

# **WRIA 16/14b Watershed Plan**

## **Summary of Implementation Actions**

Updated 6/20/12

### **Water Quantity Recommendations**

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#### **Data Needs**

##### **3.1.1 Prioritize water-quantity monitoring activities and pursue funding**

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The Planning Unit recommends that Mason and Jefferson Counties, the Skokomish Tribe, and water purveyors develop a prioritized list of surface and groundwater-quantity monitoring activities and pursue funding (e.g. grants) for ongoing, comprehensive water-quantity monitoring throughout the watershed.

##### **Status—Ongoing**

- The Planning Unit prepared a Hood Canal-wide surface water monitoring strategy.
- The Planning Unit prepared a groundwater monitoring plan that addresses groundwater quantity (ambient groundwater levels) and groundwater quality.
- The Planning Unit is currently implementing the Groundwater Monitoring Plan. Mason and Jefferson PUDs assume the staff costs of the monitoring and Planning Unit funds have paid for the costs of laboratory analysis. The monitoring will likely be curtailed if ongoing funding cannot be secured for laboratory costs.
- Mason County prepared a list of current surface water quantity monitoring (stream gauging) in the WRIA.
- HCDOP conducted stream gauging and Mason County collects flow data in 303(d) listed streams. Jefferson County CD has also collected some flow data. Ecology is also collecting flow data.
- There are stream gauges on the Dosewallips, Duckabush and Skokomish Rivers.
- The Planning Unit conducted an assessment of impaired streams which provides additional guidance on data needs.

#### **Water Conservation**

##### **3.2.1 Support and encourage tiered water rate structures**

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The Planning Unit supports the tiered rate structures adopted by the Jefferson and Mason PUDs #1 to encourage water conservation and encourages other water purveyors in the WRIA to adopt similar rate structures.

##### **Status—Ongoing**

- Mason County PUD #1 and Jefferson County PUD #1 have tiered rates. Under these rate structures, customers pay a higher rate to use water above a certain threshold, thus customers have a financial incentive to conserve.
- Tiered rate structures are now required by the state's water efficiency rule for water systems with more than 1000 connections.

### **3.2.2 Offer rebates for low-flow fixtures and appliances**

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The Planning Unit recommends that all water purveyors in the WRIA pursue funding to offer rebates for the purchase of low-flow fixtures and appliances to encourage water conservation.

#### **Status—Partially Complete**

- Mason PUD currently offers rebates to customers for low-flow shower heads and efficient washers and dishwashers.
- Jefferson PUD is considering a rebate program as an element of its water use efficiency program. JPUD will likely develop an energy conservation program that will include rebates for water-saving/low-flow fixtures as it evolves into a power provider within the next several years.

### **3.2.3 Offer water meters and encourage voluntary water metering**

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The Planning Unit recommends that water purveyors offer meters for sale to all interested water users in the WRIA and encourage water users to voluntarily meter their water use.

#### **Status—Complete**

- Mason and Jefferson County PUDs offer surplus meters for sale, although demand often exceeds supply.
- A previous Planning Unit pilot program that offered meters for no charge received virtually no interest.

### **3.2.4 Encourage golf courses to conserve water and minimize use of chemicals**

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The Planning Unit recommends that Mason and Jefferson Counties encourage new golf courses in the WRIA to adopt and implement golf course management plans that address water conservation strategies (including water re-use), use of pesticides (including herbicides and insecticides) and fertilizers and other water-related impacts. The Planning Unit also recommends that Mason and Jefferson Counties encourage existing golf courses to adopt golf course management plans.

#### **Status—Ongoing**

- Mason County PUD has water meters at the Alderbrook golf course, and is working with Alderbrook to reduce their water use.
- There is a need to contact the Cushman golf course to get an update on their status (water conservation, use of pesticides and fertilizers, etc.) and to encourage them to adopt a golf course management plan if they have not already done so.
- Jefferson County will require water quality monitoring to ensure compliance with and effectiveness of required Best Management Practices at the proposed Pleasant Harbor Master Planned Resort (Blackpoint Golf Course) if and when it is developed.
- The updated SMP for Jefferson County, which says "...avoid/minimize use of fertilizers, herbicides and pesticides," will apply to new recreational use/development such as a golf course (Article 6.4 Policy 4. Article 6.5 Water Quality & Quantity Policy A.2 is similar).

### **3.2.5 Review alternative sewage and greywater regulations**

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The Planning Unit recommends that the state Departments of Health and Ecology review alternative sewage and greywater treatment systems and revise regulations to allow greater use of these alternative sources of reused water, as appropriate.

#### **Status—Ongoing**

- DOH has prepared new alternative sewage and grey water regulations.

- The Planning Unit would like to have a briefing on the new regulations.

## Water Supply and Use

### 3.3.1 Encourage small public water systems over new permit-exempt wells

The Planning Unit recommends that the Department of Ecology, Mason and Jefferson Counties, and water purveyors encourage the development and/or consolidation of small public water systems over the proliferation of exempt wells in areas: a) where appropriate zoning exists; b) where growth is anticipated by county planning efforts; and c) when it is fiscally feasible.

#### Status—On Hold Indefinitely

- DOH is discouraging proliferation of small water systems and Ecology is discouraging the proliferation of exempt wells.
- This will be addressed through the development of a water management rule for the watershed. It is on hold until Ecology initiates discussion regarding rule-development.

### 3.3.2 Determine future water needs of domestic and public water systems

The Planning Unit recommends that Mason and Jefferson Counties, as part of planning under the Growth Management Act (GMA), determine how much additional water will be required to meet the water supply needs of single domestic wells and public water systems in the WRIA. At a minimum, the counties should use long-range demand forecasting consistent with GMA timelines (currently 20 years), but they are encouraged to consider 50 years. The counties should also work with water purveyors to integrate water supply forecasts into their analysis.

#### Status—Partially Complete

- The Planning Unit will complete a water demand forecast in 2012 that will begin to address future water supply needs in the watershed.
- There is still a need to tie in water supply with GMA planning.
- Mason County Planning staff review and comment on all new water system plans for GMA consistency and concurrency as required by the State.
- Mason County has completed maps of water service areas.
- Jefferson County analyzes water system plans with respect to GMA only; otherwise the county does not have the data to confirm/cross check info provided by purveyors. Jefferson PUD also conducts consistency reviews for Jefferson PUD water systems, including two systems in WRIA 16.

### 3.3.3 Implement water trusts and water banking

The Planning Unit recommends that the Department of Ecology work with Planning Unit members to develop and implement water trust and water banking opportunities that enhance instream flows.

#### Status—On Hold

- There is not an urgent need for water banking in WRIA 16. However, the Planning Unit is interested in a general briefing on water trusts and water banking. This may be a bigger issue when a water management rule is developed for WRIA 16.
- Ecology provides state-wide financial and technical assistance on water trusts and water banking. There have been no water trust or water banking activities in the WRIA 16 Planning Area to date.

### **3.3.4 Involve local parties in review of applications to remove water from the watershed**

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The Planning Unit recommends that the Department of Ecology involve local governments, tribal governments, and the Planning Unit throughout the review of applications for out-of-basin water transfers.

#### **Status—Ongoing**

- Ecology consults with the Skokomish Tribe and local governments on water rights applications and other important water resource issues.
- Ecology has been citing watershed plans in making water rights decisions.
- Ecology will continue to provide opportunities for the Planning Unit to comment on out-of-basin water transfers.

### **3.3.5 Allow rainwater capture below a certain threshold**

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The Planning Unit recommends that the Department of Ecology work with the Legislature to recommend a specific quantity threshold for the amount of rainwater that can be captured without a permit and request that the Legislature expressly authorize rainwater capture in quantities below this threshold. This permit exemption recommendation does not imply a recommended change in Washington State Department of Health policy regarding rain catchment for potable purposes.

#### **Status—Complete**

- Ecology adopted a policy to allow rooftop rainwater catchment.
- Ecology has allowed rainwater catchment in the WRIA 17 instream flow rule.
- No action is needed in WRIA 16 at this time other than continuing to support appropriate legislation.

### **3.3.6 Investigate winter water storage to enhance summer water supply**

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The Planning Unit recommends pursuing collaborative opportunities among Mason and Jefferson Counties, Mason County PUD #1 and Jefferson County PUD #1, and the Skokomish Tribe to investigate the feasibility of multi-purpose storage projects that utilize seasonally available water to enhance aquifers and stream flows during critical low flow periods, while taking into account the benefits of high stream flows. This recommendation is merely to collaboratively study the feasibility of multi-purpose storage in WRIA 16 and should not be construed as a recommendation for any particular multi-purpose storage project.

#### **Status—On Hold**

- Water storage is controversial within WRIA 16. A grant proposal was submitted to Ecology for WRIA 16 and 14b, but was not pursued due to controversy.
- The recommendation is on hold for the Skokomish River until the completion of the General Investigation.
- Storage may become a higher priority when Ecology initiates development of a water management rule for WRIA 16.

# Water Quality Recommendations

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## Data Needs

### 4.1.1 Implement the WRIA 16 Surface Water Quality Monitoring Strategy

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The Planning Unit recommends that the WRIA 16 Surface Water Quality Monitoring Strategy be implemented (same as recommendation 6.1.1).

#### Status—Ongoing

- The United States Geological Survey (USGS), United States Forest Service (USFS), Ecology, Washington Department of Fish and Wildlife (WDFW), DOH, the Skokomish Tribe, Mason County, Jefferson County, Jefferson CD and Mason County PUD all monitor for various water quality constituents.
- Mason County has prepared a summary of all ongoing surface water quality monitoring (locations, parameters sampled, etc.) and compared it to the monitoring strategy, and identified deficiencies.
- A comprehensive monitoring plan for all of Hood Canal was completed in 2010.
- The Planning Unit will continue to seek funding for full implementation of the monitoring strategy. Kitsap County is conducting monitoring consistent with the Hood Canal Monitoring plan within Kitsap County. Mason and Jefferson Counties need additional funding to implement the plan—preferably secure, long-term funding.
- Mason County identified the 303(d) listed streams as high priority monitoring locations in Hood Canal and performed monthly monitoring at these streams. Mason County also completed the Hood Canal Pollution Identification and Correction Project, which included shoreline monitoring along the North Shore of Hood Canal. These projects were completed with limited grant funding.
- Jefferson County and the Jefferson County Conservation District (JCCD) are continuing the Hood Canal Shoreline surface water quality monitoring and are initiating the Hood Canal Watershed grant project (through 2014) to expand monitoring upstream beyond 500' from the marine shoreline. Jefferson County also has received an EPA grant that may complement some of these efforts especially in terms of septic investigations.
- The Hood Canal Clean Watershed Project, which focuses on coastal areas of Jefferson County, will end May 31, 2012. The project provides sanitary surveys and corrective actions.
- The Hood Canal Watershed Project, which focuses on inland areas of Jefferson County, expands the work of the preceding grant from the shoreline to the entire watershed within Jefferson County. Focus is on water quality of 303(d) listed streams (Temp, low DO and FC pollution) and summer chum recovery. JCCD began stream monitoring of 18 stations in WRIA 16. Sanitary surveys are underway in the Duckabush watershed. As part of a separate EPA Clean Water District Activities grant (partnership with Clallam County), information is being gathered on “unknown” OSS systems in the Duckabush watershed as well.
- The Skokomish Tribe is also conducting monitoring on the lower Skokomish River and on the reservation.
- The Hood Canal Salmon Enhancement Group has stream gauge information on a number of streams throughout the watershed, but they are no longer collecting data.
- The Mason County Stormwater Task Force is finalizing recommendations for funding on-going program elements, including water quality monitoring.
- WDFW conducts monitoring on a project by project basis.
- There is no funding for implementation of the comprehensive Surface Water Monitoring Plan.

### 4.1.2 Continue consistent and coordinated water quality monitoring

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The Planning Unit recommends that existing organizations conducting water quality monitoring continue to work together and with the Planning Unit to ensure that consistent, coordinated water quality monitoring

**occurs that is responsive to the concerns of the community and is protective of the environment, including chemical, biological and physical health.**

**Status—Ongoing**

- The Planning Unit prepared a comprehensive Water Quality Monitoring Strategy for Hood Canal. (See 6.1.1.1.) Funding has not been identified to fully implement the strategy in Mason or Jefferson Counties.
- Mason and Jefferson Counties continue to input all of their Hood Canal water quality monitoring data into DOE's Environmental Information Management (EIM) program.
- The HCCC has received a grant to develop a regional Hood Canal Pollution Identification and Correction (PIC) program.
- Washington Sea Grant is working cooperatively with the Washington State Departments of Ecology and Health to perform BEACH and Harmful Algae Bloom monitoring within the WRIA 16 watershed.
- Mason County is a steering committee member of the Puget Sound Ecosystem Monitoring Program (PSEMP) whose main purpose is to evaluate progress towards ecosystem recovery and to continually improve the scientific basis for management actions in the Puget Sound. The goal is to work with all partners to coordinate monitoring efforts to provide credible, high quality and accessible monitoring findings for partners, decision-makers, and ultimately, the public.
- Mason County completed monitoring of the 12 streams listed on the 303(d) list for fecal coliform and has requested that Ecology delist 9 of these streams based on the updated monitoring results.

**4.1.3 Better coordinate the State's water quality monitoring**

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**The Planning Unit encourages the state Departments of Health and Ecology to better coordinate their respective water quality monitoring efforts, including data sharing, rulemaking, enforcement, and other regulatory efforts.**

**Status—Ongoing**

- The Planning Unit supports and tracks the efforts of the Marine Waters Working Group within the Puget Sound Partnership.
- The Planning Unit continues to encourage better coordination between state agencies on monitoring issues.

**4.1.4 Inventory and monitor dump sites and landfills**

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**The Planning Unit recommends that Mason and Jefferson Counties and the Department of Ecology prepare an inventory of current and former dump sites and landfills and, where appropriate, prepare and implement clean-up plans. Mason and Jefferson Counties should also seek grant funding to compile and assess water quality data from these sites.**

**Status—On Hold Pending Funding**

- Counties need funding to complete the assigned tasks.
- The Planning Unit has requested information from Ecology regarding the Dayton wood waste landfill closure because of possible impacts to the Skokomish River.

#### **4.1.5 Continue monitoring the Webb Hill biosolids application site**

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**The Planning Unit recommends that Mason County and the Department of Ecology continue water quality monitoring efforts and initiate further investigations, as appropriate, at the Webb Hill biosolids application site to identify and assess impacts to surface and groundwater.**

##### **Status—Complete**

- The Planning Unit hired Aspect Consulting to conduct a hydrogeologic investigation of groundwater flow direction and possible nitrate inputs; this was completed in fall 2007.
- Ecology requires quarterly water quality sampling of the on-site well and surface water, and annual soil sampling at the facility.
- The operator of the Webb Hill biosolids application site has drilled an additional monitoring well and is providing ongoing monitoring at the site.
- Ecology and North Ranch Biorecycling signed an “Agreed Order” in February of 2009 regarding site management and mitigation of impacts.
- The Planning Unit has completed the two-phased study. Ecology continues to monitor the site and work with the operator. The Planning Unit continues to advocate for appropriate oversight of the site.

#### **4.1.6 Encourage water quality and quantity measurements in individual wells**

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**The Planning Unit recommends that the Mason and Jefferson County health departments promote and encourage periodic voluntary measurement of water quality and water depth in individual wells. Water depth measurement should be conducted by a professional to protect the aquifer from contamination.**

##### **Status—On Hold Pending Funding**

- Both Mason and Jefferson Counties provide information when requested but neither county has funding for well education or outreach.
- Washington Sea Grant has incorporated WET (Well Education and Testing) into its citizen science monitoring program. WET provides an opportunity for WRIA residents to periodically test their well water for fecal coliform and other constituents. Educational information is provided that highlights the need for and analysis of their test results.

#### **4.1.7 Determine impacts of septic systems on sensitive water bodies**

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**The Planning Unit recommends that the Mason and Jefferson county health departments continue to track studies and other efforts underway to determine the impacts of nutrient and pathogen loading from septic systems near sensitive water bodies, and work with the Planning Unit to consider appropriate options, alternatives, or standards that might be pursued.**

##### **Status—Ongoing**

- Hood Canal Coordinating Council (HCCC) and the Hood Canal Dissolved Oxygen Program (HCDOP) are working on this. The Planning Unit would like to be involved and will track the efforts by HCCC and HCDOP. There is a strong need for information sharing with and among the various groups who are interested in this topic.
- Mason and Jefferson Counties are participating in the HCCC wastewater workgroup, which is reviewing relevant research concerning OSS nitrogen contribution and appropriate alternatives.
- The HCCC has created a GIS layer of known OSS on Hood Canal. The Pollution Identification and Correction program will use this data.
- HCDOP is evaluating nitrogen contributions from septic systems. The HCDOP report is being peer reviewed to assess the validity of the study and the amount of nitrogen contributions from OSS.

- Mason and Jefferson Counties are validating OSS records along the shorelines of Hood Canal, and are also mapping community OSS systems.

## On-site sewage systems

### 4.2.1 Implement septic system operation and maintenance programs

The Planning Unit recommends that Jefferson and Mason Counties continue and expand their efforts to implement septic system operation and maintenance (O&M) programs and encourages the two counties to work together to collect comparable data. The Planning Unit recommends that the counties compile an annual report on the results of the O&M program for the local boards of health, and that this report be available to the public. Finally, the Planning Unit recommends that septic system inspections be required on a regular basis (as appropriate based on location, type and age).

#### Status—Partially Complete

- Mason County currently generates O&M reports from its On-site Sewage Systems (OSS) database.
- Both Counties prepare informal reports summarizing activities related to OSS for their local boards of health and have provided samples to the Planning Unit.
- State regulations require inspection on every system annually, except for gravity which requires an inspection at least every 3 years. The homeowner is responsible for these inspections.
- Mason County sends out reminder notices (when funding is available).
- HCCC completed a Hood Canal wide OSS GIS project. OSS installation date and system type data was collected from all three counties and standardized for display and analysis in GIS.
- Mason County prepares reports as a requirement of grant funding. These reports are available to the public.
- Jefferson County is keeping track of O&M reports and conducted sanitary surveys on 900 shoreline properties through the Hood Canal Shoreline grant and will be doing another 400 through the Watershed grant; however not all of these are within WRIA 16. Jefferson County is planning to update the OSS code to allow homeowner inspections as part of the EPA Clean Water District Activities. Jefferson County prepares an annual report to the Jefferson County Board of Health that summarizes OSS activities. Jefferson County also provides quarterly reports to the state DOH that report the number of unknown OSS identified and number of inspections completed.
- Jefferson County is involved in regional efforts to develop a program to enable the homeowner of some systems to complete the required inspections. A Septic System Monitoring Workgroup was convened in early 2012 and held a series of public work group meetings to develop recommended revisions to the existing on-site septic system monitoring program. Public forums were also held to review proposed draft revisions to local on-site septic system monitoring code.

### 4.2.2 Identify failing septic systems and notify owners

The Planning Unit recommends that Mason and Jefferson Counties continue to identify failing septic systems and notify landowners of the need for remedial actions.

#### Status—Ongoing

- This is being done on an ongoing basis by both counties.
- Mason County is currently performing follow-up at all sites that have had an unsatisfactory service event that are located within 1000' of Hood Canal and along the shoreline of the 303(d) listed streams. There is funding available for this work through December 2012. Beyond that date or in areas located outside of the current study area (1000' of Hood Canal and along the 303(d) listed streams), Mason County will continue to perform follow-up work when and where funding is available.

- Jefferson County is identifying and investigating failing systems through grant-funded programs as well as through the complaints process.
- Adequate, ongoing funding remains a concern for both counties.

### **4.2.3 Assess sewers and other alternatives to septic systems in sensitive areas**

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**The Planning Unit recommends that Mason and Jefferson Counties assess the feasibility and effectiveness of providing sewer or community septic systems in environmentally sensitive areas, particularly where nutrients and pathogens are a concern. The Planning Unit also recommends that, where appropriate, the counties and the Department of Health encourage alternative methods of septic waste management, including nutrient removal, non-discharging toilets, and greywater treatment systems.**

#### **Status—Ongoing**

- Mason and Jefferson counties are currently assessing the feasibility and effectiveness of providing sewer or community systems in environmentally sensitive areas as an alternative to individual OSS.
- DOH has prepared new alternative sewage and grey water regulations. The Planning Unit would like to have a briefing on the new regulations and will invite DOH and Ecology to participate. (*See also Rec. 3.2.5*)
- The HCCC is interested in alternatives to conventional OSS for nutrient removal. Scientific research is ongoing for this topic. The Planning Unit is interested in a summary of the current research.
- The Department of Health, in partnership with Ecology and UW, is conducting a pilot project of septic systems nutrient removal efficacy.

### **4.2.4 Consider funding options for septic upgrades along shorelines and in other sensitive areas**

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**The Planning Unit recommends that Mason and Jefferson Counties consider a broad range of funding options to offset the costs of septic upgrades or conversion to community systems along shorelines or in other sensitive areas.**

#### **Status—Ongoing**

- Kraft 3 (formerly ShoreBank Enterprises and Enterprise Cascadia) offers loans to assist OSS owners in replacing failing systems or funding upgrades.
- The US Department of Agriculture provides grants for low-income senior citizens which can be used to assist with on-site septic repairs or replacements.
- Jefferson County Environmental Health is incorporating information about community drainfields and the importance of upgrading individual septics in all homeowner education workshops.
- Jefferson County Environmental Health assists communities with research and data to support funding requests for community solutions.
- Assessment of a new fee does not seem feasible at this time.
- Jefferson and Mason Counties continue to provide information on the Kraft3 septic loan program (formally ShoreBank and Enterprise Cascadia) to residents during sanitary surveys and upon request.
- The Planning Unit will continue to advocate for ongoing funding for the OSS loan program by the state legislature.

#### **4.2.5 Require a septic system inspection upon the sale of a property**

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The Planning Unit recommends that Mason County require a septic system inspection by a certified septic professional upon the sale or transfer of property and require pumping if appropriate. The Planning Unit also recommends that Jefferson County continue its current program and work to improve compliance.

##### **Status—Complete**

- Both Mason and Jefferson Counties now require OSS inspections at the time of property sale/transfer.
- The Planning Unit will continue to track the effectiveness of this provision.

#### **4.2.6 Encourage community wastewater treatment systems for new developments**

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The Planning Unit recommends that Mason and Jefferson Counties encourage homeowner associations or private and public utilities to establish community wastewater treatment systems for appropriate new developments of four or more homes.

##### **Status—Delayed Indefinitely**

- This is not a priority for the Planning Unit at this time. The Planning Unit may reconsider this in the future if circumstances change.
- Mason and Jefferson Counties encourage community systems as appropriate.
- Jefferson County may address this more proactively through the new EPA grant.

### **Animal Waste**

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#### **4.3.1 Encourage farm plans and agricultural best management practices in critical areas**

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The Planning Unit encourages those farms in or adjacent to critical areas of the WRIA to have a current farm plan. Farm plans should consider seasonal restrictions on animal pastures to protect streams and floodplains from manure. The Planning Unit also recommends that the Mason and Jefferson conservation districts seek funding to 1) prepare farm plans, 2) provide financial assistance to help landowners implement agricultural best-management-practices, and 3) evaluate how effectively the farm plans and best management practices are being implemented.

##### **Status—Ongoing**

- In the early 2000s Mason Conservation District conducted a farm inventory in the WRIA 16/14b areas. This information is old and in need of update when grant dollars are available.
- Mason and Jefferson Conservation Districts are continuing to seek funding for farm plans and implementation of best management practices as well as updating farm inventories.
- In Jefferson County, grant funds are available for BMPs to replant early successional species in riparian areas.
- The Mason County Stormwater Task Force is finalizing recommendations for funding on-going program elements, including technical assistance for landowners wishing to implement agricultural BMPs.

### 4.3.2 Require manure management practices that protect floodwaters

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The Planning Unit recommends that Mason and Jefferson Counties require that manure in floodplains be managed in a manner that protects floodwaters from manure contamination.

#### Status—Ongoing

- Mason and Jefferson Conservation Districts continue to offer technical assistance to landowners to minimize manure contamination of surface waters. Conservation measures include buffer enhancement, manure composting structures, manure exchange programs for heavy use areas.
- In Jefferson County the updated SMP places limits on manure spreading within 25 feet of the ordinary high water mark.
- Mason County adopted the Volunteer Stewardship Program (VSP) which exempts existing agricultural land from its critical resource ordinances, to be replaced with a new program when funding is available. Jefferson County did not opt to participate in the VSP.

### 4.3.3 Effectively manage pet waste in parks

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The Planning Unit recommends that, where appropriate, Mason and Jefferson Counties and the Washington State Parks Commission consider programs for the management of domestic animal waste at state and county parks in the WRIA.

#### Status—In Progress

- Many parks in Mason and Jefferson Counties have designated pet leash areas, while others do not allow pets.
- The Washington State Parks Commission (State Parks) has been working with Washington Sea Grant (Sea Grant) to implement pet waste management practices in the Hood Canal State parks.
- Mason Conservation District, along with Mason Eco Net, received a \$10,000 block grant to install 12 pet waste stations in the WRIA 16/14b area. A map of the sites can be found at [http://www.masoncd.org/Pet\\_Waste\\_logos\\_web.pdf](http://www.masoncd.org/Pet_Waste_logos_web.pdf)
- Mason County provides pet waste educational information to homeowners during sanitary surveys. Mason County also did an analysis on the number of dogs in the Hood Canal Watershed and the amount of waste/fecal coliform that they produce.
- Washington Sea Grant continues to provide pet waste education to WRIA 16 watershed residents and businesses through Kids' Day at OysterFest, Mason Area Fair, on site visits to communities, beach walks, Bivalves for Clean Water events and activities and school visits. Sea Grant also monitors pet waste stations previously installed in the WRIA and encourages community members to install pet waste stations in their neighborhoods.

## Stormwater

### 4.4.1 Minimize impervious surface

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The Planning Unit encourages Mason and Jefferson Counties to ensure that County regulations minimize impervious surfaces and, to the extent feasible based on site conditions, maximize on-site infiltration, detention or reuse.

#### Status—Ongoing

- A coalition of 12 local organizations, including Jefferson County Public Health, held a workshop on Low Impact Development (LID) in February 2008, with funding from Ecology.

- The Salmon and Steelhead Habitat Inventory and Assessment Program, Summer Chum Recovery Plan, and the Mid-Hood Canal Chinook Recovery Plan each have GIS coverages of regional impervious surfaces.
- HCCC has developed a GIS layer modeling existing impervious surfaces on Hood Canal.
- Mason County adopted a LID ordinance for the Belfair and Allyn UGAs in 2008. Some LID techniques, such as maximizing infiltration to the extent feasible, are applied on a county-wide basis
- Mason County (through the Conservation District and WSU) provides training opportunities to local contractors wishing to become LID certified. Training was also provided in 2011 for Mason County staff to learn more about LID concepts, identify implementation barriers, and share outreach and education needs at permit counters.
- Mason Conservation District has provided LID technical assistance to numerous clients resulting in additional demonstration projects and outreach materials such as the videos found on their website.
- Mason County WSU Extension promotes rain gardens through videos, manuals, workshops and volunteer projects
- In Jefferson County, the Watershed Stewardship Resource Center (WSRC) promotes LID techniques as voluntary approach to meeting stormwater and other regulatory requirements. Demonstration garden sites will also be constructed in Port Townsend.

#### 4.4.2 Retain native vegetation

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**The Planning Unit recommends that Mason and Jefferson Counties encourage retention of native vegetation throughout the WRIA. *This recommendation will be implemented in coordination with Recommendations 5.1.2 and 6.3.3.***

##### **Status—Ongoing**

- Jefferson County encourages retention of native vegetation through implementation of its Critical Areas Ordinance (CAO), its Shoreline Master Program (SMP), and through stormwater review.
- Jefferson County continues to support the Jefferson Conservation District in planting native vegetation on streamside sites. The Jefferson WSRC is educating prospective land purchasers about county requirements.
- Jefferson WSU Extension manages a shore stewards program, which includes shoreline properties.
- Mason County Public Health encourages landowners to retain native vegetation during sanitary surveys.
- Washington Sea Grant offers on-site technical assistance to shoreline homeowners on nearshore vegetation management. Sea Grant also offers beach walks, workshop presentations, and other venues to promote appreciation and awareness of native vegetation. Workshops include Bivalves for Clean Water, Living on the Edge, composting, Native Plant Prescription and Blue Thumb gardening workshops.
- The Mason County Stormwater Task Force (SWTF) recently reviewed existing ordinances and considered adoption of new ordinances. The SWTF is not recommending the adoption of any new ordinances at this time, citing the need to better implement and enforce existing regulations. While Mason County does not have a “Clearing Ordinance”, retention of native vegetation is addressed in several locations of existing Mason County code including LID, Resource Protection and Stormwater.
- The Planning Unit will continue to advocate for Mason County to adopt a Clearing Ordinance.

#### 4.4.3 Continue and expand stormwater management for state highways

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**The Planning Unit recommends that the Legislature fully fund the Washington State Department of Transportation’s stormwater management activities for state highways in the WRIA.**

##### **Status—Ongoing**

- This was discussed at a meeting with DOT staff. The Planning Unit is working with DOT staff to get support for the prioritization efforts by habitat biologists.

- The HCCC has received a grant to develop a regional stormwater prioritization plan.

#### **4.4.4 Implement best management practices for roadside ditches**

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The Planning Unit recommends that Mason and Jefferson Counties, along with other appropriate agencies, pursue funding for best management practices along roadside ditches, including planting and vegetation retention, topsoil improvements, and installation and maintenance of filter strips to filter stormwater pollutants. *This recommendation will be implemented in coordination with Recommendation 4.5.1.*

##### **Status—Ongoing**

- The Planning Unit met with Mason County Public Works staff. The Planning Unit will continue to work with Mason County staff to identify and prioritize areas for retention of roadside vegetation.
- Mason County will continue active participation in the Regional Road Maintenance Program.
- Jefferson County has incorporated BMPs into its management of roadside ditches, including no spraying of herbicides, creating vegetative filter systems along highways, etc.
- The Planning Unit requested state funding for ditch management efforts in 2009 but funding was not provided.
- Jefferson County has conducted only “spot” ditch maintenance over the last several years in WRIA 16 because these are generally in good shape. Practices include WSDOT BMPs including the avoidance of work when water is running in the ditch and supporting grass growth in ditches. Ditching is avoided where water drains to salt water, lakes or creeks.
- Washington Sea Grant has not been able to secure funding for this activity. Sea Grant continues to work one on one with homeowners and contractors as opportunities arise.

#### **4.4.5 Establish riparian buffers and road maintenance standards for forestland owners**

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The Planning Unit encourages the Washington Forest Practices Board to establish riparian buffer regulations and road maintenance and abandonment planning criteria, based on best available science, for all forestland owners who are required to get a forest practices permit.

##### **Status—Complete**

- This recommendation has been implemented.

#### **4.4.6 Expand County stormwater management programs**

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The Planning Unit recommends that Mason and Jefferson Counties expand their stormwater management programs by adopting stormwater provisions, such as those in the current Puget Sound Conservation and Recovery Plan, including:

- Stormwater controls for appropriate new development and redevelopment;
- Stormwater site plan reviews;
- Stormwater control at construction sites;
- Proper operation and maintenance at stormwater facilities;
- Pollution source controls;
- Illicit discharges and water quality response;
- Problem identification and ranking;

- Low impact development; and
- Public education and outreach on stormwater.

**Status—Complete**

- Jefferson County adopted Ecology's *Stormwater Management Manual for Western Washington* in 2002.
- Mason County adopted the minimum requirements of Ecology's 2005 Manual on June 17, 2008 (Ordinance 81-08). The Manual was gradually phased in over a four year period, and was effective county-wide in June of 2012.

Other

**4.5.1 Implement Integrated Pest Management on publicly owned land**

The Planning Unit recommends that Mason and Jefferson Counties develop and implement a coordinated Integrated Pest Management program to minimize the use of pesticides (including herbicides and insecticides) on publicly owned land. *This recommendation will be implemented in coordination with Recommendation 4.4.4.*

**Status—Ongoing**

- Jefferson County does not spray pesticides—and infrequently uses herbicides—on County roads or parks. Jefferson County Public Works strictly mows and brush cuts and does not use pesticides. Requests to use herbicides on noxious weeds along roads needs to go through the Weed Board. There is no Jefferson county park land in WRIA 16.
- Mason County Parks Department does not use pesticides; they occasionally use the herbicides round-up or crossbow for weed control.
- Mason County is a participant in the Regional Road Maintenance Program, which recommends best management practices for ditch maintenance activities amongst many other maintenance practices. Many of these BMPs are consistent with the principles of IPM.
- Washington Sea Grant provides information to homeowners during site visits and during composting and Blue Thumb Gardening workshops on alternatives to chemicals and what options are available for invasive weed control.

**4.5.2 Address saltwater intrusion**

The Planning Unit recommends that Mason County identify areas that are susceptible to seawater intrusion and consider adopting a program to address seawater intrusion. The Planning Unit also recommends that Jefferson County share information with Mason County on their saltwater intrusion program.

**Status—Delayed**

- Jefferson County addresses saltwater intrusion in its Unified Development Code.
- This is delayed until results of the groundwater monitoring network have been assessed, which may provide relevant data on saltwater intrusion

**Habitat Recommendations**

### **5.1.1 Support existing salmon recovery and habitat conservation programs**

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The Planning Unit supports the following ongoing activities and recommends that these programs and/or similar programs be continued:

- Efforts by all the groups and agencies working to implement salmon recovery plans and associated projects;
- Habitat acquisition programs or conservation easements funded or implemented by land trusts, the Salmon Recovery Funding Board, Lead Entity groups, the Shared Strategy for Puget Sound, and others.
- Efforts to revegetate riparian areas;
- Efforts to improve large woody debris in streams;
- Salmon recovery efforts to address floodplain connectivity, riparian degradation, and channel complexity;
- Floodwater management planning to be integrated with salmon recovery efforts;
- Efforts to reduce adverse sedimentation;
- Efforts by the Mason County Weed Board to control invasive species;
- Efforts by the Mason and Jefferson conservation districts to implement the Conservation Reserve Enhancement Program (CREP).

#### **Status—Ongoing**

- Jefferson County is implementing its Conservation Futures and Floodplain Acquisition and Restoration Programs to protect and restore key habitat and open space.
- Mason Conservation District's "South Hood Canal Riparian Enhancement" program is a 2 year project working with the Mason County Weed Control Board to eradicate knotweed and plant coniferous plants where treatment has occurred. This is scheduled for completion in 2013.
- Mason Conservation District implemented a 42.5 acre riparian corridor CREP plan for Skokomish Farms and continues to assist with maintenance throughout the life of the project.
- Mason Conservation District implemented a 42 acre National Resource Conservation Service (NRCS) flood plain easement for Skokomish Farms.
- Jefferson County's Conservation Futures program has projects in the Hood Canal watershed but not in WRIA 16 to date. County acquisition projects in the Brinnon area to support salmon recovery are proceeding.
- Jefferson County is pursuing SRF Board funds for 2012 for coastal property acquisition for restoration.
- The Comprehensive Flood Management Plan for the Dosewallips and Duckabush Rivers was completed in 2009.
- WDFW continues to participate in and support salmon recovery efforts, including several habitat restoration projects recently completed on WDFW lands in the Hood Canal watershed.
- The Restoration Plan in the Mason County Shoreline Update will identify opportunities for parks and properties.
- Ecology has identified Channel Migration Zones in Mason County and this information will be available in the Shoreline Master Program's Inventory and Characterization Report.
- The Skokomish River Basin Ecosystem Restoration Study evaluates significant ecosystem degradation in the basin; formulates, evaluates and screens potential solutions to these problems; and recommends a series of actions and projects for construction. Mason County and the Skokomish Indian Tribe are the non-federal project sponsors working with the Corps of Engineers to complete this feasibility study. The study should be completed by 2015.

### **5.1.2 Use vegetative management for danger trees in or near critical areas**

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The Planning Unit recommends that Mason and Jefferson Counties adopt ordinances requiring or encouraging vegetative management as the first approach to danger trees in critical areas or their buffers. The Planning Unit also recommends that Mason and Jefferson Counties and the state Department of Natural Resources (DNR) develop and implement requirements that felled danger trees (as defined by the DNR) in critical areas or buffers must remain on site as large woody debris, as appropriate.

#### **Status—Ongoing**

- Mason and Jefferson Conservation Districts routinely hold technical advisory workshops to assist landowners retain or enhance native vegetation.
- The Mason County Landslide Hazard Areas chapter of the Resource Ordinance contains some vegetative management requirements for danger tree removals. A proposed amendment would add the requirement of retaining the trunks (lying on the ground) of cut danger trees within the hazard area or buffer, unless they pose a disease risk to other trees. This tree trunk retention requirement is already contained within Mason County's Fish and Wildlife Habitat Conservation Areas chapter.
- Washington Sea Grant provides Blue Thumb Gardening workshops, site visits and educational materials to WRIA 16 watershed residents and businesses about vegetation management. Jefferson County's updated SMP has 'hazard tree' provision.

### **5.1.3 Validate stream typing designations**

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The Planning Unit recommends that the State Department of Natural Resources work with local entities to validate the stream typing designations in WRIA 16 with ground-truthing (i.e., field work) during seasonally appropriate times.

#### **Status—On Hold Pending Funding**

- There is no funding at this time. No actions can occur until funding is secured.
- 5.1.4 Adopt the Forest and Fish Adaptive Management Program

The Planning Unit encourages the State Forest Practices Board to swiftly adopt the Adaptive Management Program rule-making petitions presented by the Policy Committee of the Forest and Fish Program in accordance with WAC 222-12-045.

#### **Status—In Progress**

- The state rule-making process is underway. Many components in the Adaptive Management Program are included in the CR101 process which is largely complete; others are in process in the CR102 process.

### **5.1.5 Consider land preservation programs for critical habitat**

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The Planning Unit encourages Mason and Jefferson Counties to consider such tools as a Conservation Futures Program, the transfer of development rights, and mitigation banking to preserve critical habitat.

#### **Status—On Hold**

- Jefferson County has an existing Conservation Futures program and considered a Transfer of Development Rights (TDR) program but decided that other conservation efforts were more appropriate for the County.
- The Planning Unit will consider hosting a future meeting to explore these options within Mason County. It is not a near-term priority.

## Other Recommendations

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### Hood Canal

#### 6.1.1 Implement the WRIA 16 Surface Water Quality Monitoring Strategy

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The Planning Unit recommends that the WRIA 16 Surface Water Quality Monitoring Strategy be implemented.

Actions to implement this recommendation are listed under Recommendation 4.1.1.

#### 6.1.2 Minimize the discharge of effluent into Hood Canal

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The Planning Unit recommends that, due to the special concerns in Hood Canal, the Department of Ecology consider including permit conditions requiring new wastewater treatment plants to include a water reuse/recharge component which eliminates the discharge of effluent into Hood Canal. The Planning Unit also recommends that Ecology strongly consider options to minimize discharges into Hood Canal when permits are renewed.

##### Status—Ongoing

- Ecology has a policy that no new discharges will be allowed in Hood Canal.
- In 2011, The Planning Unit hosted a public forum to compare and contrast sewage systems and septic systems. The participants addressed the pros and cons of septic and sewer systems, including both the technical and the financial aspects.
- The Planning Unit remains concerned that the cost of sewers may exceed the benefits.

#### 6.1.3 Provide adequate toilet facilities at popular recreation sites

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The Planning Unit recommends that the state Departments of Natural Resources and Fish and Wildlife, the Parks Commission, and the U.S. Forest Service provide an adequate number of toilets and soap dispensers at their popular fishing, camping or other highly-used recreation sites, where appropriate.

##### Status—Ongoing

- Some private businesses provide porta-potties at popular fishing sites during fishing season.
- The Planning Unit, in collaboration with WDFW staff, developed a prioritized list of sites needing additional services and prepared a to-do list of tasks.
- The Planning Unit hosted numerous meeting to discuss options, including use of marine boating funds, to increase sanitary services. The Planning Unit also sent letters advocating for sanitary services to numerous agencies that own or manage properties where services are needed.
- WDFW worked with the fishing community to improve toilet facilities at popular fishing sites during the 2010 fishing season and increased enforcement efforts for both fishing regulations and sanitary needs; a specific emphasis was placed on the fishery on the Skokomish River. Lack of funding remains an obstacle for maintaining these services. The efforts by the fishing community since 2010 were key components of improved conditions.

#### **6.1.4 Assess and upgrade pump-out stations for recreational vehicles and boats**

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The Planning Unit recommends that Mason and Jefferson Counties consider partnering with other stakeholders (such as State Parks and the Interagency Committee on Outdoor Recreation) to assess the adequacy of campground and marine pump-out stations for recreation vehicles and boats and then upgrade the facilities where necessary, subject to available funding. *See also Recommendation 6.5.6.*

##### **Status—On Hold Pending Funding**

- Funding is not available for this task.
- Union Marina and the Port of Hoodspport have installed marine pump-out stations.
- Twanoh State Park upgraded its marine pump station.

#### **6.1.5 Use sewer systems instead of individual septic systems when necessary to protect public and environmental health**

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The Planning Unit recommends that the State Legislature develop specific provisions that allow for sewer systems in an Aquatic Rehabilitation Zone when necessary to protect the environment from degradation. Sewer systems in such locations would only be appropriate if they are necessary to protect basic health and safety or the environment. These sewer systems must also be financially feasible at rural densities. *This recommendation will be implemented in coordination with Recommendation 6.1.6.*

##### **Status—No Action Required**

- In 2011, The Planning Unit hosted a public forum to compare and contrast sewage systems and septic systems. The participants addressed the pros and cons of septic and sewer systems, including both the technical and the financial aspects.
- The Planning Unit remains concerned that the cost of sewers may exceed the benefits.

#### **6.1.6 Maintain zoning limits if new sewer systems are installed outside an Urban Growth Area**

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The Planning Unit recommends that if sewer systems are installed outside an Urban Growth Area to alleviate septic impacts in Hood Canal, Mason and Jefferson Counties maintain the growth, density and build-out limits found within their respective Comprehensive Plan and development regulations. *This recommendation will be implemented in coordination with Recommendation 6.1.5.*

##### **Status—No Action Required**

- In 2011, The Planning Unit hosted a public forum to compare and contrast sewage systems and septic systems. The participants addressed the pros and cons of septic and sewer systems, including both the technical and the financial aspects.
- This issue will be addressed in Mason County's SMP update.

#### **6.1.7 Prioritize Department of Transportation stormwater projects that would improve Hood Canal**

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The Planning Unit recommends that the Washington State Department of Transportation consider the sensitivity of Hood Canal in prioritizing stormwater projects.

##### **Status—Ongoing**

- See also Rec. 4.4.3

- The Planning Unit would like an update on PSP efforts to address road-related issues along Hood Canal.

### **6.1.8 Provide education on pesticide- and fertilizer-reduction and promote alternatives**

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The Planning Unit recommends that Mason and Jefferson Counties, the Washington State University Extension offices in Mason and Jefferson Counties, Mason and Jefferson conservation districts, Washington Sea Grant, and the Hood Canal Coordinating Council pursue funding to educate homeowners and businesses on the need to minimize use of pesticides (including herbicides and insecticides) and fertilizers and encourage the use of natural, slow-release fertilizers such as compost. Due to the special concerns of excess nitrogen and phosphorous in Hood Canal, the use of fertilizers should be strongly discouraged in the proximity of water (i.e. lakes, rivers, streams or marine waters).

#### **Status—Ongoing**

- Washington Sea Grant provides information and testing resources to participants of Blue Thumb Gardening, Clean and Simple, Septic Sense, Bivalves for Clean Water and Septic System Landscaping workshops. Sea Grant also incorporates phosphorus, carbon, nitrogen and silica reduction messages into citizen science monitoring, beach walks and site visits. Sea Grant is actively seeking additional funding to expand the scope of outreach and educational efforts regarding carbon.
- Jefferson County has addressed this in OSS classes.
- This topic was addressed in the WRIA 16 video “Who Speaks for Hood Canal” and the “Under the Hood” publication.
- Mason and Jefferson Conservation Districts offer nutrient management and integrated pest management technical advice in farm and conservation plans with landowners, as funding allows.
- Mason County Public Health provides information to homeowners regarding the use of pesticides and fertilizers.
- WSU Extension created an handout on fertilizer use in the Hood Canal watershed.
- Jefferson County shoreline/watershed educational materials frequently include this information for existing programs. The WSRC will help with landowner education for sustainable development. The updated Jefferson County SMP has policies to encourage minimal use of chemicals.

### **6.1.9 Communicate results of low dissolved oxygen studies**

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The Planning Unit recommends that the Puget Sound Action Team<sup>1</sup>, the Hood Canal Coordinating Council, and other agencies implementing projects to address low dissolved oxygen, continue to track, publish and update measurable results from all funded projects so that this information can be easily shared and accessed by other participating entities and the general public.

#### **Status—Ongoing**

- Clear roles within HCCC and PSP need to be defined for maintaining and providing ongoing updates of hypoxia in Hood Canal.
- The Planning Unit will carefully review the peer-reviewed reports from HCDOP which are expected to be available in 2012.

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<sup>1</sup> The Puget Sound Partnership replaced the Puget Sound Action Team in July 2007, thus responsibility for implementing recommendations involving the Puget Sound Action Team will be given to the Partnership.

### **6.1.10 Provide education on nitrogen and phosphorous reduction in household products**

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The Planning Unit recommends that Mason and Jefferson Counties expand existing education and outreach programs for residents to emphasize information on the benefits of avoiding nitrogen and phosphorous in household products, and to encourage retailers to offer these alternative products for sale in their stores.

#### **Status—In Progress**

- There is now a state-wide ban on phosphorous in household detergents.
- In Jefferson County, the SMP has policies to encourage minimal use of chemicals and the WSRC will help with landowner education for sustainable development. Also, TLC for Your Septic classes provide information on reducing impacts from nitrogen and phosphorous.
- Mason WSU Extension has prepared a handout regarding fertilizer use in the Hood canal watershed, which Mason County distributes during sanitary surveys.
- Washington Sea Grant continues to offer Clean and Simple workshops and other outreach efforts. The workshops provide watershed residents and businesses information about alternative household cleaning products, and provide participants the opportunity to create and take home least toxic, low nitrogen and low phosphorus products.

### **6.1.11 Involve Watershed Planning Units in the development of regional governance for Hood Canal**

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The Planning Unit recommends that, as specified in the coordinating requirements of RCW 90.88.030(1)(b), the Hood Canal Coordinating Council solicit participation from Watershed Planning Units in developing its regional governance study design, research, and recommendations. The Planning Unit's intent is to assist the Council in developing governance recommendations that will clarify the roles and responsibilities of the many agencies and organizations involved in Hood Canal efforts, eliminate duplication, and optimize service delivery efficiencies.

#### **Current Implementation Actions (2008)**

#### **Status—Complete**

- The regional governance study was completed and HCCC staff met with the Planning Unit regarding this issue.

### **6.1.12 Revise Shoreline Master Programs and plans**

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The Planning Unit recommends that Mason and Jefferson Counties review their respective Shoreline Master programs and development regulations, and revise them if necessary to minimize new structures on riparian habitat (as defined by RCW 79A.15.010 (7)). The Planning Unit recommends that Mason County pursue funding to revise its Shoreline Master Plan (SMP) to incorporate the recommendations of this watershed plan. The Planning Unit also recommends Ecology give high priority to funding this effort due to the designation of Hood Canal Aquatic Rehabilitation Zone One.

#### **Status—Ongoing**

- The Planning Unit provided comments on the Jefferson County SMP update. Ecology has conditionally approved the Jefferson County SMP pending some required changes, in particular having to do with finfish aquaculture.
- Mason County is in the process of updating its SMP. The Planning Unit will stay informed on this process and will provide comments on the draft SMP during public comment periods.

### 6.1.13 Promote alternatives to bulkheads and other shoreline structures

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In updating Shoreline Master Programs, the Planning Unit recommends that Mason and Jefferson Counties consider: 1) initiating a public education program to educate the public about the impacts of shoreline structures and the need to move toward alternatives; 2) developing and implementing incentives for removing and replacing hard bulkheads and other shoreline structures that impede natural processes; and 3) adopting stringent restrictions on the installation of new hard bulkheads or other shoreline structures that impede natural processes, as well as encouraging soft-armoring or other non-structural alternatives where feasible. *This recommendation will be implemented in coordination with Recommendation 6.3.4.*

#### Status—Ongoing

- Mason County discourages concrete bulkheads on saltwater due to erosion problems and lack of habitat value.
- Jefferson County conducts public education programs on the impacts of shoreline structures, and offers incentives for removing and replacing hard shoreline armoring. Jefferson County currently requires that shore defense works are designed and built to minimize disruption to shoreline processes. Property owners must rule out any “soft” armoring techniques before approval is given for a bulkhead, and approved bulkheads can be no larger than is necessary to adequately protect the property.
- The Jefferson County SMP has new policies/regulations to allow such structures when a need is demonstrated, but limit their proliferation. The WSRC is providing education regarding soft armoring options. The Planning Unit was briefed on this aspect of the Jefferson County’s draft SMP.
- Sea Grant has a program to educate homeowners on marine bulkheads.
- WDFW continues to encourage shoreline landowners to develop property with consideration of marine resources & habitat natural processes that retain beaches. The marine shoreline bank protection manual effort continues but slowly due to budget constraints. WDFW biologists continue to promote alternatives to bank protection, where feasible, and participate in shoreline master program updates as technical advisors.
- In Mason County, hard bulkheading is only allowed when the applicant has shown that softer armoring techniques are infeasible by providing a report or letter prepared by a professional engineer with expertise in shoreline hydraulics. Documentation (dated photos, professional reports, etc.) is required showing that the rate of erosion threatens existing upland improvements. Mason County also updated the handout regarding bulkhead permitting.
- Washington Sea Grant provides site visits, education and information to WRIA 16 residents about the impacts of shoreline structures and alternatives.

### 6.1.14 Consider marine drift cells and sediment dynamics when issuing land use permits

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The Planning Unit recommends that Mason and Jefferson Counties consider the impacts to and protection of marine drift cells and source sediments in issuing shoreline and other land use permits.

#### Status—Ongoing

- In Jefferson County, implementation of the updated SMP will include the use of the Shoreline Inventory & Characterization for permit review. New regulations reflect an increased understanding of sediment drift processes (i.e. no beach access structures along feeder bluff areas). The Shoreline Restoration Plan also includes opportunities for improving riparian/beach/shoreline functions.
- Mason County’s SMP update will address marine drift cells and sediment dynamics.

### **6.1.15 Establish local improvement districts to fund shoreline improvements**

The Planning Unit recommends that Mason and Jefferson Counties encourage shoreline landowners to establish local improvement districts to fund the protection and restoration of shorelines.

#### **Status—On Hold**

- Actions on this recommendation are delayed indefinitely due to the economic downturn.

### **6.1.16 Remove derelict gear and debris from Hood Canal and restore eelgrass beds**

The Planning Unit recommends that the state Department of Natural Resources and tribes be fully funded to remove derelict or abandoned anchors, boats, floats, nets, treated pilings, and other debris in Hood Canal to improve and restore eelgrass beds and other natural habitat.

#### **Status—Ongoing**

- The Skokomish Tribe, DNR, WDFW, Sea Grant, shellfish growers, land trusts, the Northwest Straits Commission and the Hood Canal Salmon Enhancement Group (HCSEG) are working on removing creosote pilings, derelict debris, and gear removal as well as eelgrass restoration.
- WDFW continues existing programs on derelict gear removal.
- In cooperation with WDFW and Tribes, Washington Sea Grant co-facilitated a clean-up of 7 acres of marine debris in Quilcene Bay. Washington Sea Grant also helps facilitate clean-up of WRIA 16 regional beaches throughout the year with scouts, youth, adults and community groups. Twice a year Washington Sea Grant and volunteers collect microplastic data from key deposition beaches in WRIA 16 for long term analysis.

### **6.1.17 Separate the South Shore Sub-basin from WRIA 14**

The Planning Unit recommends that the Legislature separate WRIA 14 into two WRIs (14A and 14B) and that the south shore of Hood Canal (which is included in the WRIA 16 Planning Process under an agreement between WRIs 14 and 16) be designated as WRIA 14B. The Planning Unit also recommends that WRIA 14B continue to be administered as part of WRIA 16 during plan implementation.

#### **Status—Complete**

- The legislature adopted legislation in 2009 that separated WRIA 14 and designated WRIA 16 as the planning entity for WRIA 14b.

### **6.1.18 Evaluate the impact of marine mammals on Hood Canal's water quality**

The Planning Unit supports an evaluation of marine mammals' impacts on fecal and nutrient loading in Hood Canal.

#### **Status—No Action Required**

- No action required. The Planning Unit remains supportive of an evaluation.

## Funding

### 6.2.1 Fund the implementation of watershed plans through the State

The Planning Unit recommends that the Legislature provide stable, ongoing funding for the implementation of watershed plans.

#### Status—Ongoing

- WRIA 16 and individual Planning Unit members continue to advocate for ongoing funding.

### 6.2.2 Research other opportunities for funding watershed plan implementation

The Planning Unit recommends that as part of its “Governance Study,” the Hood Canal Coordinating Council include considerations for creating a stable, on-going funding source to implement the recommendations of the watershed plan or similar programs.

#### Status—Partially Complete

- The governance study is complete; it did not address stable, on-going funding sources.
- \* The WRIA 16 Planning Unit requested a Near Term Action in the 2012 Puget Sound Partnership Action Agenda Update to address WRIA16/14b funding.

## Education and Outreach

### 6.3.1 Provide education on alternatives to permit-exempt wells

The Planning Unit recommends that the Department of Ecology work with the Planning Unit to develop and implement an ongoing education/outreach effort for current and future water users on state laws governing the use of permit-exempt groundwater withdrawals. The education and outreach program should encourage the development of small public water systems as an alternative to the proliferation of permit-exempt wells. The Planning Unit also recommends that the benefits of shared water systems for new development be advocated through existing outreach programs.

#### Status—On Hold Indefinitely

- DOH is discouraging proliferation of small water systems and Ecology is discouraging the proliferation of exempt wells. There needs to be a clear and consistent message before an education program can be established.

### 6.3.2 Provide education on septic system, pet waste, and livestock waste management

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The Planning Unit recommends that the Mason and Jefferson Counties continue to give information to realtors and homeowners on fecal coliform/pathogen and nutrient impacts and prevention strategies, including proper septic system inspection, operation and maintenance, and pet waste management. In addition, the Planning Unit recommends that conservation districts and Washington State University Extension offices continue to provide information about livestock waste management and best management practices. *This recommendation will be implemented in coordination with Recommendation 6.4.4.*

#### Status—Ongoing

- WSU Extension, Sea Grant, Mason and Jefferson Counties, and Mason and Jefferson Conservation Districts provide information on livestock waste management, pet waste management, and septic system management.
- Mason WSU Extension provides regular OSS workshops (similar to septic 101), rainwater workshops, and works with 4H and other clubs to provide training on livestock management.
- Mason Conservation District and Jefferson County Conservation District emphasize nutrient management education to livestock, as well as provide technical assistance to develop and implement conservation plans that protect water quality and reduce soil erosion
- Jefferson WSU Extension provides “Welcome to the Watershed” homeowner packets in Jefferson County; this may be extended to Mason County depending on funding.
- The Skokomish Tribe is working on a nonpoint source handbook for landowners.
- CDs and WSU Extensions work on manure management issues.
- The Planning Unit encourages Mason County to adopt a non-point pollution ordinance.
- Mason and Jefferson Conservation Districts continue to provide technical assistance on livestock waste management and best management practices, as funding allows.
- Mason County Public Health continues to provide educational materials to homeowners during sanitary surveys and through the OSS O&M program.
- Jefferson County provides education on proper management of septic systems, pet waste, and livestock waste through classes, newsletters, the website, and upon request.
- Washington Sea Grant provides technical assistance to Realtors and homeowners on septic system and pet waste issues thru site visits, events and educational forums.
- Mason County completed a survey of existing education and outreach materials, programs, and activities. The Mason County Stormwater Task Force reviewed education and outreach alternatives and recommended an on-going program that would cost approximately \$160,000 per year. The Task Force also recommended that an education and outreach program be developed to clearly identify how the funds are to be spent, and evaluate the effectiveness of activities and materials.

### 6.3.3 Encourage landowners to maintain native vegetation

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The Planning Unit recommends that Mason and Jefferson Counties initiate public education encouraging landowners to maintain native vegetative cover, which will improve stormwater infiltration. *This recommendation will be implemented in coordination with Recommendations 4.4.2 and 5.1.2.*

#### Status—Ongoing

- WSU Extension has many relevant educational materials.
- Jefferson County is exploring incentives to encourage people to keep vegetative material on site
- The Nearshore Partnership has conducted a literature review quantifying benefits of vegetative cover, including water retention.

- Mason and Jefferson Conservation Districts hold technical advisory workshops to assist landowners retain or enhance native vegetation.
- Mason and Jefferson Conservation Districts continue to hold annual native plant sales.
- The “Under the Hood” publication addresses native vegetation.
- Washington Sea Grant continues to provide Blue Thumb Gardening program workshops, shelf talkers and site visits throughout the WRIA 16 watershed.

### **6.3.4 Provide permit applicants with information on alternatives to bulkheads**

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**The Planning Unit recommends that Mason and Jefferson Counties and the Washington Department of Fish and Wildlife provide all applicants for bulkhead or armoring permits educational materials that explain why bulkheads are discouraged and provide information on beneficial alternatives. *This recommendation will be implemented in coordination with Recommendation 6.1.13.***

#### **Status—Ongoing**

- Jefferson County conducts public education programs on the impacts of shoreline structures, and offers incentives for removing and replacing hard shoreline armoring. Jefferson County currently requires that shore defense works are designed and built to minimize disruption to shoreline processes. Property owners must rule out any “soft” armoring techniques before approval is given for a bulkhead, and approved bulkheads can be no larger than is necessary to adequately protect the property.
- The Jefferson County SMP has new policies/regulations to allow such structures when a need is demonstrated, but limit their proliferation. The WSRC is providing education regarding soft armoring options
- Sea Grant has a program to educate homeowners on marine bulkheads.
- WDFW continues to encourage shoreline landowners to develop property with consideration of marine resources & habitat natural processes that retain beaches. The marine shoreline bank protection manual effort continues but slowly due to budget constraints. WDFW biologists continue to promote alternatives to bank protection, where feasible, and participate in shoreline master program updates as technical advisors.
- In Mason County, hard bulkheading is only allowed when the applicant has shown that softer armoring techniques are infeasible by providing a report or letter prepared by a professional engineer with expertise in shoreline hydraulics. Documentation (dated photos, professional reports, etc.) is required showing that the rate of erosion threatens existing upland improvements. Mason County also updated the handout regarding bulkhead permitting.
- Washington Sea Grant provides site visits, education and information to residents about the impacts of shoreline structures and alternatives.

### **6.3.5 Produce a report card on the state of the watershed**

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**The Planning Unit recommends that the Planning Unit, with assistance from the Department of Ecology, develop a periodic report card on the state of the watershed and that this report be posted on the Department of Ecology web site.**

#### **Status**

- The Planning Unit produced the “Under the Hood” publication in 2011 in lieu of a report card.
- The Planning Unit hopes the Partnership will continue to produce a detailed State of the Sound report that addresses specific needs in Hood Canal.
- The NW Indian Fisheries Commission has a 5-year report on the state of the watershed. The WRIA 16 geographic area is scheduled to be completed in 2012; WRIA 14b will be included at a later date.

## Enforcement

### 6.4.1 Reduce illegal water withdrawals and water quality violations

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The Planning Unit recommends that the state legislature adequately fund the Department of Ecology's enforcement operations to stop egregious illegal water withdrawals and diversions as well as water quality violations. The Department of Ecology should also coordinate with appropriate Planning Unit members to prioritize and initiate actions to bring those who are illegally withdrawing water into compliance.

#### Status—On Hold

- Ecology's current enforcement and compliance efforts with respect to illegal water withdrawals, diversions, and water quality violations are complaint-driven.
- The Planning Unit would like data on the number of violations in the watershed.
- Local governments and Ecology need increased funding for compliance activities.
- Mason County refers complaints regarding illegal water withdrawals to Ecology.
- The Planning Unit will delay further action on this recommendation until the state economy improves.

### 6.4.2 Establish penalties for removing large woody debris from streams

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The Planning Unit recommends that state and local governments establish clear civil penalties to better enforce existing prohibitions to removing large woody debris from streams.

#### Status—Ongoing

- This will be addressed in Mason County's SMP update.
- There are state restrictions and penalties but they are not being enforced.
- Local governments need increased funding for compliance activities.

### 6.4.3 Adequately fund compliance and enforcement activities for existing laws and regulations

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The Planning Unit recognizes that full compliance with existing laws and regulations would address many of the issues identified in this watershed plan. The Planning Unit recommends that the State Legislature and the Boards of County Commissioners for Mason and Jefferson Counties give high priority to adequately funding compliance and enforcement activities.

#### Status—On Hold Indefinitely

- Action on this recommendation is delayed indefinitely due to the economic downturn.
- The Mason Stormwater Task Force identified enforcement as priority and discussed permanent funding for a code enforcement position. A grant has been offered to Mason County that would provide funding for a code enforcement position for a limited time, and the position would have a marine shoreline focus.

## 6.4.4 Enforce illegal grey-water and black-water discharges

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The Planning Unit recommends that Mason and Jefferson Counties increase enforcement of illegal grey-water and black-water discharges. *This recommendation will be implemented in coordination with Recommendation 6.3.2.*

### Status—On Hold Pending Funding

- Mason and Jefferson Counties' current enforcement of illegal grey-water and black-water discharges is complaint-driven.
- Counties are enforcing grey-water and black-water violations if encountered during sanitary and shoreline surveys.
- Mason County tracks all complaints, sanitary survey/dye tests and fecal coliform results. Mason County can run a report in Tidemark (permit tracking software) of all on-site sewage complaints within a specific time frame. Mason County can then use GIS to identify those that are within WRIA 16/14b.
- In Jefferson County the SMP has policy/regulation to disallow release of untreated effluents, solid & liquid wastes.
- Local governments need increased funding for compliance activities.

## Support for Ongoing Activities

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### 6.5.1 Continue existing stormwater education and outreach programs

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The Planning Unit recommends that the Puget Sound Action Team, Washington Sea Grant, and Washington State University Extension continue their stormwater education and outreach programs in the watershed.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### 6.5.2 Revise critical areas ordinances to protect Hood Canal and the nearshore environment

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The Planning Unit recommends that Mason and Jefferson Counties continue to revise their critical areas ordinances based on best available science to provide adequate buffers, require compliance with Habitat Management Plans, establish and enforce improved stormwater treatment and controls, and maintain undeveloped marine drift cells. The Planning Unit also recommends that each county develop a matrix of critical areas buffers and setbacks as a single, consolidated source of reference.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### 6.5.3 Minimize the number of new docks and stream crossings

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The Planning Unit also recommends that Mason and Jefferson Counties continue to encourage multiple-user docks and stream crossings to minimize the number of structures that impair habitat.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### **6.5.3 Revise development regulations to ensure consistency with the State's fish passage guidelines**

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The Planning Unit recommends that Mason and Jefferson Counties continue to revise their development regulations to ensure they are consistent with the Washington Department of Fish and Wildlife's fish passage guidelines (<http://wdfw.wa.gov/hab/engineer/habeng.htm>).

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### **6.5.4 Continue Master Gardener focus on minimizing pesticides and fertilizers**

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The Planning Unit recommends the Master Gardener curriculum continue to focus on minimizing the use of pesticides (including herbicides and insecticides) and fertilizers and emphasizing alternatives.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### **6.5.5 Assess adequacy of marine pump-out stations**

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The Planning Unit supports the Hood Canal Coordinating Council's efforts to assess whether the number of marine septic pumping stations are adequate to serve recreational boating in Hood Canal. The assessment should determine if the existing sites are adequately maintained and whether new sites are needed in specific areas. The assessment should also include recommendations for public education. See also *Recommendation 6.1.4*.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### **6.5.6 Participate in efforts to address low dissolved oxygen in Hood Canal**

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The Planning Unit supports the activities of the Hood Canal Dissolved Oxygen Program and recommends that Planning Unit members continue participating in this and other regional efforts to address low dissolved oxygen issues. The Planning Unit also encourages HCDOP to address the impacts of low dissolved oxygen on ecological communities as well as on entire ecosystems.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

### **6.5.7 Support water clean-up efforts**

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The Planning Unit supports water resource clean-up efforts in the watershed, including TMDLs and shellfish protection districts.

No specific actions are required to implement this recommendation because it supports existing efforts. The Planning Unit will advocate for continuation of existing efforts and will support efforts to obtain necessary resources, including funding.

## Information Gathering

### 6.6.1 Conduct follow-up studies to fill information gaps

The Planning Unit recommends that the following studies be completed, as funding allows. The Planning Unit recommends that Planning Unit members and other appropriate entities cooperatively pursue funding to complete these studies:

- A study of the comparative impact on impaired rivers and streams of withdrawing water from deeper confined aquifers as opposed to withdrawing water from shallow, unconfined aquifers thought to be in more direct hydraulic continuity with streams.
- A modeling or research effort to predict more specifically the stream flow impacts from climate change on WRIA 16 streams;
- Preparation of a groundwater quality monitoring strategy;
- Preparation of a groundwater quantity monitoring strategy;
- Exploring additional water storage opportunities; and
- GPS mapping and typing of wetlands by trained staff on routine site visits.

#### Status—Ongoing

- The Planning Unit prepared a groundwater monitoring strategy that addresses both water quality and quantity. Groundwater monitoring is conducted by Mason and Jefferson PUDs.
- The River and Stream Impairment Analysis was completed and includes recommendations for additional assessment.
- A Hood Canal Water Quality Monitoring strategy has been completed.
- Wetland mapping and other GIS work is still in need of funding in both Mason and Jefferson Counties.
- WDFW will keep the Planning Unit apprised of their findings on climate change impacts to streams and fish.

### 6.6.2 Develop a shared database of water-related data

The Planning Unit recommends that the Department of Ecology provide technical assistance to the Planning Unit to prepare a plan for the development of a shared database of water-related data, including GIS data sets. The plan will assign responsibilities to various Planning Unit members for data gathering, entry and maintenance of the database.

#### Status—Delayed

- Actions on this recommendation are on hold due to lack of resources as a result of the economic downturn.
- The Planning Unit will discuss alternative methods to store and share data with the Partnership and HCCC.

### 6.6.3 Develop a clearinghouse of data and information on Hood Canal

The Planning Unit recommends that the Legislature create and fund a clearinghouse for all data and information gathered on Hood Canal. The information should be housed at a single location (such as the State Library) and made easily accessible to the public.

#### Status—Delayed

- Actions on this recommendation are on hold due to lack of resources as a result of the economic downturn.
- The Planning Unit asked the Partnership to include this in the Action Agenda.

## **6.6.4 Archive studies on Hood Canal within the Timberland Library System**

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The Planning Unit recommends that copies of all publications and documents regarding Hood Canal be given to the Timberland Library System for easy access by local residents.

### **Status—Delayed**

- Some materials have been supplied to libraries but many have not.
- The Planning Unit will work with library staff to develop a protocol for how to submit documents and have them categorized or referenced electronically.
- The Planning Unit publications are on the Ecology website and will be included in a new WRIA 16 page within Mason County's website.

## **Plan Implementation**

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### **6.7.1 Improve coordination and communication among water quality and water resource staff at both Mason and Jefferson Counties**

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The Planning Unit recommends that Mason and Jefferson Counties implement mechanisms to improve coordination and communication between water quality and water resource staff (including land use, public works and environmental health staff). This could range from improved channels of communication to consolidating these staff into a single department.

### **Status—Delayed**

- No actions have been taken on this recommendation.

### **6.7.2 Incorporate Watershed Plan recommendations into local Comprehensive Plans**

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The Planning Unit encourages Mason and Jefferson Counties to incorporate the watershed plan recommendations, where appropriate, into the local Comprehensive Plan, including resource ordinances and development regulations.

### **Current Implementation Actions (2008)**

#### **Status**

- The Planning Unit completed a summary of areas of overlap and discrepancies between the WRIA 16 Watershed Management Plan and relevant Mason and Jefferson County land use plans and ordinances.
- The Planning Unit will address this during Comp Plan updates in both Mason and Jefferson Counties. In Jefferson County the next update is scheduled for 2016; in Mason County it is scheduled for 2015.
- The Planning Unit will work with planning staff from both counties to identify a process for review of significant development proposals or revisions to significant policies (such as CAOs, SMPs, etc.)