



# Wetlands & Agriculture Report

## Wetlands and GMA

The definition for “**wetlands**” under the GMA consist of:

“...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 nonwetland 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 nonwetland areas created to mitigate conversion of wetlands.”<sup>1</sup>

The methodology used in Washington State to determine the boundaries of a wetland is the 1987 Corps of Engineers Wetland Delineation Manual. Mason County relies on the Washington State Wetland Rating System for evaluating wetland qualities and identifying standards for their protection and management.

Although the Voluntary Stewardship Program (VSP) exempts the farming community from critical area regulations, baseline conditions existing for wetlands as of July 2011, must be maintained. In addition, VSP seeks to encourage voluntary actions that enhance wetlands. However, it is important to note there is no set prescriptive approach for these enhancements.

## Wetlands and Federal Law

It is important to keep in mind that despite the exemptions under state law, federal law regarding the use and conversion of wetlands by agriculture still apply.<sup>2</sup> One aspect of federal law to consider applies to farming operations established on wetlands on or before December 23, 1985:

- ▶ Agricultural operations may continue to farm wetlands as long as they do not increase effects on the water regime. NRCS may grant exceptions if it decides:
  - Changes to the remaining wetland functions would be negligible; or,

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<sup>1</sup> RCW 36.70A.030(21)

<sup>2</sup> 7 CFR 12.33 – Use of wetland and converted wetland



- There was an increase in the water regime on the property that necessitates drainage improvements due to human activity in the rest of the watershed.
- ▶ Maintenance or improvement of drainage systems is allowed as long as such actions do not alter the hydrology of nearby wetlands or increase the scope and effect of the original alteration or manipulation.
- ▶ If farming activities on a wetland cease for five or more consecutive years, the land is considered abandoned. This does not apply to participation in a USDA approved wetland restoration, set-aside, diverted acres, or similar programs. Other exceptions apply.

Wetlands may still be converted to agricultural use under federal law; however, such conversions require extensive mitigation to ensure there is no net loss of

### **Intersection between wetlands and countywide agricultural lands**

Wetlands are present in many areas of the county, but are especially common in the river and stream valleys where agricultural activities occur. In the past, many wetlands were converted to agricultural uses due to their excellent soil qualities for raising crops and livestock pasture.

Because the VSP definition of agriculture is so broad in that it includes commercial and noncommercial farming activities, there is no precise information for the exact number of acres or parcels affected by wetlands. The best “guestimate” available is for those agricultural parcels enrolled in the Open Space Program that *potentially* have wetlands.<sup>3</sup>

**Table 1.** Total acres and number of parcels with wetlands enrolled in the Open Space Program

Acres of agricultural lands with wetlands:	10,266
Number of agricultural parcels with wetlands:	521
Percent total agricultural land acreage with wetlands:	76%

<sup>3</sup> Information about wetlands in the county is available as a GIS layer from the US Fish and Wildlife Service’s National Wetlands Inventory. This data layer identifies parcels that potentially have wetlands on them. The main limitations to this data layer is that it does not always reveal the location of all wetlands and it often shows the presence of wetlands that were converted to agricultural uses long ago.



## Wetland functions and values

Wetlands play a variety of important roles, or *functions*, in the environment. Some of these functions wetlands provide:

- ▶ Filtering sediments, pollutants, & nutrients from reaching surface waters;
- ▶ Slowing water flow on land and along rivers;
- ▶ Absorbing water that is slowly released into groundwater and streams;
- ▶ Supporting fish and wildlife habitat.

These functions in turn create benefits, or *values*, for people and the environment. Wetland functions especially contribute valuable services for maintaining the viability of agriculture. Table 2 provides a summary of these values for agriculture.

**Table 2.** Wetland Functions and Values for Agriculture

Function	Value to Agriculture
▶ Groundwater recharge & streamflow maintenance	• Increases availability of water in streams & rivers for irrigation during dry season
▶ Sediment, nutrient, & chemical capture	• Protects drinking water quality in wells • Filters sediments and other suspended particles from entering streams & lakes, thus avoiding a regulatory response
▶ Flood protection along streams & rivers	• Slows energy of floodwaters that can damage structures & fields • Redirects and stores floodwaters, allowing slower release
▶ Shoreline stabilization	• Provides streambank stabilization & minimizes erosion potential from stream energy
▶ Habitat for fish & wildlife	• Pest control by wildlife • Access to fishing & hunting • Avoidance of ESA/PHS listings

It is important to note that not all wetlands perform all functions, nor do they perform all functions equally well.

## Protection and Enhancement of Wetlands by Agriculture through Voluntary BMPs

The Voluntary Stewardship Program (VSP) requires agriculture to ensure the protection of wetlands as they existed from July 2011 onward. VSP also encourages agriculture to enhance wetlands with voluntary actions through a variety of best management



practices (BMPs). BMPs reduce crop and livestock impacts on wetlands, and in many cases, can help increase the productivity and profitability of agriculture.

The National Resource Conservation Service (NRCS) has developed a series of BMPs known as “conservation practice standards.” Conservation practice standards are established nationally to provide broad guidance for applying conservation technology on the land and to set the minimum levels for acceptable application of the technology. NRCS conservation practices are science-based tools designed to protect soil, water, air, plants, animals, and humans, along with their associated environments.

Although these BMPs are normally associated with and implemented through NRCS and local conservation district programs, any agricultural operator can, and often do, implement these practices on their own. Table 3 summarizes typical NRCS conservation practices typically associated with wetland enhancement or protection.

**Table 3.** NRCS Voluntary Best Management Practices Associated with Wetland Protection & Enhancement

<b>Voluntary BMPs</b>	<b>Action</b>	<b>Purpose</b>
<b>Channel stabilization</b>	Stabilizing the channel of a stream with suitable structures	<ul style="list-style-type: none"> <li>▪ Maintain or alter channel bed elevation or gradient</li> <li>▪ Modify sediment transport or deposition</li> <li>▪ Manage surface water &amp; ground water levels in floodplains, riparian areas, &amp; wetlands</li> </ul>
<b>Channel bank vegetation</b>	Establishing & maintaining adequate plant densities on channel banks, berms, spoil, & associated areas.	<ul style="list-style-type: none"> <li>▪ Stabilize channel banks &amp; adjacent areas &amp; reduce erosion &amp; sedimentation using vegetation</li> <li>▪ Maintain or enhance the quality of the environment, including visual aspects</li> <li>▪ Enhance fish &amp; wildlife habitat</li> </ul>
<b>Constructed wetland</b>	A wetland that has been constructed for the primary purpose of water quality improvement	<ul style="list-style-type: none"> <li>▪ Treat wastewaters through the biological &amp; mechanical activities of a constructed wetland</li> </ul>
<b>Critical area planting</b>	Establishing permanent vegetation on sites that have or are expected to have high soil erosion rates, & on sites that have physical, chemical	<ul style="list-style-type: none"> <li>▪ Stabilize areas with existing or expected high rates of soil erosion by water</li> <li>▪ Stabilize areas with existing or expected high rates of soil erosion by wind</li> <li>▪ Restore degraded sites that cannot be stabilized through normal methods</li> </ul>



Voluntary BMPs	Action	Purpose
	or biological conditions that prevent the establishment of vegetation with normal practices	
<b>Fence</b>	A constructed barrier to livestock, wildlife or people	<ul style="list-style-type: none"> <li>▪ Applied as part of a conservation management system to facilitate the application of conservation practices that treat the soil, water, air, plant, animal &amp; human resource concerns</li> </ul>
<b>Filter strip</b>	A strip or area of vegetation for removing sediment, organic matter, & other pollutants from runoff & wastewater	<ul style="list-style-type: none"> <li>▪ Reduce sediment, particulate organics, &amp; sediment adsorbed contaminant loadings in runoff</li> <li>▪ Reduce dissolved contaminant loadings in runoff</li> <li>▪ Reduce sediment, particulate organics, &amp; sediment adsorbed contaminant loadings in surface irrigation tailwater</li> <li>▪ Restore, create or enhance herbaceous habitat for wildlife &amp; beneficial insects</li> <li>▪ Maintain or enhance watershed functions &amp; values</li> </ul>
<b>Fish passage</b>	Modification or removal of barriers that restrict or impede movement of fish	<ul style="list-style-type: none"> <li>▪ Improve or provide passage for aquatic organisms</li> </ul>
<b>Heavy use area protection</b>	The stabilization of areas frequently & intensively used by people, animals or vehicles by establishing vegetative cover, by surfacing with suitable materials, &/or by installing needed structures	<ul style="list-style-type: none"> <li>▪ Reduce soil erosion</li> <li>▪ Improve water quantity &amp; quality</li> <li>▪ Improve air quality</li> <li>▪ Improve aesthetics</li> <li>▪ Improve livestock health</li> </ul>
<b>Irrigation water management</b>	process of determining & controlling the volume, frequency, and application rate of irrigation water	<ul style="list-style-type: none"> <li>▪ Improve irrigation water use efficiency</li> <li>▪ Minimize irrigation induced soil erosion</li> <li>▪ Decrease degradation of surface &amp; groundwater resources</li> <li>▪ Manage salts in the crop root zone</li> </ul>



Voluntary BMPs	Action	Purpose
<b>Nutrient management</b>	Managing the amount, source, placement, form and timing of the application of nutrients and soil amendments	<ul style="list-style-type: none"> <li>▪ Manage air, soil, or plant micro-climate</li> <li>▪ Reduce energy use</li> <li>▪ Budget and supply nutrients for plant production</li> <li>▪ Minimize the potential for environmental damage including agricultural nonpoint source pollution of surface and ground water resources.</li> <li>▪ Maintain or improve the physical, chemical and biological condition of soil</li> <li>▪ Properly utilize all sources of organic material, including animal waste, as a plant nutrient source</li> <li>▪ Prevent or reduce excess nutrient concentrations in the soil</li> </ul>
<b>Pest management</b>	Utilizing environmentally sensitive prevention, avoidance, monitoring & suppression strategies, to manage weeds, insects, diseases, animals & other organisms (including invasive & noninvasive species), that directly or indirectly cause damage or annoyance	<ul style="list-style-type: none"> <li>▪ Enhance quantity and quality of crops grown for food and fiber</li> <li>▪ Minimize negative impacts of pest control on soil resources, water resources, air resources, plant resources, animal resources and/or humans</li> </ul>
<b>Prescribed grazing</b>	The controlled harvest of vegetation with grazing or browsing animals, managed with the intent to achieve a specified objective	<ul style="list-style-type: none"> <li>▪ Reduce accelerated soil erosion &amp; maintain or improve soil condition for sustainability of the resource</li> <li>▪ Maintain or improve water quality &amp; quantity</li> <li>▪ Provide or maintain food, cover &amp; shelter for animals of concern</li> <li>▪ Improve or maintain animal health &amp; productivity</li> <li>▪ Improve or maintain the health &amp; vigor of selected plant(s) &amp; to maintain a stable &amp; desired plant community</li> <li>▪ Attain grazing &amp; management efficiency to promote economic stability</li> </ul>



<b>Voluntary BMPs</b>	<b>Action</b>	<b>Purpose</b>
<b>Riparian forest buffer</b>	An area of predominantly trees &/or shrubs located adjacent to & up-gradient from watercourses or water bodies	<ul style="list-style-type: none"> <li>▪ Create shade to lower water temperatures</li> <li>▪ Provide a source of detritus &amp; large woody debris for aquatic &amp; terrestrial organisms</li> <li>▪ Create wildlife habitat &amp; establish wildlife corridors</li> <li>▪ Reduce excess amounts of sediment, organic material, nutrients &amp; pesticides in surface runoff &amp; reduce excess nutrients &amp; other chemicals in shallow ground water flow</li> <li>▪ Produce a timber, fiber, forage, fruit, or other crop consistent with other intended purposes</li> <li>▪ Provide protection against scour erosion within the floodplain</li> <li>▪ Restore natural riparian plant communities</li> <li>▪ Moderate winter temperatures to reduce freezing of aquatic over-wintering habitats</li> <li>▪ Increase carbon storage</li> </ul>
<b>Riparian herbaceous cover</b>	Grasses, grass-like plants & forbs that are tolerant of intermittent flooding or saturated soils & that are established or managed in the transitional zone between terrestrial & aquatic habitats	<ul style="list-style-type: none"> <li>▪ Provision of food, shelter, shading substrate, access to adjacent habitats, nursery habitat &amp; pathways for movement by resident &amp; nonresident aquatic, semi-aquatic &amp; terrestrial organisms.</li> <li>▪ Improve &amp; protect water quality by reducing the amount of sediment &amp; other pollutants, such as pesticides, organic materials &amp; nutrients in surface runoff as well as nutrients &amp; chemicals in shallow ground water flow.</li> <li>▪ Help stabilize stream banks &amp; shorelines.</li> <li>▪ Increase net carbon storage in the biomass &amp; soil</li> </ul>
<b>Stream habitat improvement &amp; management</b>	Treatment(s) used to maintain, improve, or restore physical, chemical & biological functions of a stream.	<ul style="list-style-type: none"> <li>▪ Provide suitable habitat for desired aquatic species &amp; diverse aquatic communities</li> <li>▪ Provide channel morphology &amp; associated riparian characteristics important to desired aquatic species</li> <li>▪ Provide aesthetic values &amp; recreation opportunities associated with stream habitats such as angling &amp; fish &amp; wildlife viewing</li> </ul>



<b>Voluntary BMPs</b>	<b>Action</b>	<b>Purpose</b>
<b>Streambank &amp; shoreline protection</b>	Treatment(s) used to stabilize & protect banks of streams or constructed channels, & shorelines of lakes, reservoirs, or estuaries	<ul style="list-style-type: none"> <li>▪ Prevent the loss of land or damage to land uses, or other facilities adjacent to the banks, including the protection of known historical, archeological, &amp; traditional cultural properties</li> <li>▪ Maintain the flow or storage capacity of the water body or to reduce the offsite or downstream effects of sediment resulting from bank erosion</li> <li>▪ Improve or enhance the stream corridor for fish &amp; wildlife habitat, aesthetics, recreation</li> </ul>
<b>Tree/shrub establishment</b>	Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.	<ul style="list-style-type: none"> <li>▪ Provide forest products</li> <li>▪ Provide wildlife habitat</li> <li>▪ Establish long-term erosion control &amp; improvement of water quality</li> <li>▪ Provide waste treatment</li> </ul>
<b>Use exclusion</b>	Excluding animals, people or vehicles from an area	<ul style="list-style-type: none"> <li>▪ Prevent, restrict, or control access to an area to maintain or improve the quantity &amp; quality of natural resources or minimize liability &amp; human health concerns</li> </ul>
<b>Waste storage facility</b>	Impoundment or containment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure	<ul style="list-style-type: none"> <li>▪ Store manure, agricultural by-products, wastewater, and contaminated runoff to provide the agricultural operation management flexibility for waste utilization</li> </ul>
<b>Watering facility</b>	A device (tank, trough, or other watertight container) for providing animal access to water	<ul style="list-style-type: none"> <li>▪ Protect &amp; enhance vegetative cover through proper distribution of grazing</li> <li>▪ Provide erosion control through better grassland management</li> <li>▪ Protect streams, ponds &amp; water supplies from contamination by providing alternative access to water</li> </ul>
<b>Wetland creation</b>	The creation of a wetland on a site that was historically non-wetland	<ul style="list-style-type: none"> <li>▪ Create wetland functions &amp; values</li> </ul>





Voluntary BMPs	Action	Purpose
<b>Wetland restoration</b>	Rehabilitation of a drained or degraded wetland where the soils, hydrology, vegetative community, & biological habitat are returned to the natural condition to the extent practicable	<ul style="list-style-type: none"> <li>Used to restore hydric soil conditions, hydrologic conditions, hydrophytic plant communities, &amp; wetland functions that occurred on the disturbed wetland site prior to modification to the extent practicable</li> </ul>
<b>Wetland wildlife habitat management</b>	Retaining, developing, or managing habitat for wetland wildlife	<ul style="list-style-type: none"> <li>Maintain, develop, or improve habitat for waterfowl, fur-bearers, or other wetland associated flora &amp; fauna</li> </ul>

### Programs Providing Financial Incentives for Protecting & Enhancing Wetlands

Agricultural operators can access a variety of federal, state, and local programs that provide financial incentives for protecting or enhancing wetlands on the lands they work. These programs typically focus on supporting the implementation of BMPs or setting aside conservation areas that benefit wetlands. Acceptance of financial assistance typically requires adherence to set standards. For example, a program assisting with fencing likely will require a buffer of a set distance.

**Table 4.** Federal, State, and Local Agricultural Conservation Programs for Wetlands

Program	Description
<b>NRCS • Agricultural Conservation Easement Program (ACEP)</b>	<p>Program provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits.</p> <ul style="list-style-type: none"> <li>The <b>Wetland Reserve Easement</b> provides technical &amp; financial assistance to private landowners to restore, protect, &amp; enhance wetlands through the purchase of a wetland reserve easement (permanent, 30-year, &amp; term easements)</li> <li>The <b>Wetland Reserve Enhancement Partnership</b> is voluntary program for eligible partners to leverage resources to carry out high priority wetland protection, restoration and enhancement and to improve wildlife habitat. Actions include: <ul style="list-style-type: none"> <li>Wetland restoration and protection in critical areas</li> <li>Ability to cost-share restoration or enhancement beyond NRCS requirements through leveraging</li> <li>Able to participate in the management or monitoring of selected project locations</li> </ul> </li> </ul>



Program	Description
	<ul style="list-style-type: none"> <li>○ Ability to use innovative restoration methods and practices</li> </ul>
<b>NRCS • Conservation Stewardship Program (CSP)</b>	<p>The Conservation Stewardship Program (CSP) is a voluntary conservation program that helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Participants earn CSP payments for conservation performance—the higher the performance, the higher the payment. CSP is available to all producers, regardless of operation size or type of crops produced. Producers must have effective control of the land for the term of the proposed contract.</p>
<b>NRCS • Environmental Quality Incentives Program (EQIP)</b>	<p>Provides financial and technical assistance to agricultural producers through contracts up to a maximum term of ten years in length. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland.</p> <ul style="list-style-type: none"> <li>▪ The <b>Conservation Innovation Grants (CIG)</b> uses EQIP financial assistance to stimulate the development &amp; adoption of innovative conservation approaches &amp; technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production.</li> </ul>
<b>FSA • Conservation Reserve Program (CRP)</b>	<p>Land conservation program administered by the Farm Service Agency (FSA). In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are 10-15 years in length. The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat.</p>
<b>FSA • Farmable Wetlands Program</b>	<p>The Farmable Wetlands Program (FWP) is designed to restore previously farmed wetlands and wetland buffer to improve both vegetation and water flow. FWP is a voluntary program to restore up to one million acres of farmable wetlands and associated buffers. Participants must agree to restore the wetlands, establish plant cover, and to not use enrolled land for commercial purposes. Plant cover may include plants that are partially submerged or specific types of trees.</p>



Program	Description
<b>GHCD • Conservation Reserve Enhancement Program (CREP)</b>	The Conservation Reserve Enhancement Program (CREP) is a part of the Conservation Reserve Program (CRP). CREP targets high-priority conservation concerns identified by the state, and federal funds are supplemented with non-federal funds to address those concerns. In exchange for removing environmentally sensitive land from production and establishing permanent resource conserving plant species, farmers and ranchers are paid an annual rental rate along with other federal and state incentives as applicable per each CREP agreement. Participation is voluntary, and the contract period is typically 10–15 years.
<b>GHCD • Cost Share Programs</b>	Covers a portion of the cost for landowners to install NRCS BMP projects that improve natural resource management and sustainability
<b>RCO • Salmon Recovery Grant</b>	The Recreation and Conservation Office offers multiple grant programs for salmon recovery to restore damaged habitat, fix barriers to fish migration, & conserve pristine habitat. Grant applicants must contribute a minimum of 15 percent of the cost of the project.

There are alternate sources of non-governmental financial assistance that can assist agricultural operators in implementing protection and enhancement strategies. While these sources generally are not accessible by individuals, the Conservation District, local organizations, and salmon recovery Lead Entities can develop and secure grants from them to fund conservation programs. These alternate funding sources can include:

- ▶ *Philanthropic and community foundations* are legally required to give away at least 5 percent of their assets annually to qualify for foundation status.
- ▶ *Not-for-profit organizations* sometimes have programs to provide financial or in-kind support for projects that help them to fulfill their goals.
- ▶ *Public/Private partnerships* combine public and private efforts to fund projects or meet environmental goals
- ▶ *Corporations* give funds through two mechanisms—corporate foundations and operating funds. Corporate foundations operate in a manner similar to other foundations and are frequently listed in foundation directories. Corporate operating funds are usually allocated through their community relations office.

