed Plan. 	LIO	<ul style="list-style-type: none"> • Climate change/severe weather 	D2.1
HC6 Hood Canal salmon recovery funding. HCCC is both the Lead Entity for Chinook salmon and the regional recovery organization for Hood Canal and eastern Strait of Juan de Fuca summer chum. HCCC will develop a process for prioritizing acquisition, protection, and restoration actions and continue to target funding to the highest priority salmon recovery	<ul style="list-style-type: none"> • By spring 2014, under direction of the Board, HCCC will complete salmon recovery prioritization to identify the list of actions in priority order for recovering summer chum, Skokomish Chinook, and Mid Hood Canal Chinook. • By 2015, HCCC will work with partners to develop a funding strategy for the 10 highest priority 	HCCC Lead Entity	<ul style="list-style-type: none"> • Dams • Culverts • Freshwater shoreline infrastructure • Marine shoreline infrastructure • Invasive species 	A6.1

Near-Term Action	Performance Measures	Owner(s)	Pressure(s)	Regional Sub-Strategy
actions.	<p>habitat/harvest/ hatchery actions for salmon recovery and track and publish progress on funding of these projects through 2016.</p> <ul style="list-style-type: none"> • By spring 2016, HCCC will work with partners to secure funding and/or develop feasibility studies for the top 10 priority projects. • By fall 2015, initial construction will be completed for the Skokomish Estuary floodplain project, selected for state funding under the floodplains by design, the Skokomish Tribe, Mason Conservation District, and Ecology. • By fall 2014, North Olympic Salmon Coalition will complete final design and begin initial construction of the Kilisut Harbor restoration project as funded by Puget Sound Acquisition and Restoration large capital request and Estuary and Salmon Restoration Program. 			
<p>HC7 Hood Canal salmon recovery monitoring and adaptive management. HCCC working with many partners, state and federal agencies, and the tribes will complete a Monitoring and Adaptive Management Framework for both Skokomish Chinook and Mid Hood Canal Chinook. Monitoring protocols and plans for both Chinook salmon recovery chapters will be completed.</p>	<ul style="list-style-type: none"> • By summer 2014, the Lead Entity committees and HCCC Board will approve a Skokomish Chinook Monitoring and Adaptive Management Framework. • By summer 2014, the Lead Entity and HCCC Board will approve a Mid Hood Canal Chinook Monitoring and Adaptive Management Framework. • By spring 2015, the Lead Entity will develop a process for developing monitoring protocols for priority indicators for both Skokomish Chinook and Mid Hood Canal Chinook. • By spring 2016, monitoring protocols and plans for both Chinook salmon recovery chapters will be completed. 	HCCC (Lead)	<ul style="list-style-type: none"> • Dams • Culverts • Freshwater shoreline infrastructure • Marine shoreline infrastructure • Invasive species 	A6.1
<p>HC8 Seepage pits and cesspools. Reduce the use of</p>	<ul style="list-style-type: none"> • By July 2014, convene meeting of local health 	Local health	<ul style="list-style-type: none"> • Onsite sewage 	C9.4

Near-Term Action	Performance Measures	Owner(s)	Pressure(s)	Regional Sub-Strategy
seepage pits and eliminate cesspools as discovered in all Hood Canal shoreline (marine and freshwater) properties.	<p>jurisdictions to assess and determine if Onsite Management Plan strategies relevant to cesspools and seepage pits on shoreline properties adequately address human health and safety.</p> <ul style="list-style-type: none"> • By July 2014, identify sites with no records available. • By July 2015, local health jurisdictions locate and verify all shoreline seepage pits and cesspools. Conduct field investigations for all shoreline properties that have no records for seepage pits available. • Local health jurisdictions create a management plan for seepage pits that includes inspection frequency and education on funding or replacement options for decommission. • By December 2015, management plan for seepage pits in Hood Canal adopted by county Boards of Health, if not in existing plans. 	jurisdictions (Mason, Kitsap ¹ , and Jefferson)	systems	

¹ Kitsap Health District has completed these tasks and does not have any cesspools or seepage pits. Kitsap does not permit new seepage pits and cesspools. HCCC = Hood Canal Coordinating Council; IWP = Integrated Watershed Plan; LIO = local integrating organization.

The following opportunities have been identified by the community as important for Hood Canal recovery and will be further described through the IWP process.

Planning

- Assess the need to update county comprehensive plans to meet goals of the IWP. Empower the HCCC IWP Steering Committee to evaluate land use and advise the HCCC Board on progress.
- Participate in updating shoreline master plan for Kitsap and Mason Counties and the City of Bremerton (South Kitsap Industrial Area) to ensure consistency with goals of the IWP. Support implementation of the plans once completed.
- Recommend opportunities to implement and enforce existing regulatory programs of the counties (e.g., shoreline master plans, critical area ordinances, county comprehensive plans) and state (e.g., Revised Code of Washington and Washington Administrative Code) such as around permit enforcement on new development.
- Identify opportunities to improve planning for, and services of and between, urban and rural communities such as identifying grant opportunities and funding for improving sewer systems.
- Improve financial and technical assistance programs aimed at fostering voluntary stewardship and improving re/development standards such as participating in Low Impact Development trainings and implementations, identifying standards for soft shore protection, and engaging in sustainable working farms and forests.

Agriculture and Forestry

- Participate in and support efforts to permanently protect larger tracts of forests for their ecological and community values.
- Protect, foster, and incentivize sustainable, working forests and farms (e.g., extinguishing development rights and other programs) by engaging in the Dosewallips, East Jefferson, and Tahuya forest protection efforts.
- Implement and monitor effectiveness of programs such as Forest Practices Habitat Conservation Plans and similar agreements, the U.S. Forest Service's Northwest Forest Plan and Access and Travel Management Plans, and select salmon habitat projects.
- Form a Hood Canal forests and forestry focal group to develop and implement balanced approaches to conserving forests and forestry and support sub-regional groups to meet regional goals.
- Form a Hood Canal agriculture focal group (or three affiliated sub-regional groups) to develop and implement balanced approaches to conserving agricultural lands.

Nearshore and Estuaries

- Consult with landowners and public about potential high priority Puget Sound Nearshore Estuary Restoration Program (PSNERP) projects and advocate for funding for high priority projects with landowner support.

- Restore beaches by removing or retrofitting infrastructure, setting back structures where feasible, and revegetating shorelines. Ensure updating and implementation of priority shoreline projects across various plans.
- Restore estuaries by removing infrastructure and setting back levees/revetments where feasible. Ensure updating and implementation of priority estuary projects across various plans.

Invasive Species

- Identify and create strategies to focus on invasive species that pose the biggest threats to implementation of the IWP and salmon recovery plans.
- Educate decision makers on the need to increase funding available for Noxious Weed Control Boards to help implement local priorities.
- Work with partners to implement a regional knotweed control strategy that includes messaging and outreach to key constituents such as landowners, landscapers, and nurseries.
- Implement WDFW's and Skokomish Tribe's Aquatic Nuisance Species Management Plan for organisms such as ballast water and zebra mussels. Develop messaging and outreach to key constituents.

Water Quality and Wastewater

- Identify where in the Hood Canal watershed the highest risk onsite septic systems (OSS) are located now or could be located in the future. Develop a mechanism, such as through the regional Pollution Identification and Correction program, to evaluate the risk of contribution of nitrogen from OSS to Hood Canal and to address critical uncertainties in nitrogen loads.
- Research and register low cost, low maintenance, non-proprietary retrofits of existing OSS and new OSS that will reduce nitrogen by at least 80% from the initial septic effluent concentration (average domestic septic tank effluent is 57.7 mg/L TN, concentrations range from 26 to 124 mg/L TN) as well as remove pathogens.
- Explore the current regulations related to wastewater and water quality (nutrients and dissolved oxygen) and assess potential additional or modified local or state regulations to address nitrogen and/or dissolved oxygen in Hood Canal from septic systems, boats, and other sources.
- Continue involvement of county and state managers and planners in the Aquatic Rehabilitation Technical Advisory Committee to develop recommended actions to address water quality in Hood Canal. Finalize and implement the Aquatic Rehabilitation Communication Plan to educate and engage the public in the realization of actions.
- In coordination with state agencies (e.g., Fish and Wildlife, Parks and Recreation, Department of Natural Resources) and building from the WRIA 16 Planning Unit's prioritized list of needs, address the need for additional sanitary services at popular recreation sites around Hood Canal.
- Work with jurisdictions and the WRIA planning units to develop and implement a regional continuous monitoring program that includes groundwater; streams, shorelines, and marine waters; and stream aggradation/degradation mitigation, including a field-based assessment of uplands and individual streams on sources and amounts and how it can be mitigated. This research will also

include Phases II and III of a water demand, supply, and availability study as well as community outreach and education around water quantity and quality.

- Develop and implement an appropriate monitoring and evaluation program building on available marine water monitoring.
- Improve coordination and support implementation of the Washington State Department of Ecology (Ecology) Model Toxics Control Act cleanup plan for industrial pollution in Port Gamble Bay, geographic response plans, and the Northwest Wildlife Plan.
- Work with partners to continue the clean up of marine debris throughout Hood Canal, but with a particular focus on the north end.

Stormwater

- Advise jurisdictions throughout the Hood Canal watershed on opportunities to revise development codes to incorporate current stormwater management practices, specifically by adopting and incorporating the most current Ecology stormwater manual. Work with these jurisdictions to prioritize stormwater retrofits within Hood Canal based on an analysis of current land use and the existing built environment and to promote retention of natural land cover as the most effective way to prevent stormwater runoff.
- Support the counties and tribes to implement the Pollution Identification and Correction programs that address issues of pollutant source control and illicit discharge detection and elimination.
- Provide guidance on the adoption of Low Impact Development practices to be used as a first choice to the maximum extent practicable in new development, redevelopment, and retrofitting of existing development.
- Request that Ecology provide a statewide stormwater best management practices (BMPs) training program (similar to the Certified Erosion and Sediment Control Leads program) for site inspectors to learn about compliance with stormwater BMPs.
- Track the recommendations of Ecology's Stormwater Workgroup and work with the HCCC Technical Advisory Committee Stormwater Workgroup to evaluate if additional stormwater monitoring plans specific to Hood Canal are needed.

Floodplains

- Implement comprehensive floodplain management plans where they exist.
- Restore floodplains and channel migration zones by removing infrastructure and setting back revetments where feasible and protect functioning floodplains and channel migration zones.

Outreach and Education

- Ensure incorporation of outreach and education with the public and key stakeholders in actions and initiatives identified above.
- Develop materials to convey to the public the importance/benefits of work done to multiple focal components.