

**The Mason County Voluntary  
Stewardship Program helps local  
farmers voluntarily conserve our**

## **WORK PLAN**

**Voluntary Stewardship Program**

**6/19/2018**

**Mason County, Washington**

**County's natural resources through good  
stewardship practices on the land. The  
Mason County Voluntary Stewardship  
Program helps local farmers voluntarily  
conserve our County's natural resources  
through good stewardship practices on  
the land. The Mason County Voluntary  
Stewardship Program helps local  
farmers voluntarily conserve our  
County's natural resources through good  
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the land. The Mason County Voluntary  
Stewardship Program helps local**



# Mason County

State of Washington

411 N. 5<sup>th</sup> Street

Shelton, Washington 98584



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## MASON CONSERVATION DISTRICT

450 W. Business Park Road

Shelton, Washington 98584

360/427-9436 ~ [www.masoncd.org](http://www.masoncd.org)

*"Promoting the sustainable use, conservation and restoration of natural resources for future generations"*

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ACRONYM	
BMP	BEST MANAGEMENT PRACTICE
CA	CRITICAL AREAS
CARA	CRITICAL AQUIFER RECHARGE AREA
FWHCA	FISH AND WILDLIFE HABITAT CONSERVATION AREA
GMA	GROWTH MANAGEMENT ACT
HMP	HABITAT MANAGEMENT PLAN
ISP	INDIVIDUAL STEWARDSHIP PLAN
MCC	MASON COUNTY CODE
MEP	MASON ENVIRONMENTAL PERMIT
PHS	PRIORITY HABITAT SPECIES
RCW	REVISED CODE OF WASHINGTON
SMA	SHORELINE MANAGEMENT ACT
SMP	SHORELINE MASTER PROGRAM
VSP	VOLUNTARY STEWARDSHIP PROGRAM
WAC	WASHINGTON ADMINISTRATIVE CODE
WDFW	WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
WRIA	WATER RESOURCE INVENTORY AREA

## I. DEFINITIONS

**AS** per the GMA statute (RCW 36.70A.703), the VSP utilizes the definition of the Shoreline Management Act (RCW 90.58.065) for agricultural activities. Other relevant definitions from Mason County's Resource Management Code, Chapter 8.52 MCC, and Mason County's Zoning Code, Chapter 17.06 MCC, are also presented here.

**AGRICULTURAL ACTIVITIES** (as per RCW 90.58) means agricultural uses and practices including, but not limited to: producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

**AGRICULTURAL EQUIPMENT** and **AGRICULTURAL FACILITIES** (as per RCW 90.58) includes, but is not limited to: (i) The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; upland finfish rearing facilities; water diversion, withdrawal, conveyance, and use equipment and facilities including but not limited to pumps, pipes, tapes, canals, ditches, and drains; (ii) corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands; (iii) farm residences and associated equipment, lands, and facilities; and (iv) roadside stands and on-farm markets for marketing fruit or vegetables.

**AGRICULTURAL LAND** (as per RCW 90.58) means those specific land areas on which agriculture activities are conducted.

**AGRICULTURAL PRODUCTS** (as per RCW 90.58) includes but is not limited to horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock including both the animals themselves and animal products including but not limited to meat, upland finfish, poultry and poultry products, and dairy products.

**AGRICULTURAL RESOURCE LAND** (as per Section 17.06.010 MCC) means land designated by Mason County as agricultural lands of long-term commercial significance.

**COMMISSION** (as per RCW 36.70A.703) means the Washington State Conservation Commission as defined in RCW 89.08.030.

**CRITICAL AREAS** (as per RCW 36.70A.030(5)) include the following areas and ecosystems: (a) Wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas.

"Fish and Wildlife Habitat Conservation Areas" does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company.

**CRITICAL AQUIFER RECHARGE AREAS** (as per WAC 365-190-030(3)) are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

**DIRECTOR** (as per RCW 36.370A.703) means the Executive Director of the Washington State Conservation Commission.

**EROSION HAZARD AREAS** (as per WAC 365-190-120(5)) includes areas likely to become unstable, such as bluffs, steep slopes, and areas with unconsolidated soils.

**ENHANCE** or **ENHANCEMENT** (as per RCW 36.70A.703) means to improve the processes, structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas.

**FREQUENTLY FLOODED AREAS** (as per Section 8.52.030 MCC) means lands in the floodplain subject to a one percent or greater chance of flooding in any given year, including floodplain related areas of avulsion risk. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands and the like.

**GEOLOGICALLY HAZARDOUS AREAS** (as per WAC 365-190-120(1)) means areas that because of the susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

**HAMLET** (as per WAC 365-196-425) are isolated rural areas of more intense development, including commercial, industrial, residential, or mixed-use areas. They are a subcategory of LAMIRDs (Limited Areas of More Intense Rural Development) as defined under the Growth Management Act. These areas were recognized during the initial adoption of the Comprehensive Plan to permit small-scale development and prevent low density sprawl. Hamlets in Mason County include: Bayshore, Dayton, Deer Creek, Grapeview, Lilliwaup, Matlock, Potlatch, Spencer Lake, and Tahuya.

**INTERFACE** is the place at which independent and often unrelated systems meet and act on or communicate with each other.<sup>1</sup>

**LANDSLIDE HAZARD AREAS** (as per WAC 365-190-120(6)) areas include areas subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any

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<sup>1</sup> "Interface." Merriam-Webster.com, Merriam-Webster, [www.merriam-webster.com/dictionary/interface](http://www.merriam-webster.com/dictionary/interface). Accessed 25 May 2018

areas susceptible to landslide because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors.

**LONG TERM COMMERCIAL FORESTS** are lands primarily useful for growing trees, including Christmas trees subject to the excise tax imposed under RCW 84.33.100 through 84.33.140, for commercial purposes, and that has long-term commercial significance for growing trees commercially.

**PARTICIPATING WATERSHED** (as per RCW 36.70A.703) means a watershed identified by a county under RCW 36.70A.710(1) to participate in the program.

**PRIORITY WATERSHED** (as per RCW 36.70A.703) means a geographic area nominated by the county and designated by the Commission.

**PROGRAM** (as per RCW 36.70A.703) means the Voluntary Stewardship Program established in RCW 36.70A.705.

**PROTECT** or **PROTECTING** (as per RCW 36.70A.703) means to prevent the degradation of critical area functions and values existing as of July 22, 2011.

**RECEIPT OF FUNDING** (as per RCW 36.70A.703) means the date a county takes legislative action accepting any funds as required in RCW 36.70A.715(1) to implement the program.

**STATEWIDE ADVISORY COMMITTEE** (as per RCW 36.70A.703) means the statewide advisory committee created in RCW 36.70A.745.

**TECHNICAL PANEL** (as per RCW 36.70A.703) means the Directors or Director designees of the following agencies: the Department of Fish and Wildlife; the Department of Agriculture; the Department of Ecology; and the Commission.

**WATERSHED** (as per RCW 36.70A.703) means a Water Resource Inventory Area, salmon recovery planning area, or a subbasin as determined by a county.

**WATERSHED GROUP** or **WORK GROUP** (as per RCW 36.70A.703) means an entity designated by a county under the provisions of RCW 36.70A.715.

**WETLANDS** (as per WAC 365-196-200(22)) means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

**WORK PLAN** (as per RCW 36.70A.703) means a watershed work plan developed under the provisions of RCW 36.70A.720.

## 2. MASON COUNTY – OVERVIEW

**MASON** County is situated along the southwestern portion of Puget Sound, and encompasses roughly 1,051 square miles (672,715 acres). It borders on Jefferson County to the north, Grays Harbor County to the west and southwest, Thurston County to the southeast, Pierce County to the east, and Kitsap County to the northeast.

**Figure 1 Mason County Location Map**



Source: [www.worldatlas.com](http://www.worldatlas.com)

It is a predominantly rural county despite the urban spillover from both Thurston and Kitsap Counties. The County has one incorporated City, Shelton, and two Native American Tribes, the Skokomish and the Squaxin Island Tribes.

Three geological provinces combine to form Mason County. They include the Puget Sound Lowland, the Olympic Mountains, and the Black Hills. There are also a total of 109 waterbodies considered to be shorelines of the state including two marine waterbodies (Hood Canal and South Puget Sound), 64 rivers and streams, 44 lakes nearly 709 linear miles of shoreline have been identified within the County.<sup>2</sup>

Additionally, five watersheds exist within the County: Queets-Quinault, Lower Chehalis, Skokomish, Hood Canal, and Puget Sound. Watersheds are physically divided areas that drain into

*The way land is developed, undeveloped or farmed is a reflection of its population distribution. The Washington Office of Financial Management projects 81,616 people will live in Mason County by 2026 – a 31% increase*

**Figure 2 Mason County Town Hall, 1914**

Source: Mason County Historical Society

<sup>2</sup> Mason County Final Draft Shoreline Inventory and Characterization Report October 2012

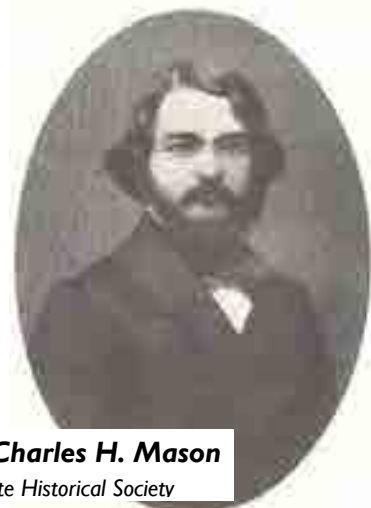


particular bodies of water. Watersheds are also grouped into Water Resource Inventory Areas, also known as a WRIA. A WRIA is a legislatively created boundary of an area for the purposes of formal water resource planning. These five watersheds have been grouped into five WRIsAs for planning purposes: Kennedy-Goldsborough (WRIA 14), Kitsap (WRIA 15), Skokomish-Dosewallips (WRIA 16), Queets-Quinault (WRIA 21), and Lower Chehalis (WRIA 22).<sup>3</sup> Mason County's rich natural resources and open spaces prevail across its landscape. Combined national, state, and private forests currently account for about 61%<sup>4</sup> of the County's land. Mineral deposits underlie its top soils, and both agricultural and aquaculture areas contribute to the County's natural beauty and its economy.



Mason County also includes substantial open space that hosts wildlife habitat, undeveloped natural areas, and many developed park and recreation sites.<sup>5</sup>

A report published in 1960 by the United States Department of Agriculture provides an interesting discussion of Mason County's unique history, including its agricultural beginnings. The County was established in March of 1854 and originally named Sawamish County after a tribe of Indians in Thurston County. At that time, the County included the western part of Thurston County to the Hood Canal. The name didn't change until 1864 when it became Mason County, in honor of the first secretary of the Territory of Washington, Charles H. Mason, who served from 1853 until his death in 1859.



**Figure 3 Charles H. Mason**  
WA State Historical Society

*In 1903 Mason County had a population of about 4,471. By 1950 the population was 15,022, according to the United States Census. One-third is urban, mainly in and around Shelton. The rest is rural. The growth in population has been related to the expansion of the lumbering and other wood-using industries. Agriculture has only a minor place in the economy of Mason County because the soils are not suitable for farming or the terrain is too rugged. Only about 7.6 percent of the county was in farms in 1954. The main farming communities are around Shelton, Matlock, Dayton, Kamilche, Grapeview, Belfair, along the Pickering Passage, and in the*

<sup>3</sup> Mason County Comprehensive Plan, 2005

<sup>4</sup> Mason County Assessor's Office, 2015, and Mason County Department of Community Services

<sup>5</sup> Mason County Comprehensive Plan, 2016

*Skokomish River Valley. Much of the land on the average farm is covered by second growth forest or is in stump pastures. Dairying is the most important type of agriculture; poultry raising is second. Hay is the predominant crop, but grapes are produced in large quantities. Growing of berries and fruits and raising of beef cattle are of lesser importance.<sup>6</sup>*

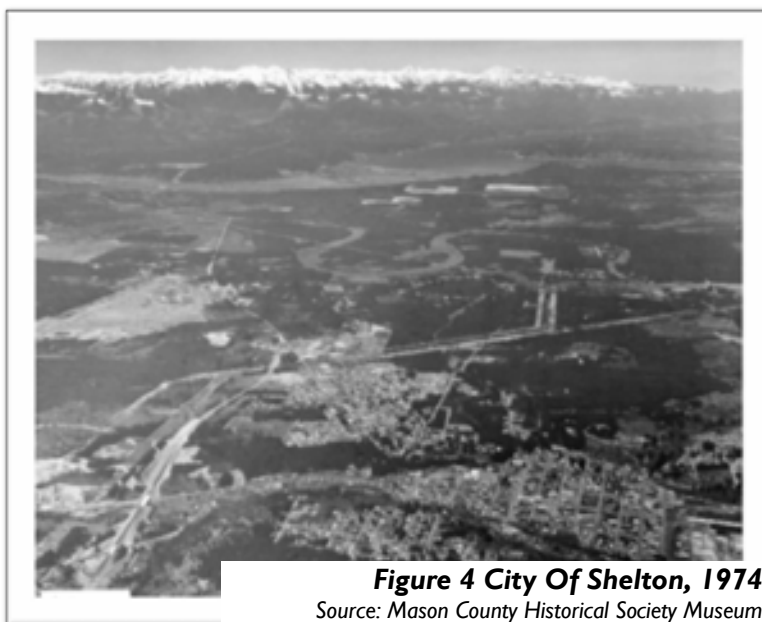
**Table 1 Land Use Categories<sup>7</sup>**

Land Use	Total Acres	% Total
<b>Residential</b>	40,201	8.8%
<b>Commercial</b>	4,361	1.0%
<b>Transportation</b>	2,440	0.5%
<b>Utilities</b>	1,980	0.4%
<b>Government</b>	8,638	1.9%
<b>Parks</b>	1,968	0.4%
<b>Agri/Aquaculture</b>	7,633	1.7%
<b>Mining</b>	147	0.03%
<b>Forest</b>	276,848	60.7%
<b>Vacant</b>	111,912	24.5%
<b>Total</b>	456,128	100%

percentage of total land use with the increased agriculture acres is still approximately 2%.

With that being said, the long history of agriculture and its perseverance in the community continue to reflect its importance in Mason County's culture and economy. Programs that support the protection of farming, such as the Voluntary Stewardship Program, provide Counties with additional opportunities to facilitate and even expand this industry in the future.

Agriculture remains a relatively small percentage of Mason County's overall division of land use when compared to the way the rest of the County has developed. As Table 1 shows, less than 2% of the County is actually designated as agricultural. There are other portions of the County where agricultural activities are permitted, but not designated as agriculture that must also be included. Information more inclusive of smaller farming activities on other land uses was extracted from the Washington Department of Agriculture's (WDA) 2010 crop survey data. The total number of acres reflecting agricultural activities incorporating the WDA survey is approximately 8,015; however the



**Figure 4 City Of Shelton, 1974**

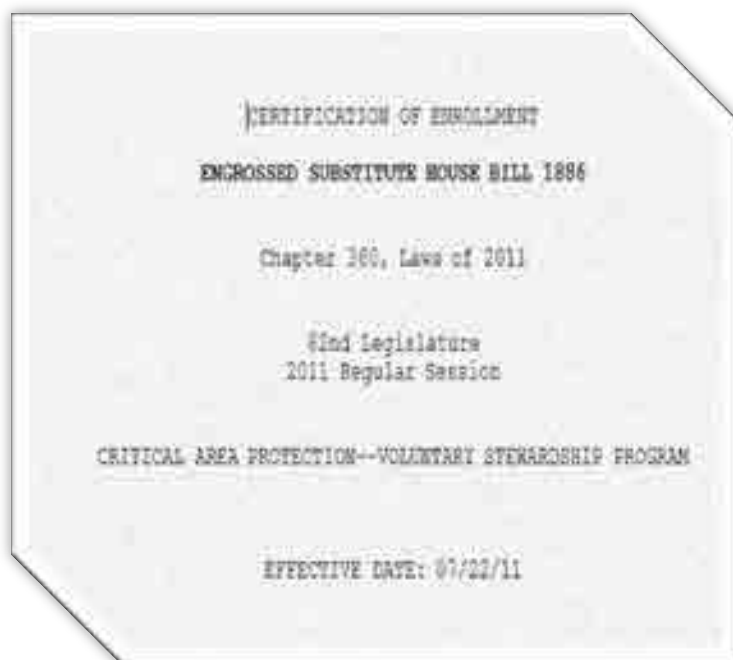
Source: Mason County Historical Society Museum

<sup>6</sup> Soil Survey of Mason County, Washington Report by A.O. Ness, Soil Conservation Service, United States Department of Agriculture, and R. H. Fowler, Washington Agricultural Experiment Stations, 1960

<sup>7</sup> Mason County Assessor's Office, 2015, and Mason County Department of Community Services

### 3. INTRODUCTION TO THE VOLUNTARY STEWARDSHIP PROGRAM

**ENACTED** by the Legislature in 2011, the Voluntary Stewardship Program (VSP) is an alternative to traditional top-down regulations for the protection of critical areas on agricultural land. Enabled under the Washington State Growth Management Act (RCW 36.70A), the VSP uses a collaborative, stakeholder-driven process to identify, coordinate, and build on existing programs and practices that address agricultural effects on critical areas. The Program directs that each participating County create a Work Plan to include goals and benchmarks for protection and enhancement of critical areas through **voluntary, site-specific stewardship plans**, while also maintaining and enhancing the long-term viability of agriculture and reducing the conversion of farmland to other uses.



Mason County has opted in to the VSP and reached out to stakeholders forming the VSP Watershed Work Group to prepare the Work Plan. Within the Work Plan, the Group will develop strategies to achieve the goals and benchmarks, together with methods of monitoring and techniques of adaptive management. The Legislature intended counties and VSP Watershed Work Groups to “*focus and maximize voluntary incentive programs [that] encourage good riparian and ecosystem stewardship as an alternative to historic approaches used to protect critical areas.*”<sup>8</sup> (Appendix Critical Areas) The VSP is a voluntary approach to 1) protect critical areas, 2) maintain and enhance the viability of agriculture, and 3) promote the voluntary enhancement of critical areas through incentive-based measures. The Program’s Goals are:

- a. *Promote plans to protect and enhance critical areas within the area where agricultural activities are conducted, while maintaining and improving the long-term viability of agriculture in the state of Washington and reducing the conversion of farmland to other uses;*
- b. *Focus and maximize voluntary incentive programs to encourage good riparian and ecosystem stewardship as an alternative to historic approaches used to protect critical areas;*

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<sup>8</sup> RCW 36.70A.700(2)(b)

- c. *Rely upon RCW 36.70A.060 for the protection of critical areas for those counties that do not choose to participate in this program;*
- d. *Leverage existing resources by relying upon existing work and plans in counties and local watersheds, as well as existing state and federal programs to the maximum extent practicable to achieve program goals;*
- e. *Encourage and foster a spirit of cooperation and partnership among county, tribal, environmental, and agricultural interests to better assure the program success;*
- f. *Improve compliance with other laws designed to protect water quality and fish habitat; and*
- g. *Rely upon voluntary stewardship practices as the primary method of protecting critical areas and not require the cessation of agricultural activities.<sup>9</sup>*

*Agriculture operations that receive incentives to keep land in farm production and are provided protections beyond general purpose rural zoning are less likely to be rezoned, annexed, subdivided, or otherwise converted out of agricultural use.*

*Designating Farmland Around Puget Sound,  
American Farmland Trust, 2014*

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<sup>9</sup> RCW 36.70A.700

## 4. OVERVIEW AND HISTORY OF VSP

**IN** 2007, the legislature passed Substitute Senate Bill 5248 with two primary objectives – finding a balance between the regulatory requirements and productive use of critical areas; and the preservation of viable agricultural lands. Toward that end, the Bill

- enacted a moratorium on new critical areas regulations on agricultural uses defined in the Bill between May 1, 2007 and June 30, 2010. In 2010, the moratorium was extended until June 30, 2011 so the work could be completed.
- directed the William D. Ruckelshaus Center, a neutral policy consensus center operated by Washington State University and the University of Washington, to convene the chief participants at the negotiating table and search for “common ground.” The Agriculture and Critical Areas Committee, comprised of representatives from agricultural and environmental organizations, counties, and tribes, was tasked to conduct a fact finding mission, bring together stakeholders on this issue for discussion of the issues, and develop a recommendation to the legislature. The Committee met for two years discussing potential solutions to protect and restore critical areas while preserving agricultural viability.

*To ensure that productive agriculture and a healthy environment can co-exist, the Committee developed a shared vision. Desired outcomes for the future in this vision include opportunities for the next generation of farmers and fishermen to earn a living. Critical areas support clean water, sustainable and harvestable populations of salmon and shellfish, and healthy and diverse populations of wildlife and plant species. Farmers would operate successful agricultural businesses while taking the initiative to improve the environment on their land. Washington State is already a model for local watershed groups working together to identify problems and implement solutions. A successful agricultural stewardship program would enable these local communities to apply cooperation, innovation, and effective action for the advancement of agriculture and the environment.*

### *Principles for the Agriculture and Critical Areas Stewardship Program*

- *Build on existing work in local watersheds.*
- *Emphasize voluntary stewardship first.*
- *Protect critical areas from further degradation, and apply consequences where volunteer measures fall short.*
- *Set priorities for voluntary actions to restore and enhance critical areas.*
- *Enforce existing state laws for water quality and habitat.*
- *Work together to find funding.<sup>10</sup>*

The hard work undertaken by the parties brought together by the Ruckelshaus Center concluded in early 2011 with an agreement submitted to the legislature in the form of HB 1886. The Center provided

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<sup>10</sup> The William D. Ruckelshaus center, 2010. *A Framework for Stewardship: Final Report on the Work of the Agriculture and Critical Areas Committee.* Washington State University, Pullman, WA and University of Washington, Seattle, WA.



the State Legislature and the Governor with *A Framework for Stewardship: Final Report of the William D. Ruckelshaus Center on the work of the Agriculture and Critical Areas Committee* in October 2010. This document ultimately prescribes that the

*... framework of stewardship is characterized by choices at the county and landowner level. In those places where agricultural activities intersect with sensitive critical areas ... promote incentives for agricultural landowners and operators to voluntarily enhance the condition of critical areas through restoration projects and farm management practices<sup>11</sup>*

The legislature subsequently enacted Engrossed Substitute House Bill (ESHB) 1886. This bill amended the Growth Management Act to allow options for protecting critical areas that:

- Permits the County to use a voluntary stewardship program in conjunction with stakeholders in lieu of enacting further critical areas regulations in regards to agricultural uses. At the state level, the voluntary stewardship program is to be administered by the Washington Conservation Commission; or
- Continue under existing law and update critical areas regulations for agricultural uses by July 22, 2013. RCW 36.70A.710(6)(a); or
- Limit the voluntary stewardship program to certain watersheds in the county, and update the critical areas regulations for other watersheds.



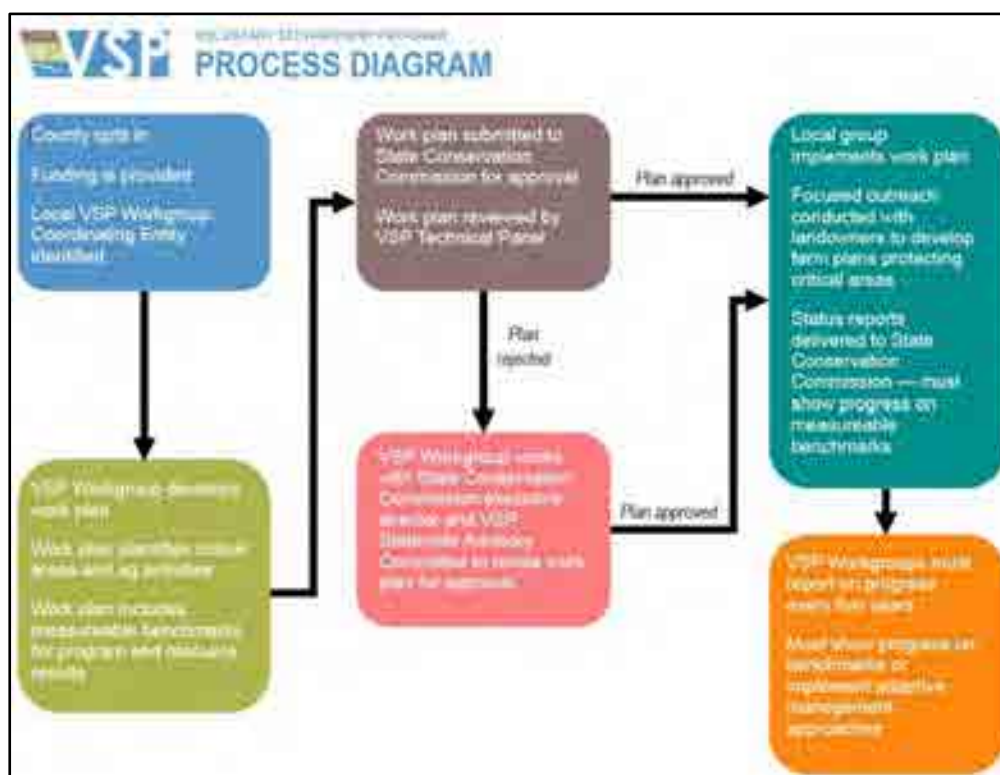
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<sup>11</sup> The William D. Ruckelshaus center, 2010. *A Framework for Stewardship: Final Report on the Work of the Agriculture and Critical Areas Committee*. Washington State University, Pullman, WA and University of Washington, Seattle, WA

## 5. ORGANIZATION AND PROCESS

### STATE

**THE** Voluntary Stewardship Program (“VSP”) is administered by the Washington State Conservation Commission (“Commission”). As such, the Commission must (a) establish implementation policies and procedures; (b) administer funding for counties; (c) administer technical assistance funds; (d) Establish a technical panel; (e) review and evaluate submitted work plans and reports; (f) Review and evaluate the program's success and effectiveness; (g) designate priority watersheds; (h) provide administrative support for statewide advisory committee; (i) maintain a program web site; (j) report to legislature on program status; (k) conduct a review of the program every five years; and (l) report to the appropriate committees of the legislature. The Department of Commerce, under which the Growth Management Act is administered, shall assist counties participating in the program. The Commission, Departments of Commerce, Agriculture, Fish and Wildlife, and Ecology, and other state agencies shall also cooperate and collaborate to implement the program.



Source: Washington Conservation Commission

### COUNTY

The legislative authority of a county may elect to protect critical areas through a VSP program. In order to participate, within six months after July 22, 2011, the County must have adopted an ordinance or resolution that elects to participate, identifies the watersheds that will participate; and nominates watersheds for consideration as state priority watersheds. The process for selecting watersheds

includes considering the role of farming within it, the likelihood of program success, and the existence of other programs already in place. The process for prioritizing watersheds from those selected goes further by evaluating fish and wildlife habitat in the region, and determining presence of community support for effective program administration.

Adoption of the County's ordinance or resolution establishes the effective date of the program. It will apply to all unincorporated property upon which agricultural activities occur within each participating watershed. It also makes the County eligible for a share of the funding made available to implement the program, subject to funding availability from the state. Until, however, adequate funding was made available; the County was not required to implement the VSP program. When funds did become available, the County had 60 days to designate a Watershed Work Group and an entity to administer the funds for each watershed.

## **WORK GROUP**

The Work Group is tasked with developing a work plan to protect critical areas while maintaining the viability of agriculture in the watershed. The Plan must also include goals and benchmarks for the protection and enhancement of critical areas. In developing and implementing the Work Plan, the watershed group must:

- a. Review and incorporate applicable water quality, watershed management, farmland protection, and species recovery data and plans;*
- b. Seek input from tribes, agencies, and stakeholders;*
- c. Develop goals for participation by agricultural operators conducting commercial and noncommercial agricultural activities in the watershed necessary to meet the protection and enhancement benchmarks of the work plan;*
- d. Ensure outreach and technical assistance is provided to agricultural operators in the watershed;*
- e. Create measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through voluntary, incentive-based measures;*
- f. Designate the entity or entities that will provide technical assistance;*
- g. Work with the entity providing technical assistance to ensure that individual stewardship plans contribute to the goals and benchmarks of the work plan;*
- h. Incorporate into the work plan any existing development regulations relied upon to achieve the goals and benchmarks for protection;*
- i. Establish baseline monitoring for: (i) Participation activities and implementation of the voluntary stewardship plans and projects; (ii) stewardship activities; and (iii) the effects on critical areas and agriculture relevant to the protection and enhancement benchmarks developed for the watershed;*



- j. Conduct periodic evaluations, institute adaptive management, and provide a written report of the status of plans and accomplishments to the county and to the commission within sixty days after the end of each biennium;*
- k. Assist state agencies in their monitoring programs; and*
- l. Satisfy any other reporting requirements of the program.<sup>12</sup>*

When the Work Plan is complete, it is submitted to the Executive Director for the Washington Conservation Commission for approval. An approved Work Plan extends eligibility for additional state assistance and funding. Additionally, both commercial and non-commercial agricultural operators participating in the program are eligible to receive funding and assistance under watershed programs.

## STATE ... AGAIN

After the Executive Director (“Director”) receives the County’s Work Plan, it is submitted to the Technical Panel for review. The Technical Panel (“Panel”) is made up of representatives of the Commission, and the Departments of Agriculture, Fish and Wildlife, and Ecology. The Panel has ninety (90) days to report to the Director if the Work Plan will, after ten years of receipt of funding, work in conjunction with other existing plans and regulations to protect critical areas while maintaining and enhancing the viability of agriculture in the watershed.

If the Panel determines the Work Plan will work, it must recommend approval to the Director who must then approve the Plan. If the Panel does not recommend approval, it must describe the reasons why to the Director, then those reasons are provided to the Work Group. The Work Group has a total of two years and nine months to submit and receive approval of the Work Plan, including any revisions. If that is not achieved, the Director will submit the Work Plan to the Statewide Advisory Committee.

The Statewide Advisory Committee (“Committee”) is appointed by the Commission and made up of two representatives each from county government, agricultural organizations, environmental organizations, and may include two representatives from tribal governments.

The Committee serves in consultation with the Director when there is disagreement as to whether or not a submitted Work Plan meets the goals and benchmarks for successful implementation. The Director then acts upon the recommendations of the Committee on how to proceed. If the recommendation is that the Work Plan would likely be approvable within six months, the Director must grant the Work Group an extension. If, however, the Committee determines that six months will not likely result in an approvable Work Plan, then the Director does not grant an extension and the Plan fails.

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<sup>12</sup> RCW 36.70A.720

## 6. SCHEDULE AND REPORTING REQUIREMENTS

**DEADLINES** for the monitoring and reporting portions of the Voluntary Stewardship Program are established in the statute, and begin with the date that Mason County received its funding. Each County is required to report their Work Plan's effectiveness and accomplishments at specific periodic increments. This reporting also initiates adaptive management based on what the County reports. Thresholds set in the Work Plan to be met are evaluated during this reporting periods and adaptations, if necessary, are instituted. Mason County's "receipt of funding" date, as defined in RCW 36.70A.703(9) is November 24, 2015. The following schedule is the timeline in which documents are due under the RCW 36.70A.720 based on a tentative approval date of September 7, 2018. These dates will necessarily shift dependent on the actual approval date of the Work Plan.

**Table 2 Reporting Schedule**

<b>November 24, 2015</b>	<b>Receipt of Funding</b>
<b>September 7, 2018</b>	Work Plan Approval Deadline – 2 years, 9 months from Receipt of Funding Date
<b>May 24, 2018</b>	Submit to Technical Panel – 90 days prior to deadline
<b>August 24, 2018</b>	Report Due to County and Commission – 60 days prior to recurring biennium periodic evaluation
<b>November 24, 2020</b>	Report Due to Director and County – at 5 years and recurring, if Work Plan is meeting protection and enhancement goals and benchmarks
<b>November 24, 2025</b>	Report Due to Director and County – at 10 years if Work Plan is meeting protection and enhancement goals and benchmarks

The reports will be developed by District Staff together with the Work Group. Draft reports would be prepared and presented to the Work Group for review and comment. Comments will be addressed and edits made to the reports, which will then be approved by the Work Group and will be distributed to the County, WSCC, and others by the District on behalf of the Work Group. The general timing for reporting will be as follows:

- Monitoring will focus on the measurable benchmarks and will include informal evaluations at least every 2 years in support of the 5-year performance review, and to determine if any adaptive management measures are needed prior to the 5-year review.
- The Work Group must report no later than 5 years after receipt of funding on whether the protection and/or enhancement goals are being met or identify an adaptive management plan to meet VSP goals and benchmarks.
- The Work Group must report not later than 10 years after receipt of funding, and every 5 years thereafter, whether it has met the protection and enhancement goals and benchmarks of the Work Plan.

If the Work Group determines goals have not been met, they must propose and submit an Adaptive Management Plan for achieving the goals and benchmarks. Monitoring indicators will inform the long-term viability of the Adaptive Management Plan, based on goals for protecting critical area functions.<sup>13</sup> The Work Group will satisfy all other reporting requirements of the Program in compliance with RCW 36.70A.720(l).

*Commercial and noncommercial  
agricultural operators participating  
in the program are eligible to receive  
funding and assistance under  
watershed programs.*

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RCW 36.70A.720(5)

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<sup>13</sup> Lincoln County VSP Work Plan

## 7. THE WORK PLAN

**THE** Program is intended to address each County at the watershed level, not on an individual property or parcel level. In that way, the work plan can then build “*from existing watershed plans, salmon recovery information, water quality cleanup plans, the Puget Sound Action Agenda, and other available data, and will incorporate information on local agricultural conditions and objectives.*”<sup>14</sup> (Existing Plans Appendix)

Mason County includes portions of five Water Resource Inventory Areas (WRIAs): Kennedy-Goldsborough (WRIA 14), Kitsap (WRIA 15), Skokomish-Dosewallips (WRIA 16), Queets-Quinault (WRIA 21), and Lower Chehalis (WRIA 22). In 2012, under Resolution #07-12, the Board of County Commissioners opted in to the Voluntary Stewardship Program and nominated all five WRIAs for consideration as “priority watersheds” pursuant to RCW 36.70A.210. The Work Plan will, however, primarily address only four of the WRIAs. That portion of the Queets-Quinault WRIA in the very northwestern tip of Mason County is completely within the Olympic National Park where no agricultural activity occurs and no mapping data is available.

Once the watersheds were designated and prioritized and funding was received, the County selected the Mason Conservation District to administer the grant and its deliverables. A VSP Watershed Work Group (“Work Group”) was established and appointed by the County to be responsible for ensuring the program’s future success. This will require, in part, the creation of a Work Plan that outlines a strategy “*to protect critical areas while maintaining the viability of agriculture in the watershed. The work plan must include goals and benchmarks for the protection and enhancement of critical areas.*”<sup>15</sup>

The Work Group’s first core task is meeting the statutory test in determining whether or not “*... at the end of ten years after receipt of funding, the work plan, in conjunction with other existing plans and regulations, will protect critical areas while maintaining and enhancing the viability of agriculture in*

**Figure 5 Mason County WRIAs Map**



<sup>14</sup> The William D. Ruckelshaus Center, 2010. A Framework for Stewardship: Final Report on the Work of the Agriculture and Critical Areas Committee. Washington State University, Pullman, WA and University of Washington, Seattle, WA

<sup>15</sup> RCW 36.70A.720(1)

*the watershed.”*<sup>16</sup> According to the VSP statutes, the Work Plan must be approved within two years and nine months after receipt of funding, as determined through the VSP Work Plan Approval process, if considered to be effective over a ten year period. The Work Group’s second core task is to create measurable ten-year benchmarks designed to promote voluntary, incentive-based measures to provide long-term protection of critical areas and to encourage voluntary enhancements to improve critical areas. Together these voluntary incentive-based efforts reflect the three core “test” elements of an approvable VSP Work Plan: 1) Protection of critical areas; 2) maintenance and enhancement of agricultural viability; and 3) voluntary enhancement of critical areas through promotion of incentive-based measures.

The Work Group has prepared this Work Plan to provide goals, measurable benchmarks, strategies and adaptive management, to leverage existing watershed plans and other programs, and to protect critical areas and promote agriculture. This Work Plan applies to the intersection of agriculture and five critical areas – fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, geologically hazardous areas (including landslide, seismic and erosion hazards), and critical aquifer recharge areas in unincorporated areas of Mason County. This Work Plan is intended to fulfill the VSP legislative requirements to create a voluntary set of goals, benchmarks, and planned activities. The

Crosswalk in Table 3 provides verification that the Work Group has included information in the Work Plan as outlined in RCW 36.70A.720.




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<sup>16</sup> RCW 36.70A.725(2)

**Table 3 Crosswalk**

<b>RCW 36.70A.720(1)</b>	<b>Chapter/Page</b>
<i>(a) Review and incorporate applicable water quality, watershed management, farmland protection, and species recovery data and plans;</i>	Appendix 2 & Chapter 8
<i>(b) Seek input from tribes, agencies, and stakeholders;</i>	Chapter 9
<i>(c) Develop goals for participation by agricultural operators conducting commercial and noncommercial agricultural activities in the watershed necessary to meet the protection and enhancement benchmarks of the work plan;</i>	Chapter 19 & Appendix 6
<i>(d) Ensure outreach and technical assistance is provided to agricultural operators in the watershed;</i>	Chapter 22 & Chapter 23
<i>(e) Create measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through voluntary, incentive-based measures;</i>	Chapter 19 & Appendix 6
<i>(f) Designate the entity or entities that will provide technical assistance;</i>	Chapter 22
<i>(g) Work with the entity providing technical assistance to ensure that individual stewardship plans contribute to the goals and benchmarks of the work plan;</i>	Chapter 22
<i>(h) Incorporate into the work plan any existing development regulations relied upon to achieve the goals and benchmarks for protection;</i>	Chapter 21
<i>(i) Establish baseline monitoring for: (i) Participation activities and implementation of the voluntary stewardship plans and projects; (ii) stewardship activities; and (iii) the effects on critical areas and agriculture relevant to the protection and enhancement benchmarks developed for the watershed;</i>	Appendix 6
<i>(j) Conduct periodic evaluations, institute adaptive management, and provide a written report of the status of plans and accomplishments to the county and to the commission within sixty days after the end of each biennium;</i>	Chapter 6 & Appendix 6
<i>(k) Assist state agencies in their monitoring programs; and</i>	Chapter 21
<i>(l) Satisfy any other reporting requirements of the program.</i>	Chapter 6

The VSP was added to the Growth Management Act for the protection of critical areas in relation to agricultural activities. Once a VSP Work Plan has been developed for Mason County, an agricultural operator may choose whether or not to participate in the program.

VSP statutes do not grant counties or state agencies any additional regulatory authority to protect critical areas on lands used for agricultural activities.<sup>17</sup> In order to promote producer participation and productive discussion among VSP Work Group members, the statutes prohibit county promulgation of new critical area regulations related to agricultural activities during the VSP process

<sup>17</sup> RCW 36.70A.702



(narrow exceptions apply).<sup>18</sup> The VSP Work Plan is to rely on voluntary stewardship “*as the primary method of protecting critical areas and not require [termination] of agricultural activities*”.<sup>19</sup> Additionally, the County, through its VSP Work Plan, may not “*require an agricultural operator to discontinue agricultural activities legally existing before July 22, 2011.*”<sup>20</sup> Further, nothing in the VSP statutes requires participation from agricultural operators.<sup>21</sup>

With regard to conservation programs, the VSP is not to be administered in a manner that prevents operator eligibility for environmental incentives,<sup>22</sup> and “*agricultural operators implementing an individual stewardship plan consistent with a work plan are presumed to be working toward the protection and enhancement of critical areas*”.<sup>23</sup> Agricultural operators volunteering to participate may withdraw from the program at any time. Also, VSP may not require participating operators who voluntarily enter conservation contracts to protect or enhance critical areas to continue such voluntary measures after expiration of the applicable contract.<sup>24</sup>



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<sup>18</sup> RCW 36.70A.130(8)(a) Except as otherwise provided in (c) of this subsection, if a participating watershed is achieving benchmarks and goals for the protection of critical areas functions and values, the county is not required to update development regulations to protect critical areas as they specifically apply to agricultural activities in that watershed.

<sup>19</sup> RCW 36.70A.700

<sup>20</sup> RCW 36.70A.702

<sup>21</sup> RCW 36.70A.705

<sup>22</sup> RCW 36.70A.702

<sup>23</sup> RCW 36.70A.750

<sup>24</sup> RCW 36.70A.760

## 8. EXISTING WATERSHED PLANS

IN recent history, many attempts have been made by several agencies to address the issues surrounding watershed protection and enhancement. To leverage existing resources and avoid redundancy with ongoing watershed planning efforts, the Work Group performed a review of some of those existing water quality, watershed management, farmland protection, and species recovery plans, consistent with the requirements of RCW 36.70A.720(1)(a). These plans identify major watershed-scale issues related to natural resource functions; factors contributing to the degradation of those functions; and strategies recommended improving those functions and/or preventing their further degradation. A summary of the Plans reviewed in this plan can be found in Appendix 2.

### SHELLFISH PROTECTION DISTRICTS

When a shellfish growing area is downgraded, RCW 90.72.045 requires the county legislative authority to create a shellfish protection district and establish a shellfish protection program.<sup>25</sup> In Mason County, several districts have been established as a result of this rule including Oakland Bay, Annas Bay, Big Bend, and McLane Cove Shellfish Protection Districts. Review of these plans illustrates commonalities in their priorities and recommended strategies, generally centered on water quality. The following noted priorities are a much abbreviated list aimed at the primary concern, which is water quality, but also those that can be concurrently addressed through VSP implementation:

#### PRIORITIES:

- fecal coliform bacteria
- shoreline, stormwater, and upland runoff
- non-point contamination sources

The strategies below, as interpreted from the SPD Plans, are also consistent with those of the VSP's goals and benchmarks connecting VSP implementation to the continuation of shellfish protection and water quality improvement. The strategies below align with those BMPs suggested and already in use that serve to assist in the control of contaminants entering water resources.

#### STRATEGIES:

- ✓ COMPOSTING FACILITY – reduce pollution potential and improve handling of organic wastes

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<sup>25</sup> RCW 90.72.045 Shellfish protection districts—Programs required after closure or downgrading of growing area classification—Annual report. The county legislative authority shall create a shellfish protection district and establish a shellfish protection program developed under RCW 90.72.030 or an equivalent program to address the causes or suspected causes of pollution within one hundred eighty days after the department of health, because of water quality degradation due to ongoing nonpoint sources of pollution has closed or downgraded the classification of a recreational or commercial shellfish growing area within the boundaries of the county. The county legislative authority shall initiate implementation of the shellfish protection program within sixty days after it is established.



- ✓ FENCING – control movement of animals and people, especially near sensitive water resources
- ✓ STORMWATER RUNOFF CONTROL – reducing and improving the quality of water leaving a site
- ✓ ACCESS CONTROL – used to control the access of animals, people, and vehicles from sensitive areas
- ✓ TREE/SHRUB ESTABLISHMENT – establishes long term erosion control and water quality
- ✓ ROOF RUNOFF STRUCTURE – protect surface water by excluding run off from contaminated structures
- ✓ EDUCATION, OUTREACH AND CONSERVATION PLANS – a successful VSP will rely heavily upon reaching out to landowners with conservation and protection information, and securing the voluntary implementation of best management practices through conservation planning

## WATERSHED PLANNING ACT

Washington State legislature passed the Watershed Planning Act (Chapter 90.82 RCW)<sup>26</sup> in 1998. This legislation established a process for preparing watershed plans for 62 Water Resource Inventory Areas (WRIAs), which roughly correspond with physiographic boundaries of drainage basins in Washington.<sup>27</sup> Under this new Planning Act, funding would be made available, to the extent appropriated by the Legislature, to conduct the planning and implementation of a Watershed Plan. Mason County received such funding in the form of a planning grant from the Washington Department of Ecology for WRIA 14 and 16 planning efforts.

### IMPLEMENTATION PLAN.

- 1) *Within one year of accepting funding under RCW 90.82.040(2)(e), the planning unit must complete a detailed implementation plan. Submittal of a detailed implementation plan to the department is a condition of receiving grants for the second and all subsequent years of the phase four grant.*
- 2) *Each implementation plan must contain strategies to provide sufficient water for: (a) production agriculture; (b) commercial, industrial, and residential use; and (c) instream flows. Each*

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<sup>26</sup> RCW 90.82.010 Finding. The legislature finds that the local development of watershed plans for managing water resources and for protecting existing water rights is vital to both state and local interests. The local development of these plans serves vital local interests by placing it in the hands of people: Who have the greatest knowledge of both the resources and the aspirations of those who live and work in the watershed; and who have the greatest stake in the proper, long-term management of the resources. The development of such plans serves the state's vital interests by ensuring that the state's water resources are used wisely, by protecting existing water rights, by protecting instream flows for fish, and by providing for the economic well-being of the state's citizenry and communities. Therefore, the legislature believes it necessary for units of local government throughout the state to engage in the orderly development of these watershed plans.

<sup>27</sup>RCW 90.82.043

*implementation plan must contain timelines to achieve these strategies and interim milestones to measure progress.*

- 3) *The implementation plan must clearly define coordination and oversight responsibilities; any needed interlocal agreements, rules, or ordinances; any needed state or local administrative approvals and permits that must be secured; and specific funding mechanisms.*
- 4) *In developing the implementation plan, the planning unit must consult with other entities planning in the watershed management area and identify and seek to eliminate any activities or policies that are duplicative or inconsistent.*<sup>28</sup>

Watershed planning is similar to shellfish protection but on a much larger scale and addresses the resource as a whole, beyond just a shellfish focus. Enacted by state law, watershed planning can involve as many stakeholders as it does objectives; however on a local scale goals again align with those of the VSP. The priorities remain consistent with water quality, and expand to aspects of fish and wildlife habitat. The VSP contains best management practices that either directly or indirectly affects these priorities, and these Strategies illustrate a few of those most prominent in Mason County.

#### PRIORITIES:

- Fecal coliform bacteria
- Temperature
- Riparian conditions
- Runoff and sedimentation
- Erosion
- Grazing by streams and floodplains
- Loss of habitat

#### STRATEGIES

- ✓ HEAVY USE PROTECTION – provide a stable, non-eroding surface frequently used by animals and people
- ✓ TREE/SHRUB ESTABLISHMENT – establishes long term erosion control
- ✓ NUTRIENT MANAGEMENT – control the amount and timing of soil nutrients to minimize non-point pollution from agricultural activities
- ✓ PRESCRIBED GRAZING – managing stocking rates and animal grazing periods to improve forage and function, and reduce soil erosion

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<sup>28</sup>RCW 90.82.043

- ✓ FILTER STRIP – reduce suspended solids and soil contaminants in runoff
- ✓ MULCHING – prevent excessive bank erosion, reduce emissions of particular matter
- ✓ WATERING FACILITY – provide designated access of drinking water for wildlife and livestock as alternative to sensitive source
- ✓ EDUCATION, OUTREACH AND CONSERVATION PLANS – a successful VSP will rely heavily upon reaching out to landowners with conservation and protection information, and securing the voluntary implementation of best management practices through conservation planning

The Plans evaluated under this planning process provide a few examples of those drafted, adopted, and currently being implemented in Mason County. The best management practices as suggested in this Program to protect and enhancement critical areas while maintaining a healthy agricultural environment will succinctly lend themselves to further the success of its predecessors.

## 9. WORK GROUP STRUCTURE AND ROLE

**PER** the VSP statute, “*the watershed group must include broad representation of key watershed stakeholders and, at a minimum, representatives of agricultural and environmental groups and tribes that agree to participate*”.<sup>29</sup> The Mason Conservation District, as appointed Lead Entity providing Technical Assistance by Mason County, has solicited participation in the VSP planning process from individuals representing the following interests:

Skokomish and Squaxin Island Indian Tribes	Washington State Department of Ecology
Washington Department of Fish and Wildlife	WRIA Basin Planning Units
Washington State Farm Bureau	Local Agricultural Operators
Hood Canal Salmon Enhancement Group	Local Interested Property Owners
WSU Extension Office	

The District implemented a communications strategy to broadly inform the public of the development of the VSP in Mason County. The promotions described the purpose of VSP and the formation of the Watershed Work Group. Promotional efforts included:

- press release to the Shelton-Mason County Journal and iFIBER One News
- e-mail communications to
  - agricultural producers and groups
  - environmental groups and individuals
  - residents at large
- presentations to service clubs, community clubs and organizations, and community leaders
- postings to website and social media
- word of mouth

As a result, the District obtained a number of applications from interested individuals to participate in the Work Group from the above-listed groups with the exception of the Tribes. The Squaxin Island Tribe has expressed in two separate writings that they do not agree with the VSP approach and declined both invitations.

No written response was received from the Skokomish Tribe after two invitations. Both Tribes are, however, kept on the regular VSP group mailing list to keep them apprised of the activities should they decide to provide input at some future point. As for the remainder of the list, all individual property owners and agricultural operators who applied to be Group members were accepted as stakeholders in this process. The composition of the group is merely a result of community members taking an interest in the Program and the process. No applicants were denied a seat and the District continues to leave the invitation open for additional membership. Agency representatives from this list acting as consultants have attempted to attend the regular meetings and continue be informed and invited.

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<sup>29</sup> RCW 36.70A.715(3)

Members attending the Work Group meetings with some degree of regularity are listed in the table. This group met somewhat informally for the first six to eight months before being formally appointed by the Board of County Commissioners. Since the Group's participation is quite extensive over the next 10 or more years, the District deemed it important to recognize the Group's stability and level of commitment prior to formal appointment.

VSP encourages good stewardship, with a statutory goal of fostering cooperation among agricultural, tribal, environmental, and county interests.<sup>30</sup> The Watershed Work Group established includes the following members:

**Table 4 Watershed Work Group Membership**

<b>Name</b>	<b>Representation</b>	<b>Stakeholder/Consultant</b>
<b>BENTON, Joshua</b>	WA Dept. of Fish & Wildlife	Consultant
<b>BEYER, Michael</b>	Agricultural Producer	Stakeholder
<b>BLOOMFIELD, Tom</b>	Seattle Shellfish (Aqua culture)	Stakeholder
<b>BOLTZ, Larry</b>	Agricultural Producer	Stakeholder
<b>BORDEN, Allan</b>	Citizen/Property Owner	Stakeholder
<b>ECHEVERRIA,</b>	Agricultural Producer	Stakeholder
<b>EWALD, Erin</b>	Taylor Shellfish (Aquaculture)	Stakeholder
<b>HAGER, Laurie</b>	Agricultural Producer	Stakeholder
<b>JANNY, Fran</b>	Agricultural Producer	Stakeholder
<b>LADNER, Katie</b>	Small Farm Owner	Stakeholder
<b>MCCALLUM, Michelle</b>	Agricultural Producer	Stakeholder
<b>REHWALDT, Jeanne</b>	Mason Matters	Consultant/Stakeholder
<b>SHEFFELS, Evan</b>	Washington Farm Bureau	Consultant
<b>SHORT, William</b>	Agricultural Producer	Stakeholder
<b>STEWART, Myrn</b>	Agricultural Producer	Stakeholder
<b>WALDBILLIG, Chris</b>	WA Dept. of Fish & Wildlife	Consultant

The Work Group remains open to additional members over time, and is responsible for developing and implementing the Work Plan. This responsibility comprises the following tasks: designating technical assistance providers, identifying outreach and implementation approaches, setting goals and benchmarks, establishing a monitoring plan, regular reporting, and adaptive management of established goals. The Work Group is also responsible for developing and administering the Work Plan on an ongoing basis throughout implementation and monitoring.

The Mason County VSP Work Group conducted its first meeting on June 28, 2016 and began meeting regularly in January of 2017. Early in the Group's process a SWOT (Strength, Weaknesses,

<sup>30</sup> RCW 36.70A.700

Opportunities, and Threats) Analysis was conducted to help focus their efforts throughout the process. (SWOT Appendix) This exercise provided a foundation for further discussions around how the agriculture community viewed farming in Mason County. It also served as an educational piece for District Staff to better understand the interests and needs of local farmers. The Work Group has welcomed the participation of interested parties and has drawn a distinction between the Stakeholders and the public agency representatives who attend the meetings as “consultants”. This is to clarify the decision-making process for developing a Work Plan, to encourage the public agencies to provide technical assistance to Stakeholders, and to maintain the neutrality of these agencies within the VSP process.

As earlier stated, the County received funding in the form of a grant awarded by the Washington Conservation Commission (“Commission”). The Commission has provided funding to Mason County for the development of the Work Plan as required for the implementation of the VSP, consistent with RCW 36.70A.700-760 and related statutes. The Mason Conservation District (“District”) has been selected by the Mason County Board of Commissioners as the technical lead to develop the Work Plan and to provide assistance to landowners, subject to the availability of adequate funding. The District is a non-regulatory local agency which already works closely with rural landowners developing voluntary conservation plans for individual parcels. It also helps connect landowners with grants and loans to help them implement the conservation plan in a manner that helps conserve natural resources and support agriculture.

## FOR IMMEDIATE RELEASE

In June of 2016, the District issued a New Release announcing the County was ready to begin developing the Voluntary Stewardship Program and soliciting the Work Group’s membership.

*“The Mason Conservation District is soliciting for participants on a stakeholder workgroup over the next several months. The District will introduce the community to the Voluntary Stewardship Program on June 28th, 6 PM at the Mason County Department of Public Works’ conference room.”*

## 10. MEET THE “PROTECT CRITICAL AREAS” TEST

**THIS** Work Plan must detail how Mason County, through its VSP, will protect critical areas while maintaining and enhancing the viability of agriculture within each watershed. The definition of protection in the legislation under the VSP indicates that “‘*protect*’ or ‘*protecting*’ mean to prevent the degradation of functions and values existing as of July 22, 2011.”<sup>31</sup>

Important elements of this definition of “protection” include the terms “degradation of functions and values” from the baseline date of July 22, 2011 and what information is available as of that date. Here the County faces a challenge in determining the condition of its critical areas at the July 2011 date, together with assessing the level of degradation that may have occurred since then, and its nexus to agriculture. Using that analysis a strategy of protection from further degradation can be achieved. See [Critical Areas Appendix](#) for a description of the Critical Areas in Mason County and their 2011 Baseline Maps.



<sup>31</sup> RCW 36.70A.703



## II. MEET THE “MAINTAIN AND ENHANCE AGRICULTURAL VIABILITY” TEST

**THE** VSP Work Plan must “maintain and enhance” agricultural viability to receive approval.<sup>32</sup> Some VSP statutory sideboards implicitly help to maintain agricultural viability. For instance, the VSP Work Plan is to rely on voluntary stewardship “*as the primary method of protecting critical areas and not require cessation of agricultural activities.*”<sup>33</sup> The County, and the VSP Work Plan, may not “*require an agricultural operator to discontinue agricultural activities legally existing before July 22, 2011.*”<sup>34</sup> Also, VSP statutes do not grant counties or state agencies any additional regulatory authority to protect critical areas on lands used for agricultural activities.<sup>35</sup> (Regulatory Context Appendix) In order to promote producer participation and productive discussion among Work Group members, VSP statutes prohibit county from proclaiming any new critical area regulations related to agricultural activities during the VSP process (narrow exceptions apply).<sup>36</sup> Further, nothing in the VSP statutes requires participation from agricultural operators.<sup>37</sup>



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<sup>32</sup> RCW 36.70A.725

<sup>33</sup> RCW 36.70A.700

<sup>34</sup> RCW 36.70A.702

<sup>35</sup> Ibid

<sup>36</sup> RCW 36.70A.130(8)(a)

<sup>37</sup> RCW 36.70A.705



## 12. CREATE AND MEET PROTECTION AND ENHANCEMENT BENCHMARKS

**THE** statute requires the Work Group to

*[c]reate measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through voluntary, incentive-based measures.*<sup>38</sup>

The VSP legislation further states the “*program shall be designed to protect and enhance critical areas on lands used for agricultural activities through voluntary actions by agricultural operators.*”<sup>39</sup> Failure to meet a goal or benchmark set in the Work Plan will result in plan failure and will trigger a regulatory approach to critical areas protection.<sup>40</sup>

Though critical area enhancement is not part of the initial VSP Work Plan Approval test, the Work Plan must also include benchmarks for promotion and implementation of voluntary actions designed to protect and enhance critical areas. The definition of “protection” is provided in early Chapters. The VSP legislation’s definition of “enhancement” or “enhance” “*means to improve the processes, structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas.*”<sup>41</sup>



<sup>38</sup> RCW 36.70A.720(2)(b)

<sup>39</sup> RCW 36.70A.705(1)

<sup>40</sup> RCW 36.70A.720(2); RCW 36.70A.735; RCW 36.70A.130(8)

<sup>41</sup> RCW 36.70A.703

### 13. BASELINE CONDITIONS AND MONITORING

**BASELINE**, in the context of VSP, is a term used to describe the physical state of critical areas and farm lands in Mason County as of July 22, 2011, the effective date of VSP legislation. This includes measurable information regarding the types, locations, and sizes of critical areas, as well as farms. From this, the Work Group can monitor the progress in implementing the Work Plan’s measurable benchmarks.

The Plan must establish baseline monitoring for: (i) participation activities and implementation of the voluntary stewardship plans and projects; (ii) stewardship activities; and (iii) the effects on critical areas and agriculture relevant to the protection and enhancement benchmarks developed for the watershed.<sup>42</sup> The baseline status of critical areas and their intersection with agricultural activities are identified later in this document. Though measurable benchmarks for agricultural viability are not required by the VSP legislation, these suggested activities should be considered throughout plan implementation to further the combined goals of “*protect[ing] critical areas while maintaining and enhancing the viability of agriculture in the watershed.*”<sup>43</sup>



<sup>42</sup> RCW 36.70A.720(2)(i)

<sup>43</sup> RCW 36.70A.725

## 14. BASELINE BANKING

**CONSIDERING** a period of time has passed between the 2011 baseline and the approval of this Work Plan, it would follow logic that some efforts to protect critical areas and enhance agricultural viability have already taken place. Those activities could be considered as improving the County’s “bottom line” when it comes to both protection and enhancement efforts of critical area; as well as agriculture. A summary of protection efforts on agricultural lands has been compiled in the table below establishing a “banking” of positive efforts toward the overall achievement of the Work Plan’s goals.

### NAIP HIGH RESOLUTION AERIAL IMAGERY CHANGE DETECTION

Advances in digital imaging and Federal initiatives to monitor agriculture have led to the acquisition of state-wide 1-meter aerial imagery for 2006, 2009, 2011, 2013 and 2015 made available by the National Agricultural Imagery Program. The high accuracy, fine scale, and broad scope of this data set provide a unique opportunity to address land use and land cover questions.

In this Work Plan, the Mason Conservation District will use the High Resolution Change Detection<sup>44</sup> (“HRCD”) model to track the changes in critical areas as often as the information is updated.

This data covers all areas of Puget Sound for which bare earth LiDAR<sup>45</sup> data was available, including WRIA’s 1 through 19. WRIAs 14, 15, and 16 cover most of Mason County, omitting WRIA 22 (Lower Chehalis) which was not part of the data set. The map illustrates the areas of detected change (green) in the eastern and northeastern parts of the County and extending beyond. No data appears in the lower southwestern portion.

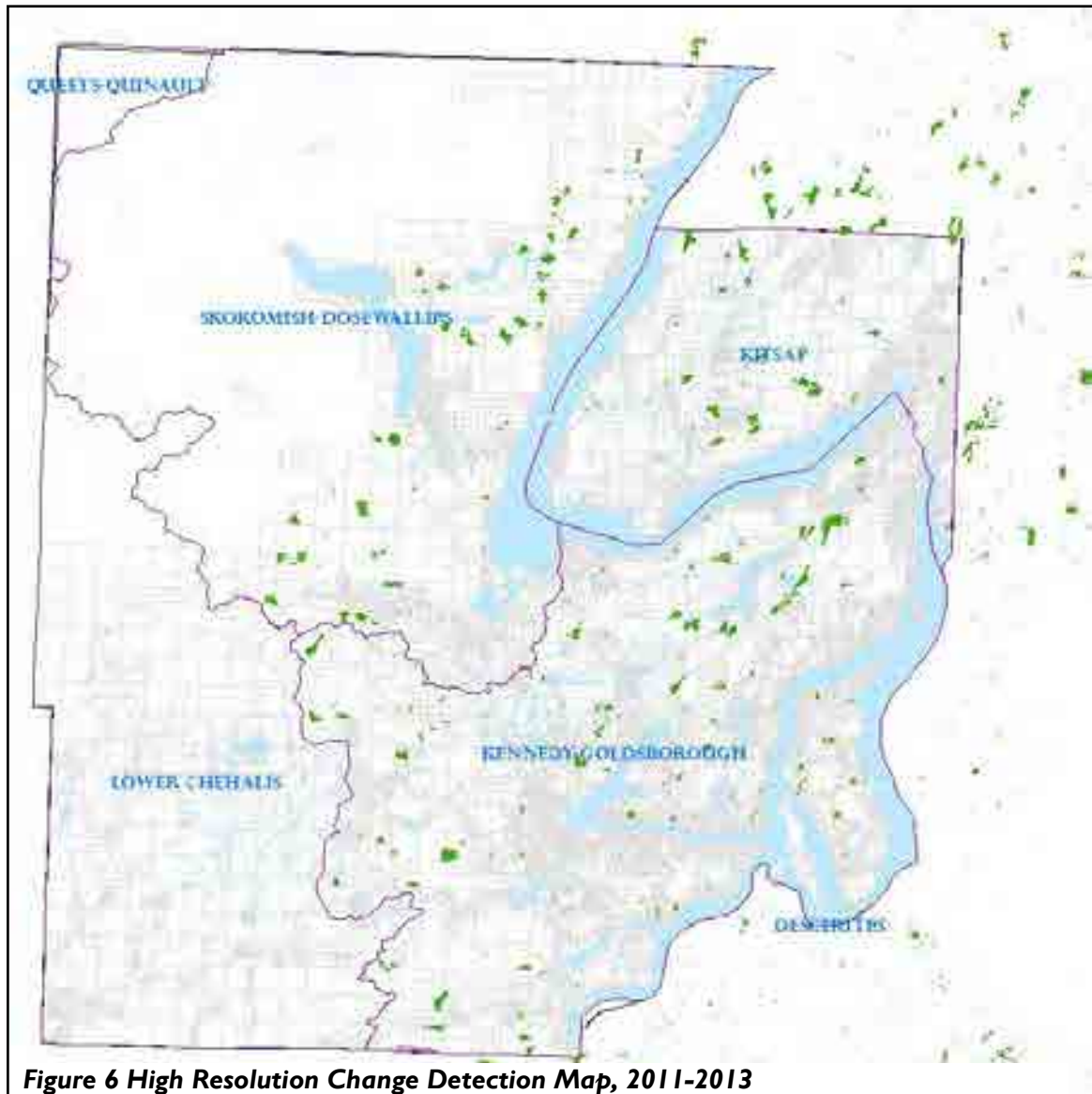
The analysis performed with HRCD quantifies new impervious and semi-pervious surfaces and canopy loss over periods of time. In Mason County, these include the periods from 2006 to 2009, 2009 to 2011 and 2011 to 2013. Considering the baseline dates for VSP is July 22, 2011, the 2011-2013 data set was used to establish changes that occurred in Mason County post 2011.

A GIS analysis was conducted by the District utilizing the change detection data together with agricultural lands in the County. Of approximately 6,037 acres of detected change in the County post 2011, approximately 28 acres, or 0.5%, of that were on agricultural lands. This reflects a relatively small amount of change resulting in increased impervious surface or decrease in tree canopy in Mason County’s agricultural lands. Comparing this data set to the information collected for the two preceding years, there were approximately 7,051 acres of detected change in the County, with 165 of those acres on lands with agricultural activities.

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<sup>44</sup> Developed under a Salmon Recovery Funding Board grant to the Habitat Science Division of the Washington Department of Fish and Wildlife

<sup>45</sup> LiDAR stands for Light Detection and Ranging and is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. [oceanservice.noaa.gov/facts/LiDAR](http://oceanservice.noaa.gov/facts/LiDAR)



**Figure 6 High Resolution Change Detection Map, 2011-2013**

During that four year period a significant reduction in change was detected; however, additional data would be needed post 2013 to conclude any trends toward overall improvement. The following table breaks down these changes over both collection periods by WRIA.

**Table 5 HRCD Detected Changes by WRIA (Acres)**

WRIA	2011-2013				2009-2011			
	Total Change	Tree Canopy Decrease	Impervious Surface Increase	Semi-Impervious Increase	Total Change	Tree Canopy Decrease	Impervious Surface Increase	Semi-Impervious Increase
<b>14</b>	27.6	26.5	0.5	0.8	109.4	105.1	4.8	1.7
<b>15</b>	0.2	0.1	0.06	0.06	0.1	0.05	0.02	0
<b>16</b>	0.6	0.5	0	0.1	55.2	55.1	0.05	0
<b>Totals</b>	28.3	27.2	0.6	1.0	164.8	160.2	4.8	1.7

From the table it can be deduced that most of the changes detected were a reduction of tree canopy and mostly in WRIA 14 in both time periods.

## MASON CONSERVATION DISTRICT BMP PROJECTS

Analysis of the District records for BMPs implemented in Mason County as of July 2011 produced the following table. These projects reflect local efforts by agricultural operators to voluntarily improve and protect critical areas on their property.

**Table 6 Mason Conservation District BMP Projects as Of July 2011**

WRIA	BMP	Acres Improved	Total WRIA acres improved
14	Brush Management	6.5	
	Herbaceous Weed Control	127	
	Conservation Cover	.19	
	Fencing	.625	
	Use Exclusion	12	
	Tree/shrub site preparation	.03	
	Roof runoff structures	1 each	
	Heavy use protection area	.03	
	Nutrient management	9.5	
	Subsurface drain	.02	
	Tree/shrub site preparation	.43	157
15	Tree/shrub site preparation	.06	
	Tree/shrub establishment	.06	.12
16	Stream habitat improvement & management	10.75	
	Herbaceous weed control	1,700	
	Prescribed grazing	1	
	Tree/shrub establishment	2.5	
	Wetland enhancement	30	
	Grading, shaping, re-leveling	.15	
22	Engineered log jam	6 each	1,744
	Brush management	.35	.35

## USDA NATURAL RESOURCES CONSERVATION SERVICE – CONSERVATION PRACTICES

The table below reflects information received from the Washington office of the Natural Resources Conservation Service for conservation practices implemented in Mason County from 2011 through 2017. While the location of these practices is protected, the types and amounts over this time period can provide a history from which projected benchmarks can be extrapolated.

**Table 7 NRCS Conservation Practices 2011-2017**

Code	Practice	Unit	Amount/Year						
			2011	2012	2013	2014	2015	2016	2017
<b>560</b>	Access Road	Feet		95			425		
<b>314</b>	Brush Management	Acres					6	4.1	12.4
<b>340</b>	Cover Crop	Acres		1	0.1				
<b>342</b>	Critical Area Planting	Acres			0.7				
<b>647</b>	Early Successional Habitat Development/Mgmt	Acres		3					
<b>382</b>	Fence	Feet	200	2895				1710	2275
<b>383</b>	Fuel Break	Acres				8.6			
<b>561</b>	Heavy Use Area Protection	Acres	0.1	1	1	0.1	3	0.1	0.3
<b>315</b>	Herbaceous Weed Control	Acres						5.6	6.6
<b>325</b>	High Tunnel System	Sq. Ft.							2160
<b>441</b>	Irrigation System, Micro-irrigation	Acres					1.1		
<b>442</b>	Irrigation System, Sprinkler	Acres					16.2		
<b>430DD</b>	Underground, Plastic	Feet					1180		
<b>516</b>	Livestock Pipeline	Feet					675		250
<b>634</b>	Manure Transfer	Nº	1						
<b>484</b>	Mulching	Acres					1.3		4.7
<b>590</b>	Nutrient Management	Acres		1	139.8		0.1		21.4
<b>500</b>	Obstruction Removal	Acres			3				



Code	Practice	Unit	Amount/Year						
			2011	2012	2013	2014	2015	2016	2017
<b>582</b>	Open Channel	Feet			90				
<b>595</b>	Pest Management	Acres	5.8	7.8	3				
<b>516</b>	Pipeline	Feet	740	588				765	
<b>528</b>	Prescribed Grazing	Acres		1	120				
<b>643</b>	Restoration of Rate or Declining Natural Communities	Acres	24.3	7.9	20.5	29.3	28.9		
<b>391</b>	Riparian Forest Buffer	Acres						3.6	
<b>558</b>	Roof Runoff Structure	Nº		1	7				
<b>798</b>	Seasonal High Tunnel for Crops	Sq. Ft.					2178.1	4080	
<b>381</b>	Silvopasture	Acres					6		
<b>395</b>	Stream Habitat Improvement and Management	Acres	1		0.7				
<b>612</b>	Tree/Shrub Establishment	Acres	3.9	1.7	1.7	3.5	16.4		2.8
<b>660</b>	Tree/Shrub Pruning	Acres	1	1.5	7				4
<b>490</b>	Tree/Shrub Site Preparation	Acres	7	9.5	0.5	21.2	3		8.5
<b>620</b>	Underground Outlet	Feet		822					
<b>313</b>	Waste Storage Facility	Nº			1		1		
<b>614</b>	Watering Facility	Nº		3	1		1	5	2

Aside from the NRCS data that cannot be assigned to a specific WRIA, this Chapter illustrates some activities already occurring in the target area for this Program's efforts to build on. Monitoring efforts for future protection and enhancement measures will follow through the strategies discussed in the remainder of this plan. According to the data collected, Table 8 below reflects critical area acres improved versus acres impacted to show a net baseline.

**Table 8 Net Baseline Acres of Critical Area Improvements**

WRIA	CA Acres Improved	CA Acres Changed	Total Net Baseline of
<b>14</b>	145	27.6	117.4
<b>15</b>	.12	0.2	.10
<b>16</b>	1,477	0.6	1476.4
<b>22</b>	.35	--	.35

What are important to record from the table above are the acres of improvement that has occurred in each WRIA since the baseline date of July 22, 2011. Since the VSP requires that critical areas be protected and/or enhanced, the acres as established by that date must be maintained or increased. In WRIA 14, 129 acres of critical areas have already been improved, as have 1,743 acres in WRIA 16. While any decrease in critical areas is not the goal of VSP, these two WRIsAs have already established a margin of improvement should either of them suffer a loss. WRIsAs 15 and 22 have minimal recorded improvements and will need to maintain the acres established in 2011.



## 15. MONITORING

**DETERMINING** the success of the Voluntary Stewardship Program over a ten-year period requires the ability to monitor the lands which are subject to it. The Program is intended to protect and enhance critical areas on agricultural lands as they were in July of 2011 through voluntary incentivized measures. It is also aimed at improving agricultural viability through those same or additional measures. Later Chapters outline goals and benchmarks to implement the Program, with reporting measures at periodic intervals to determine its success. Should efforts prove ineffective at reaching the goals and benchmarks, then adaptive management will be instituted. The monitoring element of this Work Plan is where the data is collected over time to indicate changes, both positive and negative. In order to achieve effective monitoring, the data sets must be observable over time – they must be updateable in order to be monitored and analyzed as a performance measure of the Program. Each data set obtained for measuring critical areas and agricultural lands has historical significance, but not all of them have the capacity to be updated for this Program’s purposes.

Appendix 7 of this Work Plan provides a table of Monitoring Tools District Staff will be utilizing over the next several years to determine if various benchmarks are being achieved. The Tools, the information they provide, resources for accessing those Tools, and a monitoring schedule are contained in the Appendix including:

- Best Management Practices (BMP) - are specific on the ground activities designed to both improve agricultural activities and protect critical areas. A list of BMPs most commonly used in Mason County is provided in Appendix 8 with a brief description of their use and application. These practices originated from the Natural Resources Conservation Service in their list of Conservation Practices. Many of these are also found, and illustrated, in the Individual Stewardship Plan Overview and Checklist in Appendix 9.
- Individual Stewardship Plans (ISP) - target the goals of this Work Plan by addressing agricultural activities with critical areas. An ISP is a site-specific plan for individual agricultural operations that identifies agricultural activities and conservation practice options that promote agricultural business viability while protecting and voluntarily enhancing critical areas.
- Restoration and Conservation Projects for salmon habitat – to show habitat enhancement projects and areas. This resource is a tracking site to view various projects within Mason County and can be monitored for habitat enhancement. The Habitat Work Schedule data system<sup>46</sup> illustrates implementation of some of the watershed plan strategies that have implicit protection and enhancement objectives. Land acquisition and conservation easements represent protection of critical areas while restoration and enhancement actions would improve the quality of critical areas functions and values. These actions are not limited to areas with

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<sup>46</sup> The Lead Entity Habitat Work Schedule system is the mapping and project tracking tool that allows Lead Entities to share habitat protection and restoration projects with funders and the public

agricultural activities, although activities related to agriculture are highlighted for the purpose of this Work Plan.

- NAIP High Resolution Aerial Imagery Change Detection – a digital analysis of land cover changes that have occurred in the County’s landscape over time. This resource is discussed in further detail in Chapter 13.

Local Jurisdictional Maps – Critical Aquifer Recharge Areas, Geologically Hazardous Areas, Frequently Flooded Areas, Future Land Use Map, Wetlands, Fish and wildlife habitat conservation areas. Maps and mapping data obtained from the County’s GIS Division is available and updated on various schedules. As noted in the beginning of this Chapter, mapping data used to create the Critical Area maps and subsequent tables may not be updated in an efficient or timely manner to provide a useful monitoring tool for the purposes of this Work Plan. However, District Staff will continue to review the data for updates as they occur.

- Geologically Hazardous Areas - data has not been updated by Mason County since the inception of their Comprehensive Plan in 1996, or in any subsequent updates. Generally, however, these types of areas are a result of soil composition and soil stability which do not change over short periods of time – relatively speaking.
- Critical Aquifer Recharge Area (CARA) - data maps were developed for the County by a geologist named Gordon Adams in 1999. Several funding requests in an attempt to update these maps have fallen short of fruition and are unlikely to be heeded in the foreseeable future. The type of studies needed to update CARA maps are quite costly and labor intensive.
- Wetlands - mapping was created from the National Wetlands Inventory and imported into the District’s GIS system to create mapping layers. This is a fluid mapping system, pardon the expression, that changes annually as new information is observed. The caution to this, however, is that wetlands are estimated using “high altitude imagery” and not necessarily ground-truthed. Changes to wetlands could, in fact, be noted over the next ten years in areas subject to this Work Plan’s monitoring program depending on their size and physical change. However, on a small scale, such as a single farm in a single county, impacts – increases or decreases – may not be recognized using the USDFW imaging techniques. Wetlands mapping will be included in this Work Plan’s monitoring as an updateable data set.
- Frequently flooded areas - are designated by the Federal Emergency Management Agency (FEMA) through their Flood Insurance Rate Program and adopted by local governments for regulation. In Mason County frequently flooded areas are not regulated under the Critical Areas Ordinance



*“Interpretation of these [Critical Aquifer Recharge Area] data sources was performed by Geologist Gordon Adams. An explanation of that interpretation is included in a letter from Gordon Adams dated March 29, 1999.”*

*Section 8.52.120(1)(B)(vii) MCC*



(Resource Ordinance) but instead under a separate Flood Damage Prevention ordinance adopted in the Building and Construction code. These areas are regulated by the County under a set of regulations prescribed by FEMA and subject to their ultimate approval. It is likely that since this critical area is not included in the Critical Areas ordinance that it is not subject to VSP and the Flood regulations will be maintained as a regulatory backstop. The maps generated for this Work Plan containing frequently flooded areas reflect the most current data as compiled by FEMA and adopted by Mason County. Considering these maps were most recently updated prior to this in the 1980s, it is not likely that the mapping will be updated again in this Programs life cycle.

**Figure 7 2016 Prelim Floodplains Map - Skokomish Valley**



Source: Mason County, Department of Public Works, GIS Division

- Fish and Wildlife Habitat Conservation Areas maps - were created from data received from the Washington Department of Fish and Wildlife. The data is updated as species and habitat are found in the field and as funding permits; this is not a suitable database for use as a primary monitoring tool.

What can be updated for monitoring purposes is the amount and location of agricultural activities. Data utilized to map agricultural land and land with agricultural activities will be the easiest to obtain and update for monitoring purposes. This information is updated in the Assessor's database during their annual cycles of evaluation for taxing purposes and for properties put in or taken out of the County's

open space program. Additionally, the District works with landowners who practice agricultural activities on their property that may not be designated as agricultural; this property can be included in the inventory for monitoring purposes as well.

- **Designated Agricultural Lands** – a list of property listed as tax exempt for agricultural purposes. Parcel lists obtain from the Mason County Assessor’s Office indicate property enrolled in an agriculture open space program. This is not an inclusive list of agricultural activities as not all operators choose to participate in these types of programs or do not meet the states minimum requirements.
- **Census of Agriculture** – conducted by the U.S. Department of Department of Agriculture. Conducted every five years, this is a count of farms and ranches, and the people who operate them. Much information has been extracted from this Census and provided in Appendix 5. The last Census was in 2012, and information from the 2017 Census will be available in February of 2019. At that time, tables utilizing that information will be updated.
- **Agricultural Land Use Crop Survey Data** – conducted by the Washington Department of Agriculture. This survey conducted every three years uses field work and specialized crop identification. This type of survey encompasses agricultural activities on lands that may not be in open space programs or designated in the future land use map, but are nonetheless agricultural.

Other sources for monitoring were discussed during the Formal Review Process with the Washington Conservation Commission’s VSP Technical Panel. These data sites and resources will provide the District and Work Group with additional tools to improve the County’s baseline as well as implement more comprehensive monitoring program. These sources have received a cursory review by Staff for inclusion in order to meet VSP statutory approve deadlines, and will be more fully explored for the Work Plan’s implementation. These include:

- **Mason County’s Water Quality 303(d) Listings** – provided by the Washington Department of Ecology for categorizing polluted waters. Ecology assesses water quality under the Federal Clean Water Act to ensure they are restored and maintained as fishable and swimmable. Once assessed, waters are classified into one or five categories.

*Waters whose beneficial uses (such as for drinking, recreation, aquatic habitat, and industrial use) that are impaired by pollutants are placed in the polluted water category (category 5) of the water quality assessment. The 303(d) list, so called because the process is described in Section 303(d) of the Clean Water Act, lists waters in the polluted water category.<sup>47</sup>*

- Mason County’s 303(d) listings can be found on Ecology’s website and include several category 5 locations with quality impairments such as temperature, pH, dissolved oxygen, and bacteria. Within these parameters for water quality, potential agriculture related sources could include

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<sup>47</sup> <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d>



animal waste (bacteria), organic matter decomposition (dissolved oxygen, pH), and erosion/sediment/canopy cover (temperature).<sup>48</sup> It is District Staff's intent to utilize the 303(d) listings in the VSP process by cross reference agricultural activities with listed sites for potential contaminant sourcing as well as future protection practices.

<https://fortress.wa.gov/ecy/approvedwqa/ApprovedSearch.aspx>

- Washington State Department of Health Source Water Assessment Program – provides a resource to inform as to drinking water sources and potential activities that could cause contamination. Developed under the 1996 Safe Drinking Water Act Amendments, this program and its mapping application will allow District Staff to determine if agricultural activities are located near drinking water sources in order to avoid potential contamination.

<https://fortress.wa.gov/doh/eh/maps/SWAP/index.html>

<https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/SourceWater/SourceWaterProtection>

- NOAA Office of Coastal Management Coastal Change Analysis Program Regional Land Cover – provides a data set that allows documentation of land cover changes over time including wetlands, impervious surface and agriculture. District Staff will obtain the information available for Mason County and analyze changes occurring between 2010 and 2016 for monitoring purposes. This data will complement other land cover data the County has already incorporated into the Work Plan.

<https://coast.noaa.gov/digitalcoast/data/ccapregional.html>

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<sup>48</sup> Lincoln County VSP Work Plan



## 16. AGRICULTURE AND AGRICULTURAL ACTIVITIES

**AGRICULTURE** as a land use or as a resource land is represented in the County's Comprehensive Plan

*"as land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees, or livestock, and that has long term commercial significance for agricultural production."*<sup>49</sup>

This is similar to how it is defined under the Growth Management Act. However, as discussed in the opening paragraph of Chapter I, agriculture for the purposes of VSP is being evaluated by the way it is defined under the Shoreline Management Act (SMA). The GMA defines agriculture in a fairly broad sense and primarily focuses on the product; and GMA has no comparable definition for agricultural activities. The Mason County Resource Management Ordinance has also created within it a definition of agricultural activities<sup>50</sup> that bares some similarities to that of the SMA. In the case of the VSP, using a definition that is standardized statewide and covers a broader range of activity allows for uniformity among the local individual Work Plans.

The first rendition of the Comprehensive Plan adopted in 1996 described the history of agriculture practices in Mason County as having

*taken place ... since the early days of logging. The clear-cutting practices of those early logging companies opened a considerable amount of County land to agriculture, particularly to dairying and cattle raising. Crop production was limited to the growing of hay, berries and potatoes. In the eastern part of the County where the weather was milder, extensive vineyards and fruit orchards were planted. Despite its rich agricultural history, however, Mason County is not well-endowed with the resources necessary to create a strong competitive advantage for agricultural production. Consequently, agriculture's current role in Mason County's economy is relatively minor.*<sup>51</sup>

The regulation of agricultural land, as well as forestry and mining resource lands, is found in the County's Resource Ordinance. Resource lands are "designated" as such as by a specific set of criteria. As a designated resource land, the Ordinance acknowledges the unique importance of the resource and

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<sup>49</sup> Mason County Comprehensive Plan, Chapter IV, 2005 Update, Mason County, Washington

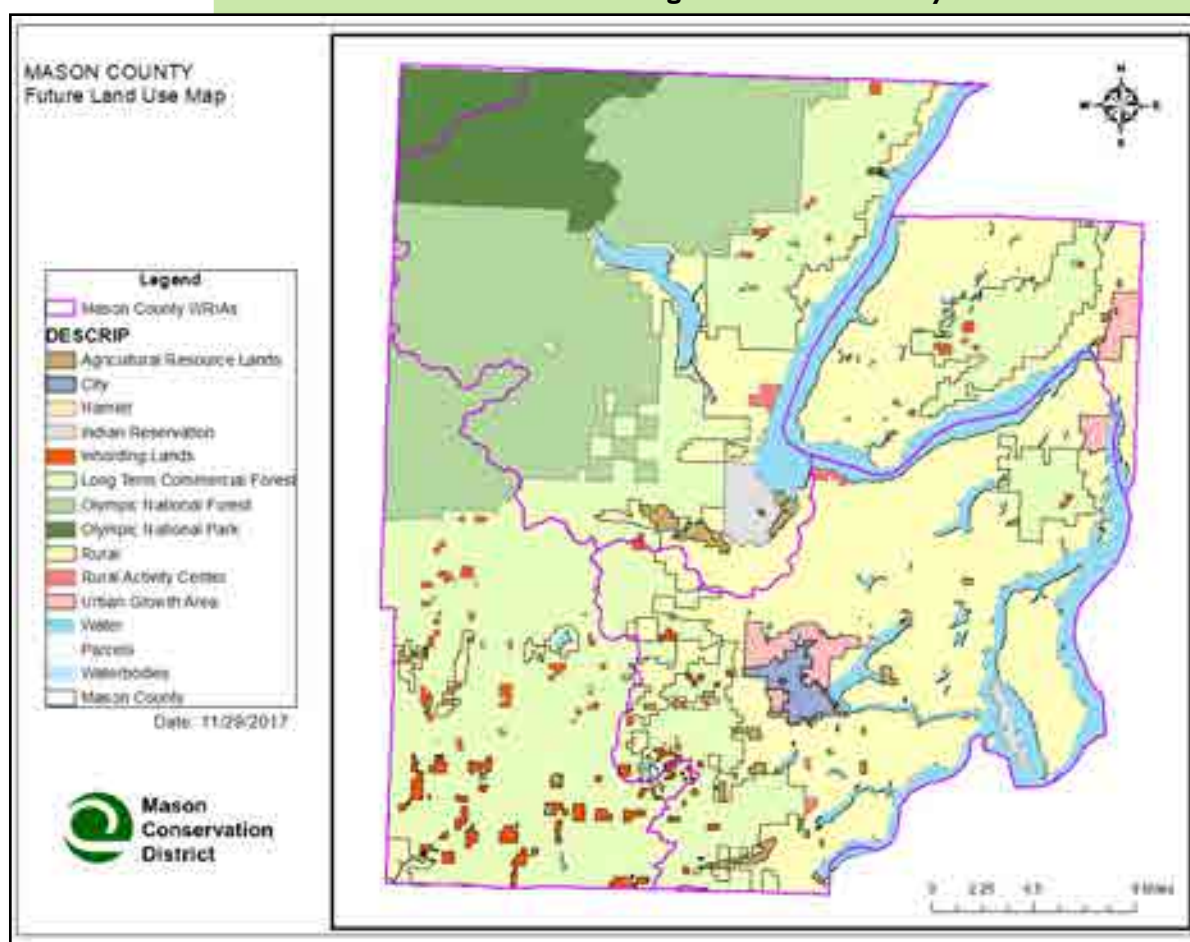
<sup>50</sup> "Agricultural activities and existing and ongoing agriculture" means those activities conducted on lands defined in RCW 84.34.020(2), and those activities involved in the production of crops and/or raising or keeping livestock, including the operation and maintenance of farm and stock ponds, drainage ditches, operation and maintenance of ditches, irrigation systems including irrigation laterals, canals or irrigation drainage ditches, and normal operation, maintenance and repair of existing serviceable agricultural structures, facilities or improved areas, and the practice of aquaculture. Activities which bring an area into agricultural use are not part of an ongoing operation. An operation ceases to be ongoing when the area on which it is being conducted is converted to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals or drainage ditches related to an existing and ongoing agricultural activity.

<sup>51</sup> Mason County Comprehensive Plan, Chapter IV, 2005 Update, Mason County, Washington

affords it a distinct classification and development standards that focus on protection and preservation from encroachment and conversion of use.

Much of the agricultural land within the County is located in the rural areas, outside the urban growth areas. According to the Mason County Assessor's records, there were 387 parcels in 2011 with the taxing classification of agricultural or agricultural open space. These parcels combined total approximately 6,400 acres of agricultural land. Understanding that not all land being utilized for agricultural activity is officially recognized, data must be gathered from other resources to obtain a full picture of agriculture in Mason County. Agricultural resource land as described by the Resource Ordinance may or may not be included in the Assessor's data base and would need to be accounted for from other sources including the Future Land Use Map.

**Figure 8 Mason County Future Land Use Map**



Source: Mason County, Department of Public Works, GIS Division

The Future Land Use Map (above) also created in 1996, depicts agricultural land as several areas of brown. In this case, these parcels were designated under a specific set of criteria in addition to any associated taxing classification utilized in the Assessor's data. These lands, in order to qualify for designation had to be,

- (1) *an existing commercial agricultural use (as of the date of designation) or where the property was used for agricultural purposes as of January 1991, where identified by property tax classification in the open space - agriculture property tax classification program pursuant to Chapter 84.34 RCW or where agricultural use has been identified as the principal use of the property, are presumed to meet this criteria;*
- (2) *a minimum parcel size of ten acres; and*
- (3) *has prime farmland soils;*
- (4) *is surrounded by lands qualifying under classification criteria 1 to 3; or*
- (5) *is an upland fin-fish hatchery.*<sup>52</sup>

In addition to the qualifying criteria outlined above, the Comprehensive Plan and the Resource Ordinance provide protections for designated and non-designated agricultural land through a Preferential Right to Farm. This means that,

- (A) *No resource use or any of its component activities shall be or become a nuisance, private or public, by any changed conditions in or about the locality thereof after the same has been in operation for more than five years, when such operation was not a nuisance at the time the operation began; provided that the provisions of this subsection shall not apply whenever a nuisance results from the negligent or improper operation of any such operation or its component activities, and the property owner follows the standards of this chapter.*
- (B) *A resource operation shall not be found to be a public or private nuisance if the operation conforms to local, state, and federal law and best management practices.*
- (C) *A farm or forest operation shall not be restricted to time of day or days of the week, but shall be conducted according to best management practices pursuant to state law.*
- (D) *A farm or forest operation shall be free from excessive or arbitrary regulation.*<sup>53</sup>

The Resource Ordinance further protects agricultural lands by requiring,

*All plats, short plats, large lot subdivision, development permits, and building permits issued for activities on, or within five hundred feet of lands designated as agricultural resource lands shall contain the following notification: 'This property is within or near designated agricultural resource lands on which a variety of commercial activities may occur at times and that are not compatible with residential development. Residents of this property may be subject to inconvenience or discomfort associated with these activities including, but not limited to: dust,*

*The Open Space Taxation Act ... states that it is in the best interest of the state to maintain, preserve, conserve and otherwise continue in existence adequate open space lands for the production of food, fiber, and forest crops and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens.*

*RCW 84.34*

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<sup>52</sup> Section 8.61.010 MCC

<sup>53</sup> Section 8.52.040(5) MCC

*odor, noise and chemical applications.*<sup>54</sup>

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<sup>54</sup> Section 8.61.010(5)(B) MCC

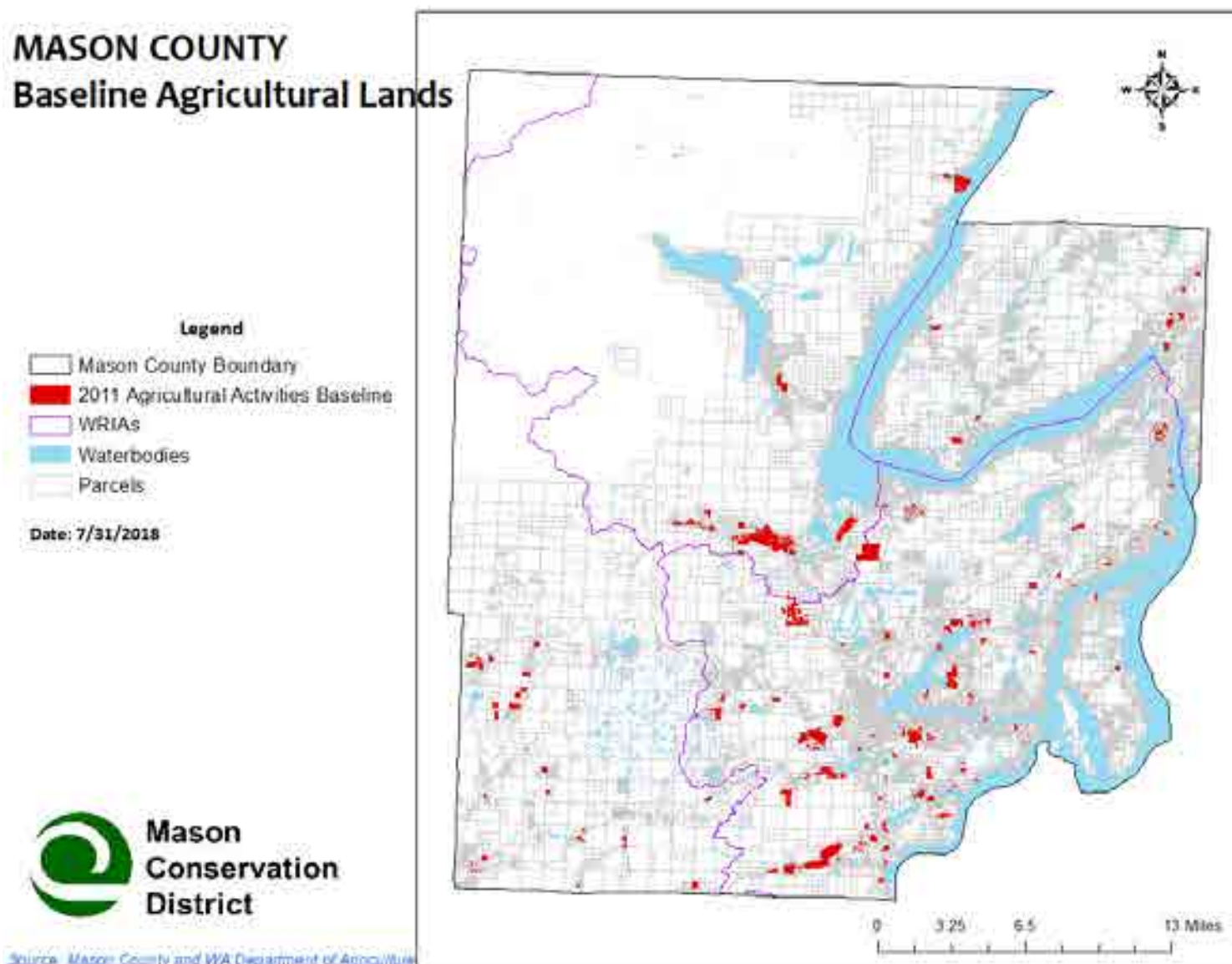
## 17. ESTABLISHING THE AGRICULTURAL BASELINE

**IN** order to evaluate and monitor the effectiveness of this Work Plan, there must be an established baseline of conditions from where to begin. As discussed earlier, the effective date of the VSP program, July 22, 2011, is that date from which each jurisdiction's baseline conditions must be set. Obtaining this information can be challenging; especially if the data was never actually created or gathered at the time. Not every County will have data from 2011 and will need to accommodate this requirement with the best information available. Data for the agricultural landscape of Mason County was gathered from several resources: the Mason County Comprehensive Plan's Future Land Use Map, the Mason County Assessor's Office, the Washington State Department of Agriculture, the U.S. Department of Agriculture, and the Mason Conservation District. The Agricultural Lands Map (Figure 9) is a compilation of designated agricultural resource lands from the Mason County Comprehensive Plan's Future Land Use Map (2005), the Mason County Assessor's data on agricultural open space land (as of 2011) and Washington Department of Agriculture's crop survey data (2010). This is the most comprehensive portrayal for a baseline overview of agricultural lands in Mason County. This map shows 605 agricultural parcels covering 8,015 acres.





**Figure 9 Baseline Agricultural Lands**

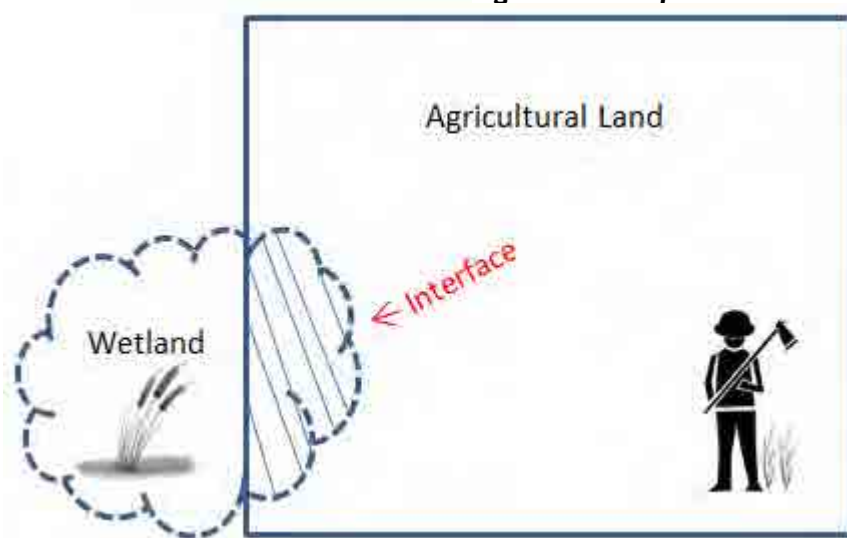


## 18. AGRICULTURAL LANDS AND CRITICAL AREAS INTERFACE

**THE** following Chapters describe the overlap, or interface, of agricultural lands with the County’s critical areas. Each critical area is regulated under the Resource Ordinance with specific guidelines targeting protection and preservation. Unlike zoning, critical area regulations are designed to create an environment that safeguards the resource from development impacts, including agriculture. Each critical area is different and how it interfaces with agricultural activity varies depending on the use and intensity. The figure below is a visual representation of how the term “interface” is being applied in this Plan. The tables below summarize the statistics of agricultural land located near or in critical areas.

**Table 9 Acres and Percentages of Agriculture and Critical Area Interface**

**Figure 10 Interface Illustration**



Critical Area “CA” <sup>55</sup>	Total Acres Of CA	Total Acres Of Agriculture <sup>56</sup>	Acres Of Agriculture Interface	% Of Total Agriculture Interface	% Of Total CA Interface
<b>CARA</b>	121,084	8,015	4,254	53%	3%
<b>Flooded Areas</b>	59,535	8,015	3,048	38%	5%

<sup>55</sup>Critical Areas data obtained from Mason County Public Works, GIS Services; with the exception of Fish & Wildlife data which was obtained from the Washington Department of Fish & Wildlife

<sup>56</sup>Agricultural lands data obtained from Mason County Assessor’s 2011 Open Space-Agriculture Program, Mason County, Public Works, GIS Services for Resource Lands from the Mason County Comprehensive Plan’s Future Land Use Map, and Washington Department of Agriculture’s 2010 Crop distribution survey



Critical Area "CA" <sup>55</sup>	Total Acres Of CA	Total Acres Of Agriculture <sup>56</sup>	Acres Of Agriculture Interface	% Of Total Agriculture Interface	% Of Total CA Interface
<b>Landslide Areas</b>	82,683	8,015	290	4%	0.3%
<b>Seismic Areas</b>	398,254	8,015	7,589	95%	2%
<b>Erosion Areas</b>	16,856	8,015	108	1%	1%
<b>Fish &amp; Wildlife</b>	27,798	8,015	1,513	19%	5%
<b>Wetlands</b>	54,650	8,015	1,206	15%	2%

Monitoring interface, as described here, is a quantitative indicator of the effects conservation practices can have on the physical perimeters of critical areas. Other indicators serve to qualitatively monitor the functions and values of critical areas such as water temperature, pH, dissolved oxygen, and in-stream flows to discern agricultural impacts or trends. This type of qualitative analysis will encompass a more in-depth layer of monitoring utilizing data from sources such as the Department of Ecology's 303(d) listings and the Department of Health's Source Water Assessment Program.

## CRITICAL AQUIFER RECHARGE AREAS

The County's Critical Aquifer Recharge Areas ("CARAs") are primarily located in the Lower Chehalis and Kennedy Goldsborough WRIs where there are also heavy concentrations of waterbodies. The Skokomish-Dosewallips WRIA in the northwestern corner would appear from the data to have no CARAs; however, this land is mostly national forest and parcel information would likely be unavailable. This leaves a noticeable gap in data, however due to the lack of agriculture in that area it should not affect the overall Work Plan. CARAs are regulated under the Resource Ordinance and divided into four Standards of Classification. The determining methodology consisted of reviewing mineral, geologic, soil, topographic and well record data. The classifications can be described as:

**Class I (Extremely Susceptible)** These areas are identified as having a recessional outwash of thickness greater than 25 feet. Recessional outwashes are a geological formation predominantly composed of underground source of drinking water unconsolidated sands and gravels. These formations exhibit horizontal permeabilities greater than 30 feet per day (horizontal permeabilities are generally ten times less than vertical permeabilities). Potential contaminants entering an underground source of drinking water can be expected to travel one mile in six months or less.

**Class II (Highly Susceptible)** These areas are identified as recessional outwash and alluvium 25 feet or less in thickness. These geologic formations are composed of unconsolidated sands and gravels interlain with discontinuous layers of hardpan and silty clays. Depth to water is generally 25 to 125 feet below land surface. These formations exhibit horizontal permeabilities in the range of 30 to 50 feet per day. Potential contaminants entering an underground source of drinking water can be expected to travel one mile in a time frame greater than six months and up to one year.

**Class III (Moderately Susceptible)** These areas are identified as advance outwash. The geologic formations consist of discontinuous layers of clayey gravel and sand and layers of silt and clay, which are more continuous and have been compacted into hardpan. Depth to water is greater than 125 feet below land surface. These formations exhibit horizontal permeabilities in the range of three to 15 per day. Potential contaminants entering an underground source of drinking water can be expect to travel one mile in a time frame greater than one year and up to five years. Class III areas include those well head protection areas, not otherwise designated as a Class I, II, or III critical recharge area.

**Class IV (Low Susceptibility)** These areas are identified as advance outwash found in the southwest part of Mason County along the Satsop drainage.

*Surface waters replenish, "recharge", aquifers through seepage from streams, lakes, and wetlands, and from precipitation that percolates through soil or rock. Areas with a critical recharging effect on aquifers used for potable water, also called Critical Aquifer Recharge Areas or CARAs.*

There are 4,254 acres of agricultural land (bright yellow) covering aquifer recharge areas – more than 50% of all the County’s agricultural lands (Figure 11). Of those, the table indicates the highest concentration of this interface lies within the Kennedy Goldsborough and Skokomish-Dosewallips watersheds. The majority of this coverage in the Skokomish River valley, along the Tahuya River in the northeastern portion of the County, and down along the Skookum Creek (Kamilche Valley) to the south. Concentrations of agricultural activities are prevalent in the Skokomish River valley, centrally located in the County, and along Mill and Coffee Creeks to the south of Oakland Bay. The crop coverage in these areas is mostly pasture, grass hay, and Christmas Trees. In the County’s Resource Ordinance, protection measures of these areas extend 300 feet beyond the mapped boundaries.

*A Critical Aquifer Recharge Area (CARA) ordinance provides local governments with a mechanism to protect the functions and values of a community’s drinking water by preventing pollution and maintaining supply.*

The map coverage does not delineate the classification of aquifers; however for regulation purposes, this is of little relevance as each classification is held to the same regulatory standards, with the exception of Class IV which is less. Aquifer recharge areas do not prohibit agricultural activities with the exception of feedlots, which are prohibited unless legally pre-existing prior to adoption of the County’s Resource Ordinance. The table below shows a breakdown of CARA acreage by watershed.

**Table 10 Acres and Percentages of CARA and Agriculture Interface**

WRIA	Total Acres of CARA	Total Acres of Agriculture Interface	% Total of CARA Acres in Agriculture
<b>Kennedy Goldsborough</b>	36,703	1,806	5%
<b>Kitsap</b>	4,004	245	6%
<b>Skokomish Dosewallips</b>	11,255	1,469	13%
<b>Lower Chehalis</b>	69,122	735	1%
<b>Totals</b>	121,084	4,254	3%

Figure 11 Intersection Of Agricultural Lands And CARAS Map

## MASON COUNTY Agriculture and CARAs

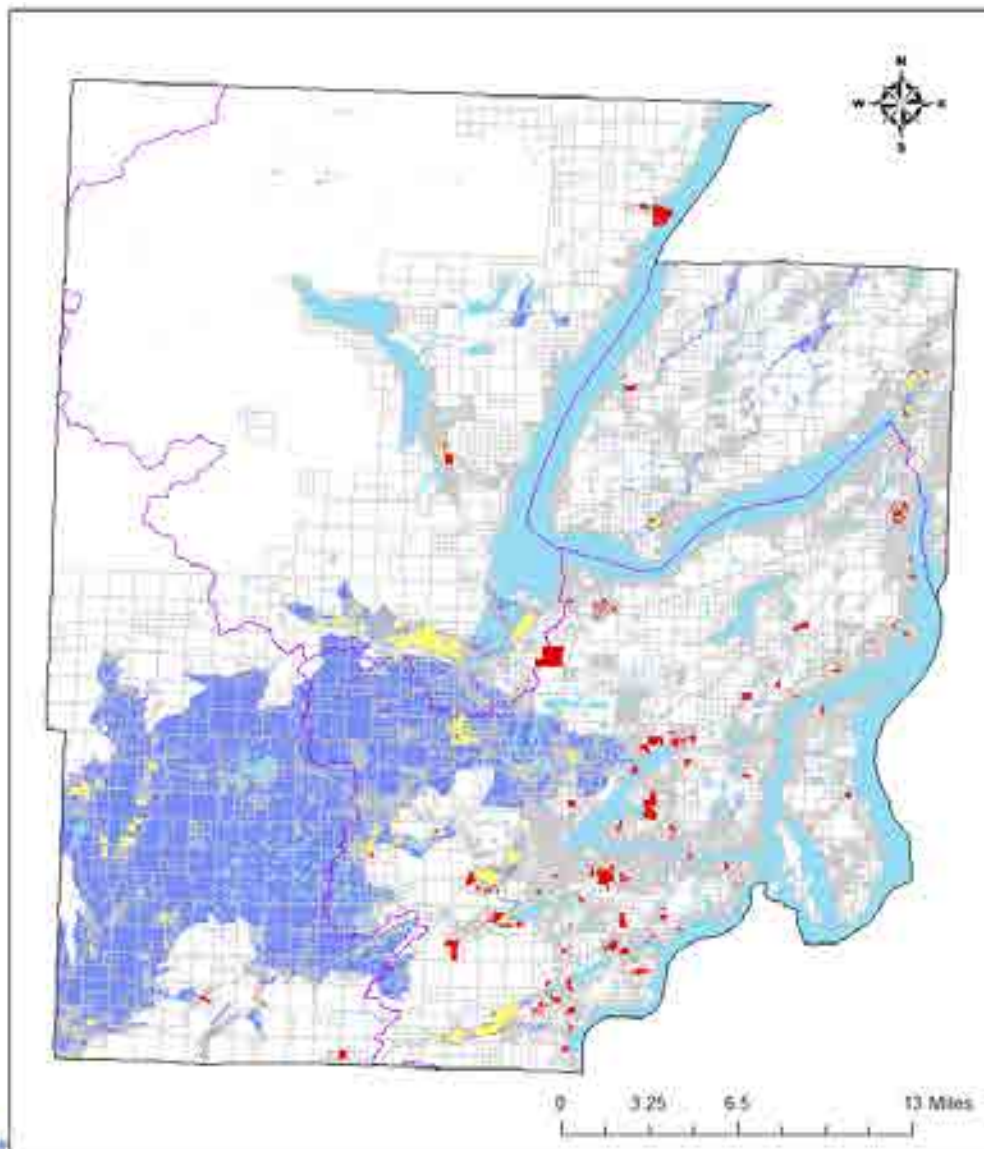
### Legend

- Ag/CARA Interface
- Mason County Boundary
- 2011 Agricultural Activities Baseline
- WRIsAs
- Waterbodies
- Parcels
- Critical Aquifer Recharge Areas

Date: 7/31/2018



Source: Mason County and WA Department of Agriculture



## FREQUENTLY FLOODED AREAS

Frequently flooded areas are generally those designated by the Federal Emergency Management Agency (FEMA) as being within the one hundred year floodplain and depicted on Flood Insurance Rate Maps (FIRMs) as published.<sup>57</sup> Most of them are, of course, along the banks of waterbodies. The Mason County Resource Ordinance defers the regulation of activities and development in these areas to the Flood Damage Prevention Ordinance (Chapter 14.22 MCC). The authority established under the Flood Damage Prevention Ordinance (FDPO) is directed by Chapter 86.16 RCW which provides for the administration of Floodplain Management by local governments.

*The flood hazard areas of Mason County are subject to periodic inundation which can result in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses could be exacerbated by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss. ... [T]his flood damage prevention ordinance to implement comprehensive flood damage reduction measures that are necessary for public health safety and welfare and that allow property owners to protect their property.<sup>58</sup>*

The FDPO also distinguishes Special Flood Risk zones in the floodplain of the Skokomish River, Vance Creek and tributaries. The map in Figure 13 indicates (bright yellow) the areas of agriculture located in flood areas. Approximately 3,000 acres – just under 40% of all Mason County agricultural lands are in frequently flooded areas. Again, there is an abundance of this type of land use in the Skokomish River Valley, a special flood risk zone according to the County's most recent ordinance. The Skokomish River Valley and its tributaries are not only of special concern in the FDPO, but this area is also governed by the Skokomish River Comprehensive Flood Control Management Plan cited within the Ordinance. The Plan, drafted in 1987 and on record with the U. S. Government Printing Office, describes the valley as primarily agricultural and residential. Since the turn of the

*Mason County protects frequently flooded areas by concentrating urban development on the least amount of land, considers the suitability of the land for development through the use of performance standards, and provides for significant opens pace and resource use areas in development within the Rural Area.*

<sup>57</sup> Flood hazard areas identified on Flood Insurance Rate Map are Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. [www.fema.gov/flood-zones](http://www.fema.gov/flood-zones)

<sup>58</sup> Section 14.22.020 MCC

century, the Skokomish Valley has been extensively converted to agriculture through the cutting and removal of the aboriginal riparian forests. Today, most of the valley has been converted to pasture and Christmas tree plantations. The economy of the Skokomish Valley is based on agriculture, and therefore the soil resource. Soils in the valley are the key to its agricultural success and are, in fact, the result of its continuous flooding.

*Alluvial soils, deposited by successive flooding of river valleys, typically have high agricultural values because of their widespread sources across the landscape. Because of their widespread sources, alluvial soils contain a variety and abundance of minerals necessary for plant growth not commonly found in soils which have developed in place from a single parent rock source. Thus the flooding of the Skokomish Valley is the source of its agricultural productivity.<sup>59</sup>*

The problems associated with the increasing annual flooding were, among other things, attributed to soil erosion of bare, unprotected farm fields, and damage to crops such as corn and Christmas trees. A specific concern in the 1987 Plan was a catastrophic event causing the river to jump its banks and carve a new channel; individual measures towards amelioration include flood proofing of structures, agricultural practices adapted to flooding, and bank protection methods not harmful to fish habitat.

Several studies were conducted over the years to determine ways to reduce flooding damage; however, the cost-benefit analysis of most of the structural remedies didn't "pencil out". Non- structural methods (e.g. code and policy amendments) ultimately became the weapon of choice. The County utilized the building code, the Comprehensive Plan, and the Shoreline Management Program to guide future activity in the Skokomish Valley. With respect to agriculture, this included the prohibition of tillage patterns and feedlots.

Another large concentration of farm land in the frequently flooded areas is found along the Skookum Creek, in the south end of the County. The Skookum Creek farming area including Totten Inlet are shown collectively with the Skokomish River Valley in Figure 12 below. The primary agricultural activity in both areas is pasture and grass/hay.

**Table 11 Acres and Percentages of Flood Areas and Agriculture Interface**

WRIA	Total Acres of Flood Area	Total Acres of Agriculture Interface	% Total of Flood Acres in Agriculture
<b>Kennedy Goldsborough</b>	28,353	1,169	4%
<b>Kitsap</b>	8,454	162	2%
<b>Skokomish Dosewallips</b>	16,702	1,537	9%
<b>Lower Chehalis</b>	6,026	180	3%
<b>Totals</b>	59,535	3,048	5%

<sup>59</sup> Washington Department of Ecology. (1987). Skokomish River Comprehensive Flood Control Management Plan: Draft Plan. (TC24.W2 C36 1987). Washington DC: U.S. Government Printing Office.



**Figure 12 2016 Aerial View of Skokomish River Valley and Skookum Creek**





Figure 13 Intersection Of Ag Lands And Flooded Areas Map

## MASON COUNTY Agriculture and FFAs

### Legend

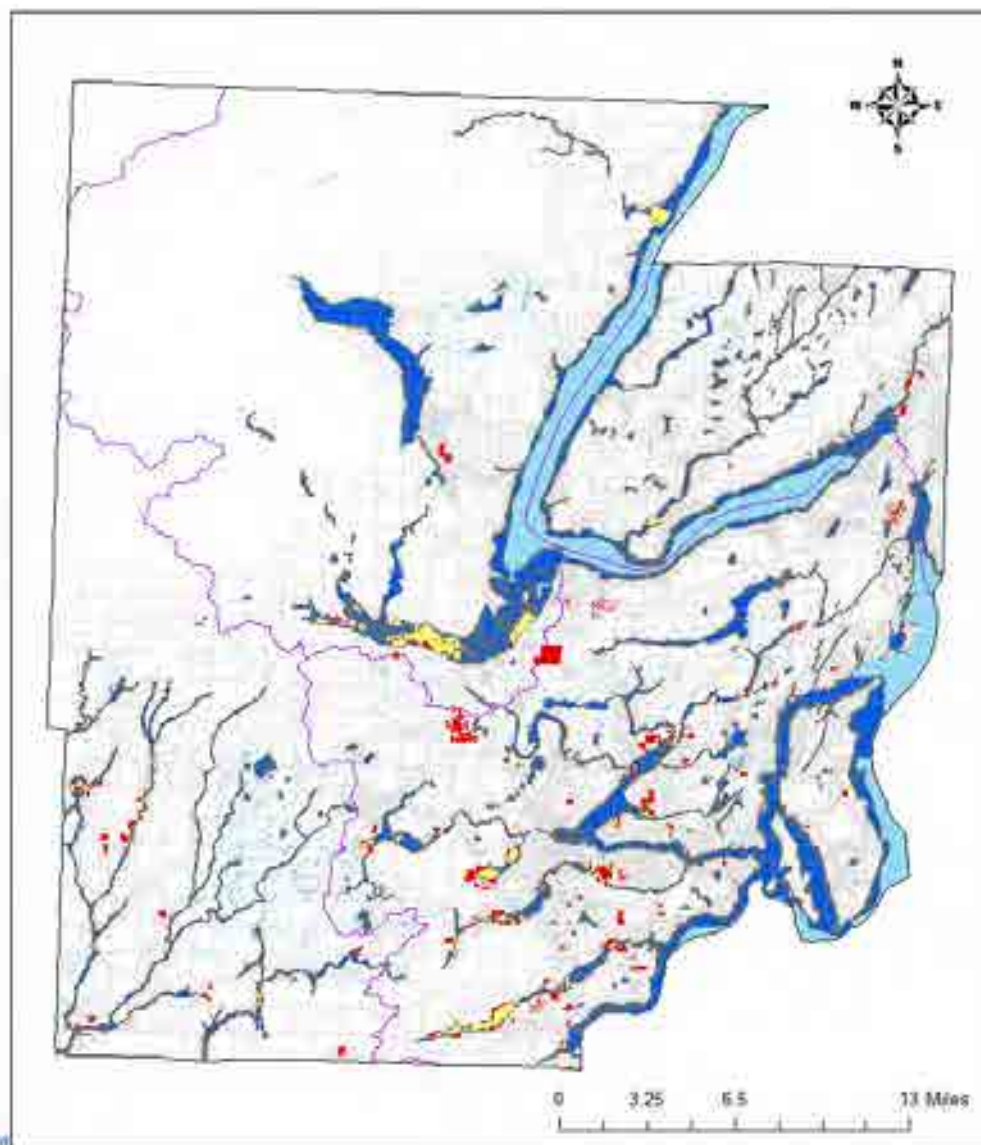
- Ag and FFA Intersect
- Frequently Flooded Areas
- Mason County Boundary
- 2011 Agricultural Activities Baseline
- WRAs
- Waterbodies
- Parcels

Date: 8/2/2018



**Mason  
Conservation  
District**

Source: Mason County and WA Department of Agriculture



## LANDSLIDE HAZARD AREAS

Landslide hazard areas cover most of the County, with the exception of the northwest corner. Again, this is likely due to the location of the Olympic National Forest and the lack of parcel level data.

Classifying areas as potential landslide hazards is primarily a function of slopes and soils. This includes areas with: indications of earth movement; artificially over-steepened or un-engineered slopes; slopes containing soft or potentially liquefiable soils; over-steepened or otherwise unstable as a result of stream incision, stream bank erosion and undercutting by wave action; slopes greater than 15% and having hillsides with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock and Springs or groundwater or any area with a slope of 40% or steeper and with a vertical relief of ten or more feet except areas composed of consolidated rock.

Landslide areas generally present potential dangers to public health and safety and, with few exceptions, development would require the professional preparation of a geotechnical report or assessment to determine under what conditions the development may proceed at a reasonable risk. Existing and ongoing agriculture is one exemption provided it is operating under best management practices. The bright yellow areas in the map (Figure 14) indicate landslide hazard areas, and are fairly wide-spaced over the County.

*An important measure of potential risk for landslide when development occurs is land clearing and alteration for development.*

**Table 12 Acres and Percentages of Landslide Areas and Agriculture Interface**

WRIA	Total Acres of Landslide Area	Total Acres of Agriculture Interface	% Total of Landslide Interface
<b>Kennedy Goldsborough</b>	25,501	204	1%
<b>Kitsap</b>	17,805	33	0.2%
<b>Skokomish Dosewallips</b>	21,748	29	0.1%
<b>Lower Chehalis</b>	19,130	23	0.1%
<b>Totals</b>	84,184	290	0.3%

**Figure 14 Intersection Of Ag Lands And Landslide Areas Map**

## MASON COUNTY Agriculture and LHAs

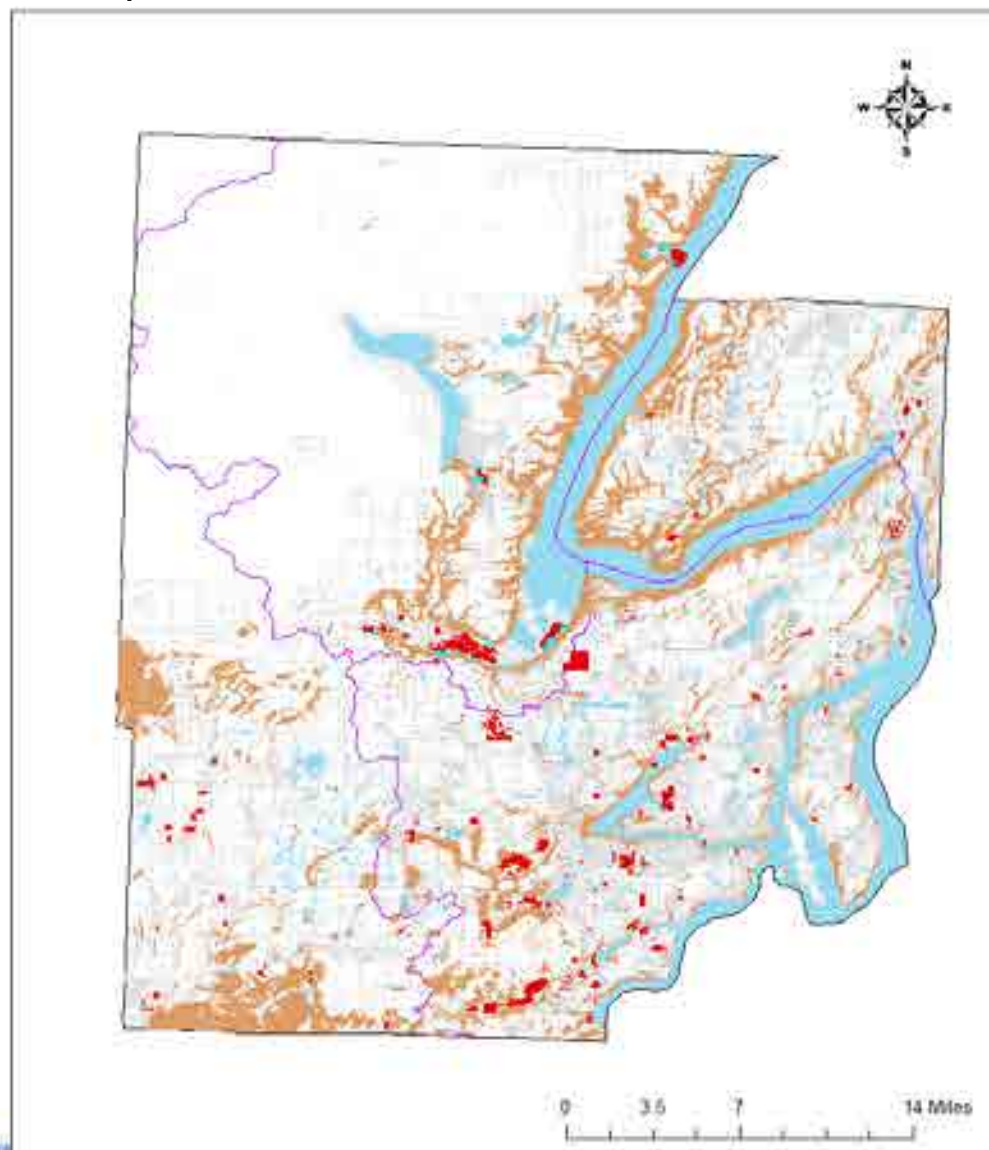
### Legend

- Ag and LHA Intersect
- Landslide Hazard Areas
- Mason County Boundary
- 2011 Agricultural Activities Baseline
- WRIs
- Waterbodies
- Parcels

Date: 8/2/2018



Source: Mason County and WA Department of Agriculture



## SEISMIC HAZARD AREAS

The bright yellow areas indicate where agriculture activity is located within the seismic areas; there are approximately 7,589 acres. (Figure 15) Since seismic activity in Mason County occurs throughout, most all of the agricultural lands are subject to seismic restrictions. These areas include all landslide hazard areas, by definition, together with all other areas susceptible to ground failure such as geologic faults; deep road fills and poorly compacted artificial fill; postglacial stream, lake or beach sediments; river deltas; and bluffs. Seismic hazard areas present potential dangers to public health and safety, and restricted development activities within them serves to prevent the acceleration of man-made and natural geological hazards, and to neutralize the risk to the property owner or adjacent properties. Types of seismic hazards include: surface faulting; ground shaking; earthquake-related ground failure and landslides; lateral spreading; liquefaction; lurch cracks; rockfalls; differential settlement; regional uplift; seiches<sup>60</sup>; and/or tsunamis. As with landslide hazard areas, development must be evaluated with a geotechnical report or assessment. There is no exception for agricultural activities in seismic areas and all structures must be designed in consideration of the ground motions associated with a 475 year return period seismic event<sup>61</sup> for a D-2 seismic zone.<sup>62</sup>

Seismic zones are generally classified by the International Building Code according to three basic criteria: probable site ground motion, soil (site class), and building occupancy use.

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*Seismic hazard area development standards focus on effects to buildings and other facilities from intense ground shaking and/or liquefaction. Attention to seismically induced landslides could also cause structural damage to buildings, particularly on steeper slopes and shoreline bluffs*

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<sup>60</sup> A seiche is a standing wave in an enclosed or partially enclosed body of water. Seiches and seiche-related phenomena have been observed on lakes, reservoirs, swimming pools, bays, harbours and seas. The key requirement for formation of a seiche is that the body of water be at least partially bouded, allowing the formation of the standing wave.

<sup>61</sup> The level of earthquake chosen as the basis of a deterministic analysis is usually measured in terms of estimated return period. The return periods commonly used are 72-year, 475-year, and 975-year periods. These return periods correspond to 50, 10, and 5 percent probability of exceedance for a 50-year period (which is the expected design life for a building). The 475-year return period (or 10 percent probability of exceedance in 50 years) event is the most common standard used in the industry for assessing seismic risk, and it is also the basis for most building codes for seismic design. <https://Understanding the Language of Seismic Risk Analysis | IRMI.com>

<sup>62</sup> IRC R301.2(2); Soils is IRC Section 401.4.1, IBC Chapter 16 & ASCE 7

**Table 13 Acres and Percentages of Seismic and Agriculture Interface**

WRIA	Total Acres of Seismic Area	Total Acres of Agriculture Interface	% Total of Seismic Acres in Agriculture
<b>Kennedy Goldsborough</b>	168,908	4,814	3%
<b>Kitsap</b>	68,556	314	0.5%
<b>Skokomish Dosewallips</b>	71,883	1,714	2%
<b>Lower Chehalis</b>	88,907	747	1%
<b>Totals</b>	398,254	7,589	2%

## Magnitude 4.2 earthquake hits near Belfair

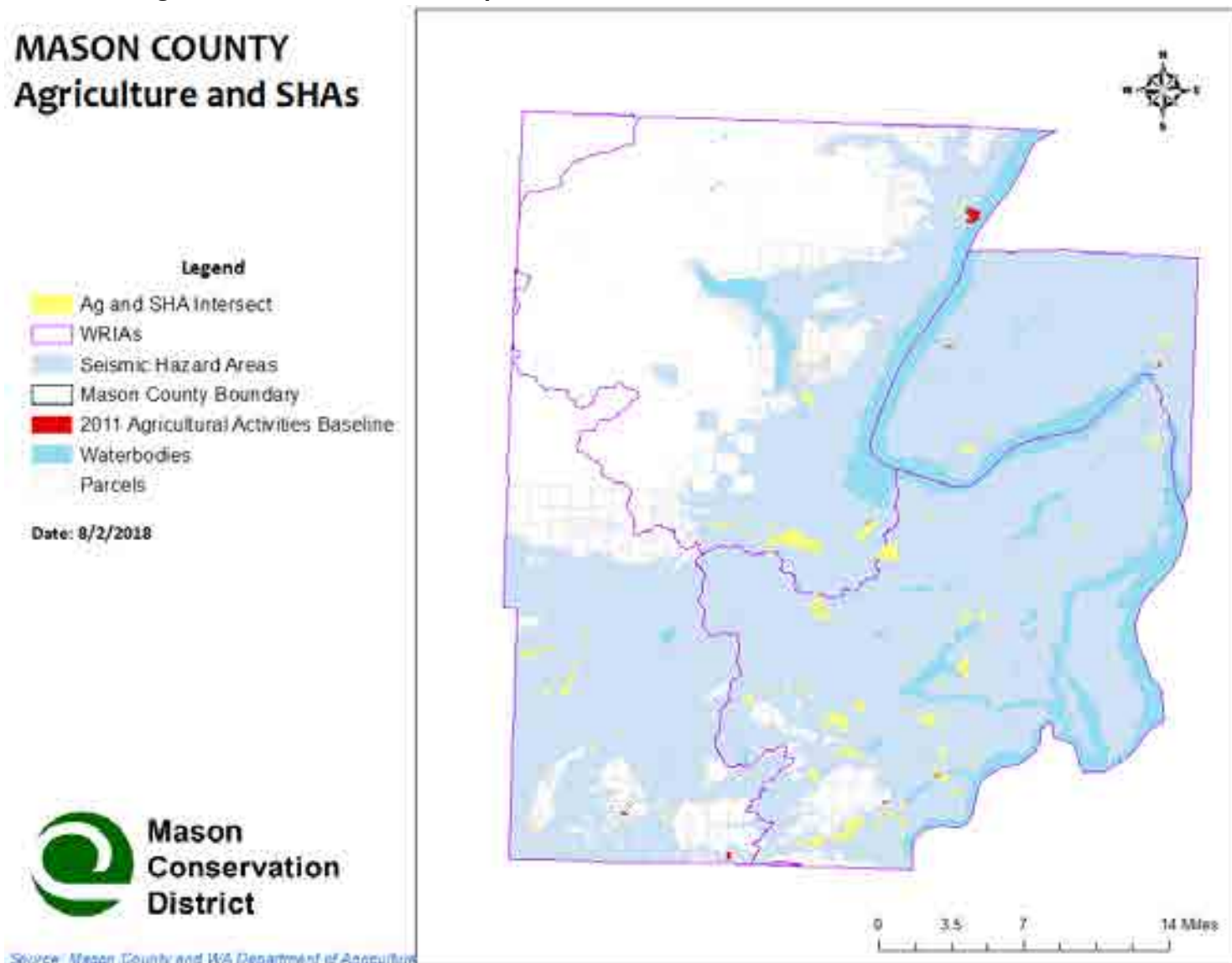
Updated: Feb 23, 2017 - 10:55 AM



Source: Kiro7.Com February 2017



**Figure 15 Intersection Of Ag Lands And Seismic Areas Map**



## EROSION HAZARD AREAS

Erosion hazards generally occur on slopes that exceed 15% and are underlain by soils which are subject to severe erosion when disturbed. Such soils include any occurrence of River Wash ("Ra") or Coastal Beaches ("Cg") and the following when they occur on slopes 15% or steeper: Alderwood gravelly sandy loam ("Ac" and "Ad"); Cloquallum silt loam ("Cd"); Harstine gravelly sandy loam ("Hb"); Kitsap silt loam ("Kc"). In Mason County, there are approximately 16,856 acres of land that qualify as erosion hazard areas; of this, 108 acres have agricultural activities occurring on them. These areas can be seen in bright yellow on the map in Figure 16. This is less than one percent of the total agricultural land acreage in the County.

Agriculture is not exempt from the development standards of the Resource Ordinance in erosion areas. Considering the sensitivity of the soils, any clearing and grading activity must have a geotechnical report prepared by a professional engineer. Structural developments in these areas are also required to obtain a soil erosion and sediment control plan as part of or in addition to the geotechnical report. This is a unique requirement not included with the landslide and seismic standards and likely why Mason County chose to parse out the geological hazards for separate consideration and protection measures. Areas of specific erosion concern are also subject to limited operations between May and October, and avoiding the wet season. Property owners conducting operations within erosion hazard areas shall not only provide a soil erosion and sediment control plan for protection of the development area and disturbed surfaces, but shall also be responsible to ensure that accelerated erosion does not occur during and after the project construction.

★★★★★★★★★★

*Erosion is a natural process in which the land surface is worn away by the action of water, wind, ice or other geologic processes. The most common cause of erosion is water falling or flowing across the land.*

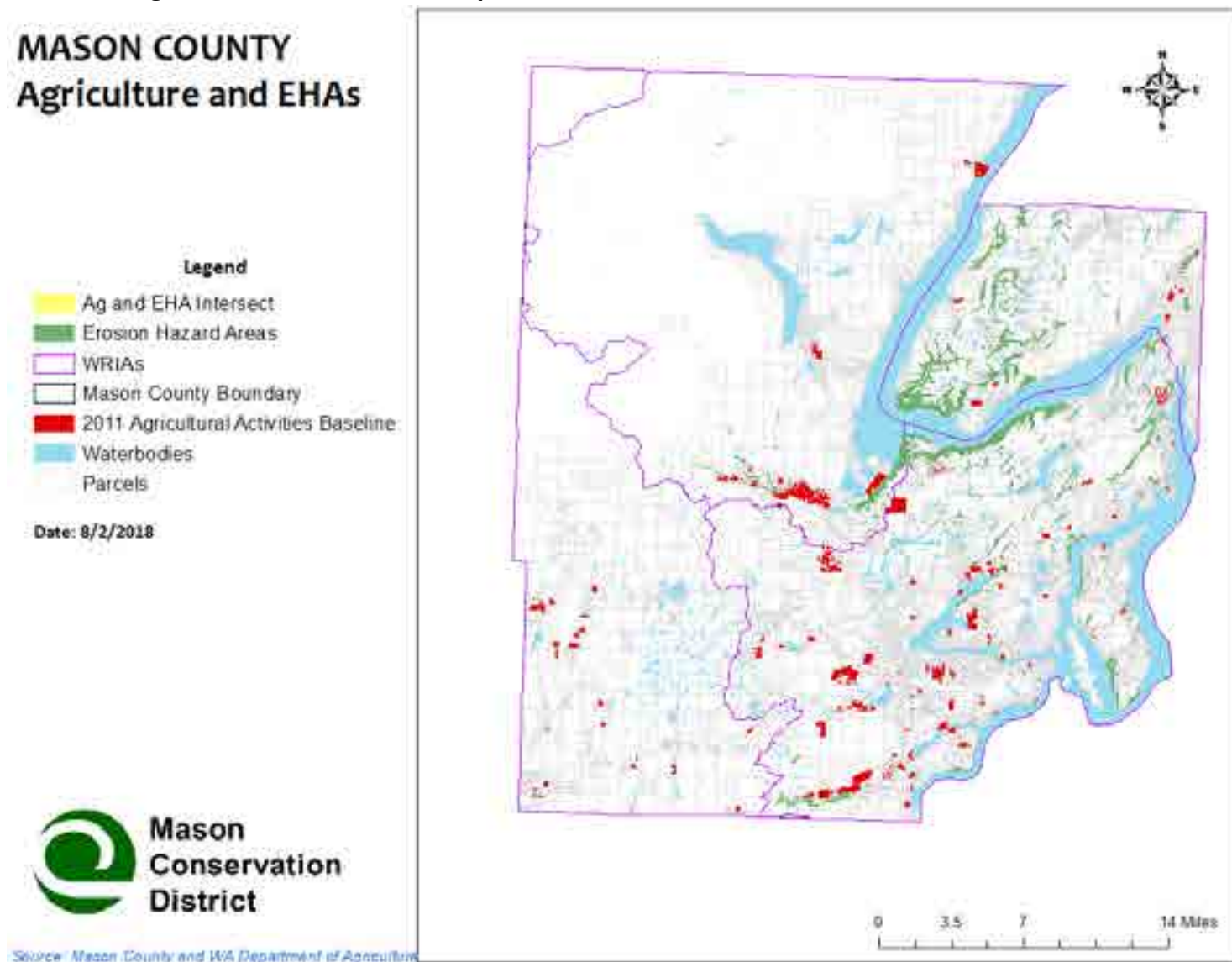
★★★★★★★★★★

**Table 14 Acres and Percentages of Erosion and Agriculture Interface**

WRIA	Total Acres of Erosion Area	Total Acres of Agriculture Interface	% Total of Erosion Interface
<b>Kennedy Goldsborough</b>	8,177	59	1%
<b>Kitsap</b>	7,051	7	0.1%
<b>Skokomish Dosewallips</b>	1,559	42	3%
<b>Lower Chehalis</b>	69	0.4	0.6%
<b>Totals</b>	16,856	108	1%



**Figure 16 Intersection of Ag Lands and Erosion Areas Map**



## FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Fish and Wildlife Habitat Conservation Areas (FWHCA) are recognized for maintaining species in suitable habitats within their natural geographic distribution so that isolated populations are not created. It does not mean maintaining all individuals of all species at all times, but does mean intergovernmental cooperation and coordination is critically important in a region. The underlying assumption is that impacts to fish and wildlife conservation areas shall be avoided or mitigated as detailed in approved Habitat Management Plans as described in the Resource Ordinance. The intent of these regulations is to:

- 1) Protect critical habitat features to support genetically viable populations of fish and wildlife species and allow for commercial and non-commercial uses.
- 2) Protect the biological, physical, and chemical components of water quality for the benefit of aquatic and terrestrial resources, as well as human consumptive uses.
- 3) Ensure that natural stream and marine shoreline functions such as flow patterns, production of sediment and large woody debris are maintained with minimal interference or impact to private property.
- 4) Protect habitat for federal or state listed endangered, threatened or sensitive fish and wildlife.
- 5) Encourage non-regulatory methods of habitat retention whenever practical, through education, and the Open Space Tax Program.
- 6) To supplement the Shoreline Master Program for Mason County to preserve and protect critical fish and wildlife habitat pursuant to (WAC 365-190-080). It is the intent that the ordinance codified in this chapter will compliment and supplement the Shoreline Master Program.
- 7) To implement the Mason County Comprehensive Plan and to achieve these purposes consistent with the Comprehensive Plan.

As discussed earlier in this Plan, Fish and Wildlife Habitat Conservation Areas include both aquatic and terrestrial

*These areas serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. Mason County contains an abundance of marine, freshwater and upland habitat for fish and wildlife.*

Columbian Black-Tailed Deer  
*Odocoileus hemianus columbianus*



Courtesy Special Collections and Archives, University of Idaho Library. SPDC Q172349.1844

areas within Mason County. The approximate location and extent of critical fish and wildlife habitat areas are available by limited access from the Washington Department of Fish & Wildlife's (WDFW) Priority Habitat and Species (PHS) Program database. The map in Figure 17 illustrates Priority Species Habitat in bright yellow. There is approximately 1,513 acres of agricultural land that interfaces with the habitat, which is about 19%.

Mason County has a number of priority species habitats, both aquatic and terrestrial. The table below describes the amounts of fish and wildlife habitat in the county together with how much of it interfaces with agricultural lands. Since most of the County's agricultural activities are in WRIs 14 and 16, it follows suit that most of the interface of habitat is also in those regions. Additionally, while the production of shellfish in Mason County is first in the State, and fifth in the Nation, less than 10% of shellfish habitat interfaces with agriculture.

**Table 15 Acres and Percentages of Habitat and Agriculture Interface**

<b>WRIA</b>	<b>Total Acres of Priority Habitats</b>	<b>Total Acres of Agriculture Interface</b>	<b>% Total of Priority Habitat Interface</b>
<b>Kennedy Goldsborough</b>	4,113	923	22%
<b>Kitsap</b>	2,657	57	2%
<b>Skokomish Dosewallips</b>	21,392	533	2%
<b>Lower Chehalis</b>	--	--	--
<b>Totals</b>	27,798	1,513	5%

**Figure 17 Intersection of Ag Lands and Priority Species Map**

## MASON COUNTY Agriculture and PHS

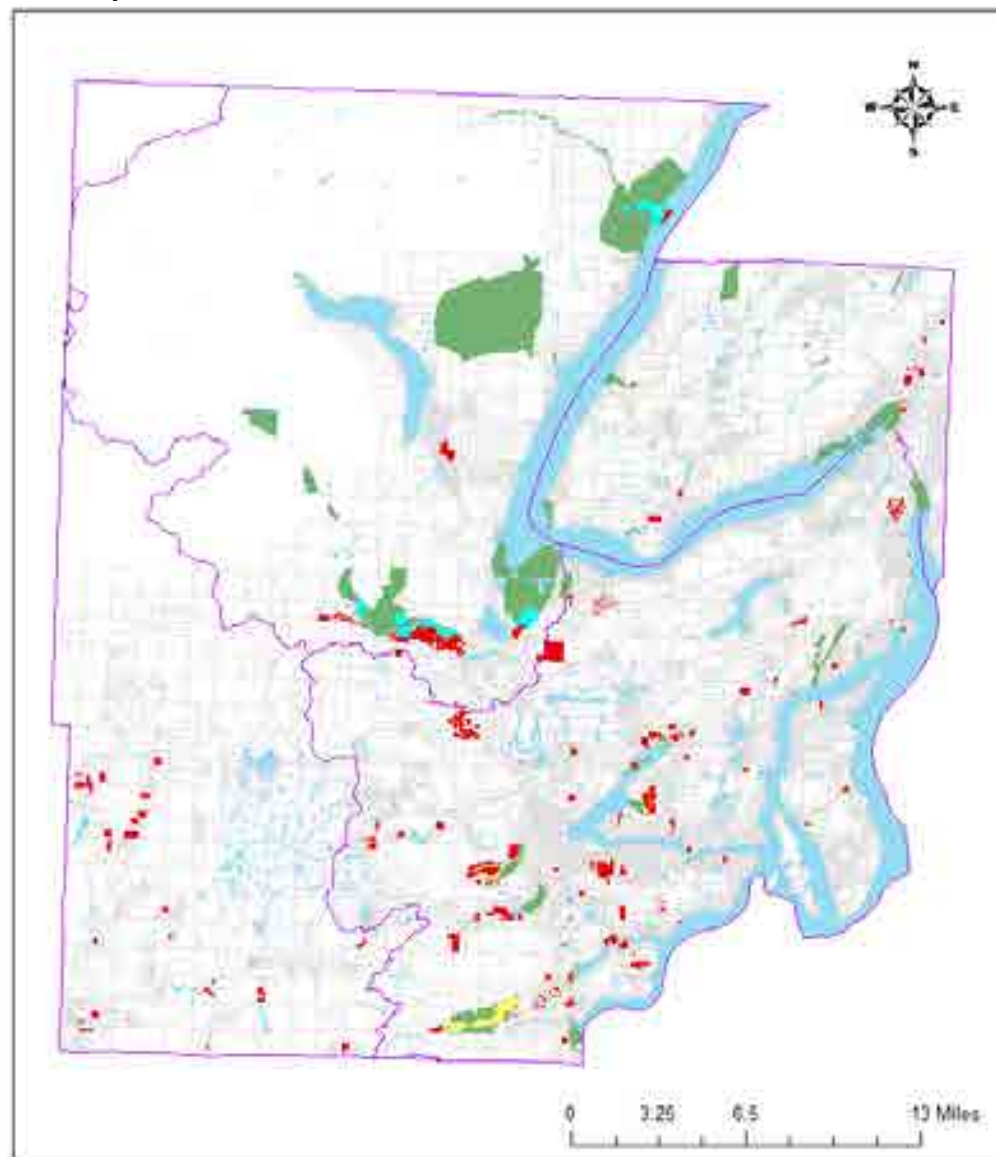
### Legend

- Ag and PHS Intersect
- Priority Habitat Species
- WRIsAs
- Mason County Boundary
- 2011 Agricultural Activities Baseline
- Waterbodies
- Parcels

Date: 8/2/2018



**Mason  
Conservation  
District**



Source: Mason County Assessor's Office, Mason County Future Land Use Map, WA Department of Agriculture, WA Department of Fish & Wildlife

## WETLANDS

Mason County is covered by approximately 54,650 acres of designated wetlands. Table 10 of [Chapter 18](#) indicates that agriculture overall only impacts approximately 2% of those; however wetlands occur on nearly 15% of the entire County's agricultural lands. The Resource Ordinance, in this case, regulates adjacent land uses in order to avoid, minimize, rectify, reduce or compensate for development impacts to maintain and enhance the biological and physical functions and values with respect to water quality maintenance; stormwater and floodwater storage and conveyance; fish and wildlife habitat; primary productivity, recreation, education and historic and cultural preservation. When avoiding impacts is not reasonable, mitigation is implemented to achieve a no net loss of wetlands in terms of acreage, function and value. What qualifies as a wetland is also provided in the Resource Ordinance as adopted from state statutes.

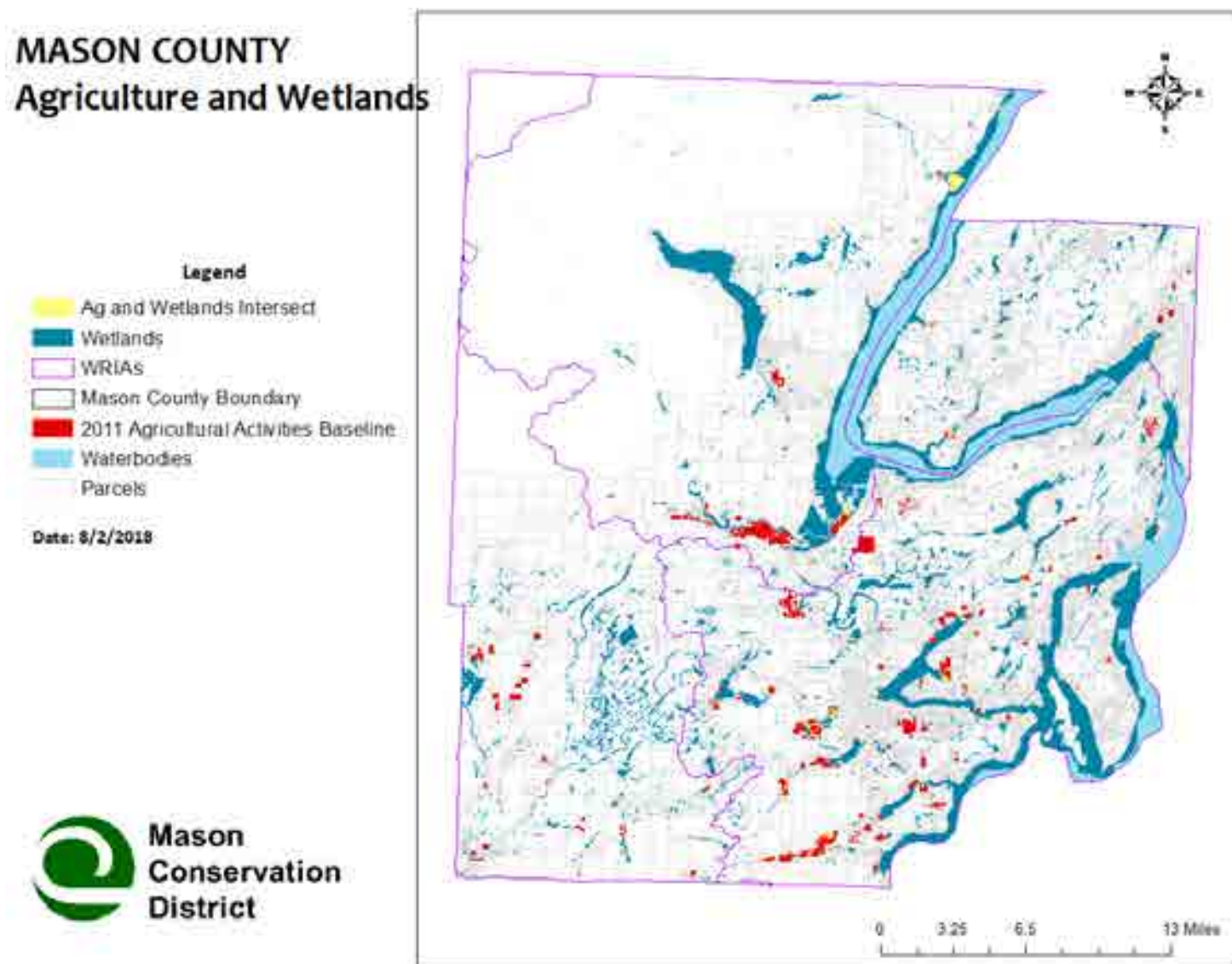
Generally, wetlands are areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in soil conditions. These include swamps, marshes, bogs and similar areas. Regulated wetlands include those just mentioned, as well as ponds less than 20 acres and Wetlands created as mitigation, and those modified for approved land use activities, including their submerged aquatic beds. Designated wetlands not regulated are comprised of artificial man-made wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street or highway. The map in Figure 18 shows the WRIA divisions in order to better see the location of all the County's wetlands as well as those on agricultural land (bright yellow). There is a minimal amount of wetland and agriculture interface as evidenced by this map; most of which are along the Skokomish River and Skookum Creek. The total amount of interface between agriculture and critical areas of July 2011 is shown in the table below.

**Table 16 Acres and Percentages of Wetland and Agriculture Interface**

WRIA	Total Acres of Wetlands	Total Acres of Agriculture Interface	% Total of Wetland Interface
<b>Kennedy Goldsborough</b>	27,207	572	2%
<b>Kitsap</b>	6,960	141	2%
<b>Skokomish Dosewallips</b>	13,916	446	3%
<b>Lower Chehalis</b>	6,567	49	1%
<b>Totals</b>	54,650	1,206	2%



**Figure 18 Intersection of Ag Lands and Wetlands Map**



Source: Mason County Assessor's Office, Mason County Future Land Use Map, WA Department of Agriculture, National Wetlands Inventory

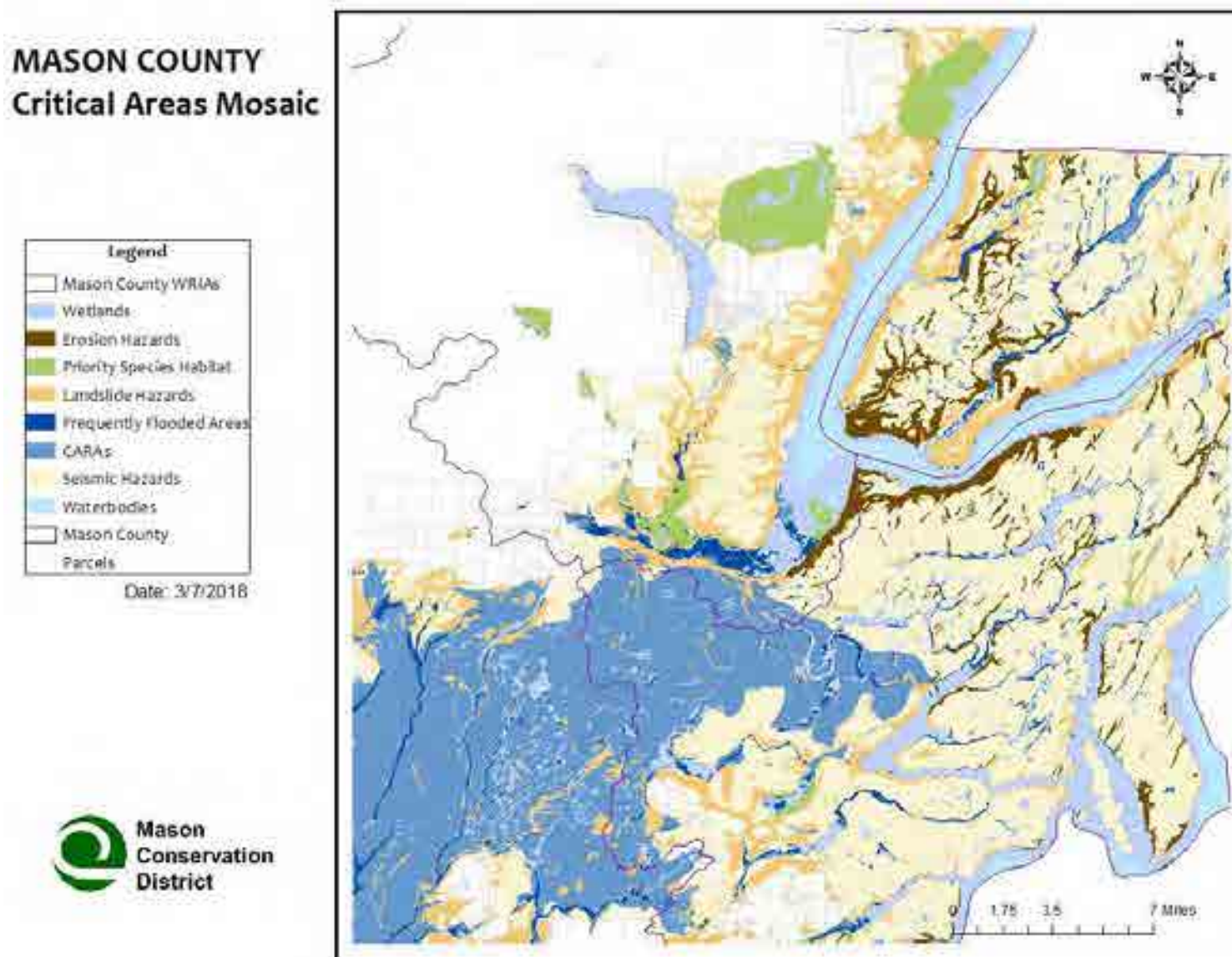


The table indicates that there is interface of critical areas and agricultural activities in four out of the five WRIAs elected to be placed in the VSP; WRIA 21 (Queets Quinault) is in the Olympic National Forest and without agriculture or adequate data for analysis. The map in Figure 19 shows the largest concentration of critical areas in the Kenney Goldsborough WRIA in the southeast portion of the County. With each critical area overlaid, the mosaic of colors shows the unmistakable evidence of their presence. The reason for this may be the large amount of water in that region including Oakland Bay, Totten Inlet, Hammersley Inlet, Skookum Creek and portions of Hood Canal that provide favorable lands for agriculture.

**Table 17 Acreage of Agriculture in Critical Areas by WRIA**

<b>Critical Areas</b>	<b>Kennedy-Goldsborough WRIA 14</b>	<b>Kitsap WRIA 15</b>	<b>Skokomish-Dosewallips WRIA 16</b>	<b>Lower Chehalis WRIA 22</b>
<b>CRITICAL AQUIFER RECHARGE AREAS</b>	1806	244	1469	735
<b>FREQUENTLY FLOODED AREAS</b>	1169	162	1537	180
<b>WETLANDS</b>	572	141	446	49
<b>GEOLOGICALLY HAZARDOUS AREAS</b>				
Landslide Hazard Areas	204	33	29	23
Seismic Hazard Areas	4814	314	1714	747
Erosion Hazard Areas	59	7	42	0.4
<b>FISH AND WILDLIFE PRIORITY SPECIES HABITAT</b>	923	57	533	--

Figure 19 Mosaic of Critical Areas Map



Source: Mason County, FEMA, WA Fish and Wildlife, FEMA

## 19. GOALS AND BENCHMARKS

**THE** Mason County VSP outlines goals to meet the protection and enhancement benchmarks as required in the Work Plan. The “protection” benchmark is specific to protecting critical areas by preventing any further degradation of function or value already existing as of July 22, 2011. Although, protecting agricultural activities from some of the risks associated with critical areas such as seismic and frequently flooded areas is of importance and should be considered in the planning process when possible. In this document, the viability of agricultural activities will mostly be those associated with critical areas, and not necessarily all activities within the County at large. The Work Plan must rely on voluntary stewardship by agricultural operators as the principal method of protecting critical areas located on or adjacent to their activities; while not requiring any reduction or termination of those activities. Successful achievement of these two benchmarks will create symbiotic relationships between agriculture and critical areas. The overall goals of VSP, as understood and iterated in this Work Plan, can be defined as:

- 1) Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011 (first benchmark, RCW 36.70A.703)
- 2) Encourage the implementation of voluntary actions that enhance critical areas on agricultural lands (second benchmark, RCW 36.70A.700)
- 3) Enhance the viability of agriculture and reduce the conversion of farmland to other uses (third benchmark, RCW 36.70A.725)

### GOALS

The Work Group has comprised four goals in this Work Plan that are similar to those of VSP stated above, but simplified for the purpose of creating understandable strategies to achieve them.

- |        |   |
|--------|---|
| GOAL 1 | Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011 |
| GOAL 2 | Enhance critical area functions and values through voluntary, incentive-based measures.                                   |
| GOAL 3 | Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.                       |
| GOAL 4 | Establish baseline monitoring program to measure benchmarks over a ten year period.                                       |

### BENCHMARKS

The VSP requires that there be goals and measurable benchmarks to determine if the Work Plan’s implementation is in fact providing protection and enhancement of the County’s critical areas. The Benchmarks are designed in such a way as to allow District Staff to measure changes to the 2011 baseline interface that would indicate either continued protection or evidence of enhancement. Interface is

- 8,015 acres of agricultural activity
- 159 agricultural operators
- 7.5 farm plans (annually)
- 1:20 operators with farm plans (annually)
- 56 acres average farm size

defined in Chapter 1 “Definitions” and further discussed in Chapter 18 “Agricultural Lands and Critical Areas Interface”. An increase in interface can show two things – the amount of critical area is increasing and the amount of agricultural activity within that critical area is decreasing. The inverse is true for a decrease in interface – the amount of critical area is decreasing and the amount of activity is increasing. Neither result, however, indicates a positive or negative affect to either the critical area or the activity without on-the-ground investigation. Monitoring data, as discussed in the Monitoring Program (Appendix 7) will determine the location of the change or changes for follow up by District Staff.

## **PARTICIPATION BENCHMARKS**

Operator participation is also a measurable used within the Benchmarks to determine if the Work Plan is being promoted and if it’s being implemented by enough landowners to ensure successful protection and enhancement. The Work Plan has an outreach component that was created by the Work Group to serve as an “idea-list” to educate the community on the VSP and rally support and volunteerism. This benchmark will require the inclusion of additional data in order to be effectively measurable.

Information in the Plan’s tables thus far is primarily based on acreage – both for agricultural activities and for critical areas. This is a functional method for calculating changes in the landscape. However, these changes only occur if the landowner is willing to proactively make these changes. Therefore, measuring participation levels can be another informative way of determining if enough operators are participating in order to meet the protection and enhancement goals. Statistical information is located in Appendix 5 as extracted from the USDA’s Census of Agriculture showing farming, farmer, and crop data. For the purpose of this benchmark, the actual number of farms, farmers, and prepared farm plans will be compiled from data received from the Washington Department of Agriculture, the Mason County Assessor’s Office, and the Mason Conservation District as of July 2011. In sum, the following baseline numbers will be used in the participation benchmarks:

The matrix in Appendix 6 (Goals, Benchmarks, Monitoring, and Adaptive Management) establishes the Plan’s measurable Benchmarks needed to assess progress toward achieving these goals. Monitoring techniques have been included and are a necessary tool to again illustrate how the Work Plan intends to effectively measure the Benchmarks and meet the Goals throughout its implementation. A threshold for adaptive management has also been established for most of the monitoring techniques to allow the

District to evaluate how they are meeting goals and adjust for future decision making. The outline below includes Goals 1, 2 and 3 together with their respective benchmarks as they relate to individual critical areas. A more detailed explanation of protection and enhancement immediately follows.

## **CRITICAL AQUIFER RECHARGE AREAS**

**GOAL 1** - Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011

### **PROTECTION BENCHMARKS:**

- Maintain baseline acreage of Agriculture and Critical Area Interface
- Maintain BMP Implementation

### **PARTICIPATION BENCHMARKS:**

- Maintain 7.5 completed farm plans (Individual Stewardship Plans) per year
- Maintain outreach to all operators annually
- Return rate of 15 ISP Checklists per year

**GOAL 2** - Enhance critical area functions and values through voluntary, incentive-based measures.

### **ENHANCEMENT BENCHMARKS:**

- 5% annual increase of BMP implementation (based on averaged annual implementation over 5 year period of each BMP through the County)

### **PARTICIPATION BENCHMARKS:**

- Increase annual number of completed Farm Plans (Individual Stewardship Plans) to 16
- Increase annual operator participation levels by 50%
- Return rate of 23 ISP Checklists per year

**GOAL 3** - Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.

### **AGRICULTURAL VIABILITY BENCHMARKS:**

- Maintain baseline acreage of Interface
- Maintain baseline acreage of Agricultural Activity
- Maintain 2011 annual average baseline of 7.5 completed Farm Plans

## **FREQUENTLY FLOODED AREAS**

**GOAL 1** - Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011

### **PROTECTION BENCHMARKS:**

- Maintain baseline acreage of Agriculture and Critical Area Interface
- Maintain BMP Implementation

**PARTICIPATION BENCHMARKS:**

- Maintain 7.5 completed farm plans (Individual Stewardship Plans) per year
- Maintain outreach to all operators annually
- Return rate of 15 ISP Checklists per year

**GOAL 2** - Enhance critical area functions and values through voluntary, incentive-based measures.

**ENHANCEMENT BENCHMARKS:**

- 5% annual increase of BMP implementation (based on averaged annual implementation over 5 year period of each BMP through the County, not all BMPs have been implemented in recent past)

**PARTICIPATION BENCHMARKS:**

- Increase annual number of completed Farm Plans (Individual Stewardship Plans) to 16
- Increase annual operator participation levels by 50%
- Return rate of 23 ISP Checklists per year

**GOAL 3** - Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.

**AGRICULTURAL VIABILITY BENCHMARKS:**

- Maintain baseline acreage of Interface
- Maintain baseline acreage of Agricultural Activity
- Maintain 2011 annual average baseline of 7.5 completed Farm Plans (Individual Stewardship Plans)

## **WETLANDS**

**GOAL 1** - Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011

**PROTECTION BENCHMARKS:**

- Maintain baseline acreage of Agriculture and Critical Area Interface
- Maintain BMP Implementation

**PARTICIPATION BENCHMARKS:**

- Maintain 7.5 completed farm plans (Individual Stewardship Plans) per year
- Maintain outreach to all operators annually
- Return rate of 15 ISP Checklists per year



**GOAL 2** - Enhance critical area functions and values through voluntary, incentive-based measures.

**ENHANCEMENT BENCHMARKS:**

- 5% annual increase of BMP implementation (based on averaged annual implementation over 5 year period of each BMP through the County)
- Reduce agricultural and wetland interface to less than 2011 baseline by: (1) maintaining and reconfiguring agricultural activities away from wetland areas; or (2) restoring and enhancing wetlands in or near agricultural activity utilizing wetland sensitive BMPs

**PARTICIPATION BENCHMARKS:**

- Increase annual number of completed Farm Plans (Individual Stewardship Plans) to 16
- Increase annual operator participation levels by 50%
- Return rate of 23 ISP Checklists per year

**GOAL 3** - Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.

**AGRICULTURAL VIABILITY BENCHMARKS:**

- Maintain baseline acreage of Interface
- Maintain baseline acreage of Agricultural Activity
- Maintain 2011 annual average baseline of 7.5 completed Farm Plans (Individual Stewardship Plans)

<b>EROSION HAZARD AREAS</b>
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**GOAL 1** - Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011

**PROTECTION BENCHMARKS:**

- Maintain baseline acreage of Agriculture and Critical Area Interface
- Maintain BMP Implementation

**PARTICIPATION BENCHMARKS:**

- Maintain 7.5 completed farm plans (Individual stewardship Plans) per year
- Maintain outreach to all operators annually
- Return rate of 15 ISP Checklists per year

**GOAL 2** - Enhance critical area functions and values through voluntary, incentive-based measures.

**ENHANCEMENT BENCHMARKS:**

- 5% annual increase of BMP implementation (based on averaged annual implementation over 5 year period of each BMP through the County)

- Reduce agricultural and erosion hazard area interface to less than 2011 baseline by: (1) maintaining and reconfiguring agricultural activities away from erosion areas; or (2) utilizing BMPs specific to erosion areas.

**PARTICIPATION BENCHMARKS:**

- Increase annual number of completed Farm Plans (Individual Stewardship Plans) to 16
- Increase annual operator participation levels by 50%
- Return rate of 23 ISP Checklists per year

**GOAL 3** - Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.

**AGRICULTURAL VIABILITY BENCHMARKS:**

- Maintain baseline acreage of Interface
- Maintain baseline acreage of Agricultural Activity
- Maintain 2011 annual average baseline of 7.5 completed Farm Plans (Individual Stewardship Plans)

<b>FISH AND WILDLIFE HABITAT CONSERVATION AREAS</b>
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**GOAL 1** - Protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011

**PROTECTION BENCHMARKS:**

- Maintain baseline acreage of Agriculture and Critical Area Interface
- Maintain BMP Implementation

**PARTICIPATION BENCHMARKS:**

- Maintain 7.5 completed farm plans (Individual Stewardship Plans) per year
- Maintain outreach to all operators annually
- Return rate of 15 ISP Checklists per year

**GOAL 2** - Enhance critical area functions and values through voluntary, incentive-based measures.

**ENHANCEMENT BENCHMARKS:**

- 5% annual increase of BMP implementation (based on averaged annual implementation over 5 year period of each BMP through the County)
- Reduce agricultural and fish and wildlife conservation area interface to less than 2011 baseline by: (1) maintaining and reconfiguring agricultural activities away from habitat areas; or (2) utilizing BMPs specific to habitat areas

**PARTICIPATION BENCHMARKS:**

- Increase annual number of completed Farm Plans (Individual Stewardship Plans) to 16

- Increase annual operator participation levels by 50%
- Return rate of 23 ISP Checklists per year

**GOAL 3** Ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.

### **AGRICULTURAL VIABILITY BENCHMARKS**

- Maintain baseline acreage of Interface
- Maintain baseline acreage of Agricultural Activity
- Maintain 2011 annual average baseline of 7.5 completed Farm Plans (Individual Stewardship Plans)

### **PROTECTION AND PARTICIPATION BENCHMARKS –**

The benchmarks for **Goals 1 and 3** involve maintaining baseline levels. In **Goal 1**, the first benchmark is maintaining baseline acreage of interface, which refers to the number of acres listed in Table 38 (Appendix 6) for each critical area and WRIA. No increase or decrease reflects there has been no change and thus the 2011 baseline is protected. The second benchmark refers to maintaining BMP implementation. Table 38 also provides eight Best Management Practices, or BMPs, implemented on land with agricultural activities and critical area interface. Each of the BMPs has an attribute beneficial to that critical area. By maintaining the 2011 level of implementation (acres, feet, or units), the level of protection it provides to the critical area has also been maintained.

Measuring Operator participation makes up the third and fourth benchmarks for participation, and will use the 2011 information from the text box above. On average, there is approximately 1 farm plan per 20 operators and approximately 159 total operators within the County. Considering that, if it takes outreach to 20 operators to obtain one farm plan, then outreach efforts will require that 150 operators be contacted annually in order to maintain the 7.5 per year plan rate (7.5 farm plans x 20 operators per plan = 150 operators). With relatively low numbers of agricultural operations in the County, the Work Group will need to widely spread broad efforts to reach out to everyone as much as possible.

Part of those outreach efforts will include using the Individual Stewardship Plan Checklist found in Appendix 9. The Checklist allows District Staff to obtain information about agricultural operations and potential VSP participants. Promoting the Checklist to known operators could produce a return of more than 159 of them within the first two years. The number of Checklists received should decline after initial outreach efforts as fewer non-participating operators would remain.

This type of outreach is new to the District, as is the entire Stewardship Program. Therefore, again using existing numbers estimates will be made as to how many Checklists will be received, and from that how many will result in Individual Stewardship Plans. Some research into the return rate of surveys, which are very similar in format to our Checklist, indicate that on average a 10-15% response rate is

most typical, with 30-40% being considered an acceptable rate.<sup>63</sup> Related to the objective of producing at least 7.5 plans per year, and at least 16 for enhancement, some assumptions have to be made about operator response and participation rates to formulate a measurable participation benchmark.

Assumptions:

159 operators receive the Checklist

Achieve Enhancement Participation Benchmark

- 23 operators return the Checklist (15% as high-end typical rate of return)
- 18 operators complete Individual Stewardship Plan (50% of those returning the Checklist)

Achieve Protection Participation Benchmark

- 15 operators return the Checklist (10% as low-end typical rate of return)
- 7.5 operators complete Individual Stewardship Plan (50% of those returning the Checklist)

Using these assumptions, a participation benchmark of 15 checklists received annually with potentially 7.5 Stewardship Plans completed can be established for Goal 1, and 23 checklists and 18 Plans can be established for Goal 2.

## ENHANCEMENT BENCHMARKS

In Goals 1 and 2, there is an enhancement benchmark indicating a 5% annual increase of BMP implementation. This percentage is a result of comparing BMPs (acres, feet, and units) over a five year period in order to obtain an average rate of increase. Maintaining the 2011 baseline would require no increases to the amount of BMPs implemented, however enhancement would be additional efforts made over time. The 5% annual increase in BMP implementation reflects a confident measure of critical area enhancement.

The number of operators participating in the BMP implementation varies and cannot be easily calculated from the total acres, feet and units. Similarly, whether or not the BMPs were part of a farm plan is also not easily determined through evaluating the data obtained from existing records. Participation levels will therefore be an extension, or multiplication, of what is known as was done for the protection benchmarks.

Since outreach efforts cannot be increased beyond what is already needed to maintain the baseline, which is to everyone, the increased number of participants will be the benchmark. For this, additional assumptions will be made. Assuming one farm plan for each BMP implemented would be approximately eight farm plans for each of the eight BMPs listed for the individual critical areas. This number aligns with the average of 7.5 plans annually already established under the participation benchmark. If the number

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<sup>63</sup> <https://www.surveymzmo.com/resources/blog/survey-response-rates/>

and/or amount of BMPs are to be increased at least 5% annually, an increase of at least one additional farm plan per year per BMP would be needed.

The 5% increase factor is not a large amount, and should be easily accommodated with a single additional BMP or Plan. The addition of eight farms per year doubles the current average of 7.5 and would thus require double the participants. If protection participation measures to assist in maintaining the 2011 baseline need at least one plan per 20 operators, enhancement participation measures would need at least two operators per 20 – a 50% increase. Therefore, the operator participation benchmarks will be to increase annual farm plans to at least 16 per year, and increase operator participation to at least two per 20 operators. Since these are assumptions made on static information, the first two years of the Work Plan's implementation will dictate how and if adjustments need to be made.

Participation is also being measured in the return rates of Individual Stewardship Plan Checklists. In the preceding Chapter on Protection Benchmarks, the assumptions made for determining Checklist benchmarks is discussed; these include those of Enhancement Benchmarks.

The last benchmark shown for some of the critical areas is a reduction in agricultural interface below the 2011 baseline. There are two metrics for this described in Table 38 which include the reduction of agriculture in or impacting the critical area and the increase of critical area in or near the agricultural activity. Reducing the activity in a critical area does not mean loss of that activity; it means that it has been reconfigured, relocated, or readapted within that critical area allowing for its enhancement. The same is true for the increase or enhanced critical area, it is not at the expense of the agriculture but instead creating a mutually beneficially rearrangement of location and/or activity.

**Goal 3** involves ensuring the viability of agriculture and reducing the conversion of agricultural lands. The benchmarks associated with this Goal measure the baseline levels of agriculture activities, agricultural interface, and farm plans. Any changes in those numbers will trigger an adaptive management action. Rates and percentages of change have not been established in these benchmarks, but may be in the future. The goal is to ensure viability and reduce conversion, and because agriculture is only 2% of the County's land use, and the average farm is less than 50 acres, District Staff intend to monitor for any changes regardless of size.

Goals 1 through 3 have a schedule of benchmarks and adaptive management illustrated in Appendix 6, and Goal 4 establishes a monitoring program more fully discussed in [Appendix 7](#).





## 20. ADAPTIVE MANAGEMENT

**UNDER** the VSP, instituting adaptive management is a necessary part of the process; it is intended to ensure that the Work Plan can adapt to change in order to achieve the goals. Thus, it is important to create a set of strategies and monitoring techniques that can be measured in terms of success.

Breaking the process down into a logical sequence of events, this Chapter will analyze each critical area by WRIA, the amount of agriculture interface, the types of BMPs and the threshold for adaptive management. The Critical Areas Appendix provides fairly detailed information on each critical area, obviating a reiteration of that full discussion here. Therefore, the following will serve as a conspectus; demonstrating practical information of each critical area as it relates to agricultural activities in each WRIA. Additionally, a table of BMPs most frequently implemented by the Conservation District in Mason County is provided in Best Management Practices Appendix to illustrate their function and applicability. BMPs, or conservation practices, are designed to address a particular resource concern such as water quality or soil erosion. Monitoring the acreage totals can provide a certain level of information regarding the amount of land coverage retained, gained, or lost for both the agricultural

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*Adaptive management [is] an explicitly experimental or “scientific” approach to managing conservation projects. It incorporates research into conservation action. Specifically, it is the integration of design, management, and monitoring to systematically test assumptions in order to adapt and learn.*

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[www.fosonline.org/what-we-do/what-is-am](http://www.fosonline.org/what-we-do/what-is-am)

activity and its associated critical area. It cannot, however, distinguish if either has been enhanced necessarily by a change in size, or the cause of the changes. The acreage or size of a critical area for some will not change and therefore won't serve as a useful monitoring tool. In fact, fish and wildlife habitat and wetlands are the only critical areas where a reduction or increase in size could be an indicator of impacts by or from agricultural activities. Critical Aquifer Recharge Areas, frequently flooded areas, and geologically hazardous areas generally do not change their size or their location, making protection measures geared more toward the agricultural operation than the critical area.

Of course that is not to say that agriculture could not

also have an effect on any of those. Changes will have to be ground-truthed to determine if they are the result of conservation practices imposed by agricultural operators or by impacts of agricultural operations. The following Chapter looks at each critical area in terms of its functions and values, what types of data will be used to measure the Program's success, how the data will be measured, where adaptive management will be implemented, and suggested options for Best Management Practices. The tables listing BMPs for each critical area contain check marks for its applicability to critical protection and/or enhancement, and agricultural viability.

## WETLANDS

**Functions and Values:** Wetlands perform a variety of biological and hydrological functions that can be directly impacted by development. These include removing nutrients, temporarily storing flood and storm water, providing groundwater recharge, fish and wildlife habitat, recreation, education and historical and cultural significance.

**Table 18 Acres of Wetland Interface By WRIA**

WRIA	Total Acres of Wetland	Total Acres of Agriculture Interface
Kennedy-Goldsborough	27,207	572
Kitsap	6,960	141
Skokomish-Dosewallips	13,916	446
Lower Chehalis	6,567	49

**What is going to be measured** –The total number of wetland acres and wetland/agricultural interface acres can be monitored with new data to indicate changes. Changes – increase or decrease – would need to be ground-truthed to determine cause of change and if it is agriculture related. Measuring the number of additional BMP/ISPs put into place post Plan approval can be an indicator of additional protection or enhancement efforts. The District is not currently able to measure water quality or quantity and have not included this as a determinant metric because of that.

**How will it be measured** – Wetland acreage will be measured using U.S. Fish & Wildlife’s National Wetlands Inventory as updated. District will download GIS data layers to compare against baseline. As to BMPs, once the Work Plan is being implemented the data spreadsheets created as part of the strategies will provide numbers and locations of agricultural operations to analyze any changes.

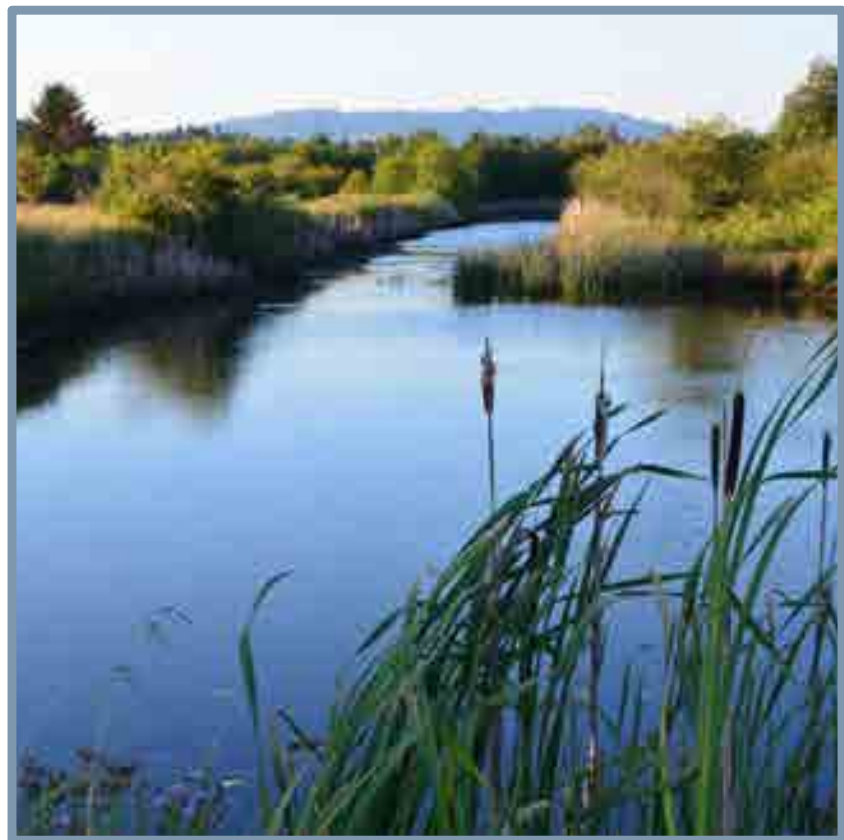
**What is the adaptive management** – Biennial analysis of the data showing that wetlands or agricultural lands with wetlands are decreasing would trigger a review of conservation efforts, a site visit (if possible) to determine cause, and a refocus of outreach.

**Table 19 Best Management Practices for Wetlands**

Best Management Practice	Protection	Enhancement	Agricultural Viability
Waste Facility Closure	✓	✓	✓
Composting Facility	✓	✓	✓
Constructed Wetland		✓	
Dike	✓	✓	✓
Drainage Water Management	✓	✓	✓
Fencing	✓	✓	
Filter Strip	✓	✓	
Prescribed Grazing	✓	✓	✓

Best Management Practice	Protection	Enhancement	Agricultural Viability
<b>Riparian Forest Buffer</b>	✓	✓	
<b>Structure For Water Control</b>	✓	✓	✓
<b>Access Control</b>	✓	✓	✓
<b>Watering Facility</b>	✓	✓	✓
<b>Wetland Creation</b>	✓	✓	
<b>Wetland Enhancement</b>	✓	✓	
<b>Wetland Restoration</b>	✓	✓	
<b>Wetland Wildlife Habitat Management</b>	✓	✓	✓

# Wetlands



## CRITICAL AQUIFER RECHARGE AREAS (CARAs)

**Functions and Values** – These areas have a critical recharging effect on aquifers used for potable water and are particularly vulnerable to contamination. Water stored in aquifers reaches the ground surface through springs, wells, or by seepage into surface water features, including wetlands. Surface waters replenish, “recharge”, aquifers through seepage from streams, lakes, and wetlands, and from precipitation that percolates through soil or rock. Groundwater provides virtually all of Mason County’s potable water.

**Table 20 Acres of CARA Interface by WRIA**

WRIA	Total Acres of CARA	Total Acres of Agriculture Interface
<b>Kennedy Goldsborough</b>	36,703	1,806
<b>Kitsap</b>	4,004	244
<b>Skokomish-Dosewallips</b>	11,255	1,469
<b>Lower Chehalis</b>	69,122	735

**What is going to be measured** – The total number of agricultural interface acres can be monitored with new data to indicate changes. Changes – increase or decrease – would need to be ground-truthed to determine cause of change and if it is related to the operation’s proximity to a critical recharge area. Measuring the number of additional BMP/ISPs put into place post Plan approval can be an indicator of additional protection or enhancement efforts.

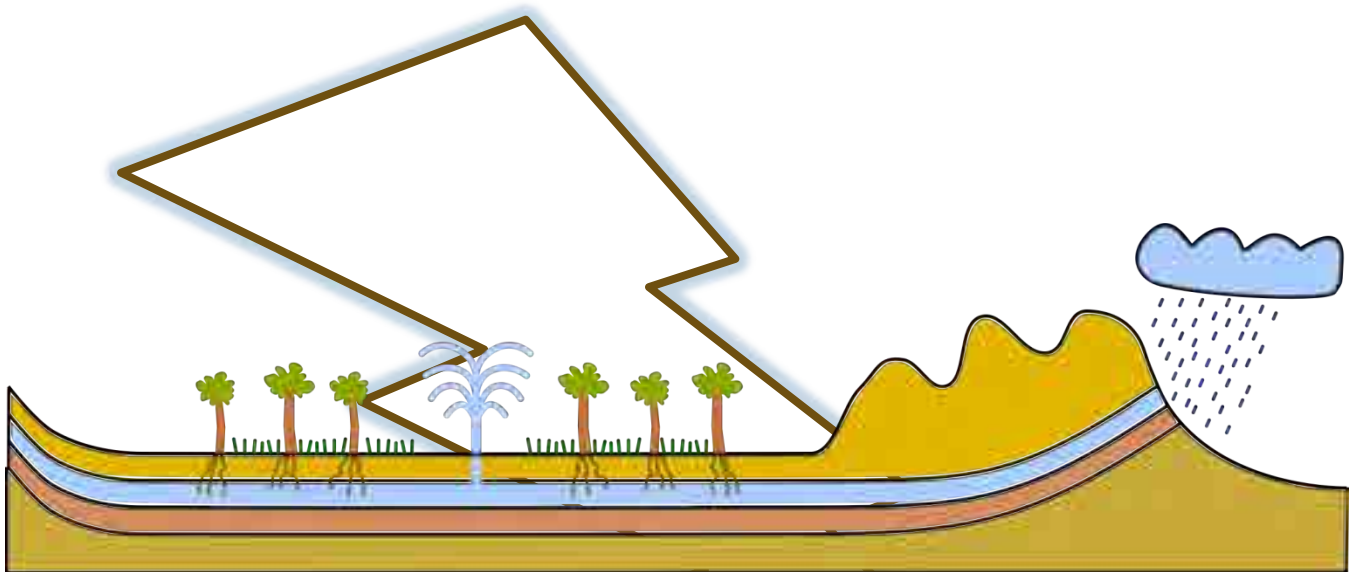
**How will it be measured** – As previously discussed, the mapping of Critical Aquifer Recharge Areas will likely not be updated in the foreseeable future. The size and location of those within the County will remain static with no discernable tool for measuring changes. Therefore, for CARAs monitoring will occur with respect to agricultural operations and BMPs. Once the Work Plan is being implemented the data spreadsheets created as part of the strategies will provide a numbers and locations of agricultural operations to analyze any changes.

**What is the adaptive management** – Biennial analysis of the spreadsheets showing agricultural lands in proximity to CARAs that are decreasing would trigger a review of conservation efforts, a site visit (if possible) to determine cause, and a refocus of outreach.

**Table 21 Best Management Practices for CARAS**

Best Management Practice	Protection	Enhancement	Agricultural Viability
<b>Waste Facility Closure</b>	✓	✓	✓
<b>Composting Facility</b>	✓	✓	✓
<b>Constructed Wetland</b>	✓	✓	
<b>Drainage Water Management</b>	✓	✓	✓
<b>Prescribed Grazing</b>	✓	✓	✓
<b>Riparian Forest Buffer</b>	✓	✓	
<b>Animal Mortality Facility</b>	✓	✓	✓
<b>Brush Management</b>	✓	✓	✓

Best Management Practice	Protection	Enhancement	Agricultural Viability
Conservation Cover	✓	✓	✓
Conservation Crop Rotation	✓	✓	✓
Contour Buffer Strips	✓	✓	
Contour Farming	✓	✓	✓
Cover Crop	✓	✓	✓
Field Border	✓	✓	✓



# Aquifer

## FISH AND WILDLIFE HABITAT CONSERVATION AREAS

**Functions and Values** – Fish and wildlife provide important recreational and economic benefits such as hunting and fishing opportunities; the continued prosperity of the commercial and recreational fish and shellfish industries depends on maintenance of excellent water quality and unpolluted habitats for fish, shellfish, and their food sources. Wildlife provides educational opportunities about biological and ecological processes, and maintaining the historical, cultural, and spiritual values of Native American Tribes and the general public. The waters and shorelines of Mason County are an important resource. In addition to their natural beauty and cultural value, they provide the base for a sizable shellfish industry, aquaculture, and fish and wildlife habitat. Managed natural areas are important for fish and wildlife habitat, scenic vistas, protection of sensitive plant species, and preservation of open space.

**What is going to be measured** – The total number of agricultural interface acres can be monitored with new data to indicate changes. Changes – increase or decrease – would need to be ground-truthed to determine cause of change and if it is agriculture related. Measuring the number of additional BMP/ISPs put into place post Plan approval can be an indicator of additional protection or enhancement efforts.

**How will it be measured** – District will download GIS data layers to compare against baseline. As to BMPs, once the Work Plan is being implemented the data spreadsheets created as part of the strategies will provide a numbers and locations of agricultural operations to analyze any changes.

**Table 22 Acres of Priority Species Habitat by WRIA**

WRIA	Total Acres Priority Habitat	Total Acres Agricultural Interface
Kennedy Goldsborough	4,113	923
Kitsap	2,657	57
Skokomish-Dosewallips	21,392	533
Lower Chehalis	--	--

**What is the adaptive management** – Biennial analysis of the data showing that agricultural lands with associated habitat areas are increasing or decreasing would trigger a review of conservation efforts, a site visit (if possible) to determine cause, and a refocus of outreach.

**Table 23 Best Management Practices for Fish & Wildlife Habitat**

Best Management Practice	Protection	Enhancement	Agricultural Viability
Brush Management	✓	✓	✓
Conservation Cover	✓	✓	✓
Conservation Crop Rotation	✓	✓	✓
Field Border	✓	✓	✓
Pest Management	✓	✓	✓
Pond	✓	✓	✓
Dike	✓	✓	✓
Fencing	✓	✓	✓



Best Management Practice	Protection	Enhancement	Agricultural Viability
Access Control	✓	✓	✓
Wetland Enhancement	✓	✓	
Wetland Restoration	✓	✓	
Wetland Wildlife Habitat Management	✓	✓	
Animal Trails and Walkways	✓	✓	✓
Clearing and Snagging	✓	✓	✓
Dam	✓	✓	✓
Aquatic Organism Passage	✓	✓	
Hedgerow Planting	✓	✓	✓
Range Planting	✓	✓	✓
Upland Wildlife Habitat Management	✓	✓	



Source: WA Dept. of Fish and Wildlife

Pocket Gopher

Eelgrass



Source: Eelgrassrestorationbc

## FREQUENTLY FLOODED AREAS

**Functions and Values** – Frequently flooded areas are lands in the flood plain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater. They include streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.<sup>64</sup> Alluvial soils, deposited by successive flooding of river valleys, typically have high agricultural values ... because they contain a variety and abundance of minerals necessary for plant growth not commonly found in soils which have developed in place from a single parent rock source.<sup>65</sup> The problems associated with the increasing annual flooding were, among other things, attributed to soil erosion of bare, unprotected farm fields, and damage to crops.

**Table 24 Acres of Flooded Areas Interface By WRIA**

WRIA	Total Acres of Flood Area Interface	Total Acres of Agricultural Interface
Kennedy Goldsborough	28,353	1,169
Kitsap	8,454	162
Skokomish-Dosewallips	16,702	1,537
Lower Chehalis	6,026	180

**What is going to be measured** – The total number of agricultural interface acres can be monitored with new data to indicate changes. Changes – increase or decrease – would need to be ground-truthed to determine cause of change and if it is related to the operation's proximity to a flood area. Measuring the number of additional BMP/ISPs put into place post Plan approval can be an indicator of additional protection or enhancement efforts.

**How will it be measured** – As previously discussed, an updated mapping of Frequently Flooded Areas was just completed the Federal Emergency Management Agency (FEMA) in 2016-2017 and will likely not reoccur within the next ten years. The size and location of those areas within the County will remain relatively static with no discernable tool for measuring changes. Therefore, for frequently flooded areas monitoring will occur with respect to agricultural operations and BMPs. Once the Work Plan is being implemented the data spreadsheets created as part of the strategies will provide a numbers and locations of agricultural operations to analyze any changes.

**What is the adaptive management** – Biennial analysis of the spreadsheets showing agricultural lands in proximity to flood areas that are decreasing would trigger a review of conservation efforts, a site visit (if possible) to determine cause, and a refocus of outreach.

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<sup>64</sup> WAC 365-190-030(8)

<sup>65</sup> Washington Department of Ecology. (1987). Skokomish River Comprehensive Flood Control Management Plan: Draft Plan. (TC24.W2 C36 1987). Washington DC: U.S. Government Printing Office

**Table 25 Best Management Practices for Frequently Flooded Areas**

Best Management Practice	Protection	Enhancement	Agricultural Viability
<b>Dam, Diversion</b>	✓	✓	✓
<b>Dike</b>	✓	✓	✓
<b>Fencing</b>	✓	✓	
<b>Dam</b>	✓	✓	✓
<b>Channel Stabilization</b>	✓	✓	
<b>Stormwater Runoff Control</b>	✓	✓	✓
<b>Animal Mortality Facility</b>	✓	✓	✓
<b>Filter Strip</b>	✓	✓	



**Skokomish River Estuary**

## GEOLOGICALLY HAZARDOUS AREAS

The following sections describe monitoring and adaptive management for geologically hazardous areas as they can effectively be addressed in this Plan. Mason County has broken down these areas into landslide hazards, seismic hazards, and erosion hazards. These types of critical areas, similar to flooded areas, are managed with respect to protection of life and property as opposed to the critical area itself. For instance, a farm located in a seismic area (which is nearly all of Mason County) will not impact it but could be impacted by it. A home, barn or similar structure built in a seismic area will need to meet engineering and design requirements for earthquakes. There are no BMPs that necessarily address that issue, and the strict adherence to the International Building Code will remain as the regulatory backstop for seismically hazardous areas. This is also true for landslide hazards areas. An agricultural activity and operation can have an impact on a landslide area, however generally in the sense that certain activities can lead to slide occurrence. Best management practices used in this instance are those that act in the prevention of a landslide event. The regulations adopted in the Resource Ordinance targeting safe and responsible action in landslide areas will remain in place as the regulatory backstop. The following sections on Seismic and Landslide Hazardous Areas will discuss each in terms of functions and values, but will not include any best management practices.

As for the third category of geologically hazardous areas, erosion hazards, these are largely impacted by land disturbing activity. Erosion hazard areas defined and mapped for this Plan are generally areas with unstable soils and slopes, similar to landslide areas. However erosion can happen when activity disturbs and exposes soils making them vulnerable to erosive forces. Agricultural activities can cause these conditions, and there a number BMPs included in that section for review.

### LANDSLIDE HAZARD AREAS

**Functions and Values:** A landslide is a rapid down slope movement of a mass of material such as rocks, soil, or other debris. Landslide areas generally present potential dangers to public health and safety; an important measure of potential risk for landslide when development occurs is land clearing and alteration for development. Development activities can increase the risk by exposing soil through clearing, altering natural drainage patterns, excavating the “toe” of slopes, or increasing soil moisture content. Conversion of agricultural lands for development purposes not only depletes farm land, but also increases the risk of landslides.

### SEISMIC HAZARD AREAS

**Functions and Values** – Seismic Hazard Areas are areas susceptible to ground failure, including mapped geologic faults; areas of poorly compacted artificial fill; areas with artificially steepened slopes; post-glacial stream, lake or beach sediments; river deltas; areas designated as potential Landslide Hazard Areas; bluff areas; and areas underlain by potentially liquefiable soils. They present potential dangers to public health and safety, and restricted development activities within them serves to prevent the acceleration of man-made and natural geological hazards, and to neutralize the risk to the property owner or adjacent properties.

## EROSION HAZARD AREAS

**Functions and Values** – Erosion Hazards are similar to Landslide Hazards in that they are both often created by, or aggravated by development activities such as clearing and grading. Mason County is underlain by soils which are subject to severe erosion when disturbed. The erosion process can be accelerated by development activity that exposes and disturbs soils so they are more vulnerable to erosive forces. Further, increased areas of impervious surfaces reduce the infiltration of rainfall, increase stormwater runoff, and result in even greater erosion potential.

**Table 26 Erosion Interface by WRIA**

WRIA	Total Acres of Erosion Area	Total Acres of Agriculture Interface
Kennedy-Goldsborough	8,177	59
Kitsap	7,051	7
Skokomish-Dosewallips	1,559	42
Lower Chehalis	69	.04

**What is going to be measured** – The total number of agricultural interface acres can be monitored with new data to indicate changes. Changes – increase or decrease – would need to be ground-truthed to determine cause of change and if it is related to the operation's proximity to an erosion event. Measuring the number of additional BMP/ISPs put into place post Plan approval can be an indicator of additional protection efforts. The enhancement column of the table below has been left blank. As with geologically hazardous areas, there are protection measures to be taken to avoid causing an event, with some of these measuring having the benefit of agricultural viability.

**How will it be measured** – As discussed in Chapter 4, the mapping of Erosion Hazard Areas will likely not be updated in the foreseeable future. The size and location of those within the County will remain static with no discernable tool for measuring changes. Therefore, for erosion hazards monitoring will occur with respect to agricultural operations and BMPs. Once the Work Plan is being implemented the data spreadsheets created as part of the strategies will provide a numbers and locations of agricultural operations to analyze any changes.

**What is the adaptive management** – Biennial analysis of the spreadsheets showing agricultural lands in proximity to erosion hazard areas that are decreasing would trigger a review of conservation efforts, a site visit (if possible) to determine cause, and a refocus of outreach.



**Table 27 Best Management Practices For Erosion Hazard Areas**

Best Management Practice	Protection	Enhancement	Agricultural Viability
<b>Dam</b>	✓		✓
<b>Brush Management</b>	✓		✓
<b>Conservation Crop Rotation</b>	✓		✓
<b>Field Border</b>	✓		
<b>Pond</b>	✓		✓
<b>Animal Trails and Walkways</b>	✓		✓
<b>Clearing and Snagging</b>	✓		✓
<b>Range Planting</b>	✓		✓
<b>Prescribed Grazing</b>	✓		✓
<b>Cover Crop</b>	✓		✓
<b>Heavy Use Protection Area</b>	✓		✓
<b>Roof Runoff Structure</b>	✓		✓
<b>Water and Sediment Control Basin</b>	✓		
<b>Mulching</b>	✓		✓

In many instances, utilizing a BMP is not appropriate, effective or even authorized to address issues associated with a specific type of critical area. Therefore, this next Chapter will identify those regulatory remedies that will remain in place as assurance that protection of critical areas is ultimately successful.





## 21. EXISTING REGULATORY BACKSTOPS

**THE** Mason County Code has incorporated in Title 8 (Environmental Policy) a chapter specific to resource management, including critical areas, commonly known as the Resource Ordinance. The VSP regulations as adopted under the Growth Management Act<sup>66</sup> provide an alternative approach to protecting critical areas outside the Resource Ordinance, and afford this option only to agricultural activity. However, there are some regulations previously adopted by Mason County that would serve to further benefit the VSP process by providing a backstop to help achieve the Plan's benchmarks. Those sections of the Mason County Code pertaining to Landslide Hazard Areas and Frequently Flooded Areas will remain in effect, while all other regulations for critical areas in agricultural lands fall under the Voluntary Stewardship Program. These two codes, together with other remaining local, state, and federal regulations are briefly described below.

### MASON COUNTY CODE

#### SECTION 8.52.140 MCC – LANDSLIDE HAZARD AREAS

Earlier discussions in this document broach the safety issues surrounding both Landslide Hazard and Seismic Hazard areas. The Landslide section of the Resource Ordinance is intended to identify areas that present potential dangers to public health and safety, to prevent the acceleration of natural geological hazards, to address off-site environmental impacts, and to minimize the risk to the property owner or adjacent property owners from development activities. The regulations adopted under this Section will remain in effect for the overall protection of life and property.

*Incorporate into the work plan any existing development regulations relied upon to achieve the goals and benchmarks for protection.*

RCW 36.70A.120(I)(h)

#### SECTION 8.52.150 MCC – SEISMIC HAZARD AREAS

As with Landslide Areas, the Seismic hazard section of the Resource Ordinance is intended to identify areas that present potential dangers to public health and safety, and to prevent the acceleration of man-made and natural geological hazards, and to neutralize the risk to the property owner or adjacent properties from development activities. The regulations adopted under this Section will remain in effect for the overall protection of life and property.

#### CHAPTER 14.22 MCC - FLOOD DAMAGE PREVENTION

Frequently Flooded Areas in Mason County are actually regulated under the Flood Damage Prevention Ordinance, which is incorporated under the Building Code and not part of the Resource Ordinance. While there are BMPs that can effectively protect agricultural operations from potential damage and loss, the regulations that guide development of any kind in frequently flooded areas remain in place.

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<sup>66</sup> RCW 36.70A.710(I)(a) As an alternative to protecting critical areas in areas used for agricultural activities through development regulations adopted under RCW 36.70A.060, the legislative authority of a county may elect to protect such critical areas through the program

Additionally, Chapter 86.16 RCW provides for the administration of National Flood Insurance Program regulation by local governments.

#### CHAPTER 14.04 MCC STATE BUILDING CODES ADOPTED AND CHAPTER 14.08 MCC BUILDING CODE AMENDMENTS

Mason County operates under the International Building Code and International Residential Code, among others as required. These codes serve in a prescriptive manner that all structures be constructed appropriately for life and safety. These include codes specifically targeted for structures located in flood, landslide, and seismic hazard areas. The building codes adopted under Chapter 14 of the Mason County Code will remain in full force and effect for the protection of life and property.

#### CHAPTER 17.01 MCC - MASON COUNTY DEVELOPMENT REGULATIONS

The Development Regulations chapter of the Mason County Code guides zoning and land use for all unincorporated areas. These regulations will remain in full force and effect.

#### CHAPTER 17.50 MCC - SHORELINE MASTER PROGRAM USE REGULATIONS

Mason County's Shoreline Master Program (SMP) applies to all the lands and waters that are designated in WAC 173-18, WAC 173-20, and WAC 173-22 to be under the jurisdiction of the Shoreline Management Act of 1971. This Work Plan developed under the State's Voluntary Stewardship Program will not replace those shoreline regulations. All regulations under the County's SMP still apply.

### OTHER STATE AND FEDERAL LAWS

All other applicable state and federal laws, including the Federal Clean Water Act, the Washington Water Pollution Control Act (RCW 90.48), the U.S. Endangered Species Act, and the Washington State Environmental Policy Act remain in full force and effect.

### ASSISTING STATE AGENCIES IN THEIR MONITORING PROGRAMS

The Work Group and District Staff may provide available information and assistance to help state agencies align their monitoring efforts with VSP monitoring and the goals and benchmarks of the VSP Work Plan within staff capabilities and any existing funding. Watershed-scale monitoring reports will be made available to agencies and District staff will provide assistance in interpreting the findings.<sup>67</sup>

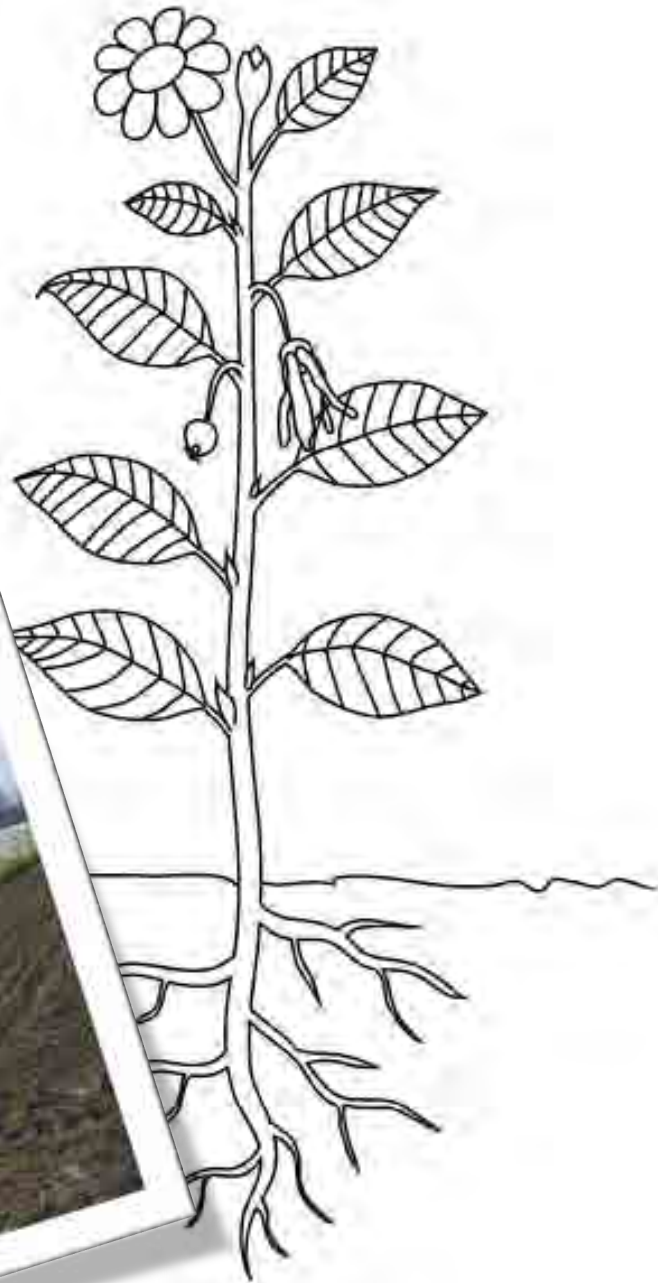
### ENDANGERED SPECIES ACT OF 1973

*An Act to provide for the conservation of endangered and threatened species of fish, wildlife, and plants, and for other purposes.*



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<sup>67</sup> Stevens County VSP Work Plan



## 22. TECHNICAL ASSISTANCE

**THE** Work Plan must ensure that there is adequate and meaningful outreach and technical assistance to the agricultural operators and agricultural community. Providing information on the VSP to commercial and non-commercial agricultural operators is fundamental to the overall success of not only the Work Plan, but in the protection and enhancement of Mason County's critical areas. The Mason County Board of Commissioners determined that the most appropriate entity to facilitate this process would be the Mason Conservation District ("District"). This organization has an established relationship with the agricultural community and currently works with operators to suggest a variety of best management practices dependent on the individual needs as well as potential funding sources for implementation. The District also participates in a number of community events, workshops and trainings that would provide many outreach opportunities to educate the community on the VSP. The goals and benchmarks proposed in this Work Plan will remain within the scope and capabilities of the District; this will ensure that no operator would be at any disadvantage for being successful.



## 23. OUTREACH STRATEGY

**CREATING** an understanding of how the Voluntary Stewardship Program can protect important critical areas while enhancing agricultural activity is a crucial first step. The Program's success will be dependent upon the knowledge, cooperation, and trust of the people and organizations involved. The Work Group's outreach strategy will help provide knowledge and understanding to the community, create integrity and reliability, and form important relationships. Group members hope to visit landowners where they are, regardless of the kind or stage of their agricultural operation. The approach taken with each landowner will be specific to the type of critical area as well as the type of agricultural operation. Ultimately, achieving a solid level of understanding will lead to the successful implementation of this Plan.

The Work Group held a special session just to brainstorm outreach ideas. As members of the agricultural community, the Group is the most logical resource when it comes to strategizing outreach techniques. The Work Group was asked a single question, "How can we get the word out to the Ag Community about VSP?" A few bulleted items were used to provoke a thought process and meaningful discussion. Initially the Facilitator broke the bullets into two categories: marketing and building awareness. Marketing strategies include printed materials, local and regional events, professional partnerships, and media. Utilizing digital communications, increasing visibility through branding with a VSP logo, and designating VSP mentors can all contribute to building awareness.

During the Group's session, several ideas were presented and then organized into broader categories. These included:

### OUTREACH EVENTS

Targeting Individual Communities – Mason County is primarily rural, with only one incorporated city. Throughout the landscape are pockets of small, informal communities with varied agricultural products and needs. Reaching out to those communities in ways that are unique to their individual situations will ensure that the VSP has a better chance of implementation.

Trained "Ambassadors" - This idea would be similar to a VSP Mentor. Either a District Staff person or even a member of the Work Group could act as an expert on the Program and disseminate information as opportunities occur. Farm tours would be another avenue for an Ambassador, or Mentor, to educate citizens on methods already in practice. District Staff often make site visits for several reason providing tag-along opportunities for the VSP Coordinator to meet and educate members of the farming community.



Events – Local community fairs provide an opportunity to reach a larger number of people in a short period of time and in a single location. Events in Mason County include Tahuya Days, Old Timers Historical Fair, OysterFest, Hama Hama Oyster Rama, Forest Festival, and Taste of Hood Canal. The District and Work Group can partner with Chambers of Commerce to explore the prospects for participating in these events.

Farmers Markets – Mason County has three farmers markets – Shelton, Belfair and Harstine Island – selling locally grown food as well as locally made products. An Ambassador or Mentor present at these markets would reach the growers and consumers, and access a broader audience.

## OysterFest 2006



### COMMUNITY BASED MEETINGS

Master Gardner Program & Small Farms – The WSU Extension Office hosts monthly meetings of the Master Gardeners of Mason County. Partnering with WSU, a District Staff person, or Group member, could distribute information on VSP to local small farmers and recreational growers participating in those meetings.

Livestock Auctions – Mason County does not have an auction house for livestock or farm equipment; however, there is such a facility in Chehalis just about one hour south of Shelton. The Chehalis Livestock Market may provide for an opportunity to reach farmers who've traveled to auction events. Additionally, that Market will also travel to a farm location to conduct auctions. Mason County farmers hosting an auction on their property may allow District Staff or Work Group members to attend for the purposes of distributing information.

Taking this Show on the Road – Many of the communities in Mason County have Fire Halls and Granges that are easily accessible and often used by the surrounding residents. District Staff and Group Members could organize an open house or workshop to talk about the Program and how participation might affect them.

Service Clubs/Organizations – The Shelton Kiwanis and Rotary Clubs hold monthly meetings as well as many fundraising events. A District Staff person or Work Group member could ask to attend a monthly meeting to promote the program and distribute materials.



## ADVERTISING

Piggyback Mailers – Whether it is a two sentence blurb, or a full page brochure, inserting VSP information into mass distributed mailers could cover a larger audience. Utility companies, the County Treasurer’s Tax Statements, or even the local newspaper could serve as conduits for VSP information.

Posters/Flyers – Creating handbills or posters about VSP, or announcing events where VSP will be presented, could represent a visual and somewhat permanent display of information in locations frequented by the farming community.

Parades – Yes, parades. Several organizations participate in the Mason County Christmas Parade. Some simply walk in groups with banners or flags, and others ride in cars, trucks, and wagons. The District could partner with an ag-relevant group to promote the Program, utilizing the same ride or join a walking group. Or, with enough momentum and gumption, the Program could be represented on its own with a “float” – decorated vehicle and some enthusiastic walkers.

Reader Boards – There are several shopping centers in the County that digital reader boards, as well as some banks and schools. It may be possible to advertise public meetings or workshops promoting VSP on those boards.

## WORKING WITH AG-RELATED BUSINESSES & ORGANIZATIONS

Professional Partnerships – The District could explore opportunities to partner with local agriculture and farming businesses including retail/wholesale seed, farm equipment and hardware distributors. For example, incentivized sales on BMP related purchases would receive discounts. The buyer receives needed supplies for improving viability and protection critical areas, and the seller receives more business as more buyers are encouraged to participate.

Real Estate Market – People moving into Mason County, or just moving into a new home in the County are generally working with a Realtor or real estate agent. New buyers often receive “welcome” gifts when they purchase property that includes information on utilities, schools, public safety and local amenities. The VSP could take advantage of this tradition by inserting program materials and farmers market coupons into

### MCD PLANS FOR GOSNELL CREEK RESTORATION

#### KITSAP SUN

Arla Shepard Bull, Mason County  
Life

*The Mason Conservation District will plant native vegetation along Gosnell Creek, a tributary of the salmon-bearing Mill Creek, and build a bridge allowing for safe crossing of people and livestock across the creek. The bridge will eliminate a natural, wet crossing and prevent sediment and animal waste from accumulating in the creek.*



the mix. This would allow the new owners to become familiar with their land, the agriculture community and their options for responsible care and cultivation.

Into the Classroom – Agricultural sciences are included in many collage and primary school curriculums, as well as in school sponsored programs like 4-H. The District could approach school district staff to discuss options for promoting the Program in these types of classes. The census numbers for agricultural operators reflect a decline in younger farmers. Bringing new approaches to agricultural viability that includes environmental protection may actually encourage students to consider farming in their future.

Beyond the Classroom – The University of Washington (SeaGrant) and the Washington State University (Extension) both provide programs around the responsible stewardship of land and water. Events held by both Universities could serve as a platform in which VSP information could be combined with other related educational pieces.

Political Arena – Supportive local elected officials can be strong allies when it comes to making community wide changes. In some case, changing laws is necessary to provide more flexibility to farmers struggling to keep their operations viable. Reaching out to Commissioners and Councilmembers early can secure their support for future endeavors. In addition, elected officials are the ones most informed by their constituents of problems, including those in the agricultural community. They can in turn provide necessary information to the District and Work Group members on what some of the issues may be.

## **PRINT AND BROADCAST MEDIA – INTERNET AND WEBSITES**

Live From Shelton – As one of Washington most rural counties, Mason County has one official newspaper that is published once a week, and one radio station. The radio station, unfortunately for the County's youth, is all talk. However, this station provides talking opportunities to its citizens everyday ... especially those who have something good to share. The Daybreak morning show on KMAS iFiberOne News Radio features representatives from various sects of the community being interviewed live on the radio AND on by video from their website. One or two Work Group members and/or District Staff can arrange to be interviewed on the radio to get information out to the station's listeners.

In the Funny Papers – As mentioned above, Mason County as well as its single incorporated city, has one official newspaper that comes out once a week – Shelton-Mason County Journal. The District could approach the paper about running an ad or article featuring the program. Ads could be run to announce meeting dates and locations, or events that feature the Program. An article illustrating the Programs origin and its plotted course through agricultural community would provide written documentation for reference, and increase media coverage.

Website – Having an accessible and current website of information will be crucial in a world of real time everything. People want ... need ... to know what is up to date and relevant to them. The Web is society's "go-to" for just about any piece of information, and this rural County's VSP should be no

exception. The District can provide a link from its home page, or generate a new address just for VSP. The website should be easy to remember and even easier to navigate. It should provide information important to the farmer or operator using it, including an email address for questions, links to forms that can be filled in on line, project funding sources, and clear examples of what the Program is intended to accomplish. It should minimize the use of acronyms and bureaucratic jibber jabber. No matter how spectacular the Program is, if people are discouraged by an unfriendly or overly burdensome website, their journey will end and so will the Program. The District may consider a professional web designer to create a site that reads well, is informative and not intimidating, and provides a logical flow of information.

Like Us – Social media is also a powerful tool. Using outlets such of Facebook or Twitter to display finished projects and success stories, and announce events and tours will help keep the Program in the foreground. People “liking” the site and following it on their own pages will make it visible to others. Information will spread from a “nonpoint source” and reach a larger audience.

What’s Trending – YouTube videos have become a popular outlet for entertainment and information. The VSP can take advantage of this trend by giving the Program a “face”, so to speak. Creating videos that showcase types of available BMPs, how they work, what they look like on the ground, and successful implementation on local farms gives the Program tangibility. Farmers and agricultural operators not familiar with the BMPs discussed in this Work Plan may be unsure or even intimidated by the practice and not fully understand its benefits. Showing a simple, and short, demonstration video might help clarify the practice and increase interest. Videos of success stories involving real farms and real people in this County will also inspire awareness and participation. One person hosting all of the videos might even generate a local celebrity.

Agency Links – The County’s VSP and Work Plan website could be linked with other agency and organizations that play a roll or have an interest in both critical areas and sustainable farming. District Staff can approach various representatives to determine the possibility and appropriateness of such links.

## **BUILDING AWARENESS THROUGH BRANDING**

Slogans and Logos – The Voluntary Stewardship Program is a mouthful, to say the least, and not entirely descriptive of what it’s about. The acronym, VSP, is even less helpful. Since the Program is designed to reach the agricultural community and motivate them into making changes for critical areas or for farms, or both, its needs a promotion that speaks to them. Many successful businesses have slogans, logos and names that are easy to remember and immediately recognizable to the community or the general public. The VSP needs to have something unique and relatable to first draw attention, and second to become a familiar reference associated with the Work Plan’s goals and implementation.

## **SITE VISITS**

Educating all District Staff on at least the basics of the Program allows them to offer possible assistance on site visits that may be initially unrelated. Agricultural operators often seek advice from District Staff without having any knowledge of critical areas that may be located on or adjacent to their property. Once detected by a non-regulatory agency (which is a PLUS) then the property owner can learn about some options for both critical area protection and agricultural viability.

## CIVIC ORGANIZATIONS

District Staff are members of various civic and community organizations in the course of general business that can provide regular opportunities to inform not only agricultural operators but people who may know some. Materials on the Program can be made available, as well as a District speakers bureau describing the program, its benefits, and participation pathways.

## BOARDS AND COMMISSIONS

Mason County has a variety of elected and appointed citizen groups that address community issues and concerns. An informal presentation to these groups will also help disseminate information to either an agricultural operator, or someone who knows one.

## MATERIALS

The District can prepare simple, straightforward materials that provide information about the VSP in an understandable and helpful format. Certain aspects of VSP can be confusing and bogged down with legal references; reaching out with information that is void of bureaucratic terminology and complicated formulas will be the most effective. Agricultural operators need information that is clear and relevant to their needs and desires. Materials created must be sensitive to this in order to be effectively understood, or even read beyond the first sentence.

## SCHOOLS

Working with schools to educate children about their natural environment is something that the District is regularly involved with. Realizing curriculum are set by the state to a specific set of guidelines, there may be other ways to integrate farming and agricultural events or workshops to engage the County's future work force. One of the items addressed by the Work Group during the SWOT<sup>68</sup> process



**Figure 20 Shelton Farmers Market**

<sup>68</sup> Strengths, Weaknesses, Opportunities, and Threats

was a noticeable lack of interest and engagement by youth in agriculture as a profession. Reaching children at earlier ages might motivate even a few to continue their education with an emphasis on farming and agriculture.

## **LANDOWNER MEETINGS**

Members of the farming community may have casual meetings to discuss issues of particular importance to operators with similar production needs or products. If permitted, District Staff could use some of these informal meetings to broach the topic of VSP and provide assistance on joining the program or taking advantage of other opportunities for District assistance.

## **LOCAL BUSINESSES/GOVERNMENT OFFICES**

Materials can be distributed at local retailers of hardware, farm supplies, and other small businesses patronized by the community. Government offices are also a place where citizen often go not necessarily out of want, but out of need. Offices of the Mason County Treasurer, Auditor, and Assessor are centrally located in downtown Shelton with a single shared lobby. Community members visit these offices daily and materials may be made available to them in places noticeable while waiting. The Auditor's office is of special importance as this office implements Open Space Program that acts as a tax incentive program for agricultural property.

## **VOLUNTARY STEWARDSHIP OVERVIEW AND INDIVIDUAL PLAN CHECKLIST**

Creating individual stewardship plans for landowners interested in participation in the Program is core to its overall success. The Plans are designed around a site's specific critical area with recommended conservation practices for protection and enhancement of that area, as well as promoting agricultural viability. The Individual Plan Checklist was created to provide an easy to complete set of questions that would help the District discover opportunities for Program implementation through landowners' voluntarily provided information. The checklist guides the landowners through a series of questions that determine which watershed the property is located in, what types of critical areas may be on or near the property, and which conservation practices have been implemented in the or which they are interested in implementing in the future. The District can use this information to update monitoring tables, and to make contact with interested parties. The checklist can also be completed and sent in completely on line from the District's website.

Additionally, the first portion of the checklist provides a scaled down overview of the Program, and can be used and distributed independent of the checklist. This came from a suggestion from the Work Group that a short and easily digestible version of the Plan be put together as a ready-to-go hand out. Considering the amount of bureaucratic lingo contained in the Plan, this was a great suggestion and the Overview document was created. The Overview and Individual Plan Checklist is attached in Appendix 9.

## **OUTREACH PRIORITIZATION AND SCHEDULE**

The Work Group met on January 23, 2018 to prioritize the outreach efforts described above. Through a collaborative effort by the Group members, the suggested ideas were individually documented on large reading cards and displayed randomly on an exhibition board. Members then wrote down their top three choices for year one and then beyond. The group was also asked to “sign up” to assist with some of the events. The ideas were grouped by consensus, and the results are reflected in the table below:

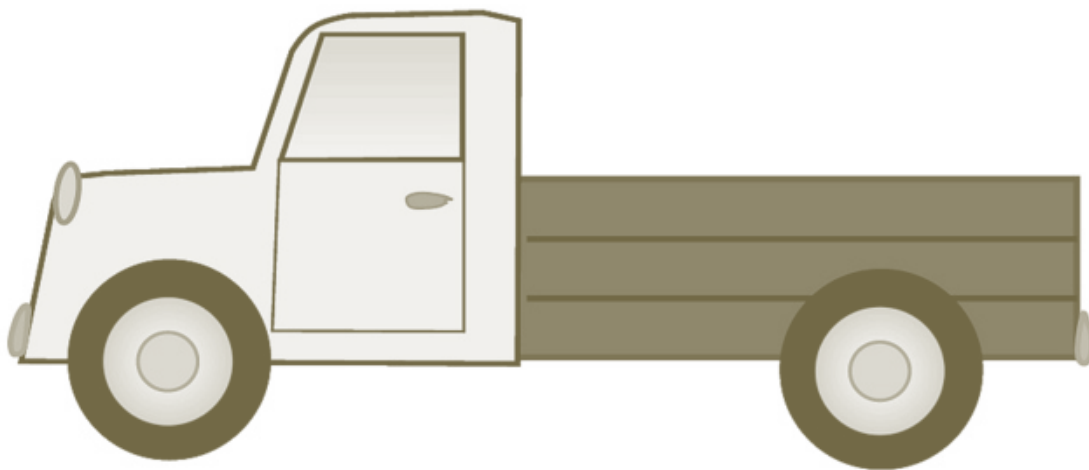
**Table 28 First Year Outreach Efforts**

<b>FIRST YEAR</b>	<b>WORK GROUP MEMBER VOLUNTEER</b>
<b>Trained Ambassadors</b>	Larry Boltz, Myrn Stewart
<b>Posters/Flyers</b>	Seth Elsen, Laurie Hager
<b>Building Awareness through Branding</b>	Allan Borden, Laurie Hager, Seth Elsen
<b>Civic Organizations</b>	... no takers yet
<b>Master Gardeners &amp; Small Farms</b>	Allan Borden
<b>Targeting Individual Communities</b>	Bill Short, Myrn Stewart, Laurie Hager, Allan Borden
<b>Agency Links</b>	Allan Borden, Seth Elsen
<b>Website</b>	Seth Elsen, Laurie Hager
<b>Social Media</b>	Seth Elsen, Laurie Hager
<b>Individual Plan Checklist</b>	District Staff, Volunteers as available

The items chosen for the first year are those the Group determined to be foundational to future outreach efforts. Establishing a recognizable name and making community connections will be a necessary first step in securing the program’s future success. The next list includes items the Group intends to target for the second year, and years to follow. After the Program has received some degree of recognition and standing as a result of the first year’s outreach, the next series of events and opportunities should prove to be more productive.

- ❖ Board & Commissions
- ❖ Landowner Meetings
- ❖ Schools
- ❖ Materials
- ❖ Local Businesses/Government Offices
- ❖ Live from Shelton (Radio)
- ❖ Political Arena
- ❖ Site Visits
- ❖ In the Funny Papers (print media)
- ❖ Taking the Show on the Road
- ❖ Reader Boards
- ❖ Service Clubs/Organizations
- ❖ Farmers Markets
- ❖ Livestock Auctions
- ❖ Parades
- ❖ Piggyback Mailers
- ❖ Events
- ❖ Professional Partnerships
- ❖ What’s Trending
- ❖ Into the Classroom
- ❖ Beyond the Classroom
- ❖ Real Estate Market





## APPENDIX I CRITICAL AREAS

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## CRITICAL AREAS

**CRITICAL** Areas are established and regulated under WAC 365-190-030 (Washington Department of Commerce) and RCW 36.70A.030 (Growth Management Act). Accordingly, jurisdictions planning under the Growth Management Act (GMA) must designate critical areas and adopt regulations protecting them. The following describes how all five critical areas are defined by both the State and Mason County.

*'Critical areas' include the following areas and ecosystems: (a) Wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. "Fish and wildlife habitat conservation areas" does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company.<sup>69</sup>*

### WETLANDS

As defined by State code, wetlands are

*...areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands*

Decker Creek



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<sup>69</sup> RCW 36.70A.030(5)

*generally include swamps, marshes, bogs, and similar areas.*<sup>70</sup>

In wetlands, the soil is at least periodically saturated or covered with water.<sup>71</sup> These water conditions support special kinds of plants called hydrophytes (Greek for "water loving"). Soils that have been saturated for a sufficient length of time hold certain properties and are referred to as hydric soils. An area must exhibit all three of the following characteristics in order to be classified a wetland: (1) inundation or saturation of the soil by water, (2) the presence of wetland plants (hydrophytes), and (3) the presence of hydric soils. Wetlands are classified by a rating system set forth in the Washington State Wetland Rating System for Western Washington. A four-tier wetlands rating system has been adopted as the rating system for Mason County. Wetland buffer widths, wetland activities, and replacement ratios are based on this rating system. These four categories include:

**WETLANDS CLASSIFICATION**<sup>72</sup>

*Category I Wetlands. Category I wetlands contain documented habitat for threatened or endangered plant, animal, or fish species recognized by federal or state agencies; or documented Natural Heritage wetland sites or high quality native wetland communities which qualify as Natural Heritage wetland sites; or documented habitat of regional (Pacific Coast) or national significance for migratory birds; or regionally rare wetland communities; or wetlands with irreplaceable ecological functions; or documented wetlands of local significance.*

*Category II Wetlands. Category II wetlands contain documented habitat recognized by federal and state agencies for sensitive plant, animal, or fish species; or documented priority habitats and species recognized by state agencies; or wetlands with significant functions which may not be adequately replicated through creation or restoration; or wetlands with significant habitat value; or documented wetlands of local significance.*

*Category III Wetlands. Category III wetlands are classed as category III when they satisfy no category I, II, or IV criteria.*

*Category IV Wetlands. Category IV wetlands are less than one acre in size and hydrologically isolated and comprised of one vegetated class that is dominated (more than eighty percent areal cover) by one species from the list in Table 21 (WAC 173-183-710(d)(ii)); or are less than two acres and hydrologically isolated with one vegetative class and more than ninety percent of the areal cover is any combination of species. (WAC 173-183-710(d)(ii))*

The Wetlands and WRIAs Map indicates all of the known wetlands in Mason County according to the 2011 National Wetlands Inventory; there are nearly 55,000 acres. Most of these areas are associated with larger freshwater and saltwater systems. The alteration or destruction of wetlands can eliminate or reduce a variety of biological and hydrological functions that wetlands perform. Direct impacts may result from the clearing, grading or filling of land prior to new development. Of equal important are

<sup>70</sup> RCW 36.70A.030(21)

<sup>71</sup> RCW 36.70A.030(21)

<sup>72</sup> WAC 173-183-710

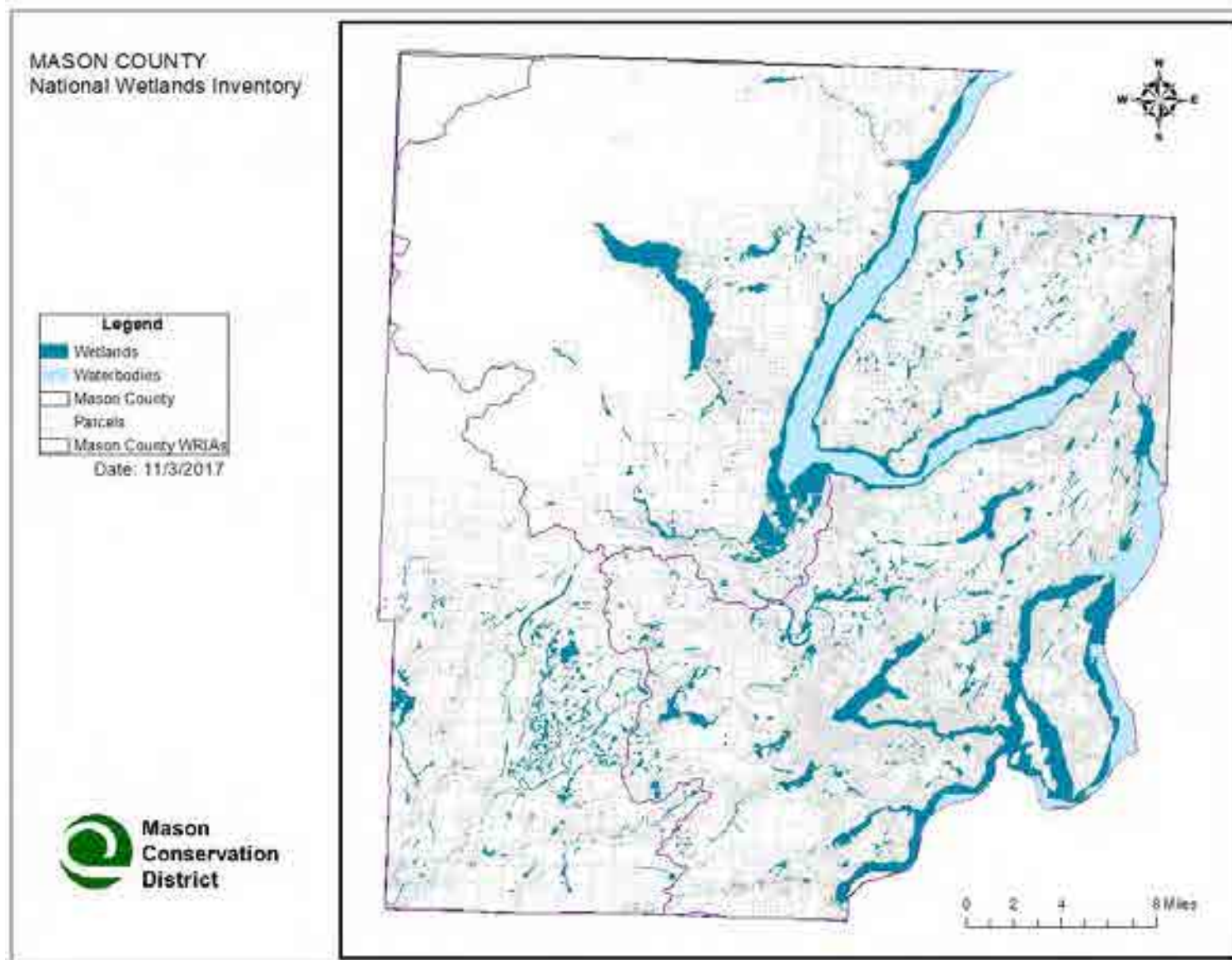
the indirect impacts from new development, which may alter surface water flows, or interrupt the infiltration of groundwater.

New development may increase volumes of sediment-laden runoff entering wetlands. This may inhibit the wetlands' natural capacity to remove nutrients and process chemical and organic wastes. In addition, increased sedimentation within wetlands may reduce their ability to temporarily store flood waters and increase the risk and magnitude of downstream impacts. Wetlands may also often provide groundwater recharge. Development activities in areas near or hydrologically connected to wetlands in recharge areas could interrupt infiltration to the groundwater system.





**Figure 21 Wetlands Map**



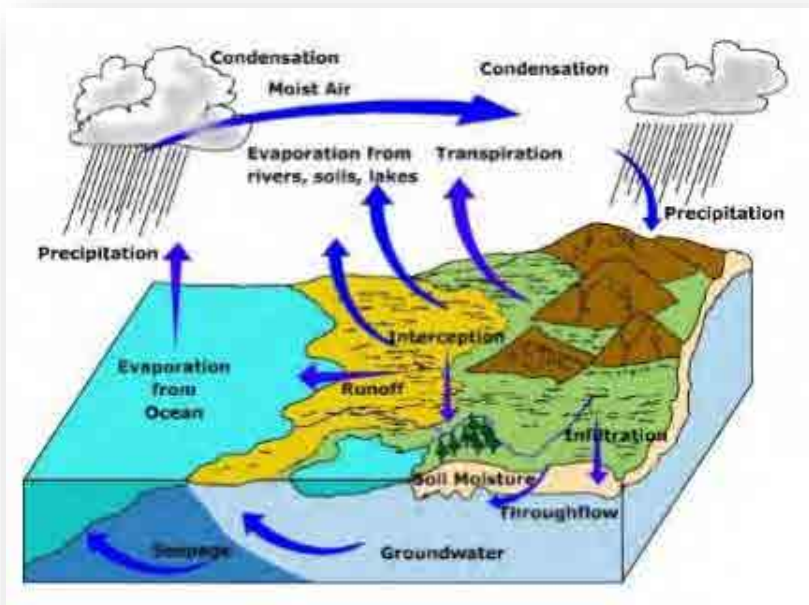
Source: National Wetlands Inventory



## CRITICAL AQUIFER RECHARGE AREAS

Groundwater exists in underground layers of porous rock or soil called aquifers. Water stored in aquifers reaches the ground surface through springs, wells, or by seepage into surface water features, including wetlands. Surface waters replenish, “recharge”, aquifers through seepage from streams, lakes, and wetlands, and from precipitation that percolates through soil or rock. Areas with a critical recharging effect on aquifers used for potable water, also called Critical Aquifer Recharge Areas or CARAs, include areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.<sup>73</sup> The Critical Aquifer Recharge Areas exist throughout Mason County and are mapped on Figure 23.

Potable water means water suitable for drinking. Groundwater provides virtually all of Mason County's potable water. Protecting aquifers and aquifer recharge areas, therefore, is critical to maintaining Mason County's water supply. The groundwater supplying most of the County's water is obtained from the aquifers running through the coarser and more permeable glacial and fluvial sedimentary deposits. The older, undifferentiated sedimentary deposits provide large quantities of water for industrial and municipal wells. Bedrock forms the bottom of



Source: WA Department Of Ecology

the groundwater layer although fractures and joints in the relatively impermeable rocks may yield small quantities of water. Precipitation provides the primary source of recharge for Mason County's groundwater. Precipitation within the County averages 64 inches annually. It increases rapidly towards the Olympic Mountains where, at Lake Cushman, precipitation is in excess of 100 inches per year. Water levels in wells are typically within 125 feet of the land surface. The quality of groundwater in an aquifer is inextricably linked to its recharge area. Approximately 121,084 acres have been mapped as Critical Aquifer Recharge Areas in Mason County.

Urban development has two potential impacts on groundwater resources: 1) increases in impervious surfaces reduce the volume of precipitation available to recharge groundwater, and 2) may introduce

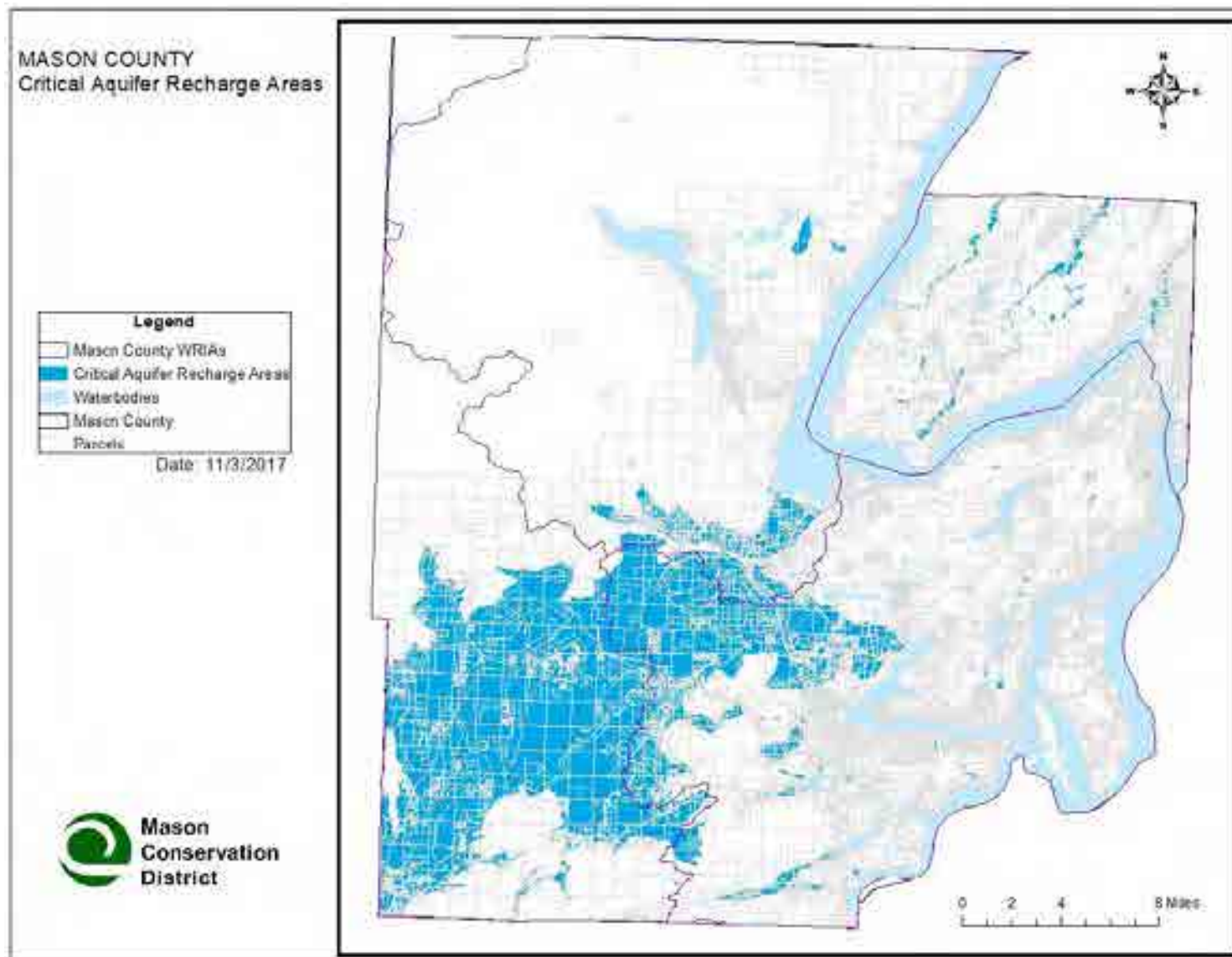
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<sup>73</sup>WAC365-190-030(3)

pollutants into the groundwater system. When groundwater recharge is reduced, groundwater supplies may be depleted. In many instances, this is coupled with withdrawals of groundwater in excess of recharge capacity. Potential long-term impacts include reduced capacity of water wells, reduced flows in groundwater-fed streams, and depletion of water supplies to lakes or wetlands. Pollutants can be introduced into the groundwater system through a variety of means. They include failing septic systems, agricultural chemicals, animal waste, urban runoff, solid waste disposal, and leaking underground storage tanks.



**Figure 22 Critical Aquifer Recharge Areas Map**



Source: Mason County Department of Public Works, GIS Division

## FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Preservation of fish and wildlife habitat is critical to protecting suitable environments for animal species, and in providing an important part of the local quality of life for County residents and visitors. Fish and wildlife also provide important recreational and economic benefits such as hunting and fishing opportunities. The continued prosperity of the commercial and recreational fish and shellfish industries depends on maintenance of excellent water quality and unpolluted habitats for fish, shellfish, and their food sources. Fish and wildlife habitat also provide significant social benefits.



Cranberry Creek

Mason County residents are accustomed to occasional encounters with wildlife such as bald eagles, great blue heron and elk. Wildlife provides the opportunity to educate the public about biological and ecological processes. Other less quantifiable benefits include wildlife viewing, and maintaining the historical, cultural, and spiritual values of Native American Tribes and the general public.

The Mason County Resource Ordinance guides management of the County's fish and wildlife habitat through the regulation of conservation areas. Fish and Wildlife Habitat Conservation Areas include both aquatic and terrestrial areas within the County. The approximate location and extent of critical fish and wildlife habitat areas are displayed in the Washington Department of Fish & Wildlife's (WDFW) Priority Habitat and Species (PHS) Program database. The following categories are used in classifying these critical areas:

- 1) Commercial and recreational shellfish areas;
- 2) Kelp and eelgrass beds; herring, sand lance, and smelt spawning areas;
- 3) Naturally occurring lakes and ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;
- 4) Streams;
- 5) Saltwater shorelines, and Lakes 20 acres and greater in surface area;
- 6) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
- 7) State Department of Natural Resources natural area preserves and natural resource conservation areas;
- 8) Areas with which federal or state endangered, threatened and sensitive species of fish and wildlife have a primary association. Those species known to be found in Mason County shall be



listed in the Resource Ordinance. Protection of species habitats is determined by the state or federal listing, and their actual presence near the site subject to review. Other listed and protected species may be found in Mason County, which are not listed.

- 9) Other areas that contain habitats and species of local importance (which include juvenile salmonid migration areas) as also listed. Species of local importance may include, but are not limited to, state candidate and monitor species.

**AQUATIC AREAS** | Mason County includes three principal river systems and numerous lakes, small rivers, and streams. The Skokomish and Hamma Hamma Rivers are swiftly flowing, deeply incised rivers



that originate high in the Olympic Mountains and empty into Hood Canal. The east and middle forks of the Satsop River originate in the Olympic Mountains, converge at the southwestern corner of the county, and flow southward into the Chehalis River. All of the eastern part of the County is drained by smaller streams which flow only short distances before reaching outlets to Puget Sound. Many of the small streams support significant fisheries that include anadromous fish. Other surface waters are made up of numerous lakes and wetland areas, some of which include Cushman,

Mason, Nahwatzel, Lost, Isabella, Island, Cranberry, Limerick and Spencer Lakes.

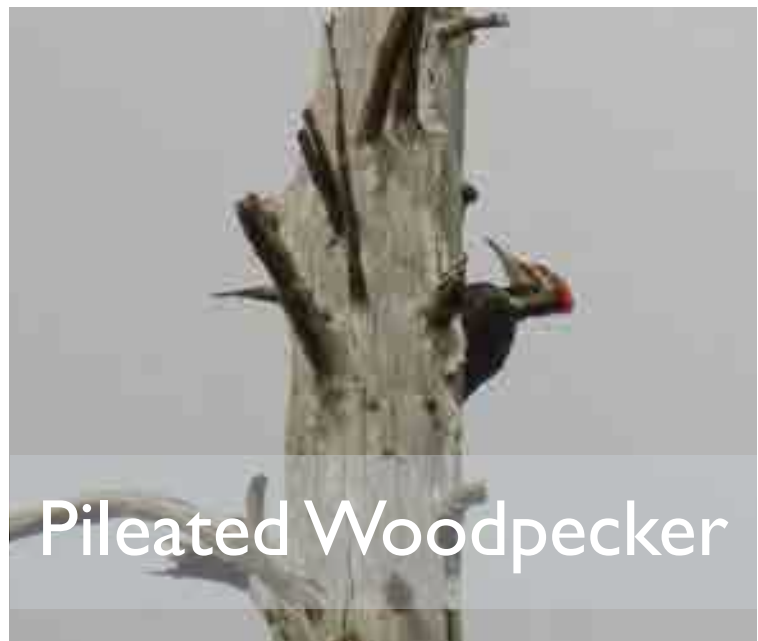
The waters and shorelines of Mason County are an important resource. In addition to their natural beauty and cultural value, they provide the base for a sizable shellfish industry, aquaculture, fish and wildlife habitat. Water systems are typed by the Washington Department of Natural Resources and the following table provides a general description of water type classifications currently in use.

**Table 29 Water Typing System<sup>74</sup>**

<b>Type</b>	<b>Description</b>
<b>Type “S” = Shoreline</b>	<i>Streams and waterbodies that are designated “shorelines of the state” as defined in Chapter 90.58.030 RCW (formerly Type 1)</i>
<b>Type “F” = Fish</b>	<i>Streams and waterbodies that are known to be used by fish, or meet the physical criteria to be potentially used by fish. Fish streams may or may not have flowing water all year; they may be perennial or season (formerly Type 2 or 3)</i>
<b>Type “Np” = Non-Fish</b>	<i>Streams that have flow year round and may have spatially intermittent dry reaches downstream of perennial flow. Type Np streams do not meet the physical criteria of a Type F stream. This also includes streams that have been proven not to contain fish using methods described in Forest Practices Board Manual Section 13 (formerly Type 4)</i>
<b>Type “Ns” = Non-Fish Seasonal</b>	<i>Streams that do not have surface flow during at least some portion of the year, and do not meet the physical criteria of a Type F stream (formerly Type 5)</i>

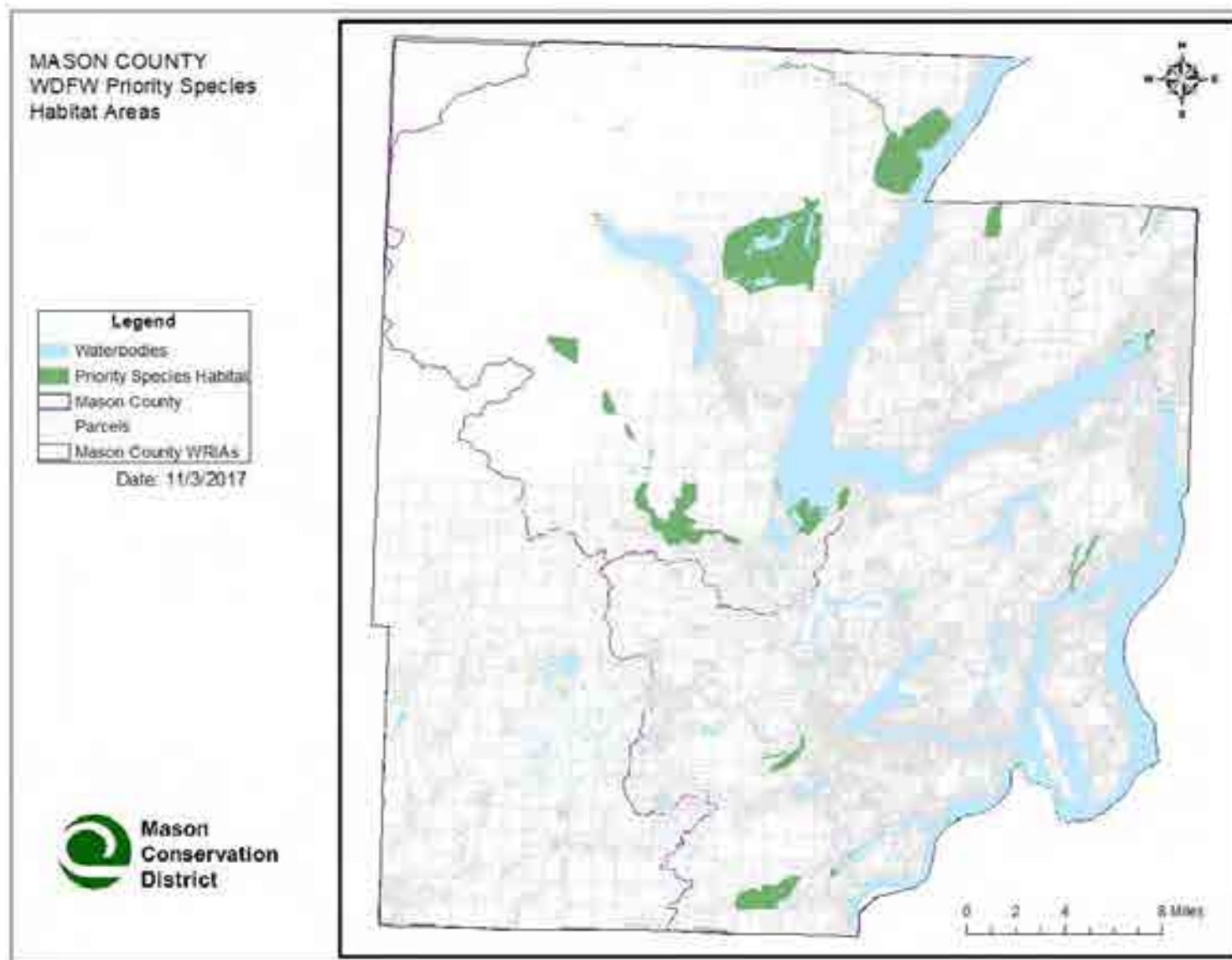
**TERRESTRIAL AREAS** | All development activities have the potential to impact native plant and animal species. Terrestrial Management Areas are those areas where the presence of state endangered or state threatened terrestrial species have been identified. The Mason County Resource Ordinance specifies that all development in these areas shall be consistent with State and Federal law.

There are also a number of publicly and privately managed natural areas in Mason County that have been designated as preserves or refuges. These areas are important for fish and wildlife habitat, scenic vistas, protection of sensitive plant species, and preservation of open space. In Mason County, there are nearly 28,000 acres of habitat. The Priority Species Habitat is mapped in Figure 23.


<sup>74</sup> WAC 222-16-030



**Figure 23 WDFW Priority Species Habitat**



Source: WA Department of Fish & Wildlife

## FREQUENTLY FLOODED AREAS

Frequently flooded areas are lands in the flood plain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.<sup>75</sup> In Mason County they include areas identified as potential or historic flood areas in the Department of Ecology's Coastal Zone Atlas or areas identified as "Zone A" flood areas on the National Flood Insurance Program Flood Insurance Rate Maps. Areas in the County meeting these descriptions are mapped in Figure 24, Frequently Flooded Areas.

Flooding in Mason County generally occurs from November through April. The greatest cause of flooding is heavy rainfall combined with snow melt. The Mason County Flood Insurance Study lists four areas as most susceptible to flooding. Those areas include the Skokomish, Tahuya and Union Rivers, and Goldsborough Creek. The Skokomish River Valley floods several times annually. Many homes, pastures and personal property were damaged over the years as well as lesser damage on a more frequent basis. Flooding on the Tahuya River and Goldsborough Creek has been known to cause some damage, whereas the Union River tends to have high flows, but minimal overbank flooding.

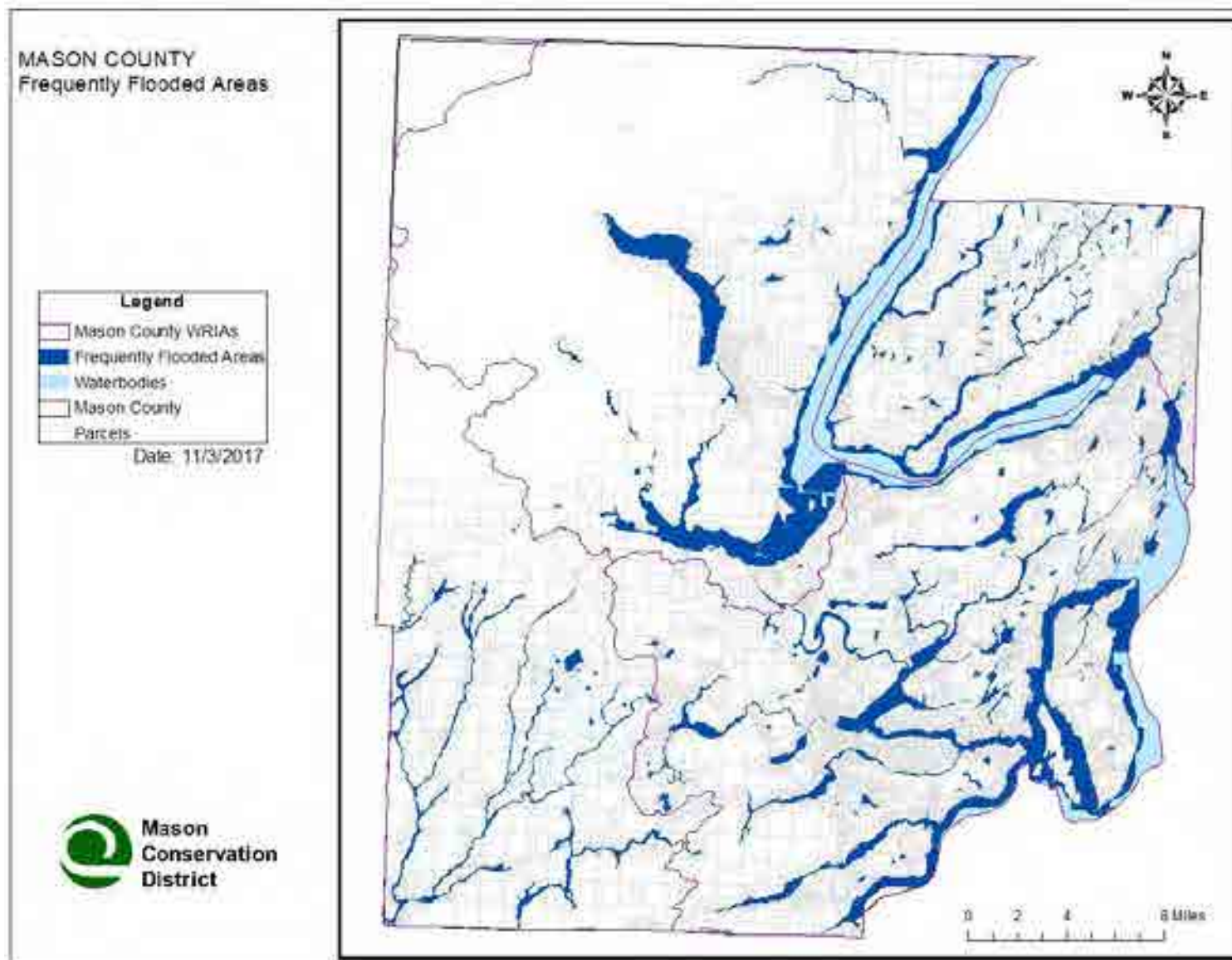
Flooding of marine shorelines is caused by a number of factors, which can occur individually or in combination. They include extreme high tides, waves generated by winds, tsunamis of distant origin, and locally generated seismic waves or boils. Wind-driven waves, superimposed on extreme high tides, represent the most common form of coastal flooding. Mason County protects frequently flooded areas by concentrating urban development on the least amount of land, considers the suitability of the land for development through the use of performance standards, and provides for significant open space and resource use areas in development within the Rural Area.



**Skokomish River Flooding**

<sup>75</sup> WAC 365-190-030(8)

**Figure 24 Frequently Flooded Areas Map**



Source: Mason County Department of Public Works, GIS Division

## GEOLOGICALLY HAZARDOUS AREAS

Geologically hazardous areas are susceptible to erosion, sliding, earthquake, or other geological events, making them unsuitable for the siting of commercial, residential, or industrial development consistent with public health or safety concerns.<sup>76</sup> In many cases, hazards can be reduced or mitigated by engineering, design or modified construction practices. Mason County's Resource Ordinance identifies three types of Geologic Hazard Areas: 1) Landslide Hazard Areas; 2) Seismic Hazard Areas; and 3) Erosion Hazard Areas. Landslide Hazard Areas are lands that have an increased potential for landslides and other earth movement. Seismic Hazard Areas are lands that are particularly susceptible to damage from earthquakes and other seismic activity. Lastly, Erosion Hazard Areas are lands that are more susceptible to excessive erosion.

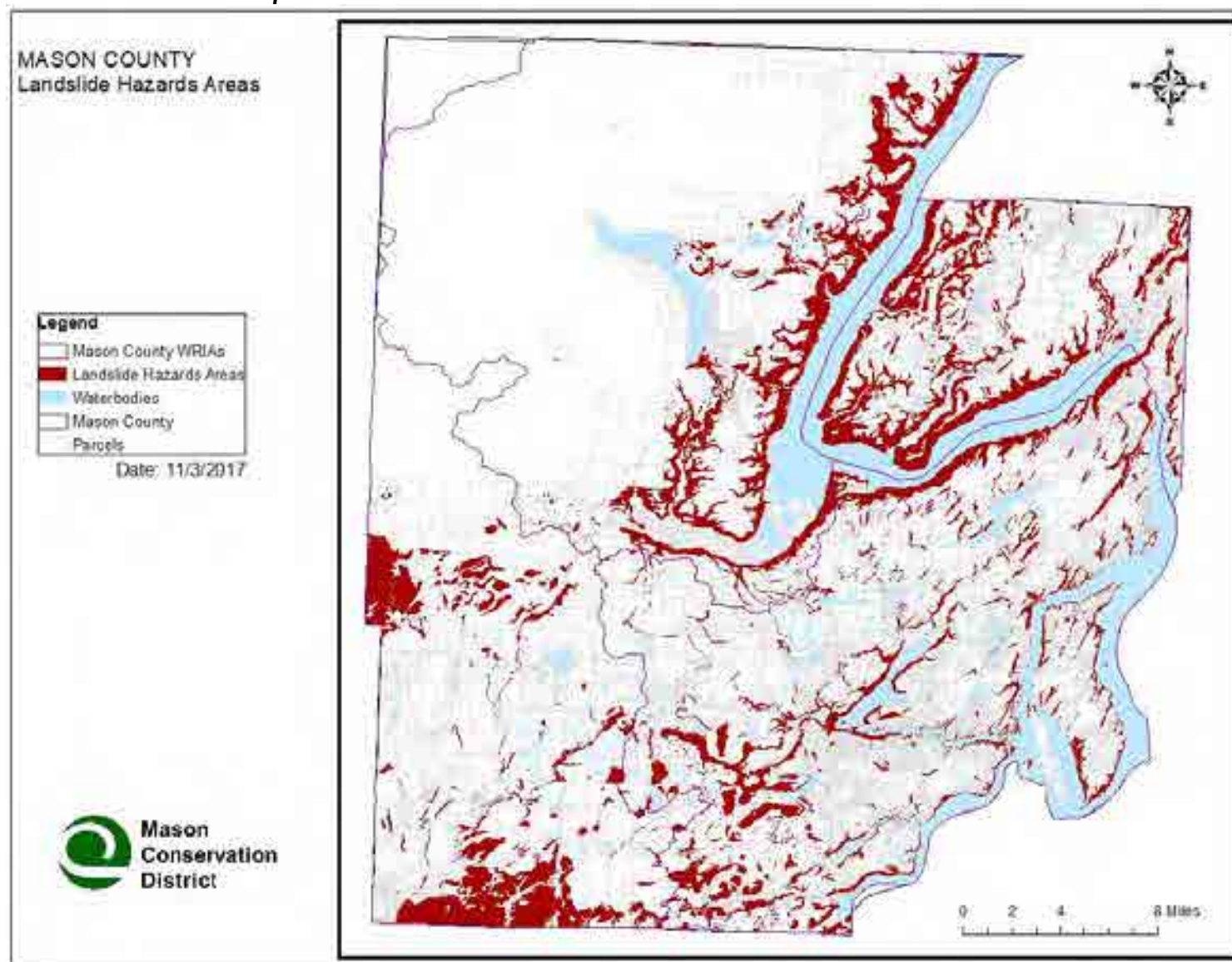
**LANDSLIDE HAZARD** | A landslide is a rapid down slope movement of a mass of material such as rocks, soil, or other debris. The speed and distance of movement, as well as the amount of material, vary greatly and depend on a combination of geologic, topographic and hydrologic factors. Especially susceptible to landslide hazards are marine bluffs and unconsolidated glacial deposits on steep hillsides (greater than 40%). The risk of landslide occurrence depends on a number of factors including soil vulnerability, slope, and the degree of water saturation. Development activities can increase the risk by exposing soil through clearing, altering natural drainage patterns, excavating the "toe" of slopes, or increasing soil moisture content. An important measure of potential risk for landslide when development occurs is land clearing and alteration for development. Conversion of agricultural lands not only depletes farm land, but also increases the risk of landslides. Potential impacts to Mason County can be assessed based on the relative amount of land converted to urban uses during the 20-year planning under each of the alternatives.



<sup>76</sup> RCW 36.70A.030 (9)



**Figure 25 Landslide Hazard Areas Map**



Source: Mason County Department of Public Works, GIS Division

**SEISMIC HAZARD** | Seismic Hazards occur in areas subject to severe risk of earthquake damage as a result of seismic induced settlement or soil liquefaction. These areas include soils containing high organic content (e.g., wetland soils), areas of loose sand and gravel, artificial fills, landslide deposits, and fine-grained soils with high water tables. Seismic Hazard Areas are areas susceptible to ground failure, including mapped geologic faults; areas of poorly compacted artificial fill; areas with artificially steepened slopes; post-glacial stream, lake or beach sediments; river deltas; areas designated as potential Landslide Hazard Areas; bluff areas; and areas underlain by potentially liquefiable soils. Mapped Seismic Hazard Areas (Figure 26) cover the majority of the County. The northwest portion of the County is Olympic National Forest which is presumably also susceptible to seismic activity however parcel data for that area is not available for inclusion on this map.

Seismic hazard area development standards focus on effects to buildings and other facilities from intense ground shaking and/or liquefaction. Attention to seismically induced landslides could also cause structural damage to buildings, particularly on steeper slopes and shoreline bluffs. In addition, the critical area regulations do not allow significant public buildings in seismic hazard areas; and the future land use plan directs most growth away from these areas.

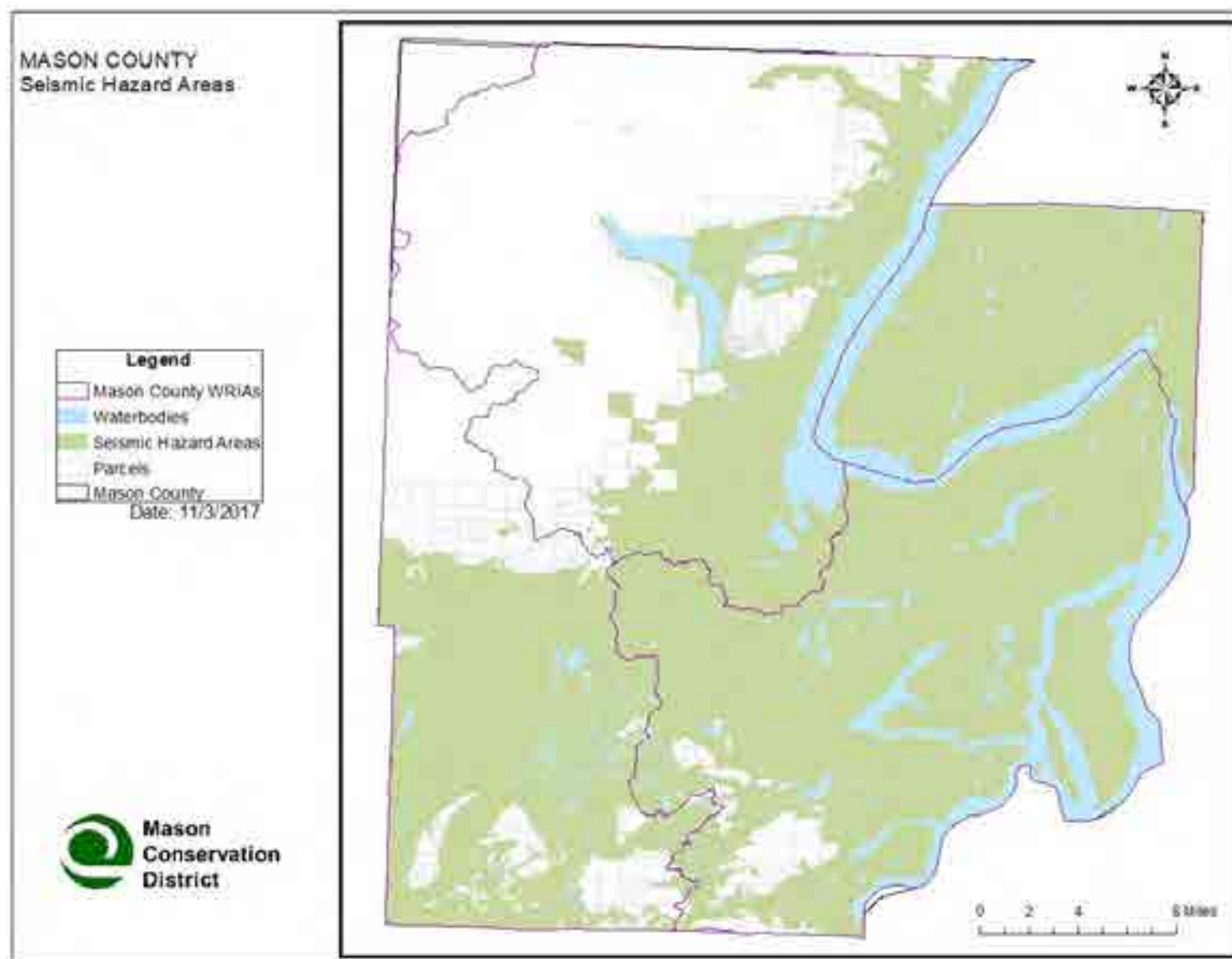
## Earthquake near Belfair shakes Puget Sound area



Source: [www.Olympian.Com](http://www.Olympian.Com)

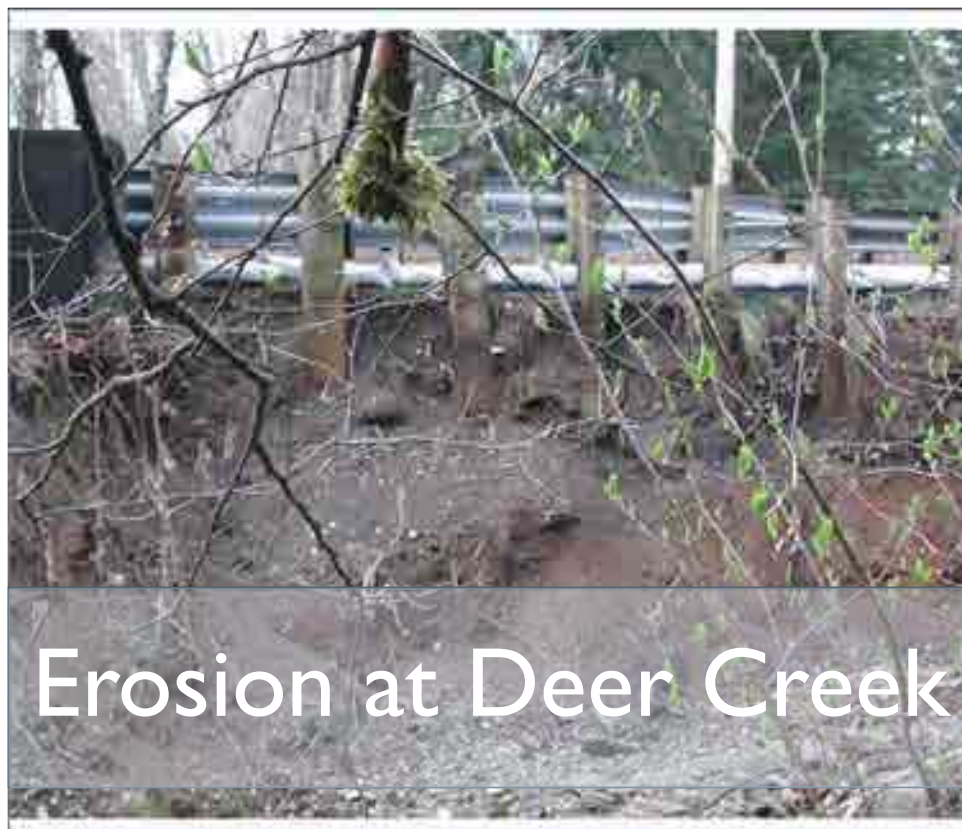


**Figure 26 Seismic Hazard Areas Map**

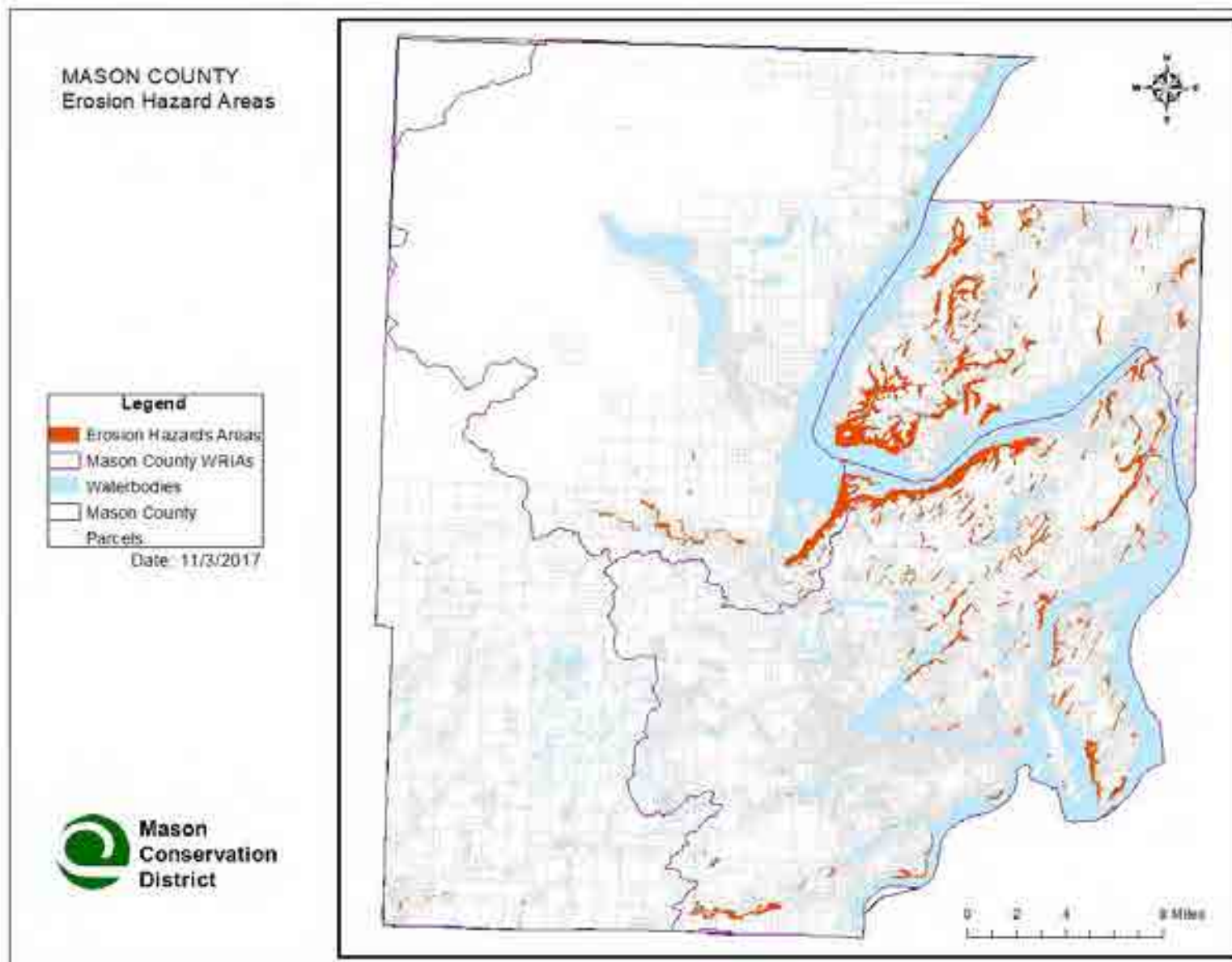


Source: Mason County Department of Public Works, GIS Division

**EROSION HAZARD** | Erosion is a natural process in which the land surface is worn away by the action of water, wind, ice or other geologic processes. The most common cause of erosion is water falling or flowing across the land. Factors contributing to erosion hazard are soil type and slope. Mason County is underlain by soils which are subject to severe erosion when disturbed. Such soils include, but are not limited to, those for which the potential for erosion is identified in the Soil Survey of Mason County, USDA Soil Conservation Service, 1960, or any subsequent revisions or addition to this source. Erosion hazards generally occur on erosive soils where slopes exceed 15%. The erosion process can be accelerated by development activity that exposes and disturbs soils so they are more vulnerable to erosive forces. Further, increased areas of impervious surfaces reduce the infiltration of rainfall, increase stormwater runoff, and result in even greater erosion potential. Increased runoff, erosion, and sedimentation may adversely affect the physical and biological characteristics of streams and other water resources. Erosion Hazards are similar to Landslide Hazards in that they are both often created by, or aggravated by development activities such as clearing and grading. The comprehensive plan controls the hazards through the critical areas regulations and by concentrating development in suitable areas. Erosion Hazard Areas as mapped in Figure 27.



**Figure 27 Erosion Hazard Areas Map**



Source: Mason County Department of Public Works, GIS Division

## APPENDIX 2 EXISTING PLANS

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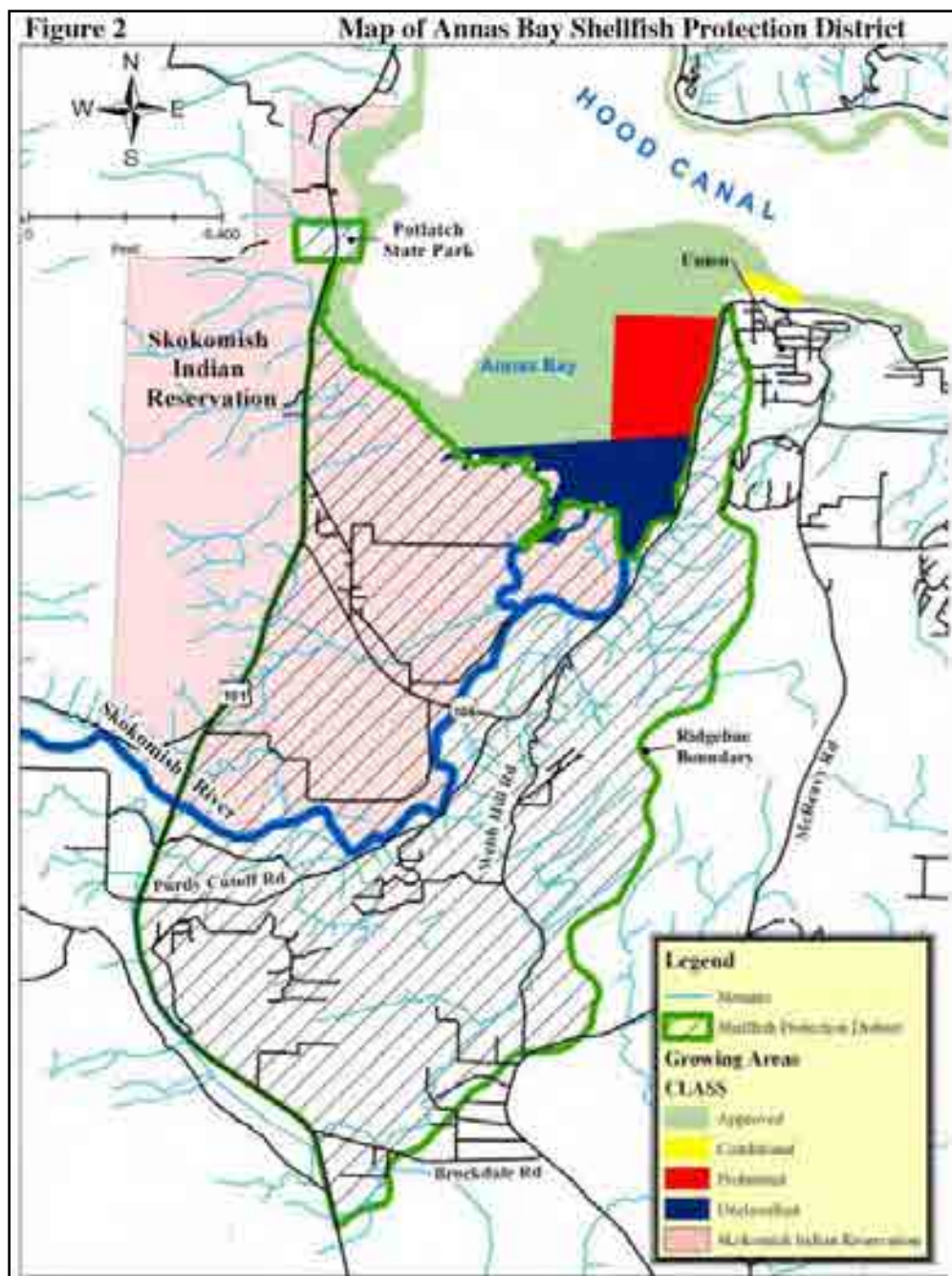


## EXISTING PLANS

The following describes portions of watershed plans as they pertain to agriculture, and its interface within the areas.

**ANNAS BAY CLOSURE RESPONSE STRATEGY, APRIL 2007.** The Annas Bay Shellfish Protection District encompasses approximately 190 developed parcels with 30 of those along shorelines. The district contains one small animal feeding operation (<60 animals) adjacent to the Skokomish River, and

**Figure 28 Annas Bay Shellfish Protection District Map**



Source: Annas Bay Closure Response Strategy

several hobby farms. It is bordered on the west by Highway 101 and runs south from Potlatch State Park to Brockdale Road; it then follows the ridgeline north to Union. At Union, the district lies adjacent to the Lower Hood Canal Shellfish Protection District, which extends on both sides of the canal to Belfair.

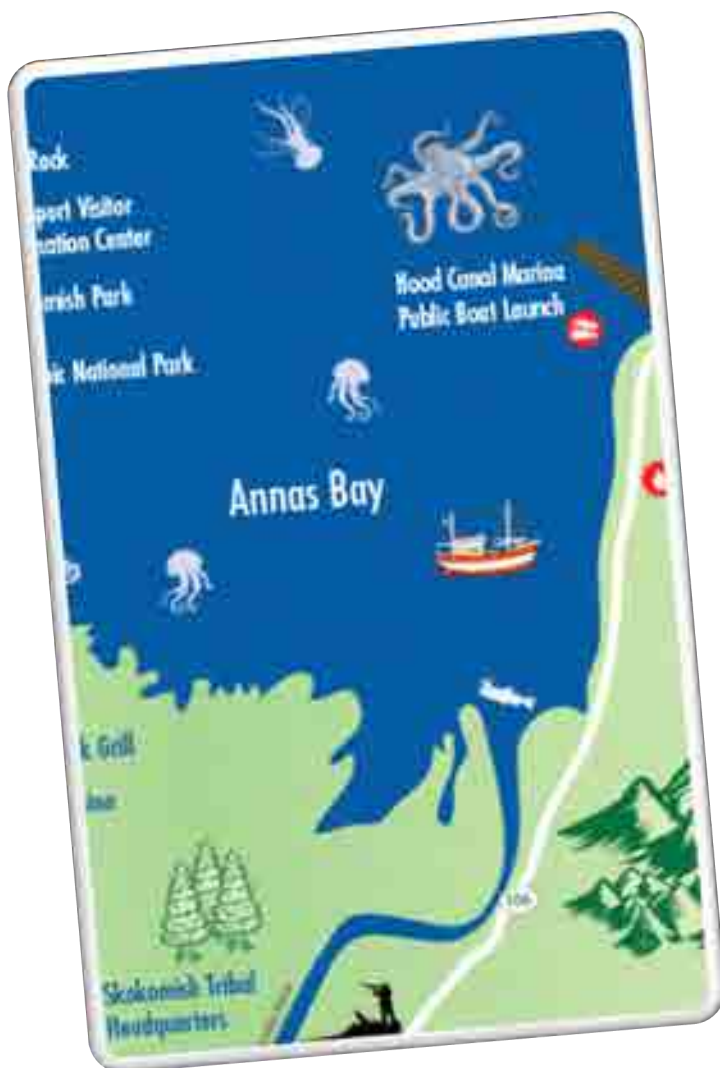
Annas Bay was downgraded by the Washington Department of Ecology in 2005 due to high levels of fecal coliform bacteria from non-point sources. Fecal coliform are bacteria found in the feces of warm-blooded animals and can be used to detect the potential presence of disease-causing organisms in water. Failing septic systems, livestock, pet waste, human recreational activities, and wildlife (including seals) are potential sources of fecal coliform bacteria in the watershed. This triggered the creation of a shellfish protection district and a protection program.



Pollution sources of concern include farm animal waste, pet waste, wildlife waste, and human sources. Improper livestock manure handling and storage can contribute to fecal coliform pollution. In addition, livestock in the vicinity have access to riparian areas and surface waters which can transport waste to

shellfish beds. Strategies outlined in the Plan included monthly and bi-monthly water sampling, sanitary surveys of on-site sewage septic systems, dye tests, and livestock inventories. Pollution control options for agricultural sources include development and implementation of farm plans that protect water quality and technical and cost-share assistance to help landowners implement best management practices including riparian fencing, waste storage structures, tree planting, erosion control and gutters, downspouts and outlets. The Plan also had a public outreach and education component to provide the community with information and resources as well as oyster meat sampling, interactive field trips for local schools, and workshops.

The Annas Bay Strategy included nearly all the components of the VSP Work Plan making it a potential resource for historical data. The groundwork put in place for protecting water quality aligns with the goals of VSP and relationships cultivated during that process could at some point be further built upon. The Work Group could reach out periodically to Mason County Public Health for new opportunities; however most of the activities associated with the Plan were complete in 2007.



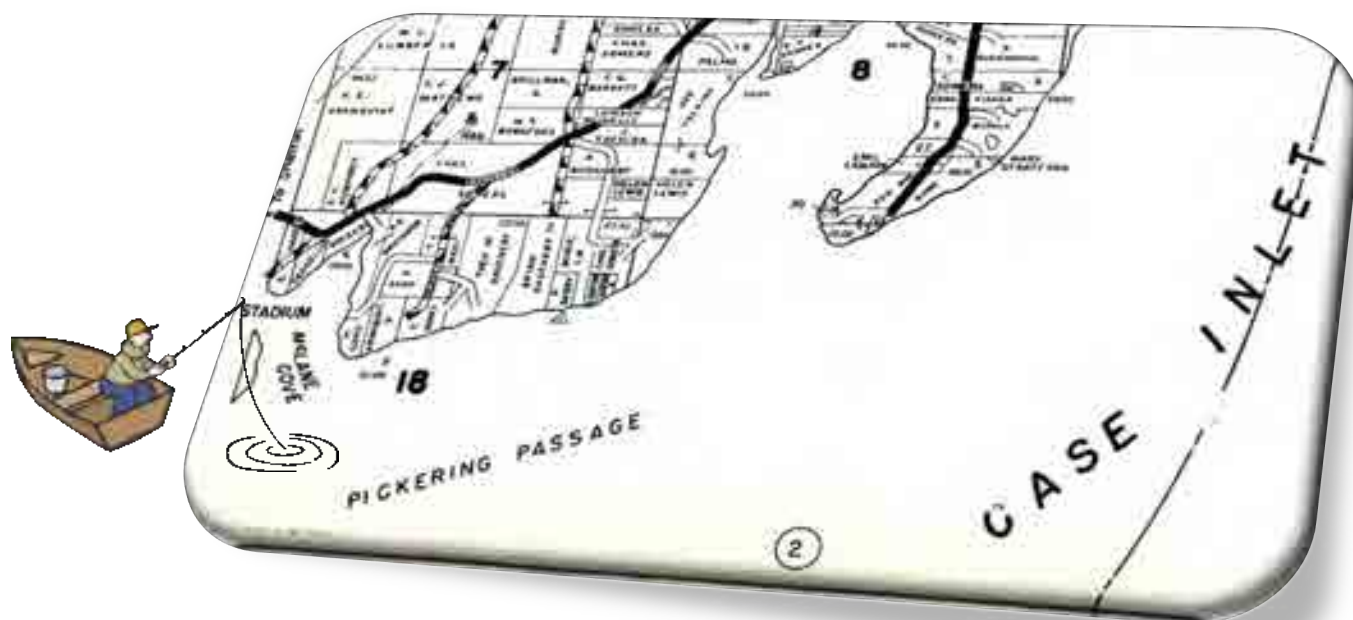
**BIG BEND SHELLFISH PROTECTION DISTRICT, APRIL 2017.** In September 2015, Washington Department of Health downgraded 17 acres of shellfish growing beds from Approved to Conditionally Approved in the Big Bend Area of Hood Canal. This area is largely developed along the marine shoreline and relatively undeveloped in the uplands. As a Conditionally Approved area, 5-day closures in Big Bend are triggered with rainfall of 0.75 in or greater within 24 hours. Additionally two sections within the area, H and I (pink and green respectively in the map below), are seasonally closed from May-September due to point source pollution from the nearby marina.

**Figure 29 Big Bend Shellfish Protection District Map**



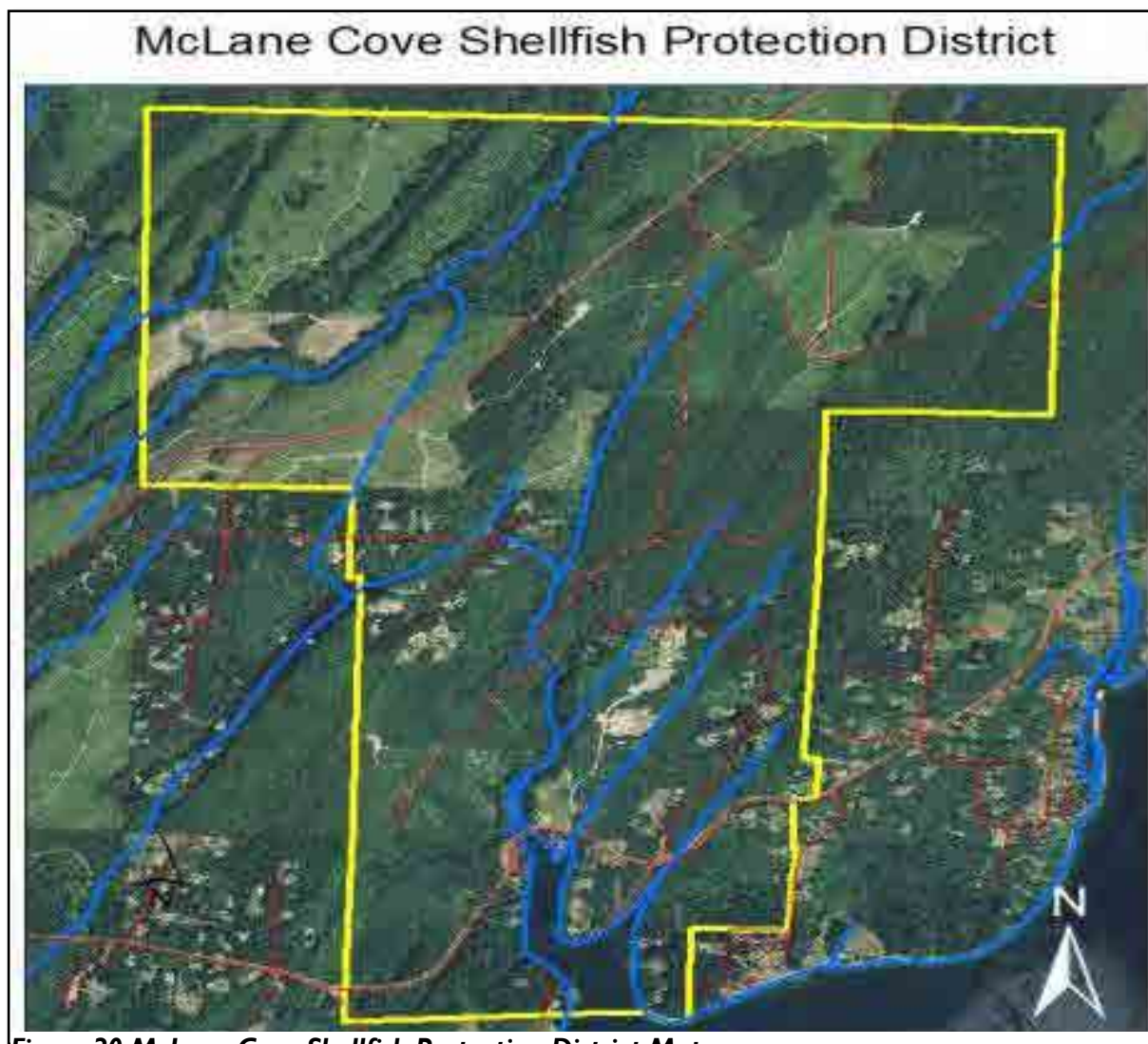
With the establishment of the Big Bend Shellfish Protection District (SPD) in February 2016, Mason County Public Health in collaboration with other local agencies developed a plan to identify, investigate and monitor fecal contamination from adjacent shoreline and upland runoff affecting Big Bend to work towards an “approved” status for this area. At this time, the SPD is meeting water quality standards. However Big Bend is considered a high risk area so reclassification cannot occur until on the ground monitoring, investigation and capacity building have occurred. The lower tolerance for risk exists for this area due to a high presence of older shoreline on-site systems, general water quality trends in Hood Canal and stormwater management. The activities associated with this Plan’s Work Plan Matrix were been completed in 2016 and no new information is known to be available for use in the VSP.

**MCLANE COVE SHELLFISH PROTECTION DISTRICT, MAY 2016.** McLane Cove is a small embayment at the northeast end of Pickering Passage. Pickering Passage is located in the South Puget Sound region and extends from Case Inlet in the North to Peale and Squaxin Passages and Hammersley Inlet at the southern end. One of the perennial streams has been named McLane Creek in previous Department of Health reports and has been variously categorized within the reports as seasonal or perennial. The area has traditionally supported clams and oysters harvest. The drainage area of these streams has been used to define the McLane Cove Clean Water District.



In 1990, a Shoreline Sanitary Survey found potential sources of untreated fecal pollution entering McLane Cove from farm animals. By 1996, re-evaluation of McLane Cove found that agricultural practices had been improved. However, this area continues to fail National Shellfish Sanitation Program (NSSP) water quality standards for Approved classification. Strategies for improvement included in the Plan's immediate goals are to reduce water pollution, meet state and federal water quality standards for commercial shellfish, and ensure that water quality standards are maintained. This would be accomplished by a variety of measures including identifying agriculture sites and providing corrective assistance, if needed. It is unclear from this Plan what measures are currently being taken to address potential farm related pollution. However, again working with the Health Department to access previously observed contaminated sites and existing water quality information could produce more outreach options.





**Figure 30 McLane Cove Shellfish Protection District Map**

*Source: McLane Cove Shellfish Protection District Plan*

OAKLAND BAY ACTION PLAN, AUGUST 2007. Oakland Bay is a small, relatively broad and shallow estuary approximately four miles long and  $\frac{3}{4}$  of a mile wide with water depths averaging 10-35 feet. (Figure 33) A large area of the foreshore is exposed to air at low tides. This inter-tidal zone is predominately mud flats with narrow deeper channels. Due to the restrictive nature of Hammersley Inlet, the long narrow waterway linking the bay to the Puget Sound Basin, the water in Oakland Bay has high refluxing, low flushing and high retention rates. There are nine major creeks: Deer, Cranberry, Campbell, Johns, Uncle John, Malaney, Shelton, Mill and Goldsborough. The drainages of these creeks, together with the shoreline drainage have been used to define the Oakland Bay Action Plan Focus Area.

Development on the shoreline and upland areas of Oakland Bay has been gradually expanding over the years. Most development in the area is residential with some industry and commercial activity, especially along the west and south sides of the bay. In most of the area on-site sewage systems treat

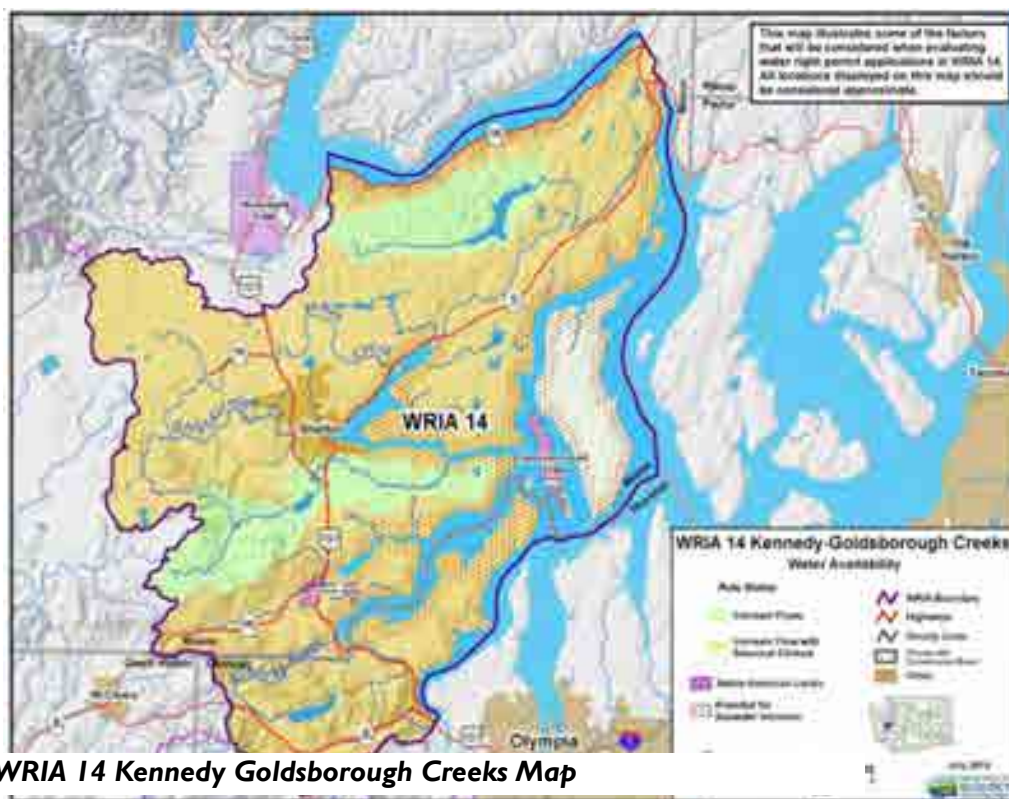
residential waste. The Shelton Wastewater Treatment Plant serves all residences and commercial establishments within its service area along the south end of the bay. In 2007 there were about 102 agricultural activities with potential to impact the growing area are located in the watershed.<sup>77</sup>

At the time of the plan, Oakland Bay water quality research and improvement efforts typically showed non-point sources of pollution to include on-site sewage systems, storm water, livestock, pets, and wildlife. Similar to McLane Cove, the Plan's primary goals were to reduce water pollution, meet state and federal water quality standards, and ensure that water quality improvements are maintained. However, unlike McLane Cove, the Oakland Bay plan had more detailed strategies described to meet that goal. Most of Oakland Bay's pollution problems over the years have been sourced back to sewage and sewer impacts since 1955. At that time, the evaluation of potential impacts from livestock had been included as a nonpoint pollution source for fecal coliform bacteria. The Departments of Ecology and Agriculture were to participate in water quality complaints to determine if agricultural practices are in fact impactful. Strategies for improvement included organized agency involvement and accountability, monitoring and performance measures, and overall changes at the policy and permitting levels. Correcting water contamination from agricultural sources would involve providing technical help to agricultural landowners, requiring conservation plans or environmental permits for new agricultural buildings, and the County's response to water quality complaints that involve land use in critical areas. Similar to the Annas Bay Strategy, the Plan for Oakland Bay closely aligns with the VSP goals. In 2007 Mason County formed the Oakland Bay Clean Water District and appointed an Advisory Committee. This Committee continues to hold meetings facilitated by the Mason County Health Department. The Work Group and the District should become involved to a reasonable extent in this Committee's activities and agenda, and share resources to further the VSP goals.

WRIA 14 WATERSHED MANAGEMENT DRAFT PLAN, FEBRUARY 2006 (Kennedy–Goldsborough Watershed). WRIA 14 is divided into five sub-basins—Case Inlet, Goldsborough, Kennedy, Skookum, and South Shore. This Draft Plan was complete in 2006 however the Planning Group was unable to reach consensus and it was ultimately not approved. The map in Figure 31 shows the original boundaries of WRIA and was included in the Draft Plan. In 2008, however the WRIA was divided into two parts – WRIA 14a and b. WRIA 14b is now included in WRIA 16 for Planning purposes.

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<sup>77</sup>Berbells, S. 2003. 2003 Shoreline Survey of the Oakland Bay Shellfish Growing Area. Department of Health. Olympia, WA.



**Figure 31 WRIA 14 Kennedy Goldsborough Creeks Map**

Figure 32 shows the portion of WRIA 14 that is now considered 14b in blue cross hatch. It contains that portion of Kennedy-Goldsborough that drains into the southern portion of the lower Hood Canal.

Like other parts of south Puget Sound, WRIA 14 features an extensive network of streams that issue from springs, wetlands, small lakes, and surface water drainages. These streams flow

into shallow bays and inlets. Principal drainages include Cranberry, Goldsborough, Kennedy, Mill, Sherwood, Johns, Deer, and Skookum Creeks. Despite its abundance of creeks, WRIA 14 has no major rivers.

The quality of water in many of WRIA 14's streams, lakes, and nearshore areas has been degraded in the past. Five marine areas, including parts of Oakland Bay and Hammersley Inlet, have been on the Department of Ecology's 303 (d)<sup>78</sup> list of impaired waters because of fecal coliform bacteria levels and/or stream temperatures. Likewise, 14 creeks in WRIA 14 have in the past been included on the 303(d) list for fecal coliform, temperature, dissolved oxygen, and/or pH. WRIA 14 is also home to many shellfish species, and water quantity and quality issues can have profound implications for fish and shellfish habitat.

*The limiting factors analysis conducted for WRIA 14 indicates that salmonid habitat has been degraded by land use practices associated with forest management, removal of large woody debris (LWD), development, and agriculture.<sup>79</sup> Other issues include culvert problems,*

Source: [gis.co.mason.wa.us](http://gis.co.mason.wa.us)

<sup>78</sup>Water Quality Assessment and 303(d) List. The federal Clean Water Act, adopted in 1972, requires that all states restore their waters to be "fishable and swimmable." Washington's Water Quality Assessment lists the water quality status for water bodies in the state. This assessment meets the federal requirements for an integrated report under Sections 303(d) and 305(b) of the Clean Water Act. [www.ecy.wa.gov/programs/wq/303d](http://www.ecy.wa.gov/programs/wq/303d)

<sup>79</sup>Kuttel, M. 2002. Salmonid Habitat Limiting Factors Water Resource Inventory Area 14, Kennedy-Goldsborough Basin, Final Report—November 2002. Olympia, WA: Washington State Conservation Commission

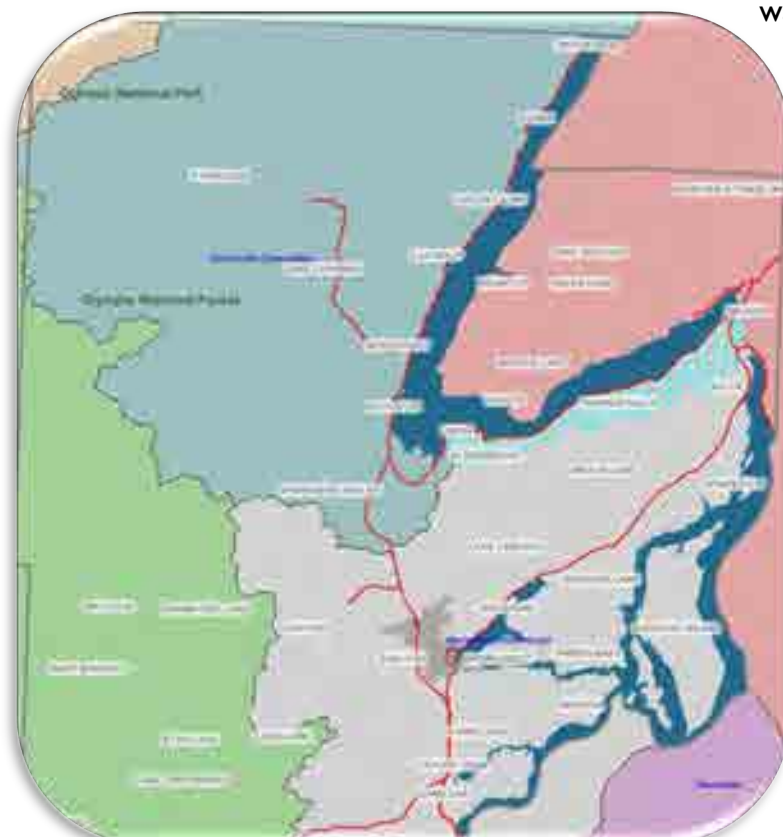


*nearshore habitat and riparian degradation, loss of channel complexity, and high sedimentation levels.<sup>80</sup>*

The statute requires that watershed planning be a three-pronged comprehensive strategy toward improvement, with production agriculture being just one of those prongs. (RCW 90.82.043(2)) The scope of planning must include water quantity elements as provided in RCW 90.82.070, and may include water quality elements as contained in RCW 90.82.090, habitat elements as contained in RCW 90.82.100, and instream flow elements as contained in RCW 90.82.080. Each of these was addressed in the WRIA 14 Plan with specific reference to the impacts of agricultural activity on fish and shellfish habitat.

The draft plan did concede, however, that the data was insufficient to draw conclusions as to overall water quality and quantity, and that a comprehensive water-resource monitoring program would be needed. Recommendations from the Plan included education and smart management of “leaving” water (storm water, sewage water, construction site water, residentially used water, irrigation water, agriculture water, etc.) and “staying” water (conservation, low impact development, re-use, minimal

water use, native vegetation, etc.) Without the necessary data to suggest a nexus between high levels of fecal coliform that may be found in this watershed and agricultural activities, and considering the primary objective of these state mandated plans is water “quantity”, there is a minimal amount of identifiable action in this plan for agricultural and critical area interface. The planning efforts in WRIA 14a have not continued since that draft Plan; and the recommendations provide a fairly universal approach to protection that can be incorporated in VSP for activity in that WRIA. This planning effort does not provide useful platform from which the VSP Work Plan can build.



**Figure 32 WRIA Map with 14b**

including 14b) The Skokomish-Dosewallips watershed is located on the eastern slope of the Olympic

WRIA 16 WATERSHED  
MANAGEMENT PLAN, MAY 2006 |  
(Skokomish-Dosewallips Watershed,

<sup>80</sup>WRIA 14 Watershed Management Plan, Kennedy–Goldsborough Watershed, Final Draft / February 2006

Peninsula, along the western and southern shores of Hood Canal. WRIA 16 includes several rivers and streams that flow from headwaters in the Olympic Mountains down to Hood Canal. The largest rivers in the watershed are the Skokomish, Dosewallips, Hamma Hamma, and Duckabush Rivers. The southern shore of Hood Canal, between Union and the western outskirts of Belfair, is also considered in this plan. Although technically part of the neighboring Kennedy-Goldsborough watershed (WRIA 14b), Hood Canal's southern shore was considered here through agreement with the WRIA 14 Planning Unit to help consolidate planning for Hood Canal and the nearshore environment.

Five sub-basins are officially part of WRIA 16, and the sixth, the South Shore sub-basin, is officially part of WRIA 14. The six sub-basins are the Dosewallips River, Duckabush River, Hamma Hamma River, Finch/Lilliwaup Creeks, Skokomish River (including the North Fork, South Fork, and mainstem); and South Shore.

WRIA 16's streams and nearshore environment provide habitat for fish, shellfish, and other aquatic animals and organisms. Agricultural activities and development can channelize mainstems and tributaries, drain beaver ponds, and threaten or destroy forested riparian zones. Development and agricultural activities in the watershed have, in some cases, disconnected floodplains from side channel habitats, removed large woody debris, reduced channel complexity and instream structure, removed riparian vegetation, caused sediment accumulation in channels, and decreased streambed and streambank stability throughout the watershed. Removal of large woody debris has reduced habitat quality in many streams in WRIA 16.

Floodplain connectivity, channel complexity, and riparian conditions have all been degraded by development. Riparian areas have been developed for residential or agricultural use, thereby removing vegetation that helped control runoff and sedimentation, shaded streams and helped keep stream temperatures cool, provided a source of large woody debris, provided habitat for terrestrial animals, and naturally protected streambanks from erosion.

The WRIA 16 Plan recommends that those farms in or adjacent to critical areas of the WRIA have a current farm plan. Farm plans should consider seasonal restrictions on animal pastures to protect streams and floodplains from manure. It also recommends that local 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.

As written, the WRIA 16 Plan reads as a precursor to VSP and as such fully supports the Program's goals. The Plan's recommendations can be mirrored as a countywide strategy of best management practices targeted toward real problems areas. Having an established foundation of needs can facilitate the Work Plan's focus and future monitoring. However, the Plan has no schedule of activities and no established funding source to implement any of the recommendations made within it. This Plan does offer interest strategies for watershed planning, however would not provide a foundation from which VSP could build.

**Figure 33 WRIA 16 Skokomish Dosewallips Map**



Source: WA Department of Ecology

HOOD

CANAL INTEGRATED WATERSHED PLAN, MAY 2014 | The Hood Canal Coordinating Council

(HCCC) partnered with a diverse array of organizations, agencies, and individuals to initiate the development of The Hood Canal Integrated Watershed Plan (IWP). The IWP was intended to be a comprehensive strategic framework for advancing a shared regional vision by integrating the full range of existing and future natural resource management efforts across all relevant jurisdictions. The scope of this document was scaled down from its original intent to something more feasible. The 2014 IWP was intended to (a) establish five-year strategic priorities for the HCCC to implement and guide regional actions towards the Vision and (b) establish a framework for accountability of strategy implementation, identification of strategic gaps, and continuous evaluation and adaptive management.

The overall vision of the IWP is “humans benefit from and coexist sustainably with a healthy Hood Canal”. Achieving that vision is focused on a sub-set of focal components, pressures, and strategies. There are five local components: shellfish, commercial shellfish harvesting, forests, forestry, and salmon, and the primary pressures impacting them are development, transportation corridors, climate change and ocean acidification, and wastewater discharges and stormwater runoff. The plan outlines a series of strategies to address these pressures and how to improve or reduce their impacts on the focal components over a period of several months to several years. The strategies, targeting the HCCC as well as other regional entities, include changes to policies and regulations; ecological restoration, remediation, or enhancement efforts; and outreach, education and communication. The IWP is a five-year plan with goals for annual monitoring reports and website interaction.

Some commonalities exist between this Plan and the VSP goals, and building a relationship with this group would be overall beneficial. However, placing a large emphasis on the strategies within this plan will likely not boost Mason County VSP efforts.



**HOOD CANAL COORDINATING COUNCIL'S HOOD CANAL REGIONAL POLLUTION IDENTIFICATION AND CORRECTION, ANIMAL WASTE POLLUTION SOURCE IDENTIFICATION STRATEGY, MARCH 2014** | Agricultural animals, livestock, pets and wildlife are all valuable economic or recreational resources in Washington State. Agriculture is a cornerstone of Washington State's economy, and Mason County has an annual market value of more than \$40,000,000 in crops and livestock sales. There were approximately 377 farms in the County in 2012 with livestock sales representing 94% of the total market value. This means that there were approximately 5,000 cattle, hogs, sheep, and poultry covering approximately 24,000 acres of farmland in Mason County and generating hundreds of thousands of pounds of animal waste. Animal fecal waste is a public health risk as it can contain pathogenic bacteria and viruses that cause human diseases. Livestock and agricultural waste pathogens include *Campylobacter* spp., *Cryptosporidium parvum*, *Listeria* spp., *Salmonella* spp., and *Escherichia coli*. Water Pollution and Pathogens Fecal pollution of surface waters is caused by human and animal waste discharged or leaked to the ground or surface waters. During rain events,

flowing surface water picks up pollutants like fecal waste, and quickly transports them to streams, bays, beaches and lakes.

Animal waste in the Hood Canal Action Area is primarily a non-point pollutant because it comes from many sources instead of a single point source. Non-point pollution is best addressed through effective public education and outreach that increases awareness about Puget Sound pollution and motivates residents to adopt new behaviors that prevent pollution from entering surface and stormwater. Washington State has been clear that agricultural activity AND water quality are both state priorities. This agricultural waste strategy is being developed to respond to this clear and compelling state guidance. Portions of that strategy include,

- The Puget Sound Partnership's on-line resource center has a section on reducing pollution from human and animal waste that includes runoff from farms with livestock.
- The Washington Conservation Commission is working with local conservation districts to complete hundreds of conservation plans and install practices to prevent pollution.
- WSU Extension's website has a link to Livestock Management and Water Quality, a publication that provides livestock owners and managers with techniques to address water quality problems. They are developing a unique Small Farms Program to address Mason County food and farm issues. The program focuses on teaching and implementing site-specific, best available science approaches that builds a vibrant and sustainable agriculture industry that is integrated with natural resource conservation efforts.
- Conservation districts encourage landowners to incorporate best management practices (BMPs) that increase farm productivity and protect water quality. They provide free technical assistance to agricultural landowners, supporting farmers as they implement practices to protect water quality. Services include site visits, farm planning, manure management guidance, and designing small-scale to engineered waste storage and compost structures. When possible, cost-share funds are provided to assist landowners to implement eligible manure management practices; and assist livestock owners with appropriate, site- and watershed-specific livestock management strategies through farm planning, technical assistance and facilitating available BMP cost-share implementation opportunities to prevent pathogen and nutrient pollution from manure and mud runoff.

Successful education and outreach programs prevent pollution by developing approaches that result in measurable adoption of specific behaviors. The social marketing process uses marketing principles and techniques to influence public behaviors and has been used effectively to protect and improve Puget Sound water quality.

The HCCC's Strategy is a clear framework that supports the VSP efforts toward water quality and pollution prevention with respect to animal waste. This aligns with BMPs currently promoted and practiced by the District for waste management, and the strategies run parallel to those incorporated into the Work Plan. Working with the HCCC will further improve the overall success of the Program through a consolidation of outreach efforts.

## APPENDIX 3 SWOT ANALYSIS

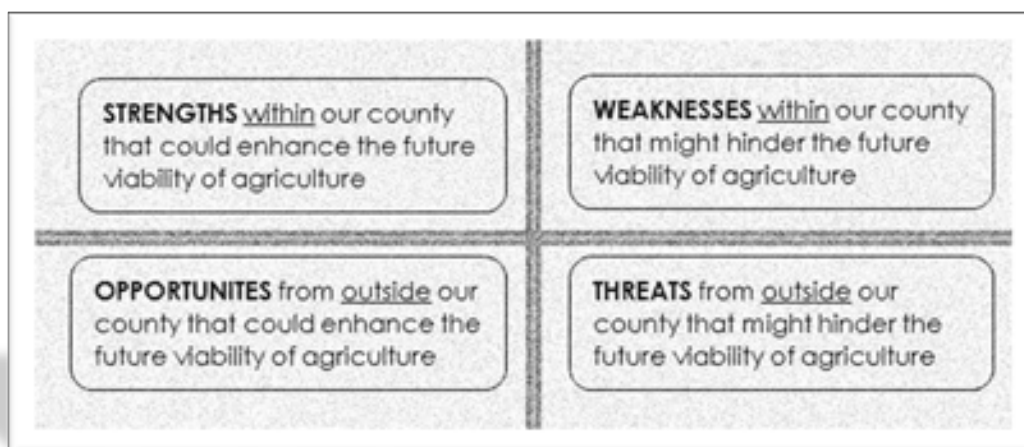
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# SWOT ANALYSIS

**EARLY** in the process the Work Group did a SWOT<sup>81</sup> analysis exercise. This exercise looks at those factors within and outside of the County that impact the future viability of agriculture and reduce the conversion of farmland to other uses. Individual group members completed a four-part worksheet and provided the following responses to each category:



## **STRENGTHS**

- Ag science classes being taught in school
- Moving Mason Forward program to have a collective and collaborative impact on making a healthy environment
- Local markets are strong for local produced goods – location dependent
- State and local elected officials who are pro-agriculture
- Mason Conservation District and WSU Extension Office provide a robust series of programs with highly qualified and educated staff for technical assistance
- Affordable land costs
- Workforce development programs
- HOPE – school and community gardens
- Hood Canal Salmon Enhancement Group is an excellent resource
- Strong community; sense of family
- Good professionals available

## **WEAKNESSES**

- No livestock/cattle auction

<sup>81</sup>SWOT analysis is an initialism for Strengths, Weaknesses, Opportunities, and Threats—and is a structured planning method that evaluates those four elements of a project or business venture. A SWOT analysis can be carried out for a product, place, industry, or person. Source: Wikipedia › wiki › SWOT\_analysis

- No processing or cold storage facilities
- Youth culture is disinterested in, or disengaged from, farming activities
- No focus on early education; employing youth raises safety concerns and employer liabilities
- Transportation costs of operation
- Non-agricultural political influences
- No staffing capacity
- Lack of local support – fairs, 4-H, etc.
- Lack of financing and working capital; assistance not available due to financial constraints
- There is no integration of common interests between agriculture and aquaculture
- Topography
- Amount of publically owned land
- Lack of nurseries, lack of marketing

### **OPPORTUNITIES**

- Technology; improved communications
- Create a dialogue of common interests between agriculture and aquaculture
- Demand in the aquaculture market
- Pacific Mountain Private Industry Council – programs for employment in Mason County
- HOPE Gardens
- USDA Food and Nutrition programs to assemble wellness programs; Farm to Table, Farm to School
- Collaborate with Enterprise for Equity, making connections
- Utilize educational institutions – create internships for students to work on farms
- South Sound Food System Network – assist in attracting processors, people interested in sustainability
- Farm to Table
- Economic Development Council Strategic Plan for Agro-Tourism
- Multi-purpose/-use lands

### **THREATS**

- State legislature's reductions on small farm tax exemptions
- Climate change
- Aging operators – losing people to work or take over farms
- Increase in number of restrictions for the transportation of livestock
- Water allocation and availability issues
- Non-Agricultural political influence – Waters of the United States

## APPENDIX 4 REGULATORY CONTEXT

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## REGULATORY CONTEXT

**THE** VSP does not “*limit the authority of a state agency, local government, or landowner to carry out its obligations under any other federal, state, or local law.*” (RCW 36.70A.702(5)) Outside of the Critical Areas Ordinance, all applicable local development regulations (for example, County’s Buildings and Construction Code) still apply.

As with local regulations, all state and federal regulations still apply under the VSP. Indeed, one objective of the VSP is to “*improve compliance with other laws designed to protect water quality and fish habitat.*” (RCW 36.70A.700(2)(f)) Voluntary enhancements under the VSP can also support agricultural viability by reducing regulatory risks and increasing regulatory certainty for agricultural operators.

Mason County enrolled the entirety of the unincorporated areas in the VSP in 2012. So long as the County participates in the VSP, regulatory requirements under the County’s Critical Areas Section of the Resource Management Ordinance (Chapter 8.52 MCC<sup>82</sup>) will not apply to “agricultural activities.” Participation in the VSP is defined as developing and implementing an approved work plan that protects critical areas and maintains agricultural viability under the timeline established by the state. The Growth Management Act (GMA) (RCW 36.70A) refers to the Shoreline Management Act (RCW 90.58) for the definition of “agricultural activities”.

### CRITICAL AREAS ORDINANCE

The VSP applies only where critical areas and agricultural activities overlap in unincorporated areas of the County. Critical areas are defined under the GMA and include fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, geologically hazardous areas (landslide, seismic, and erosion hazards), and areas with a critical recharging effect on aquifers used for potable water (critical aquifer recharge areas).

The approach to developing and implementing the VSP differs from the regulatory approach to protecting critical areas under the Resource Ordinance. Key differences between the Resource Ordinance and VSP are highlighted below:

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<sup>82</sup> Mason County Code

	RESOURCE ORDINANCE	VOLUNTARY STEWARDSHIP PROGRAM
<b>Approach</b>	Protection regulatory provisions, such as buffers, and enforcement	Voluntary participation in individual stewardship plans
<b>Protection Standard</b>	Preserve the functions and values of the natural environment, or safeguard the public from hazards to health and Safety ( <u>WAC 365-196-830</u> )	Prevent the degradation of functions and values existing as of July 22, 2011 ( <u>RCW 36.70A.703(8)</u> )
<b>Scale</b>	Site-by-Site Basis	Collective, watershed basis
<b>Monitoring</b>	None required	Monitoring required demonstrating that objective benchmarks are critical area protection are met. Progress reports are submitted every five years to demonstrate progress.
<b>Adaptive Management</b>	Periodic updates to the Resource Ordinance are required based on best available science	Adaptive management required if measurable benchmarks are not met.
<b>Responsible Party(ies)</b>	Mason County	VSP Watershed Work Group and Washington Conservation Commission
<b>Other County, State, and Federal Regulations</b>	Continue to apply	Continue to apply

**Table 30 Differences between VSP and Resource Ordinance**

Although the critical areas provisions do not apply under the VSP, the remaining sections of the Resource Ordinance and Agricultural Resource Lands Chapter (Section 8.52.061 MCC) continue to apply.

Section 8.52.061 MCC, Agricultural Resource Lands, designates Mason County Agricultural Resource Lands Agricultural Lands of Long-Term Commercial Significance and Open Space Agricultural Property. These lands may not be converted to non-agricultural uses. The zoning ordinance (Chapter 17.03 MCC) provisions establish required building setbacks for lands adjacent to designated agricultural lands. These setbacks are intended to prevent potential constraints on agricultural practices imposed by adjacent incompatible uses. These provisions continue to apply.

## SHORELINE MASTER PROGRAM

The Mason County Shoreline Master Program (SMP) has jurisdiction over shorelines of the state as defined therein. Within that jurisdiction (at minimum, within 200 feet of the ordinary high water mark

of “shorelines of the state”), both the local county SMP and VSP will apply. SMP regulations do not change with a VSP, and apply the same as before. A local VSP work plan does not replace the shoreline regulations of an SMP. VSP work plans identify voluntary practices to promote existing agricultural activities while protecting critical areas, as an alternative to a regulatory approach. All existing regulations, including SMPs and water quality regulations (e.g. Clean Water Act), still apply.

Voluntary measures to improve existing and ongoing farm practices are welcome, whether they apply to land-based agriculture or aquaculture. However, under the Shoreline Management Act, aquaculture is not agriculture, and there are specific regulations and permit requirements that will continue to apply.<sup>83</sup>



Source: [www.parks.state.wa.us](http://www.parks.state.wa.us)

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<sup>83</sup> WAC 173-26-241(3)(b)



## APPENDIX 5 FARMS AND CROPS

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# FARMS, CROPS AND AGRICULTURAL ACTIVITY

**THE** National Agricultural Statistics Service (NASS) of the United States Department of Agriculture (USDA) publishes the Census of Agriculture every five years.

*It is the only source of uniform, comprehensive agricultural data for every State and county or county equivalent. Census of agriculture data are routinely used by farm organizations, businesses, State departments of agriculture, elected representatives and legislative bodies at all levels of government, public and private sector analysts, the news media, and colleges and universities.*<sup>84</sup>

## FARMS

The census provides a snapshot view of agriculture as reported by farms and ranches throughout the United States, and here in Mason County. The definition of a farm is where the road divides, so to speak, in this analysis. The census information is based on farms as defined by the USDA. *“The census definition of a farm is any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.”*<sup>85</sup> This is quite different from how the County gathers data on agriculture, and why the analysis will vary. The census data on farms will provide specifics on a farm and farm operator level, while the agricultural lands information from the County will be less defined and categorized more broadly.



The farm data collected for this baseline evaluation is from the 2012 Census of Agriculture, with comparisons to the 2007. The reason for the additional information is to show trends as well as the current condition. The County covers approximately 614,056 acres, depending on the source of the information. Utilizing the USDA's Census, of that total just under 4% of those acres are farms. Close to the same percentage as the 2007 data no matter which total land acreage you calculate from.

<sup>84</sup>USDA NASS, 2012 Census of Agriculture, Ag Census Web Maps

<sup>85</sup>USDA NASS 2012 Census of Agriculture, Introduction

**Table 31 Total Farm as Percent Total Land, 2007-2012**

<b>Agricultural activity</b>	<b>2012</b>	<b>2007</b>	<b>%<sup>86</sup></b>
<b>Land Area – acres</b>	614,056	615,017	0%
<b>Land Area – Farm acres</b>	23,743	25,185	-6%
<b>Percent of Acreage as Farms</b>	3.9%	4.1%	-5%
<b>Conservation Lands – Farms</b>	3	5	-50%
<b>Conservation Lands – acres</b>	137	86	59%

Conservation Farm Land describes the number of farms that have land enrolled in Conservation Reserve, Wetlands Reserve, Farmable Wetlands or Conservation Reserve Enhancement Programs. There are 50% fewer farms in 2012 with conservation land than there were in 2007; however, there is nearly 60% more acres enrolled in conservation programs.

At first blush the next table shows a decline in almost every farm category. However, a closer look at the first two items – farms and farm acres – indicates that while there are 20% fewer farms in Mason County in 2012 than in 2007, the acreage only decreased by 6%. This could imply that there may be fewer farms, but the size of those farms have increased or that many farms in 2007 that did not stay farms in 2012 were smaller in acreage having less impact on the overall decrease in total farm acres. What the above table ultimately reveals is that farms between 10 and 500 acres – mid size farms – have drastically disappeared while the very small and the very large farms have survived and even increased in numbers.

**Table 32 Number Of Farms By Acreage, 2007-2012**

<b>Agricultural Activity</b>	<b>2012</b>	<b>2007</b>	<b>%<sup>86</sup></b>
<b>Farms</b>	377	471	-20%
<b>Farm Acres</b>	23,743	25,185	-6%
<b>Average Farm Acreage</b>	63	53	19%
<b>Farms 1 to 9 acres</b>	159	149	7%
<b>Farms 10-49 acres</b>	157	227	-31%
<b>Farms 50 to 179 acres</b>	45	70	-36%
<b>Farms 180 to 499</b>	9	19	-53%
<b>Farms 500 to 999</b>	4	4	0%
<b>Farms 1,000 acres or more</b>	3	2	50%

The market value of farm products sold over the past several years falls in line with the decreasing statistics of agriculture across the board so far. The USDA classifies farms by gross sales, and from that we can look at another way to visualize farming in Mason County. Small family farms are those defined as having gross annual sales less than \$250,000. In 2012, 361 out of 377 farms were

classified as small; this is 96% of all farms in Mason County. Of the remaining, only 13 farms grossed more than \$500,000 annually. This is an 18% increase in larger commercial family farms since 2007, and a 23% increase in sales. The only other notable increase was in farms with annual gross sales of between \$20,000 and \$25,000, and between \$100,000 and \$250,000. There is no immediately apparent explanation for this limited improvement.

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<sup>86</sup>% $\Delta$  = percent delta or percent “change in”

**Table 33 Number of Farms by Market Value, 2007-2012**

FARMS BY MARKET	2012	2007	% Δ
Less Than \$1,000	144	177	<b>-19%</b>
Value Of Sales	\$27,000	\$28,000	<b>-4%</b>
\$1,000 - \$2,499	54	70	<b>-23%</b>
Value Of Sales	\$89,000	\$115,000	<b>-23%</b>
\$2,500 - \$4,999	47	55	<b>-15%</b>
Value Of Sales	\$169,000	\$196,000	<b>-14%</b>
\$5,000 - \$9,999	39	52	<b>-25%</b>
Value Of Sales	\$264,000	\$356,000	<b>-26%</b>
\$10,000 - \$19,999	26	34	<b>-24%</b>
Value Of Sales	\$337,000	\$462,000	<b>-27%</b>
\$20,000 - \$24,999	12	8	<b>50%</b>
Value Of Sales	\$264,000	\$176,000	<b>50%</b>
\$25,000 - \$39,999	9	13	<b>-31%</b>
Value Of Sales	\$280,000	\$406,000	<b>-31%</b>
\$40,000 - \$49,999	3	12	<b>-75%</b>
Value Of Sales	\$130,000	\$525,000	<b>-75%</b>
\$50,000 - \$99,999	10	15	<b>-33%</b>
Value Of Sales	\$693,000	\$944,000	<b>-27%</b>
\$100,000 - \$249,999	17	15	<b>13%</b>
Value Of Sales	\$2,803,000	\$2,144,000	<b>31%</b>
\$250,000 - \$499,999	3	9	<b>-67%</b>
Value Of Sales	\$1,081,000	\$3,369,000	<b>-68%</b>
\$500,000 Or More	13	11	<b>18%</b>
Value Of Sales	\$34,665,000	\$28,243,000	<b>23%</b>

Croplands and Livestock/Poultry Farms are a subset of farms in the Census and more narrowly defined. Total croplands – harvested or not – have declined as well since 2007 at similar rates to farms in general. Livestock also shows a decline with the exception of poultry which appears to be holding steady if not slightly increasing.

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<sup>87</sup> USDA NASS, 2012 Census of Agriculture, 2012 Census Volume 1, Chapter 2: County Level Data

**Table 34 Crops and Livestock Numbers and Values, 2007-2012**

Agricultural Activity	2012	2007	%Δ
<b>Croplands – Farms</b>	180	233	-23%
<b>Livestock: Cattle, Hogs, Sheep – Farms</b>	144	208	-31%
<b>Livestock: Poultry – Farms</b>	101	99	2%
<b>Market Value – Crops</b>	\$2,513,000	\$1,606,000	56%
<b>Market Value – Livestock, Poultry, etc.</b>	\$38,296,000	\$35,357,000	8%
<b>Market Value of Products - Total</b>	\$40,809,000	\$36,963,000	10%

Another interesting notation of these farm statistics, similar to that of overall farm increase in farm size, is that while the number of farms in Mason County is shrinking, the profits are growing. There has been an increase of 10% in total market value of agricultural products between 2007 and 2012.

**Table 35 Farm Operators, 2007-2012**

Agricultural Activity	2012	2007	%Δ
<b>Farm Operators</b>	635	794	-20%
<b>Farm Operator's Primary Occupation</b>	153	165	-7%
<b>Farm Operator's Not Primary Occupation</b>	224	306	-27%
<b>≤ 2 Years on Present Farm</b>	14	18	-22%
<b>3-4 Years on Present Farm</b>	17	40	-58%
<b>5-9 Years on Present Farm</b>	70	88	-20%
<b>≥ Years on Present Farm</b>	276	325	-15%
<b>Average Years on Present Farm</b>	18.2	18.1	1%
<b>Under 25 Years of Age</b>	4	0	400%
<b>25-34 Years of Age</b>	25	12	108%
<b>35-44 Years of Age</b>	24	61	-61%
<b>45-54 Years of Age</b>	61	143	-57%
<b>55-59 Years of Age</b>	52	86	-40%
<b>60-64 Years of Age</b>	67	49	37%
<b>65-69 Years of Age</b>	80	46	74%
<b>≥ 70 Years of Age</b>	64	74	-14%
<b>Average Age</b>	58.9	56.8	4%
<b>Internet Access</b>	300	325	-8%

Panning in a different farm direction, the census data also looks at patterns in farm operators and operations. In 2012 there were 635 farm operators in the County for 377 farms. Most farms have one (178) or two (159) operators; there were four farms that actually had five or more operators.

The number of farm operators has decreased from 794 in 2007. This

follows suit with the decrease in farms almost exactly – 20%. The same distribution of farms to farms operators hasn't deviated much from 2007 2012, with the majority of farms having only one or two operators.

Farm operation as a primary occupation applied to 153 of the total in 2012, decrease of 7% over the prior five years. The decrease in farm operation something other than a primary occupation took a far greater decrease of nearly 30% during that same time frame. Farms with operators being present for a period of four or fewer years have substantially decreased,



to

a

as

with

the least amount of change in those operators present more than ten years. The average number of years has remained constant, however, at just about 18 years. The highest degree of change can be seen in the age of farm operators. In 2007 there were very few operators under the age of 35; now, however, this age group has increased by more than 400%. The decrease in age groups has impacted the mid-age range with about 60% fewer operators between the ages of 35 and 59. The trend takes another upturn with the over 60 age group increasingly becoming operators by 37% to 74%. The average age of an operator is closer now to 60 than 50 as it was in 2007. This shows farming as an occupation for the younger families just starting out, and the retirees starting on a second career.

As an aside point of interest, there are 8% fewer farms that have internet access in 2012 than 2007. This is the opposite of what one might expect considering the direction of technology; however it may in fact be a reflection of an older generation at the helm.

## CROPS

Not only has the size and number of farms changed over the past five years, but the pattern continues in a similar fashion with the amount and types of crops and livestock. Overall the number of cattle farms has decreased by nearly 40%, while the number of cattle has increased by 11%. This mirrors some of the same trends seen in earlier discussions. The amount of farms decreasing leaving the remaining farmers challenged to meet product demands. The number of beef cattle farms has also decreased 40% since 2007 and the number of beef cattle by 30%. Dairy, or milk, cattle farms have increased substantially by 83%. Interestingly however, with the addition of dairy farms, the number of milk cattle decreased by more than 50%. Although not to the same degree, the same reductions in both farms and livestock can be seen in hogs, pigs, sheep, and lambs. Mason County has a variety of other kinds of livestock including horses, ponies, mules, donkeys, alpacas, llamas, rabbits and poultry. Poultry farms have slightly increased ... 2% ... with the number of poultry actually decreasing by 37%, same as with the milk cattle.

**Table 36 Number Of Crop And Livestock Farms, 2007-2012**

CROPS	FARMS		% Δ	LIVESTOCK		% Δ
	2012	2007		2012	2007	
Cattle and Calves	90	148	-39%	2218	2002	11%
<b>Beef</b>	65	108	-40%	791	1133	-30%
<b>Milk</b>	11	6	83%	21	43	-51%
Hogs and Pigs	17	23	-26%	62	98	-37%
Sheep and Lambs	37	46	-20%	315	538	-41%
Goats	42			275		
<b>Milk</b>	16			89		
<b>Angora</b>	0			0		
<b>Meat</b>	31			186		
Horses and Ponies	97			466		
Mules, Burros and Donkeys	12			33		



CROPS	FARMS		% Δ	LIVESTOCK		% Δ
	2012	2007		2012	2007	
Poultry	102	100	2%	2846	4495	-37%
Alpaca	17			204		
Llamas	16			40		
Rabbits, Live	12			45		
Other Livestock	3					

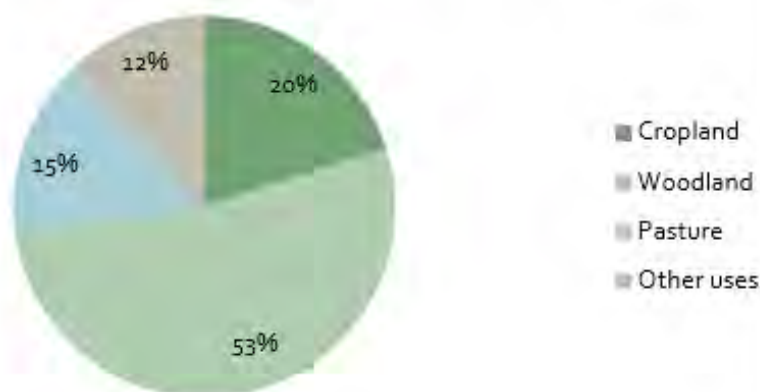
Source: USDA Census of Agriculture

There are also a variety of other types of poultry in the County, the numbers and locations of which are withheld to avoid disclosing data for individual farms. These include chukars (partridge), ducks,

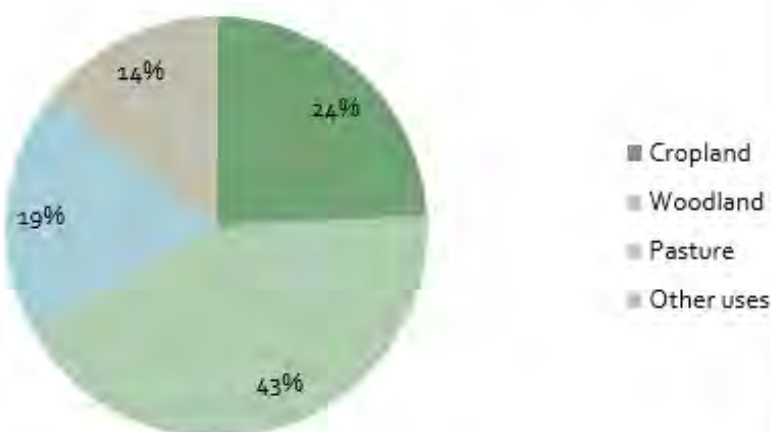
emus, geese, peacocks, quail and roosters.

There are not many crops in Mason County, and what is here is relatively small compared to some of State's eastern counties. These pie charts illustrate the percentage of land used as cropland verses other farm uses.

### 2012 Farm Land Use Percentages



### 2007 Farm Land Use Percentages



According to the USDA's Census of Agriculture<sup>88</sup>, cropland

*...includes cropland harvested, other pasture and grazing land that could have been used for crops without additional improvements, cropland on which all crops failed or were abandoned, cropland in cultivated summer fallow, and cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed.*

Conversely, woodland, which comprises the majority of Mason County's farm use, is categorized to include

*...natural or planted woodlots or timber tracts, cutover and deforested land with young growth which has or will have value for wood products and woodland pastured. Land covered by sagebrush or mesquite was reported as Permanent pastureland and rangeland or other land. Land planted for Christmas tree production and short rotation woody crops was reported in Cropland harvested, and land in tapped maple trees was reported as Woodland not pastured.<sup>89</sup>*

The ratios of land use make sense when considering the types of crops and agricultural products are grown here. The majority of what is grown in Mason County is hay, with 65 forage farms in 2012 – a 16% increase since 2007. The second largest crop, excluding Christmas trees, is berries increasing 9% over the past five years. Mason County is also the 2<sup>nd</sup> largest production of cut Christmas Trees and short rotation woody crops in the State, and the 3<sup>rd</sup> largest cut flowers and florist greens.<sup>90</sup> Snap beans made an impressive 175% increase from eight farms to 22. Large increases are also seen in broccoli, cabbage, carrots, onions, pumpkins, squash, sweet corn and tomatoes. Sharp declines have also occurred leaving some products no longer farmed in Mason County – asparagus, corn, eggplant, lettuce, mustard greens, and fresh cut herbs. There are also a number of orchards in the County, although about 30% less than in 2007. Apples, sweet and tart cherries, grapes, pears, and plums are all grown here.

**Table 37 Types and Size of Crops, 2007-2012**

Crops	Farms		%Δ	Acres		%Δ
	2012	2007		2012	2007	
<b>Forage (hay)</b>	65	56	16%	2474	2063	20%
<b>Vegetables</b>	28	28	0	88	83	6
<b>Asparagus</b>	0	4	-100		1	-100
<b>Corn</b>	0	4	-100		5	-100
<b>Snap Beans</b>	22	8	175	5	3	67
<b>Beets</b>	6	6	0	1	1	0
<b>Broccoli</b>	4	1	300	0.5		
<b>Cabbage</b>	2	1	100			
<b>Carrots</b>	15	6	150	3	1	200

<sup>88</sup> USDA NASS, 2012 Census of Agriculture, 2012 Census Volume 1, Chapter 2: County Level Data

<sup>89</sup> USDA NASS, 2012 Census of Agriculture, 2012 Census Volume 1, Chapter 2: County Level Data. Available at: [www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Washington](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Washington)

<sup>90</sup> USDA NASS, 2012 Census of Agriculture, 2012 Census Volume 1, Chapter 2: County Level Data. Available at: [www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Washington](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Washington)

Crops	Farms		%Δ	Acres		%Δ
	2012	2007		2012	2007	
<b>Cucumbers &amp; Pickles</b>	14	12	17	2	4	-50
<b>Eggplant</b>	0	2	-100			
<b>Garlic</b>	2	3	-33			
<b>Herbs, fresh cut</b>	0	6	-33			
<b>Lettuce</b>	0	5	-100		1	-100
<b>Mustard greens</b>	0	1	-100			
<b>Onions</b>	11	3	267	2	0.5	300
<b>Peas, green</b>	11	5	120	1	1	0
<b>Peppers, Bell</b>	1	3	-67			
<b>Potatoes</b>	10	14	-29	2	2	0
<b>Pumpkins</b>	10	8	25			
<b>Squash</b>	4	3	33	2		
<b>Sweet corn</b>	17	9	89	43	45	-4
<b>Tomatoes</b>	14	12	17	1	2	-50
<b>Other vegetables</b>	6	9	-33	4	5	-20
<b>Orchards</b>	21	31	-32	19	54	-65
<b>Apples</b>	15			5		
<b>Sweet cherries</b>	9			4		
<b>Tart cherries</b>	3			1		
<b>Grapes</b>	14			7		
<b>Pears</b>	7			2		
<b>Plums &amp; prunes</b>	4			1		
<b>Berries</b>	25	23	9	12	9	33
<b>Blackberries &amp; dewberries</b>	8			2		
<b>Blueberries, tame</b>	15			6		
<b>Currents</b>	1					
<b>Raspberries, red</b>	8			2		
<b>Strawberries</b>	5			1		
<b>Other berries</b>	2					
<b>Aquatic plants</b>	0	2	-100			
<b>Bulbs, corms, rhizomes, and tubers</b>	2	2	0			
<b>Cuttings, seedlings, liners, and plugs</b>	0	1	-100			
<b>Floriculture &amp; bedding crops</b>	16	18	-11	178	116	53
<b>Bedding/garden plants</b>	7	8	-13		1	-100
<b>Cut flowers &amp; cut florist greens</b>	10	16	-38	176	115	53
<b>Foliage plants, indoor</b>	2	1	100			
<b>Potted flowering plants</b>	4	1	300			

Crops	Farms		%Δ	Acres		%Δ
	2012	2007		2012	2007	
<b>Greenhouse vegetables and herbs</b>	3	1	200			
<b>Greenhouse tomatoes</b>	2	1	100			
<b>Mushrooms</b>	0	1	-100			
<b>Nursery stock crops</b>	10	19	-47	10	31	-68
<b>Vegetable seeds</b>		1	-100			
<b>Vegetable transplants</b>	1	1	0			
<b>Cut Christmas trees</b>	40	50	-20	1026	934	10
<b>Short rotation woody crops</b>	6	5	20	23	62	-63

While shorelands are not subject to the VSP and therefore aquaculture is not included in these statistics, it is remarkable to note that Mason County is 1<sup>st</sup> in the state and 5<sup>th</sup> in the nation for production.

## APPENDIX 6 GOALS, BENCHMARKS, MONITORING, AND ADAPTIVE MANAGEMENTS

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Table 38 Goals 1 And 2, Benchmarks and Adaptive Management

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT	
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
				Protection, Enhancement and Participation					
Critical Aquifer Recharge Areas	Kennedy Goldsborough WRIA 14	1,806	36,703	Maintain baseline acreage of Agriculture and Critical Area Interface  Maintain BMP Implementation  Maintain 7.5 farm plans per year  Maintain outreach to all operators annually  Return rate of 15 ISP Checklists per year	5% annual increase of BMP implementation (based on averaged annual implementation over 5-year period of each BMP through the County)  Increase annual number of Farm Plans (Individual Stewardship Plans) to 16  Increase annual operator participation levels by 50%  Return rate of 23 ISP Checklists per year	Brush Management	53 Acres	< 5% annual increase in BMP implementation < 7 completed ISPs/year < 15 ISP Checklists receive/year Outreach methods not reaching all operators	Determine reasons for reduced BMPs and options for reinstatements
	Kitsap WRIA 15	244	4,004			Heavy Use Protection Area	24 Units		Meet with District Staff to determine if lack of available funding is preventing BMP implementation
						Herbaceous Weed Control			
	Skokomish Dosewallips WRIA 16	1,469	11,255			Nutrient Management	83 acres		Determine if landowners in these areas are not receiving outreach information
						Restoration of Rare Communities	24 acres		
						Tree Shrub Establishment	132 acres		
	Lower Chehalis WRIA 22	735	69,122			Composting Facility	7 units		Meet with other technical assistance providers to ascertain level of landowner interest and possible roadblocks
						Prescribed Grazing	20 acres		



CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT	
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
				Protection, Enhancement and Participation					
Frequently Flooded Areas	Kennedy Goldsborough WIRA 14	1,169	28,353	Maintain baseline acreage of Agriculture and Critical Area Interface Maintain BMP Implementation Maintain 7.5 farm plans per year Maintain outreach to all operators annually Return rate of 15 ISP Checklists per year	5% annual increase of BMP implementation (based on averaged annual implementation over 5-year period of each BMP through the County, not all BMPs have been implemented in recent past)	Fence	22,383 feet	Any changes in interface (future years monitoring will determine how much change will warrant adaptive management)  < 5% annual increase in BMP implementation  < 7 completed ISPs/year  < 15 ISP Checklists receive/year  Outreach methods not reaching all operators	Locate area(s) of change and follow up with landowners to determine contributing factors
	Kitsap WRIA 15	162	8,454		Reduce agricultural and flood area interface to less than 2011 baseline by maintaining and reconfiguring agricultural activities away from those areas	Nutrient Management	83 acres		Determine reasons for reduced BMPs and options for reinstatements
						Restoration of Rate Communities	24 acres		Meet with District Staff to determine if lack of available funding is preventing BMP implementation
						Filter Strip			
	Skokomish Dosewallips WRIA 16	1,537	16,702		Increase annual number of Farm Plans (Individual Stewardship Plans) to 16  Increase annual operator participation levels by 50%	Stormwater Runoff Control			Determine if landowners in these areas are not receiving outreach information
						Dikes			
	Lower Chehalis WRIA 22	180	6,026		Return rate of 23 ISP Checklists per year	Dam, Division	499 feet		Meet with other technical assistance providers to

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT		
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS	
				Protection, Enhancement and Participation						
						Channel Stabilization			ascertain level of landowner interest and possible roadblocks Re-evaluate benchmarks	
Wetlands	Kennedy Goldsborough WIRA 14	572	27,207	Maintain baseline acreage of Agriculture and Critical Area Interface  Maintain BMP Implementation  Maintain 7.5 farm plans per year  Maintain outreach to all operators annually  Return rate of 15 ISP Checklists per year	5% annual increase of BMP implementation (based on averaged annual implementation over 5-year period of each BMP through the County)  Reduce agricultural and wetland interface to less than 2011 baseline by: (1) maintaining and reconfiguring agricultural activities away from wetland areas; or (2) restoring and enhancing wetlands in or near agricultural activity utilizing wetland sensitive BMPs	Fence	22,383 feet	Any changes in interface (future years monitoring will determine how much change will warrant adaptive management)  < 5% annual increase in BMP Implementation  < 7 completed ISPs/year  < 15 ISP Checklists receive/year  Outreach methods not reaching all operators	Locate area(s) of change and follow up with landowners to determine contributing factors  Determine reasons for reduced BMPs and options for reinstatements  Meet with District Staff to determine if lack of available funding is preventing BMP implementation	
						Access Control	10 acres			
	Kitsap WRIA 15	141	6,960			Filter Strip				
						Watering Facility				
	Skokomish Dosewallips WRIA 16	446	13,916			Composting Facility	3 units			

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT		
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS	
				Protection, Enhancement and Participation						
					Increase annual number of Farm Plans (Individual Stewardship Plans) to 16	Waste Storage Structure	5 units		Determine if landowners in these areas are not receiving outreach information	
	Lower Chehalis WRIA 22	49	6,567		Increase annual operator participation levels by 50% Return rate of 23 ISP Checklists per year	Wetland Wildlife Habitat Management	2.5 acres		Meet with other technical assistance providers to ascertain level of landowner interest and possible roadblocks Re-evaluate benchmarks	
						Prescribed Grazing	20 acres			
Erosion Hazards Areas	Kennedy Goldsborough WIRA 14	59	8,177	Maintain baseline acreage of Agriculture and Critical Area Interface	5% annual increase of BMP implementation (based on averaged annual implementation over 5-year period of each BMP through the County)	Brush Management	53 acres	Any changes in interface (future years monitoring will determine how much change will warrant adaptive management) < 5% annual increase in BMP implementation < 7 completed ISPs/year < 15 ISP Checklists receive/year	Locate area(s) of change and follow up with landowners to determine contributing factors	
				Maintain BMP Implementation		Conservation Cover	1 acres		Determine reasons for reduced BMPs and options for reinstatements	
	Kitsap WRIA 15	7	7,051	Maintain 7.5 farm plans per year	Reduce agricultural and erosion hazard area interface to less than 2011 baseline by: (1) maintaining and reconfiguring	Prescribed Grazing	20 acres			
				Maintain outreach to all operators annually						

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT	
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
				Protection, Enhancement and Participation					
				Return rate of 15 ISP Checklists per year	agricultural activities away from erosion areas; or (2) utilizing BMPs specific to erosion areas	Heavy Use Protection Area	24 units	Outreach methods not reaching all operators	Meet with District Staff to determine if lack of available funding is preventing BMP implementation
	Skokomish Dosewallips WRIA 16	42	1,559		Increase annual number of Farm Plans (Individual Stewardship Plans) to 16	Field Border			Determine if landowners in these areas are not receiving outreach information
					Increase annual operator participation levels by 50%	Roof Runoff Structure	26 units		Meet with other technical assistance providers to ascertain level of landowner interest and possible roadblocks
					Return rate of 23 ISP Checklists per year	Diversion	499 feet		
	Lower Chehalis WRIA 22	0.4	69			Mulching	7 acres		Re-evaluate benchmarks
Fish and Wildlife Habitat	Kennedy Goldsborough WIRA 14	923	4,113	Maintain baseline acreage of Agriculture and Critical Area Interface	5% annual increase of BMP implementation (based on averaged annual implementation	Fencing	22,383 feet	Any changes in interface (future years monitoring will determine how	Locate area(s) of change and follow up with landowners to

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT	
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
				Protection, Enhancement and Participation					
Conservation Areas				Maintain BMP Implementation	over 5 year period of each BMP through the County)	Conservation Cover	1 acre	much change will warrant adaptive management)	determine contributing factors
	Kitsap WRIA 15	57	2,657	Maintain 7.5 farm plans per year	Reduce agricultural and fish and wildlife conservation area interface to less than 2011 baseline by: (1) maintaining and reconfiguring agricultural activities away from habitat areas; or (2) utilizing BMPs specific to habitat areas	Prescribed Grazing	20 acres	< 5% annual increase in BMP implementation	Determine reasons for reduced BMPs and options for reinstatements
				Maintain outreach to all operators annually		Heavy Use Protection Area	24 units	< 7 completed ISPs/year	Meet with District Staff to determine if lack of available funding is preventing BMP implementation
				Return rate of 15 ISP Checklists per year				< 15 ISP Checklists receive/year	
	Skokomish Dosewallips WRIA 16	533	21,392		Increase annual number of Farm Plans (Individual Stewardship Plans) to 16	Field Border		Outreach methods not reaching all operators	Determine if landowners in these areas are not receiving outreach information
					Increase annual operator participation levels by 50%	Roof Runoff Structure	26 units		
	Lower Chehalis WRIA 22	--	--		Return rate of 23 ISP Checklists per year	Diversion	499 feet		Meet with other technical assistance providers to ascertain level of

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA JULY 2011 BASELINE INTERFACE	TOTAL JULY 2011 BASELINE ACRES OF CRITICAL AREA IN WRIA	GOAL 1 – PROTECT CRITICAL AREA FUNCTIONS AND VALUES ON AGRICULTURAL LANDS AT A WATERSHED LEVEL AS THEY EXISTED AS OF JULY 22, 2011	GOAL 2 – ENHANCE CRITICAL AREA FUNCTION AND VALUES THROUGH VOLUNTARY, INCENTIVE-BASED MEASURES	BEST MANAGEMENT PRACTICES	JULY 2011 BMP IMPLEMENTATION BASELINE	ADAPTIVE MANAGEMENT	
				BENCHMARKS				TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
				Protection, Enhancement and Participation					
						Mulching	7 acres		landowner interest and possible roadblocks Re-evaluate benchmarks



Table 39 Goal 3, Benchmarks and Adaptive Management

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA BASELINE INTERFACE (ACRES)	TOTAL BASELINE ACRES OF AGRICULTURAL ACTIVITY IN WRIA	GOAL 3 – ENSURE THE VIABILITY OF AGRICULTURE AND REDUCE THE CONVERSION OF AGRICULTURAL LAND INTO OTHER USES	ADAPTIVE MANAGEMENT	
				BENCHMARKS	TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
Critical Aquifer Recharge Areas	Kennedy Goldsborough WRIA 14	1,806	4,856			Locate area(s) of reduction to follow up with Landowners to determine contributing factors
	Kitsap WRIA 15	244	364	Maintain baseline acreage of Interface	< 4,254 baseline acres of interface	Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	1,469	1,959	Maintain baseline acreage of Agricultural Activity	< 8,015 baseline acres of agricultural activities	
	Lower Chehalis WRIA 22	735	835	Maintain 2011 annual average baseline of 7.5 completed Farm Plans	< 7.5 annually completed Farm Plans	Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture
Frequently Flooded Areas	Kennedy Goldsborough WRIA 14	1,169	4,856			Locate area(s) of reduction to follow up with Landowners to determine contributing factors (e.g. why farming activity is expanding or moving into flooded areas)
	Kitsap WRIA 15	162	364	Maintain baseline acreage of Interface	> 3,048 baseline acres of interface	Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	1,537	1,959	Maintain baseline acreage of Agricultural Activity	< 8,015 baseline acres of agricultural activities	
	Lower Chehalis WRIA 22	180	835	Maintain 2011 annual average baseline of 7.5 completed Farm Plans	< 7.5 annually completed Farm Plans	Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA BASELINE INTERFACE (ACRES)	TOTAL BASELINE ACRES OF AGRICULTURAL ACTIVITY IN WRIA	GOAL 3 – ENSURE THE VIABILITY OF AGRICULTURE AND REDUCE THE CONVERSION OF AGRICULTURAL LAND INTO OTHER USES	ADAPTIVE MANAGEMENT	
				BENCHMARKS	TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
Wetlands	Kennedy Goldsborough WRIA 14	572	4,856	Maintain baseline acreage of Interface Maintain baseline acreage of Agricultural Activity Maintain 2011 annual average baseline of 7.5 completed Farm Plans	> 1,206 baseline acres of interface < 8,015 baseline acres of agricultural activities < 7.5 annually completed Farm Plans	Locate area(s) of reduction to follow up with Landowners to determine contributing factors(e.g. why farming activity is expanding or moving into wetlands)
	Kitsap WRIA 15	141	364			Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	446	1,959			Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture
	Lower Chehalis WRIA 22	49	835			
Landslide Hazard Areas	Kennedy Goldsborough WRIA 14	204	4,856	Maintain baseline acreage of Interface Maintain baseline acreage of Agricultural Activity Maintain 2011 annual average baseline of 7.5 completed Farm Plans	> 290 baseline acres of interface < 8,015 baseline acres of agricultural activities < 7.5 annually completed Farm Plans	Locate area(s) of reduction to follow up with Landowners to determine contributing factors(e.g. why farming activity is expanding or moving into landslide hazard areas)
	Kitsap WRIA 15	33	364			Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	29	1,959			Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture
	Lower Chehalis WRIA 22	23	835			

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA BASELINE INTERFACE (ACRES)	TOTAL BASELINE ACRES OF AGRICULTURAL ACTIVITY IN WRIA	GOAL 3 – ENSURE THE VIABILITY OF AGRICULTURE AND REDUCE THE CONVERSION OF AGRICULTURAL LAND INTO OTHER USES	ADAPTIVE MANAGEMENT	
				BENCHMARKS	TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
Seismic Hazard Areas	Kennedy Goldsborough WRIA 14	4,814	4,856			Locate area(s) of reduction to follow up with Landowners to determine contributing factors
	Kitsap WRIA 15	314	364	Maintain baseline acreage of Interface	> 7,589 baseline acres of interface	Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	1,714	1,959	Maintain baseline acreage of Agricultural Activity	< 8,015 baseline acres of agricultural activities	
	Lower Chehalis WRIA 22	747	835	Maintain 2011 annual average baseline of 7.5 completed Farm Plans	< 7.5 annually completed Farm Plans	Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture
Erosion Hazard Areas	Kennedy Goldsborough WRIA 14	59	4,856			Locate area(s) of reduction to follow up with Landowners to determine contributing factors(e.g. why farming activity is expanding or moving into erosion hazard areas)
	Kitsap WRIA 15	7	364	Maintain baseline acreage of Interface	< 108 baseline acres of interface	Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	42	1,959	Maintain baseline acreage of Agricultural Activity	< 8,015 baseline acres of agricultural activities	
	Lower Chehalis WRIA 22	0.4	835	Maintain 2011 annual average baseline of 7.5 completed Farm Plans	< 7.5 annually completed Farm Plans	Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture

CRITICAL AREA	WRIA	AGRICULTURE & CRITICAL AREA BASELINE INTERFACE (ACRES)	TOTAL BASELINE ACRES OF AGRICULTURAL ACTIVITY IN WRIA	GOAL 3 – ENSURE THE VIABILITY OF AGRICULTURE AND REDUCE THE CONVERSION OF AGRICULTURAL LAND INTO OTHER USES	ADAPTIVE MANAGEMENT	
				BENCHMARKS	TRIGGER (MONITORING PROGRAM – APPENDIX 7)	ACTIONS
Fish and Wildlife Habitat Conservation Areas	Kennedy Goldsborough WRIA 14	923	4,856			Locate area(s) of reduction to follow up with Landowners to determine contributing factors(e.g. why farming activity is expanding or moving into habitat areas)
	Kitsap WRIA 15	57	364	Maintain baseline acreage of Interface	> 1,513 baseline acres of interface	Meet with District Staff to determine status of funding programs that may impact preservation or expansion of agriculture, and the completion of Farm Plans
	Skokomish Dosewallips WRIA 16	533	1,959	Maintain baseline acreage of Agricultural Activity	< 8,015 baseline acres of agricultural activities	
	Lower Chehalis WRIA 22	--	835	Maintain 2011 annual average baseline of 7.5 completed Farm Plans	< 7.5 annually completed Farm Plans	Meet with County Officials to determine if policy or regulation amendments have been made that may impact preservation or expansion of agriculture

## APPENDIX 7 MONITORING PROGRAM

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Table 40 Monitoring

MONITORING TOOLS	INFORMATION MONITORING TOOLS PROVIDE	RESOURCE FOR OBTAINING MONITORING TOOLS	RESOURCE CONTACT	MONITORING THRESHOLD	ACTIONS (Specific Actions based on Critical Areas, See Tables 38 and 39)	MONITORING SCHEDULE	MONITORING RESPONSIBLE PARTY
<b>“BMP”</b>  <b>Best Management Practices, or Conservation Practices, are specific on the ground activities designed to both improve agricultural activities and protect critical areas</b>	<ul style="list-style-type: none"><li>• Type of BMP</li><li>• Intended result of BMP at site</li><li>• Size, location and type of Ag Operation</li><li>• Origin of the request for assistance</li><li>• Type and size of Critical Area on site</li></ul>	Mason Conservation District Database	District Staff	Less than 5% annual increase in BMP implementation	<ul style="list-style-type: none"><li>• Locate area(s) of change and follow up with landowners to determine contributing factors.</li><li>• Determine reasons for reduced BMPs and options for reinstatements</li><li>• Meet with District Staff to determine if lack of available funding is preventing BMP implementation</li><li>• Determine if landowners in these areas are not receiving outreach information</li><li>• Meet with other technical assistance providers to ascertain level of landowner interest and possible roadblocks</li></ul>	Annually	District Staff
<b>“ISP”</b>	<ul style="list-style-type: none"><li>• Type of practices</li></ul>	Mason Conservation District Database	District Staff	Less than 7 completed ISP per year	<ul style="list-style-type: none"><li>• Locate area(s) of change and follow up with</li></ul>	Annually	District Staff



MONITORING TOOLS	INFORMATION MONITORING TOOLS PROVIDE	RESOURCE FOR OBTAINING MONITORING TOOLS	RESOURCE CONTACT	MONITORING THRESHOLD	ACTIONS (Specific Actions based on Critical Areas, See Tables 38 and 39)	MONITORING SCHEDULE	MONITORING RESPONSIBLE PARTY
Individual Stewardship Plans target the goals of this Work Plan by targeting agricultural activities with critical areas	<ul style="list-style-type: none"><li>Proposed impact/effect on Ag Operation</li><li>Size, location and type of Ag Operation</li><li>Proposed monitoring techniques</li><li>Original of the request for assistance</li><li>Site visits to property can ground-truth critical areas and BMP implementation</li></ul>				<ul style="list-style-type: none"><li>landowners to determine contributing factors.</li><li>Determine if landowners in these areas are not receiving outreach information</li><li>Meet with other technical assistance providers to ascertain level of landowner interest and possible roadblocks</li></ul>		
Restoration and Conservation Projects for salmon habitat	<ul style="list-style-type: none"><li>Type of Project</li><li>Type of Critical Area on site</li><li>Intended result of the Project</li><li>Amount/size of Critical Area</li><li>Proposed Monitoring</li></ul>	Lead Entity Habitat Work Schedule  Washington State Recreation and Conservation Office	<a href="#">Habitat Work Schedule</a>	No threshold for enhancement only tools	<ul style="list-style-type: none"><li>Annual monitoring to observe enhancement projects; the lack of such projects would not necessarily trigger any needed actions</li></ul>	Annually	District Staff
NAIP High Resolution Aerial Imagery Change Detection – a digital analysis of land cover changes	<ul style="list-style-type: none"><li>Change in land cover</li><li>Changes to critical areas</li><li>Type of change occurring</li><li>Patterns/locations of change</li></ul>	Washington Department of Fish and Wildlife	<a href="#">Habitat Science Division</a>	Any changes in agriculture and critical area interface from 2011 baseline	<ul style="list-style-type: none"><li>Determine contributing factors of change</li><li>Determine if amount of change triggers action based on Table 38</li></ul>	Every 2 – 5 years, depending on future releases of information	District Staff

MONITORING TOOLS	INFORMATION MONITORING TOOLS PROVIDE	RESOURCE FOR OBTAINING MONITORING TOOLS	RESOURCE CONTACT	MONITORING THRESHOLD	ACTIONS (Specific Actions based on Critical Areas, See Tables 38 and 39)	MONITORING SCHEDULE	MONITORING RESPONSIBLE PARTY
<b>Local Jurisdictions Maps: CARAs Geologically Hazardous Areas Frequently Flooded Areas Future Land Use Map</b>	<ul style="list-style-type: none"> <li>Increase or decrease in critical areas</li> <li>Changes to ag lands</li> <li>Type and location of changes occurring</li> </ul>	Mason County, Department of Public	GIS Division	Any changes in agriculture and critical area interface from 2011 baseline	<ul style="list-style-type: none"> <li>Determine contributing factors of change</li> <li>Determine if amount of change triggers action based on Table 38</li> </ul>	Every 5 – 10 years, depending on County's update schedule	District Staff
<b>Critical Areas mapping data: Wetlands</b>	<ul style="list-style-type: none"> <li>Increase or decrease in size of wetlands</li> <li>Location of wetlands</li> </ul>	U.S. Fish and Wildlife Service	<a href="http://www.fws.gov/wetlands">www.fws.gov/wetlands</a>	Any changes in agriculture and critical area interface from 2011 baseline	<ul style="list-style-type: none"> <li>Determine contributing factors of change</li> <li>Determine if amount of change triggers action based on Table 38</li> </ul>	Annually – USFWS updates maps biannually	District Staff
<b>Critical Areas mapping data: Fish and wildlife habitat conservation areas</b>	<ul style="list-style-type: none"> <li>Increase or decrease in size of areas</li> <li>Location of areas</li> </ul>	Washington Department of Fish and Wildlife	<a href="http://www.wdfw.wa.gov/mapping/phs">www.wdfw.wa.gov/mapping/phs</a>	Any changes in agriculture and critical area interface from 2011 baseline	<ul style="list-style-type: none"> <li>Determine contributing factors of change</li> <li>Determine if amount of change triggers action based on Table 38</li> </ul>	Annually	District Staff
<b>Designated Agricultural Lands</b>	<ul style="list-style-type: none"> <li>Number, location and size of agricultural land</li> </ul>	Mason County Assessor's Office	<a href="http://www.co.mason.wa.us/assessor/index.php">www.co.mason.wa.us/assessor/index.php</a>	Any reduction of designated agricultural lands	<ul style="list-style-type: none"> <li>Determine if reductions are in or adjacent to critical areas</li> <li>Determine contributing factors for the reduction</li> </ul>	Annually	District Staff
<b>Census of Agriculture</b>	<ul style="list-style-type: none"> <li>Changes in farm demographics (number of farms,</li> </ul>	U.S. Department of Agriculture	<a href="http://www.agcensus.usda.gov">www.agcensus.usda.gov</a>	Any changes to the agricultural demographics in the County	<ul style="list-style-type: none"> <li>Determine if agricultural lands are increase or</li> </ul>	Every 5 years	District Staff

MONITORING TOOLS	INFORMATION MONITORING TOOLS PROVIDE	RESOURCE FOR OBTAINING MONITORING TOOLS	RESOURCE CONTACT	MONITORING THRESHOLD	ACTIONS (Specific Actions based on Critical Areas, See Tables 38 and 39)	MONITORING SCHEDULE	MONITORING RESPONSIBLE PARTY
	size of farms, crops, etc.)				decreasing, and if those changes are related to critical areas		
<b>Agricultural Land Use Crop Survey Data</b>	<ul style="list-style-type: none"> <li>Changes in size and location of agricultural activities</li> </ul>	Washington State Department of Agriculture	<a href="http://www.agr.wa.gov/pestfert/natresources/aglanduse.aspx">www.agr.wa.gov/pestfert/natresources/aglanduse.aspx</a>	Any changes to the agricultural demographics in the County	<ul style="list-style-type: none"> <li>Determine if agricultural lands are increase or decreasing, and if those changes are related to critical areas</li> </ul>	~ Every 3 years	District Staff
<b>303(d) Listings</b>	<ul style="list-style-type: none"> <li>Polluted water sites</li> </ul>	Washington State Department of Ecology	<a href="https://fortress.wa.gov/ecy/approvedwqa/ApprovedSearch.aspx">https://fortress.wa.gov/ecy/approvedwqa/ApprovedSearch.aspx</a>	Any documented increases in water pollutants	<ul style="list-style-type: none"> <li>Determine nexus between pollutants and agricultural activities, if any</li> </ul>	Annually	District Staff
<b>Source Water Assessment Program</b>	<ul style="list-style-type: none"> <li>Drinking water sites</li> </ul>	Washington State Department of Health	<a href="https://fortress.wa.gov/doh/eh/maps/SWAP/index.html">https://fortress.wa.gov/doh/eh/maps/SWAP/index.html</a>	Any contaminated drinking water sources in proximity to agricultural activities	<ul style="list-style-type: none"> <li>Determine agricultural activities are source of contaminants</li> </ul>	Annually	District Staff
<b>Coastal Change Analysis Program Regional Land Cover</b>	<ul style="list-style-type: none"> <li>Land cover changes</li> </ul>	NOAA Office of Coastal Management	<a href="https://coast.noaa.gov/digitalcoast/data/ccapregional.html">https://coast.noaa.gov/digitalcoast/data/ccapregional.html</a>	Any land cover changes associated with critical areas and agricultural activities	<ul style="list-style-type: none"> <li>Determine nexus of changes in relation to agricultural activities, if any</li> </ul>	Every 5 years	District Staff

## APPENDIX 8 BEST MANAGEMENT PRACTICES

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## BEST MANAGEMENT PRACTICES

This table is a compilation of 29 Best Management Practices (BMPs) used by the District in Mason County; the first seven are the most commonly used. The information provided includes the Conservation Practice number as listed by the National Resource Conservation Service together with a description of the practice and its purpose. Many of these BMPs can be applied to different areas and are multi-functional in their ability to protect and enhance critical areas. In formulating the goals and benchmarks of this Plan, the Work Group drew from these options to apply the most effective BMPs for each. Each County will have a unique set of goals based on the types of agricultural activities practiced and the types of critical areas prevalent in those areas. In Mason County, agriculture primarily focuses around pastures and hayfields which are maintained very differently from crops and orchards, for instance.

	BEST MANAGEMENT PRACTICE   BMP	NRCS <sup>91</sup>	DEFINITION	PURPOSE
1	FENCING	382	Constructed barrier to animals or people	Facilitates conservation objectives by providing means to control movement of animals and people, including vehicles
2	HEAVY USE PROTECTION AREA	561	Used to stabilize ground surface frequently or intensively used by people, animals, or vehicles	Provide a stable, non-eroding surface for areas frequently used by animals, people, vehicles; protect/improve water quality
3	SUBSURFACE DRAIN	606	Conduit installed beneath the ground surface to collect and/or convey excess water	Remove or distribute excessive soil water
4	COMPOSTING FACILITY	317	Structure/device to contain and facilitate controlled aerobic decomposition of organic material by microorganisms into biologically stable organic material	Reduce pollution potential and improve handling characteristics of organic waste solids; produce soil amendment that adds organic matter and beneficial organisms, provides slow-release plant-available

<sup>91</sup> United States Department of Agriculture, Natural Resource Conservation Service, Conservation Practice Number

BEST MANAGEMENT PRACTICE   BMP		NRCS <sup>91</sup>	DEFINITION	PURPOSE
5			suitable as a soil amendment	nutrients, and improves soil condition
	USE EXCLUSION (ACCESS CONTROL)	472	Exclusion of animals, people, vehicles, and/or equipment from an area	Monitor, manage intensity of use by animals, people, vehicles, equipment with other practices of conservation plan
	FILTER STRIP	393	A strip or area of herbaceous vegetation that removes contaminants from overland flow.	Reduce suspended solids and contaminants in runoff; reduce dissolved contaminants in runoff; reduce suspended solids and contaminants in irrigation tailwater
	WASTE STORAGE STRUCTURE (FACILITY)	313	A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure	Temporarily store wastes, wastewater, and contaminated runoff as storage function component of agricultural waste management system
	PASTURE/HAYLAND PLANTING (FORAGE AND BIOMASS PLANTING)	512	Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production	Improve/maintain livestock nutrition and/or health; provide/increase forage supply; reduce soil erosion and improve soil and water quality; produce feedstock for biofuel or energy production; increase carbon sequestration
9	IRRIGATION SYSTEM: MICRO-IRRIGATION	441	Frequent application of small quantities of water on or below the soil surface: as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line	Efficiently and uniformly apply irrigation water and maintain soil moisture; prevent contamination of ground and surface water



	BEST MANAGEMENT PRACTICE   BMP	NRCS <sup>91</sup>	DEFINITION	PURPOSE
10	PRESCRIBED GRAZING	528	Managing harvest of vegetation with grazing and/or browsing animals	Improve/maintain desired plants species composition; improve/maintain quantity and quality of forage, water, riparian and watershed functions, and food/cover for wildlife; reduce accelerated soil erosion; manage fine fuel loads
11	FIELD BORDER	386	A strip of permanent vegetation established at the edge or around the perimeter of a field	Reduce wind/water erosion; protect soil/water quality; provide wildlife food and cover and pollinator or other beneficial organism habitat; increase carbon storage; improve air quality
12	IRRIGATION SYSTEM: SPRINKLER	442	A distribution system that applies water by means of nozzles operated under pressure	Efficient, uniform water application; improve plant condition, productivity, health, vigor; prevent entry of excessive nutrients, organics, other chemicals in water; improve soil condition; reduce particulate matter emissions; reduce energy use
13	IRRIGATION WATER CONVEYANCE – PIPELINE: HIGH PRESSURE PLASTIC (IRRIGATION PIPELINE)	430DD (430)	A pipeline and appurtenances installed to convey water for storage or application, as part of an irrigation water system.	This practice may be applied as part of a resource management system to achieve one or more of the following purposes:  Conveyance of water from a source of supply to an irrigation system or storage reservoir. Reduce energy use. Develop renewable energy systems (i.e., inpipe hydropower.)
14	RECREATION TRAIL AND WALKWAY	568 (575)	Trail: constructed path with vegetated or earthen surface.	Provide/improve animal access to forage, water, working/handling facilities,

	<b>BEST MANAGEMENT PRACTICE   BMP</b>	<b>NRCS<sup>91</sup></b>	<b>DEFINITION</b>	<b>PURPOSE</b>
	(TRAILS AND WALKWAYS)		Walkway: constructed path with artificial surface. Trail/walkway: facilitate movement of animals, people, or offroad vehicles	shelter; Facilitate improved grazing; Protect ecologically sensitive, erosive sites; Provide pedestrian/off-road vehicle access to agricultural, construction, maintenance operations; provide for recreational activities or access to recreation sites.
15	SURFACE DRAINAGE – FIELD DITCH	607	A graded channel on the field surface for collecting excess water	Intercept excess surface and shallow subsurface water from a field, conveying it to a surface main or lateral; collect excess irrigation water for a tailwater reuse system.
16	SURFACE DRAINAGE – MAIN OR LATERAL	608	An open drainage ditch for moving excess water collected by a field ditch or subsurface drain to a safe outlet.	Convey excess surface or shallow subsurface water from field ditch to safe outlet; convey excess subsurface water from subsurface drain to safe outlet
17	WASTE FACILITY COVER (ROOFS AND COVERS)	367	A rigid, semi-rigid, or flexible manufactured membrane, composite material or roof structure placed over a waste management facility, agrichemical handling facility, or an on-farm secondary containment facility	Protect clean water in existing or planned animal waste handling or storage area; improve waste management and utilization; capture biogas emissions from an existing or planned animal waste storage facility; protect clean water by excluding it from a chemically contaminated area
18	WATERING FACILITY	614	A means of providing drinking water to livestock or wildlife.	Supply daily water requirements; improve animal distribution; provide water source as alternative to sensitive resource
19	HEDGEROW PLANTING	422	Establishment of dense vegetation in a linear design to achieve a	Food, cover, corridors for terrestrial wildlife, and aquatic organisms that live in streams;

	<b>BEST MANAGEMENT PRACTICE   BMP</b>	<b>NRCS<sup>91</sup></b>	<b>DEFINITION</b>	<b>PURPOSE</b>
			natural resource conservation purpose.	improve water quality and aquatic habitat in ditches and channels; living fences; boundary delineation; intercept airborne particulate matter; reduce chemical drift, odor movement; increase carbon storage in biomass and soils; contour guidelines; screens and barriers to noise, dust; improve landscape appearance
20	HERBACEOUS WEED CONTROL	315	The removal or control of herbaceous weeds including invasive, noxious and prohibited plants	Enhance accessibility quantity, quality of forage and/or browse; restore or release plant communities and wildlife habitats consistent with the ecological site; protect soils, control erosion; reduce fine-fuels fire hazard and improve air quality
21	RIPARIAN FOREST BUFFER	391	An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.	Create shade to lower, maintain water temperatures; provide source of detritus and large woody debris; reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and in shallow ground water flow; reduce pesticide drift; restore riparian plant communities; increase carbon storage in plant biomass and soils.
22	STREAM HABITAT IMPROVEMENT & MANAGEMENT	395	Maintain, improve, restore physical, chemical, biological functions of stream, and associated riparian zone	Provide suitable aquatic habitat; maintain stream corridor ecological processes and hydrological connections of diverse stream habitat

	<b>BEST MANAGEMENT PRACTICE   BMP</b>	<b>NRCS<sup>91</sup></b>	<b>DEFINITION</b>	<b>PURPOSE</b>
				types important to aquatic species
23	TREE/SHRUB ESTABLISHMENT	612	Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration	Establish woody plants for: forest products; habitat; long-term erosion control and water quality; treat waste; store carbon in biomass; reduce energy use; develop renewable energy systems; improve restore natural diversity; enhance aesthetic
24	TREE/SHRUB SITE PREPARATION	490	Treatment of areas to improve site conditions for establishing trees and/or shrubs	Encourage natural regeneration; permit artificial establishment of woody plants
25	WETLAND RESTORATION	657	The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site	Restore: conditions conducive to hydric soil maintenance; wetland hydrology; native hydrophytic vegetation; original fish and wildlife habitats
26	ROOF RUNOFF STRUCTURE	558	A structure that will collect, control and convey precipitation runoff from a roof	Protect surface water quality by excluding roof runoff from contaminated areas; protect structure foundation from water damage or soil erosion from excess water runoff; increase infiltration of runoff water; capture water for other use
27	STREAM CROSSING	578	A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles	Access to another land unit; Improve water quality by reducing sediment, nutrient, organic, and inorganic loading; reduce streambank and streambed erosion

	BEST MANAGEMENT PRACTICE   BMP	NRCS <sup>91</sup>	DEFINITION	PURPOSE
28	NUTRIENT MANAGEMENT	590	Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments	Budget, supply, and conserve nutrients; minimize agricultural nonpoint source pollution; properly utilize manure or organic byproducts; protect air quality; maintain or improve the physical, chemical, and biological condition of soil
29	SILVOPASTURE ESTABLISHMENT	381	An application establishing a combination of trees or shrubs and compatible forages on the same acreage	Provide forage for livestock and wood products; Increase carbon sequestration; improve water quality; reduce erosion; enhance wildlife habitat; reduce fire hazard; provide shade for livestock; develop renewable energy systems

## APPENDIX 9 VOLUNTARY STEWARDSHIP OVERVIEW AND INDIVIDUAL STEWARDSHIP CHECKLIST

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# WHAT IS THE VOLUNTARY STEWARDSHIP PROGRAM?

The Voluntary Stewardship Program, or “VSP”, was adopted in 2011 under the Washington Growth Management Act as an alternative to traditional critical areas regulations. Communities develop a WORK PLAN that focuses on incentives to encourage good ecosystem stewardship instead of regulatory approaches to protect critical areas on agricultural lands. Important Critical areas generally support clean water, sustainable populations of salmon and shellfish, and healthy populations of plants and wildlife for next generations. Under this Program, farmers can operate successful agricultural businesses while taking the initiative to improve the environment on their land. These initiatives are known as Best Management or Conservation Practices, and are already in use by farmers throughout the County.

Where agricultural intersects with critical areas, the Program provides incentives for agricultural landowners and operators to voluntarily enhance the condition of critical areas through best management practices. A successful stewardship program would enable the community to apply cooperation, innovation, and effective action for the advancement of agriculture and the environment.

## THE VSP WORK PLAN

Mason County’s WORK PLAN for the Program that includes goals, benchmarks, monitoring and adaptive management for protecting and enhancing critical areas through voluntary, site- specific stewardship practices. The WORK PLAN is also focused on maintaining and enhancing the long-term viability of agriculture and reducing the conversion of farmland to other uses. Specifically the PLAN has four goals:

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<b>GOAL 1</b>	<b>protect critical area functions and values on agricultural lands at a watershed level as they existed as of July 22, 2011</b>
<b>GOAL 2</b>	<b>enhance critical area functions and values through voluntary, incentive-based measures.</b>
<b>GOAL 3</b>	<b>ensure the viability of agriculture and reduce the conversion of agricultural land into other uses.</b>
<b>GOAL 4</b>	<b>establish baseline monitoring program to measure benchmarks over a ten year period.</b>

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The PLAN also establishes measurable Benchmarks to assess progress toward achieving these goals. Monitoring techniques have been included and are a necessary tool to again illustrate how the Work Plan intends to effectively measure the Benchmarks and meet the Goals throughout its implementation. A threshold for adaptive management has also been established for most of the monitoring techniques to allow the District to evaluate how they are meeting goals and adjust for future decision making.

Fortunately, the majority of work associated with the WORK PLAN, its implementation and monitoring, is the responsibility of the Conservation District. You, the volunteer, are only as obligated as you choose to be utilizing a variety of available best management practices.

Implementation of the Program only requires voluntary stewardship as the primary method of protecting critical areas. It may not require an agricultural operator to discontinue agricultural activities,<sup>92</sup> or to even participate in the Program. Agricultural operators volunteering to participate may withdraw from the program at any time.

Commercial and noncommercial agricultural operators participating in the Program and implementing an individual stewardship plan consistent with the WORK PLAN are presumed to be working toward the protection and enhancement of critical areas. Operators participating in the program may be eligible to receive funding and assistance under watershed programs.

There are many funding opportunities for farmers regardless of whether or not they participate in this program. Some of those are listed later.

## WHAT ARE CRITICAL AREAS?

Not everyone is familiar with what or where critical areas are in Mason County. The Program recognizes five different critical areas according to the Growth Management Act, and all five can be found here. These include: critical aquifer recharge areas (CARA), frequently flooded areas, wetlands, fish & wildlife habitat conservation areas, and geologically hazardous areas.

In Mason County, geologically hazardous areas are divided into three subcategories: landslide hazard, seismic hazard, and erosion hazard areas. The following table indicates the total acreage of each critical area in the County and its proportional interface with agricultural lands.

**Acres and Percentages of Agriculture and Critical Area Interface**

Critical Area "CA"	Total Acres Of CA	Total Acres Of Agriculture	Acres Of Agriculture Interface	% Of Total Agriculture Interface	% Of Total CA Interface
<b>CARA</b>	121,084	8,015	4,254	53%	<b>3%</b>
<b>Flooded Areas</b>	59,535	8,015	3,048	38%	<b>5%</b>
<b>Landslide Areas</b>	82,683	8,015	290	4%	<b>0.3%</b>
<b>Seismic Areas</b>	398,254	8,015	7,589	95%	<b>2%</b>

<sup>92</sup>Legally existing prior to July 22, 2011

Critical Area "CA"	Total Acres Of CA	Total Acres Of Agriculture	Acres Of Agriculture Interface	% Of Total Agriculture Interface	% Of Total CA Interface
<b>Erosion Areas</b>	16,856	8,015	108	1%	1%
<b>Fish &amp; Wildlife Wetlands</b>	27,798	8,015	1,513	19%	5%
<b>Wetlands</b>	54,650	8,015	1,206	15%	2%

Critical areas, as denoted above, support clean water and healthy plant and wildlife populations. Each is different in its make-up and functions, as well as its associated protection measures. Below are brief descriptions of all five:



Critical Aquifer Recharge Areas

Surface waters replenish, "recharge", aquifers through seepage from streams, lakes, and wetlands, and from precipitation that percolates through soil or rock. Areas with a critical recharging effect on aquifers used for potable water, also called Critical Aquifer Recharge Areas or CARAs.

*Photo: Oakland Bay, Courtesy of WA Department of Ecology*



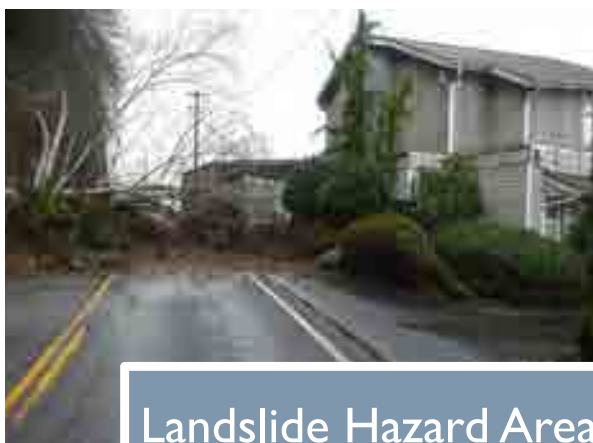
Frequently Flooded Areas

Frequently flooded areas are lands in the flood plain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater.

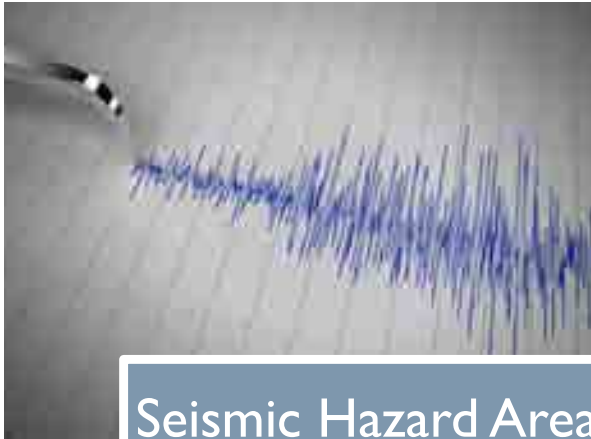
*Photo: Tahuya River, Courtesy of The Lunkers Guide*

Landslide areas are at risk for a rapid down slope movement of a mass of material such as rocks, soil, or other debris. The occurrence depends on a number of factors including soil vulnerability, slope, and the degree of water saturation.

*Photo: Highway 106 Landslide, Courtesy of KOMO 4 News*



Landslide Hazard Areas



Seismic Hazard Areas



Erosion Hazard Areas

Seismic hazards occur in areas subject to severe risk of earthquake damage as a result of seismic induced settlement or liquefied soils.

*Photo: Courtesy of [www.nbcrighnow.com](http://www.nbcrighnow.com)*



## Fish & Wildlife Habitat Conservation Areas

Erosion hazard areas are where the land surface is worn away by the action of water, wind, ice or other geologic processes. The most common cause of erosion is water falling or flowing across the land.

*Photo: Bulkhead, Courtesy of Mason CD*





## Wetlands

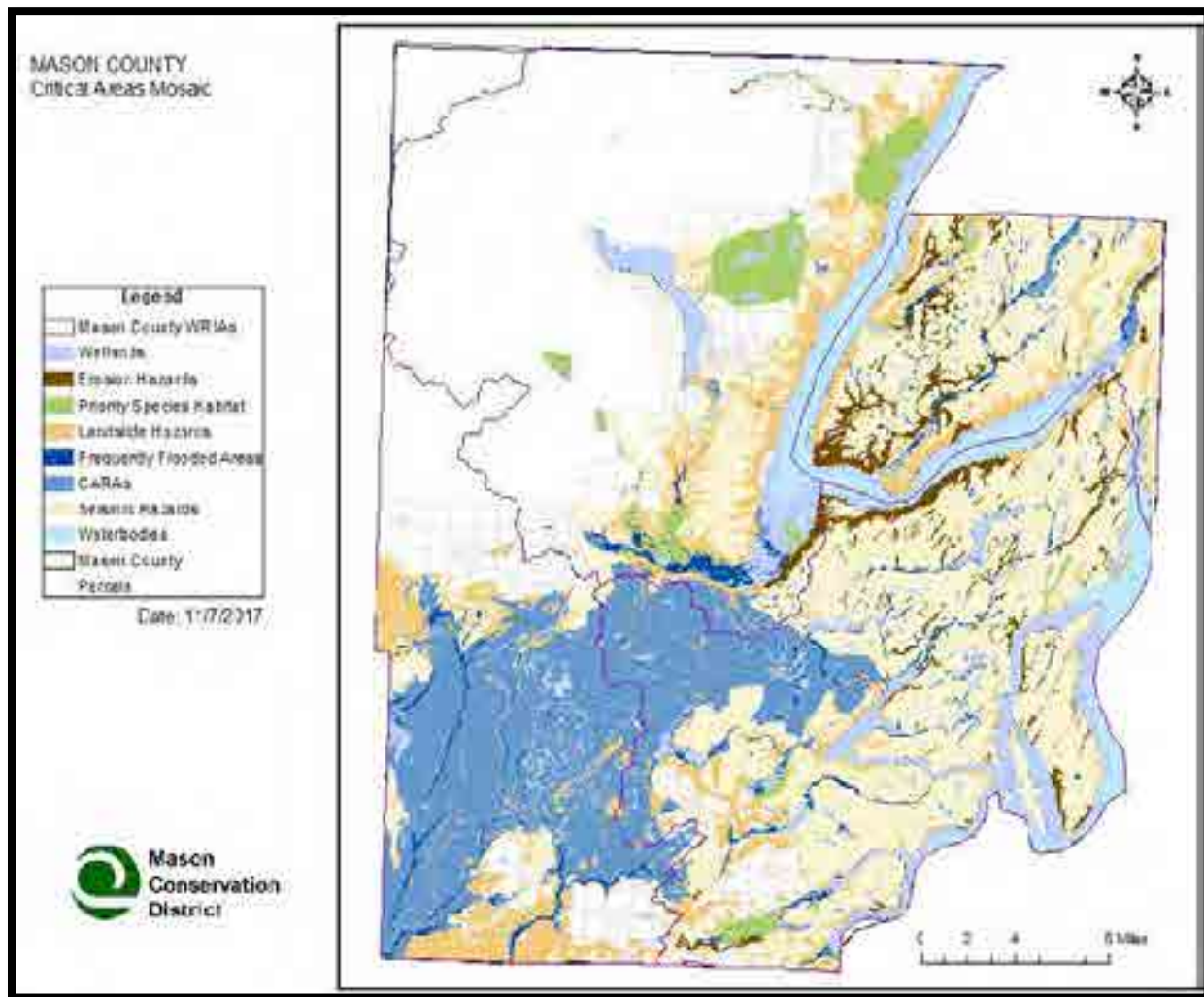
Fish and Wildlife Habitat Conservation Areas (FWHCA) are recognized for maintaining species in suitable habitats within their natural geographic distribution so that isolated populations are not created. They are both aquatic and terrestrial areas within the County.

*Photo: Courtesy of BeautifulWashington.com*

Generally, wetlands are areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions..

*Photo: Thelar Wetlands, Courtesy of Trevor.com*

To give you an idea of where these areas are, this Critical Areas Mosaic Map illustrates a pattern of these areas across the County.



To find out if your agricultural operation has a critical area located on it, and to learn more about voluntary practices, the District has created a Checklist<sup>93</sup> that evaluates the **WORK PLAN's** goals together with the needs and objectives of the individual operator.

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<sup>93</sup> The Mason County VSP ISP checklist contains a compilation of original and borrowed materials from checklists approved for other jurisdictions, including Pacific, Thurston, Yakima, and Grant - our thanks and acknowledgement of their work.

## **PROPERTY INFORMATION**

The following checklist can be used to initiate an Individual Stewardship Plan<sup>94</sup> (ISP) under the Voluntary Stewardship Program. This is a site-specific plan for individual agricultural operations that identifies agricultural activities and conservation practice options based on the Natural Resources Conservation Service's (NRCS) conservation planning procedures. The ISP details conservation practices that promote agricultural business viability while protecting and voluntarily enhancing critical areas. Completion of this survey is the first step to helping the agricultural community in Mason County to meet its participation standards under the Program. This ISP survey will be used to assess trends in implementation of practices that support agricultural viability and critical area protection, and the individual results of this survey will be held in confidentiality by the Mason Conservation District. External reporting of the ISP results will only occur at the watershed scale.

Your name:

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Phone number or email address:

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Today's date:

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Agricultural business address:

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Name of person who manages your farm:

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Number of acres in agricultural production:

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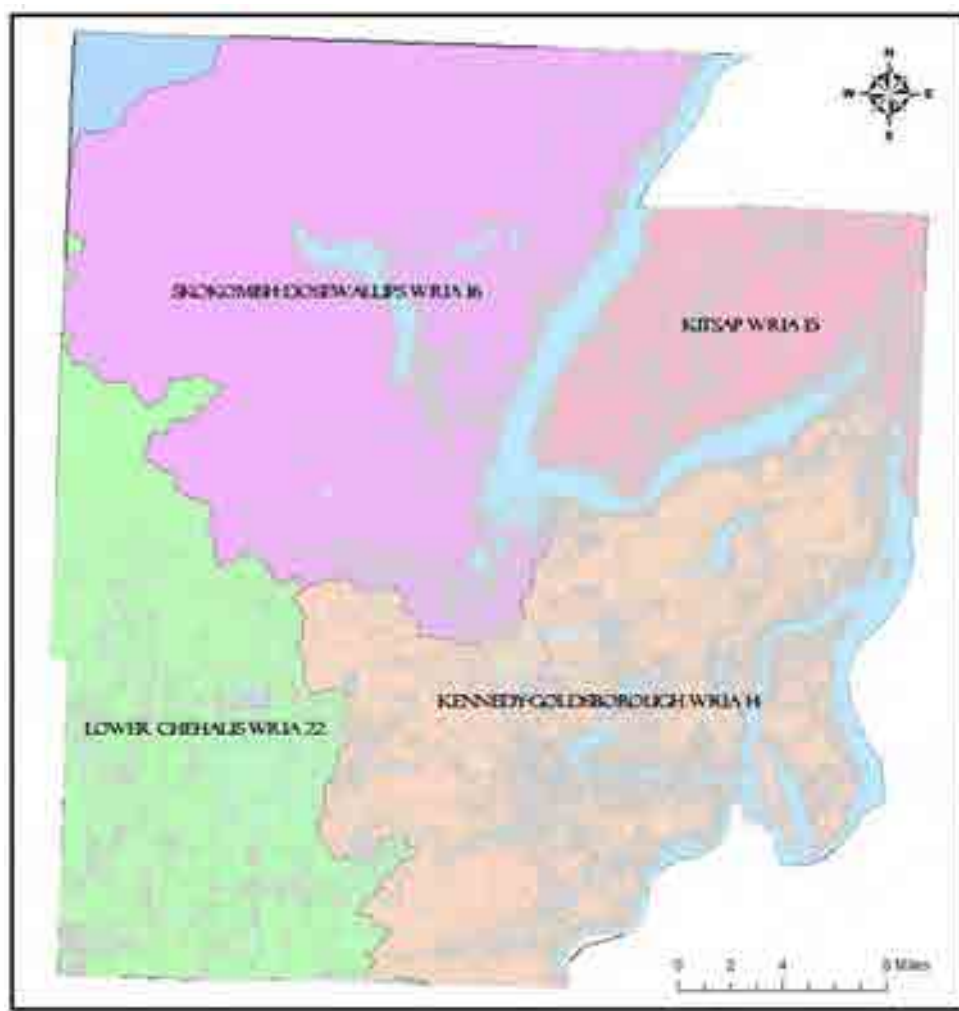
What products do you produce?

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<sup>94</sup>The Washington State Conservation Commission believes that Individual Stewardship Plans are similar to Farm Plans developed by Conservation Districts and are confidential and exempt from disclosure. Policy Advisory #01-17 RCW 42.56.270(17)



**WHAT WRIA IS YOUR AGRICULTURAL PROPERTY LOCATED WITHIN?**

Kennedy-Goldsborough - WRIA 14 ☐

Kitsap - WRIA 15 ☐

Skokomish-Dosewallips - WRIA 16 ☐

Lower Chehalis - WRIA 22 ☐

For online maps and to look up your parcel you can go to <http://www.geodata.org/>

**IDENTIFY POTENTIAL CRITICAL AREAS ON, OR NEAR, PROPERTY:**

Fish and Wildlife Habitat Conservation Areas ☐

Wetlands ☐

Frequently Flooded Areas ☐

### Geologically Hazardous Areas

- Landslide Hazard ☐
- Seismic Hazard ☐
- Erosion Hazard ☐

### Critical Aquifer Recharge Areas ☐

VSP is a voluntary and non-regulatory program. Checking one or more critical areas that may potentially be located on or adjacent to the property does not constitute an official determination of such a feature. It is helpful in filling out the rest of the checklist. If you are unsure you can contact the VSP Coordinator at (360) 427-9436, ext. 104 or you can email [Badkins@masoncd.org](mailto:Badkins@masoncd.org) for assistance.

## **IDENTIFY YOUR CURRENT PARTICIPATION IN VOLUNTARY PROGRAMS THAT ADDRESS ENVIRONMENTAL QUALITY AND AGRICULTURAL VIABILITY:**

- EQIP - Environmental Quality Incentives Program ☐
- CStP - Conservation Stewardship Program ☐
- EWP - Emergency Watershed Protection Program ☐
- EWP FPE - Floodplain Easement ☐
- FRPP - Farm & Ranchland Protection Program ☐
- CREP - Conservation Reserve Enhancement Program ☐
- ECP - Emergency Conservation Program ☐
- Disaster Assistance Program (includes LFP- Livestock Forage Program) ☐
- Mason County Open Space Tax Program ☐
- Existing farm plan through the conservation district or NRCS ☐

Other: \_\_\_\_\_

Try your best to answer the questions and Mason Conservation District Staff can help you with the rest. District staff can perform a site visit to verify the actual extent and location of critical areas on your property and help you develop an ISP for implementing conservation practices and maintaining or improving the long-term viability of your agricultural operation. This can be done through the use of online mapping tools and visual identification.

Using the examples below, begin identifying conservation practices that you are already doing or that you are interested in discussing with the District to meet objectives of the VSP. The examples are only a few of those commonly used that might be implemented in an ISP. Please indicate which conservation practices you are already doing (after the July 22, 2011 baseline) or that you would like to implement, or if it is not applicable to your operation.

For more information, criteria, and other practices please use the link in the footnote below to view the conservation practice standard in the Field Office Technical Guides.<sup>95</sup>

## Fencing



Facilitates conservation objectives by providing means to control movement of animals and people, including vehicles.

I did this after July 22, 2011 ☐

I am interested in this ☐

## Heavy Use Protection Area



Provides a stable, non-eroding surface for areas frequently used by animals, people, and vehicles; protects/improves water quality.

I did this after July 22, 2011 ☐

I am interested in this ☐

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<sup>95</sup><https://efotg.sc.egov.usda.gov>



### Subsurface Drain



A pipe installed beneath the ground surface to collect and/or convey excess water.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Composting Facility



Reduces pollution potential and improves handling characteristics of organic waste solids; produce soil amendments that add organic matter and beneficial organisms, provides slow release plant available nutrients, and improves soil condition.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Access Control



Monitor, manage intensity of use by animals, people, vehicles, equipment with other practices of conservation plan.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Filter Strip



Reduces suspended solids and dissolved contaminants in runoff; reduces suspended solids and contaminants in irrigation tailwater.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Waste Storage Structure Facility



Temporarily store wastes as storage function component of agricultural waste management system.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Pasture/Hayland Planting



Improve/maintain livestock nutrition and health; provide/increase forage supply; reduce soil erosion and improve soil and water quality; produce feedstock for biofuel or energy production; increase carbon sequestration.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Micro-Irrigation System



Efficiently and uniformly apply irrigation water and maintain soil moisture.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Prescribed Grazing



Improve/maintain desired plant species composition; improve/maintain quantity and quality of forage, water, riparian and watershed functions, and food/cover for wildlife, reduce accelerated soil erosion; manage fine fuels loads.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Field Border



Reduce wind/water erosion; protect soil/water quality; provide wildlife food and cover and pollinator or other beneficial organism habitat; increase carbon storage; improve air quality.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Sprinkler Irrigation System



Efficient, uniform water application;  
improve plant condition, productivity,  
health, vigor; improve soil condition;  
reduce particulate matter emissions;  
reduce energy use.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Water Conveyance Pipeline



Conveyance of water from a source of  
supply to an irrigation system or storage  
reservoir, reduce energy use, develop  
renewable energy systems.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Recreation Trail and Walkway



A Trail is a constructed path with a  
vegetated or earthen surface. A walkway is  
a contrasted path with an artificial surface.  
A trail/walkway is used to facilitate the  
movement of animals, people, or off-road  
vehicles.

I did this after July 22, 2011 ☐

I am interested in this ☐



### Surface Drainage - Field Ditch

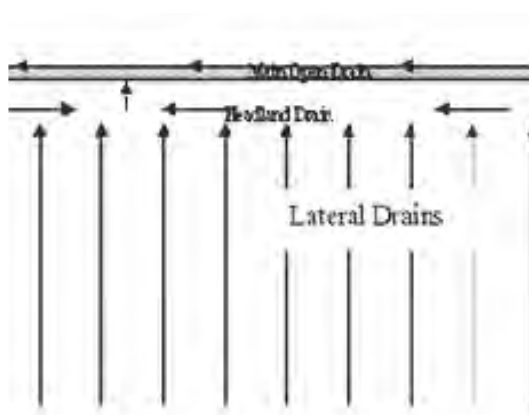


Intercept excess surface and shallow subsurface water from a field, conveying it to a surface main or lateral; collect excess irrigation water for a tailwater reuse system.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Surface Drainage - Main or Lateral



Convey excess surface or shallow subsurface water from field ditch to safe outlet; convey excess subsurface water from subsurface drain to safe outlet.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Waste Facility Cover



Protect clean water in existing or planned animal waste handling or storage area; improve waste management and utilization; protect clean water by excluding it from a chemically contaminated area.

I did this after July 22, 2011 ☐

I am interested in this ☐

## Watering Facility



Supply daily water requirements; improve animal distribution; provide water source as alternative to sensitive resource.

I did this after July 22, 2011 ☐

I am interested in this ☐

## Hedgerow Planting



Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

I did this after July 22, 2011 ☐

I am interested in this ☐

## Herbaceous Weed Control



Enhance accessibility, quantity, quality of forage and/or browse; restore or release plant communities and wildlife habitats consistent with the ecological site; protect soils, control erosion; reduce fine-fuels fire hazard and improve air quality.

I did this after July 22, 2011 ☐

I am interested in this ☐



### Riparian Forest Buffer



Create shade to lower, maintain water temperatures; reduce excess sediment, organic material, nutrients and pesticides in runoff; reduce pesticide drift; restore riparian plant communities; increase carbon storage in plant biomass and soils.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Stream Habitat Management



Provide suitable aquatic habitat; maintain stream corridor ecological processes and hydrological connections of diverse stream habitat types important to aquatic species.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Tree/Shrub Establishment



Establish woody plants for: forest products, habitat, long-term erosion control and water quality, treat waste, store carbon in biomass, reduce energy use, develop renewable energy systems, improve and restore natural diversity, and enhance aesthetics.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Tree/Shrub Site Preparation



Encourage natural regeneration; permit artificial establishment of wood plants.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Wetland Restoration



Restore conditions conducive to hydric soil maintenance, wetland hydrology, native hydrophytic vegetation, original fish and wildlife habitats.

I did this after July 22, 2011 ☐

I am interested in this ☐

### Roof Runoff Structure



Protect surface water quality by excluding roof runoff from contaminated areas; protect structure foundation from water damage or soil erosion from excess water runoff; increase infiltration of runoff water; capture water for other uses.

I did this after July 22, 2011 ☐

I am interested in this ☐

## Stream Crossing



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Access to another land unit; improve water quality by reducing sediment, nutrient, organic and inorganic loading; reduce streambank and streambed erosion.

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I did this after July 22, 2011 ☐

I am interested in this ☐

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The VSP is designed to promote the viability of agriculture over the long term and to avoid unnecessary local critical area regulations due to the prevalence of conservation practices undertaken by willing producers. Farmer and agricultural operators may find funding programs, as previously discussed, and request a field visit to obtain advice on improving viability and to recommended conservation practices.

### **ADDITIONAL INFORMATION AND ASSISTANCE**

If you have any questions or would like more information on how to get involved, contact the VSP Coordinator or visit the VSP website at [www.masoncd.org/vsp](http://www.masoncd.org/vsp). Critical areas exist throughout the County. You can direct questions about the presence of critical areas on your property or any questions on how to get involved to the Mason County VSP Coordinator:

Barbara Adkins, AICP  
Special Programs Manager  
Mason Conservation District  
450 W. Business Park Road  
Shelton, WA 98584 (360) 427-9436, ext 104  
[Badkins@masoncd.org](mailto:Badkins@masoncd.org)