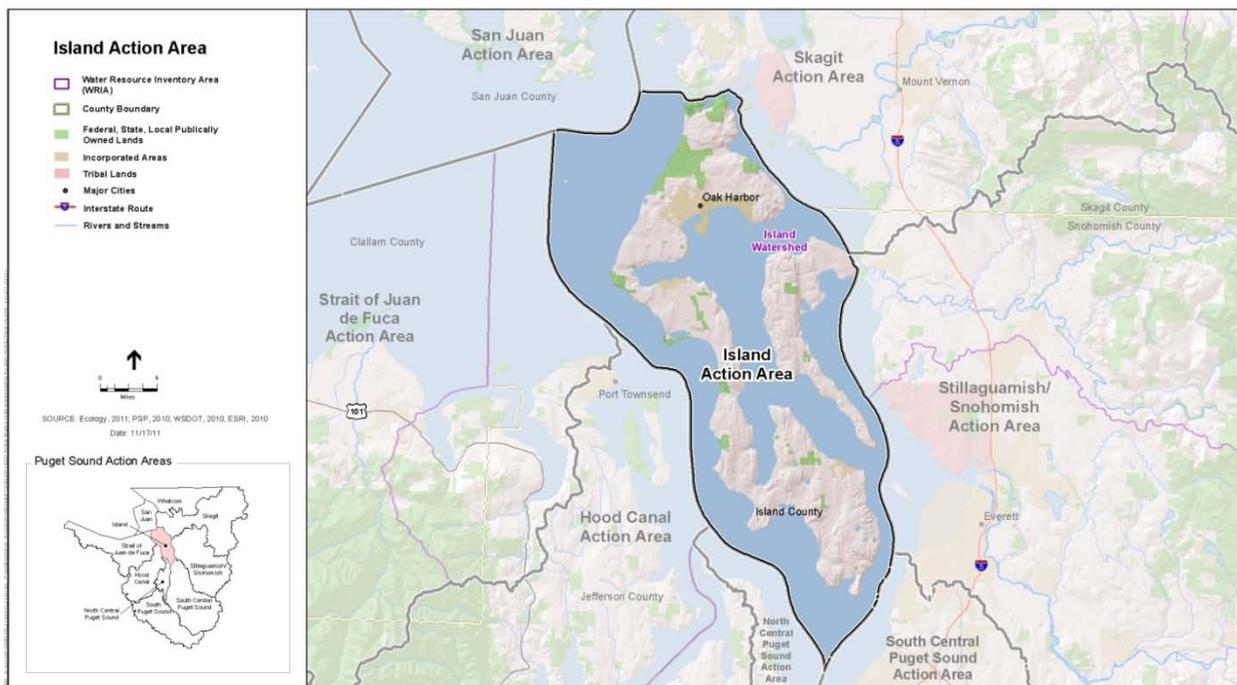


The Action Agenda in Island County/Watershed

Profile²³

Located in the neck of Puget Sound, Island County is nestled off the western shores of Skagit and Snohomish counties, and the eastern shore of Kitsap County. Island County is home to Whidbey Island, the largest island in Washington State, and also includes Camano, Ben Ure, Strawberry, and Smith islands. Sightseers from around the world flock to Deception Pass Bridge, which connects the north end of Whidbey Island to the mainland, to witness one of the Northwest's marine wonders. The 182 foot high bridge spans the drama of Deception Pass where powerful tides push boiling currents through a narrow channel connecting the Strait of Juan de Fuca to Saratoga Passage.

Already a popular place for outdoor enthusiasts, the county is developing an island-wide system of trails for hiking, biking, and horseback riding. A water trail for kayaks and other small vessels without motors is also being developed. Some hardy souls go in for sail boarding, and wet-suited surfers and divers have their favorite spots.



Island County employment is primarily associated with the Naval Air Station Whidbey Island, which employs around 10,000 workers and constitutes approximately 88 percent of all economic activity in

²³ Puget Sound Partnership will double check facts and figures listed in profiles during the public review period.

Island County. Major cities in Island County include Coupeville and Oak Harbor which is located near the Naval Air Station. The population in Island County is projected to increase 32 percent by 2020.

Unique ecosystem characteristics and assets

Important fish species in Island County include Pacific hake, rockfish, Pacific cod, and herring. It is also an important migratory area for marine mammals. A small group of gray whales spend spring and summer feeding on ghost shrimp and tubeworms on beaches on southern Whidbey and Camano islands and the east side of Port Susan. The giant Pacific octopus is also found in the Whidbey Basin.²⁴ (as well as other portions of Puget Sound); these animals attain an average length of 16 feet and weight of 110 pounds. Active shellfish culture takes place throughout the inside of Whidbey Island and Samish Bay for mussels, clams, and oysters. Commercial and recreational fisheries for shrimp and Dungeness crab are located throughout the Whidbey Basin.

Important marine bird populations reside on area islands, including a population of 900 pigeon guillemots on Whidbey Island. The deltas and flood plain 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.

Chinook populations that originate in watersheds throughout southern and central parts of Puget Sound depend on shoreline and nearshore areas in Island County for refuge and feeding as juveniles head out to the ocean and as adults return to spawn. Forage fish are an important link in the marine food web because they transfer energy between primary and secondary producers, such as plankton, to top predators such as seabirds and larger fish. Various beaches in Island County are historic spawning habitats for two types of forage fish—sand lance and smelt—while a third, herring, spawn directly onto the lush vegetation in the many intertidal eelgrass beds located in Island County.

Nearly 80 percent of the parcels that make up the county's 212 shore miles are developed or slated for residential development. Approximately 25 percent of the shoreline has been modified, and more than 60 percent of the county's coastal lagoons have been isolated from natural tidal processes. Of the remaining identified high-value shoreline areas, many, including Arrowhead Marsh, Harrington and Race Lagoons are held under private ownership. Working with and creating incentives for private landowners will be vital for future shoreline habitat protection.

Several collaborative efforts have been made to protect some of the critical nearshore habitat. The northern portion of Port Susan is owned by The Nature Conservancy and is one of the largest privately owned marine nature preserves in the world. Island County has designated the entire western portion of Port Susan as a marine stewardship area. Several other land trusts and conservancy organizations are working to protect habitat and farmland in the action area. Island County also has 57 publicly owned beaches and 22 privately owned beaches that allow some public use.

Notable
Accomplishments
Placeholder

²⁴ In the 2008 Action Agenda update, the Skagit, Island, and Stillaguamish and Snohomish Action Areas comprised one Action Area called the Whidbey Basin Action Area. A map of the Whidbey Basin Action Area can be found at the end of this chapter.

Local Action Agenda Process

A tailored three-step process was developed for the Island County Local Integrating Organization (LIO) to help facilitate updating the local strategies to the Action Agenda. This was developed to be a quick and flexible process given that the LIO is newly established and has yet to develop detailed operating procedures, working priorities, or staffing. The steps were as follows:

- 1) Watershed groups (e.g., WRAC, MRC, etc.) and other organizations/representatives (e.g., cities, tribes, ports, etc.) worked to revise strategies based on 2008 Action Agenda information.
- 2) The Policy Development/Technical advisory group (PD/TAG) of the LIO reviewed the information submitted over two meetings and came to a common understanding and provided recommended strategies to the Executive Committee.
- 3) The strategies developed by the PD/TAG were provided to the LIO Executive Committee (Council of Governments and Tribes) for approval.

The Island LIO currently has over 70 draft strategies under consideration for the 2011 Action Agenda update. Identification of prioritized strategies and actions will be the focus of the newly formed LIO in 2012.

Key Threats/Pressures in Island County/Watershed

In 2008 the Whidbey Action Area identified the following threats/pressures to the ecosystem. Work has not yet been completed in Island watershed to determine if additional threats are present or if those items identified in 2008 no longer present a threat. There will be a more robust conversation around identifying the threats to the area and the LIO will prioritize these threats in 2012.

Threats identified in 2008 from the Whidbey Basin Profile include:

Habitat alteration

- **Marine/estuary:** Loss of estuary tidal marsh and habitat connectivity, with more than 80% of the Snohomish, approximately 75% of the Skagit, and 85% of the Stillaguamish estuaries diked, cutting off tidal marshes and
- **Shorelines:** Development along lake shorelines, reducing habitat availability and heterogeneity, increasing nitrification, increases in invasive species and toxic algal blooms
- **Marine nearshore:** 38% of marine shoreline armored; over 5,000 overwater structures; 5.6 miles of railroad grade; disconnected feeder bluffs and pocket estuaries, development in sensitive areas
- **Freshwater:** Loss of large river habitat complexity and floodplain connectivity from diking, riparian clearing, and floodplain development, reducing wood debris jams, side-channels, forested islands and pools
- **Uplands:** Loss of working farms and forests through conversion resulting in altered basin hydrology and degraded habitat; 16% increase in impervious surface in Snohomish watershed from 1991-2001; potential future development pressure in nearshore, river valley and upland areas

Pollution

- **Toxics:** Groundwater contamination leaching from past industrial development
- **Bacterial pollution:** 48% of impaired waters listings due to bacterial pollution; shellfish harvest closures in Holmes Harbor, Penn Cove, Samish Bay, Similk Bay, and Port Susan Bay
- **Nutrient loading:** Contributes to eutrophication and naturally occurring low dissolved oxygen concentrations in Penn Cove, Saratoga Passage, Possession Sound; dissolved oxygen and temperate concerns found in streams
- **Surface water runoff impacts:** Pollutant loading from urban stormwater and agricultural runoff; emerging pre-spawn fish mortality concern

Freshwater resources

- Limited water availability for people, farms, and fish: Low summer flows in WRIAs 5 & 7;
- Altered magnitude, frequency and duration of peak flow events in WRIAs 3, 4, 5 & 7
- Alteration of surface hydrology: Major alterations for flows in Skagit and Sultan rivers below dams
- Increased freshwater demand from more people, resulting in decreased aquifer levels, saltwater intrusion, and decreased groundwater discharge

Invasive species

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

Artificial propagation

- Salmon production has potential negative ecological and genetic impacts on natural populations and other hatchery populations; Shellfish production: not identified as a local issue

Harvest

- Fishing and bycatch, logging, and hunting practices: Fishing and poaching; other local pressures need to be identified

Localized climate change impacts

- **Sea level rise:** significant change and loss of estuarine habitat in Snohomish, Stillaguamish, and Skagit estuaries; significant loss of Whidbey Island beaches; risk of salt water intrusion; potential loss of floodplain capacity from diking
- **Changes in hydrology** due to reduced snow pack and forest cover

Other

- Increase in population by 2025: 49% in Skagit, Island, Snohomish counties (over 380,000 people)
- Toxic algal blooms in lake systems

Opportunities, Priorities and Near Term Actions

Island LIO is a new organization and has been working to establish operating procedures and guidelines. As such, the working list of draft strategies below reflect the best thinking of the LIO to date but will be further refined and vetted as the organization continues to hold discussions and conversation relating to sequencing and prioritizing strategies. The Island LIO has not yet identified near term actions associated with these strategies. Those actions will flow from the sequencing/prioritization conversations coming in 2012. The Island LIO acknowledges that there are likely many more science needs for the local area,

however, given the time constraints the LIO did not identify a full suite of needs. This will be further refined as well in 2012.

The working list of over 70 draft strategies under consideration by the Island LIO is as follows:

Protect and Restore Terrestrial and Freshwater Ecosystems

Focus land development away from ecologically important and sensitive areas*

- Pass ordinances that develop incentives and increase site-appropriate LID techniques to manage for future planned growth
- Modify planning/development plans to maintain/increase forest cover, create riparian corridor continuity, and reduce impervious surfaces.
- Support work and fund local partners to preserve ecologically important land.
- Support the implementation and enforcement of local plans, policies and regulations.

Protect and steward ecologically sensitive rural lands*

- Identify, protect and restore important spawning and nesting areas and critical habitat for birds and other wildlife.
- Encourage retention of native vegetation as part of clearing and grading ordinances throughout Whidbey Basin and protect ecosystem functions.
- Provide technical assistance to landowners to support working forests and farms in accordance with local regulations.
- Provide support for technical assistance and cost-share programs for small farms and commercial agriculture to improve and integrate agricultural nutrient management.
- Integrate small farms into community programs.
- Continue to work cooperatively with farming community to develop a coordinated restoration strategy that balances the needs of agriculture and fish.
- Support Transfer of Development Rights, Purchase of Development Rights, Public Benefit Rating System, and other incentive programs.

Encourage compact regional growth patterns and create dense and attractive communities.*

- Develop/support private land protection opportunities (programs such as Shore Stewards/Public Benefit Rating System/Conservation Easements)

Protect and restore floodplain function*

- *For Island Watersheds most floodplains occur along the marine shorelines. See B section for shoreline strategies*

Implement and maintain freshwater and upland restoration projects*

- Invest in and implement the Salmon Recovery Adaptive Management Plan in Island Watershed.
- Increase restoration efforts in Island County by providing incentives and removing obstacles for stewardship.
- Implement the Island County Groundwater Management Plan
- Address fish passage, and increase available rearing and spawning habitat within Island Watershed.

- Broaden local volunteer organizations like Whidbey Watershed Stewards, the Marine Resource Committee or beach watchers to work in upland habitat areas.

Instream flow protection and enhancement*

- Assess, monitor and implement flow rules, infiltration, and runoff for streams in Island Watershed.
- Ensure appropriate buffers are being applied to all streams within Island Watershed.
- Provide incentives for protecting forest lands and wetlands that feed into streams.

Groundwater protection and management*

- Ensure ground water protection includes water needed to maintain in-stream flows.
- Identify and protect forest lands in aquifer recharge areas.
- Protect sole source aquifers for drinking water based on the Groundwater Resources Management Plan.

Protect and Recover Salmon*

- Implement the Island Watershed/Water Resources Inventory Area (WRIA) 6 Salmon Recovery three-year work plan.
- Support engagement of salmon recovery watershed groups.
- Engage farming interests in salmon recovery within Island Watershed.
- Identify and put in known and presumed salmon spawning and rearing habitat into the Critical Area Ordinances.
- Educate and inform residents about Island Watershed/County's function in Salmon Recovery and harvest activities.

Implementation of other plans in a coordinated way and maintenance and enhancement of biodiversity*

- Complete physical and biological stream surveys within Island Watershed.
- Fund and develop a combined biodiversity planning effort to assist with the comprehensive plan amendment and long range planning for Island County.
- Assess where natural habitats could be converted and identify protection opportunities.

Invasive species prevention and response*

- Continue local efforts to identify and eradicate invasive species impairing habitat within Island Watershed.
- Educate home owners about identifying and managing invasive species.
- Identify invasive species and the vectors for introduction and coordinate with responsible agencies to eradicate invasive species impairing habitat.
- Coordinate and provide funding for identification and eradication of invasive species

Strategies and actions to flow from the Biennial Science Work Plan effort

- *At this point no science gaps have been discussed or identified. However, over the course of the next year, Island LIO is expecting to facilitate broader process to identify and sequence (prioritize) additional strategies, near term actions, and science gaps.*

Protect and Restore Marine and Marine Nearshore Ecosystems

Protection of marine and nearshore ecosystems that still function well*

- Update Fish and Wildlife Habitat Conservation Areas of the Critical Area Ordinance in Island County.
- Work with neighboring watersheds to develop a Whidbey Basin Nearshore restoration and protection coordination effort.
- Protect unique and important rare plant communities or critical saltwater habitats.
- Protect important spawning areas, forage fish beaches, and bird habitat.
- Evaluate the need to protect ecosystem processes and quality of life when considering tidal energy projects and ecosystem services provided.
- Complete Shoreline Master Program updates within Island Watershed on schedule.
- Support and fund economic research aimed at creating property owner incentives.
- Provide targeted funding for restoration projects identified in Shoreline Master Programs.
- Implement protection of prioritized nearshore/marine habitats.
- Assess where natural habitats could be converted and identify protection opportunities.

Support economic viability of working waterfronts to help maintain ecosystem function and sustain quality of life*

- Provide economic development grants for job-creating green development along shorelines which is consistent with adopted Shoreline Master Programs.

Promote public access and use of waterfronts and marine systems*

- Provide funding for public access projects identified in Shoreline Master Programs.
- Identify priority locations for public access projects.

Improve shellfish health and harvest*

- Develop a strategy related to improving shellfish health and harvest. Most improvements in this will be related to water quality. (See section C)
- Implement shellfish protection plans within Island Watershed/County.

Implement and maintain priority ecosystem restoration projects marine and marine nearshore ecosystems.*

- Prioritize and strategically remove derelict fishing gear.
- Educate residents on how to prevent fishing gear loss.

Protect and recover marine and nearshore species

- Develop recovery plans for targeted marine species including but not limited to forage fish and rockfish.

Invasive species prevention and response*

- Continue local efforts to identify and eradicate invasive species impairing habitat.
- Identify invasive species and the vectors for introduction and coordinate with responsible agencies to eradicate invasive species impairing habitat.
- Educate public about identifying and managing invasive species.
- Coordinate and provide funding for identification and eradication of invasive species.

Strategies and actions to flow from the BSWP effort

- Establish baseline data for marine and nearshore needs.

- Understand cumulative impacts of marine and nearshore development.

Reduce and Control the Sources of Pollution to Puget Sound

Implement toxic chemical and pollution policy and programs to reduce release of chemicals*

- Continue local efforts to identify and eradicate toxins that are impairing water quality conditions.
- Implement local plans addressing temperature, dissolved oxygen, mercury, and bacteria impairments that improve impaired waterways including those listed as 303d.
- Implement projects to eradicate water quality exceedences to federal or state standards.
- Implement a Pharmaceuticals and Personal Care Products Take Back Program that uses local pharmacies and local police as identified in the WRAC non-point plan and recommendations.

Implement clean-up activities to reduce pollution*

Use a comprehensive approach to manage urban stormwater runoff at the site and landscape scales*

- Implement National Pollution Discharge Elimination System (NPDES) permits
- Begin stormwater retrofits in urbanizing areas within Island Watershed.
- Implement storm water management for dense rural shoreline development areas.
- Research and implement economic incentives for reducing stormwater runoff, such as credits, or reduced stormwater fees.

Control and manage pollution from decentralized wastewater treatment including large and small on-site systems*

- Support local efforts to identify and control sources of pollution from on-site sewage systems.

Control and manage pollution from centralized wastewater management*

Comprehensive approaches to Rethink Wastewater Control and Management*

- Encourage innovate efforts to treat, reduce, and reuse municipal/community waste water.
- Support updates to local public treatment systems, including grant funding.

Control and manage pollution from discharges of wastewater from boats and vessels*

- Implement Best Management Practices relating to marinas and other boat activity spots within Island Watershed.

Agricultural and Forest Runoff*

Effectively prevent, plan for and respond to oil spills *

Strategies and actions to flow from the BSWP effort

- Support efforts to estimate/calculate the amount of impervious surface within Island Watershed to better inform land use planning and other efforts.

*Island developed this list of local strategies within the context of an early draft outline of regional strategies and sub-strategies. Since this list of local strategies was compiled, the regional strategy outline changed. As such, the

order and wording may not match what is currently in the Action Agenda. Once the local area has completed their prioritization process, the final list of local strategies will be cross-walked with the most current regional strategies.

Link to Recovery Targets

There are many different and complex activities advancing in Island watershed that will contribute to the regional recovery targets. Since the Island LIO is newly established in this area, however, there has not yet been discussion about what is most applicable and how the area will address this. This will be a focus of the Island LIO in 2012.

Local Implementation Structure

The Island Local Integrating Organization (LIO) is comprised of Island County/Watershed (WRIA 6). The LIO builds upon existing committees and watershed groups and has an Executive Committee, the Policy Development Committee that holds representatives from Watershed Groups. Additional Ad Hoc Technical Committees may be formed as needed. The Executive Committee includes elected officials from the watershed and tribal representatives. Members include representatives from the following entities.

- City of Langley
- City of Oak Harbor
- Town of Coupeville
- Island County Commissioners
- Port District of Coupeville
- Port District of South Whidbey
- Stillaguamish Tribe
- Swinomish Tribe
- Tulalip Tribes

The Policy Development Committee members include representatives from Island County, local tribes, cities, citizen watershed groups, the salmon recovery lead entity, businesses and education and outreach organizations. The Executive Committee will determine the membership of the Policy Development Committee.

The Island LIO will be informed by the work of the Watershed Groups and other Ad Hoc Technical Committees. These various local committees include but are not limited to the Water Resources Advisory Committee (WRAC) and the Island Marine Resources Committee (MRC). The WRAC is made up of citizens in Island County and technical advisors and is charged with maintaining the sustainable use of water resources while protecting habitat, environment and human health. The Island LIO may also

IMPLEMENTATION COORDINATION IN ISLAND COUNTY/WATERSHED

The Executive Committee holds the decisions of the LIO and sets strategic policy direction, priority setting and funding concepts.

The Policy Development Committee provides recommendations on strategic direction, priorities setting, and funding concepts for the Island Watershed. The Policy Development Committee will also coordinate across groups and to identify priorities for Action Agenda implementation within the basin utilizing existing networks, plans, and input from tribes, watershed groups, cities, ports, and others.

Watershed groups are working to implement plans and identify and sequence priority actions under their purview. This work will continue to inform the priorities of the LIO.

consult with the Water and Sewer Districts, Shellfish Protection Districts and Diking Districts, as well as coordinate with other LIOs in the greater Whidbey Basin.

References and Additional Resources

Shared Strategy for Puget Sound Watershed Profile (<http://shredsalmstrategy.org>)