



Chapter Four: Protection & Enhancement Strategies

Agricultural producers are key to ~~play a major role in~~ the stewardship and management of private lands and resources within Columbia County and Washington State. Agricultural producers are continually evaluating ~~improving~~ agricultural practices, applying new science and technology, and implementing stewardship strategies and practices which generally reduce agricultural impacts on critical areas and improve our natural resources. In addition, these practices maintain or increase the viability of the agricultural economy. In Columbia County, for generations, agricultural producers have adopted practices to address a variety of resource concerns, including practices to improve habitat, reduce soil erosion and improve soil and water quality.

This chapter introduces the connection between stewardship strategies and practices and critical areas functions and values. See the figure below. Additionally, this chapter discusses stewardship strategies and practices that have been implemented since 2011 (the baseline date), highlighting protections to critical areas and associated functions and values these practices are already providing.

VSP Crosswalk - Functions and Values Connection with Stewardship Practices



4.1 Examples of Stewardship Strategies & Practices that Protect Critical Areas

As discussed in Chapter 2, key critical areas functions include water quality, hydrology, soil health and habitat. Many stewardship strategies and practices have been developed ~~adopted~~ within Columbia County that provide a wealth of benefits to these critical areas functions, ~~in addition to~~ while maintaining the viability of agriculture.

VSP Checklist

The VSP Checklist is a helpful tool to help assess how the VSP could support individual agricultural producers. It includes additional examples of stewardship strategies and practices that protect and enhance critical areas and promote agricultural viability.

Participation in Funded Programs

Federal, state and local government, and private-sector programs and opportunities are available to support producers in addressing agricultural and resource concerns. See Chapter 6 for additional resources and technical assistance available to agricultural producers on a voluntary basis. ***Participation in a government-funded program is not required to be a VSP participant.***

Table 4-1 summarizes some examples of practices that have been applied by agricultural producers in the County under NRCS programs. This table helps illustrate the types of practices that have been or can be implemented to protect critical areas functions. As noted in the table, these examples also address the promotion of agricultural viability. Additionally, a VSP Checklist has been developed for agricultural producers to determine how the VSP could support their farm operations by promoting agricultural viability while protecting critical area functions. See Appendix C for a more comprehensive “toolbox” of example practices that have been or could be implemented by agricultural producers in the County.

Table 4-1

Example of Stewardship Strategies & Practices	Description	Critical Area Functions		Agricultural Viability
Residue and Tillage Management	Managing crop and plant residue and limiting soil disturbance (e.g. <u>direct seed</u> or reduced-till)	Water Quality	~ Reduces runoff and erosion ~ Reduces transport of nutrients and sediment	~ Soil quality & conservation ~ Weed mgt ~ Yield & fertility
		Hydrology	~ Increases infiltration and decreases evapotranspiration to increase water availability <u>to crops</u>	
		<u>Soil</u>	~ <u>Maintains & improves soil structure &</u> increases cover to reduce wind and water erosion	
		Habitat	~ Provides food & cover for wildlife ~ Increases water availability	
<u>Integrated Pest Management</u>	Managing pesticide use to <u>minimize environmental impact</u>	Water Quality	~ <u>Pesticide choice to minimize impact on</u> surface and groundwater	~ Soil quality & conservation ~ Weed mgt ~ Pollinator/beneficial organisms
		Soil	~ Decreases wind and water erosion	
		Habitat	~ Reduces the <u>bio-accumulation of pesticides on habitats</u>	
Nutrient Management	Managing application of nutrients to minimize loss to runoff	Water Quality	~ Residual nutrients in surface and groundwater due to matching plant needs to the amount, timing and placement of nutrients	~ Soil quality & conservation ~ Weed mgt ~ Yield & fertility
		Habitat	~ Optimizes health and vigor of desired plant species ~ Increases food and cover for wildlife	
<u>Delete this entire example</u> Cover Crop	Planting grasses, legumes and forbs for seasonal cover	Water Quality	~ Reduces runoff and erosion ~ Reduces transport of nutrients and sediment	~ Soil quality & conservation ~ Weed mgt ~ Yield & fertility ~ Pollinator/beneficial organisms
Hydrology	~ Increases infiltration and decreases evapotranspiration to increase water availability			
Soil	~ Reduces soil disturbance and increases cover to reduce wind and water erosion			
Habitat	~ Provides food & cover for wildlife ~ Improves health of plant species			

4.2 Changes Since 2011 Baseline

Since 2011, agricultural producers have implemented practices that provide protections and enhancements to critical areas and promote agricultural viability through private projects and projects funded by government agencies. One of the key purposes of the VSP and this Work Plan is to leverage existing resources by relying on existing local work and plans, existing private-sector activities and government programs to achieve Work Plan goals (as per RCW 36.70A.700 (2)).

The following sections summarize documented stewardship strategies and practices that have been implemented since 2011 which have protected and/or enhanced critical area functions and improved agricultural viability over baseline conditions.

These documented practices likely represent only a fraction of all the stewardship strategies and practices that have been implemented since 2011. ~~because~~ Many agricultural producers in Columbia County implement practices independent of government programs. Accounting for these improvements would require an extensive self-reporting and documentation processes that are not yet in place and are not economically feasible. Additionally, it should be acknowledged that during this same time, there are likely some practices which have been discontinued.

It is expected that stewardship strategies and practices, such as fencing and stock watering facilities, will see very little discontinuation due to their capital investment. Less than 3% per year of these types of practices are anticipated to be discontinued or removed each year. There are other stewardship strategies and practices (such as pest and nutrient management) where a slightly higher rate of discontinuation (6%) is anticipated. See Table 4-2 for the various estimated disenrollment rates that are anticipated. See Chapter 5.2 for a discussion on how these anticipated disenrollment rates are considered in establishing the Work Plan's protection and enhancement benchmarks.

Programs may see a higher reduction in enrollment with the expiration of long-term government contracts, such as the Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP), that temporarily enhance wildlife habitat. However, this will occur on agricultural lands historically cultivated and may not have been part of designated critical areas. Measures and systems are typically put in place when lands are returned to production to conserve resources and protect affected critical areas adjacent to lands no longer enrolled in CRP (see Chapter 4.2.3 for additional CRP information).

Table 4-2

Anticipated Range of Disenrollment or Discontinuation	Stewardship Strategies and Practices Category	Example Practices
None	<p>Easements & Infrastructure</p> <ul style="list-style-type: none"> ~ Permanent stewardship strategies and practices 	<ul style="list-style-type: none"> ~ Permanent easements ~ Major infrastructure
Lower 0-3%	<p>Conservation Investments</p> <ul style="list-style-type: none"> ~ High Barriers to Entry or Exit <ul style="list-style-type: none"> - Conservation easements - Maintenance cost - Effectiveness ~ Increases land productivity ~ Lowers costs 	<ul style="list-style-type: none"> ~ Irrigation management ~ Watering facilities ~ Fencing
Higher 0-6%	<p>Conservation Actions</p> <ul style="list-style-type: none"> ~ Low Barriers to Entry or Exit <ul style="list-style-type: none"> - Easily removed ~ Reduced land in production ~ Rotational use <ul style="list-style-type: none"> - Market-driven rotation ~ Reliance on unstable conservation funding or incentives (e.g. Conservation Reserve Program and CREP) 	<ul style="list-style-type: none"> ~ Tillage management ~ Pest management ~ Nutrient management ~ Habitat restoration ~ Managed grazing ~ Cover crop ~ Range planting

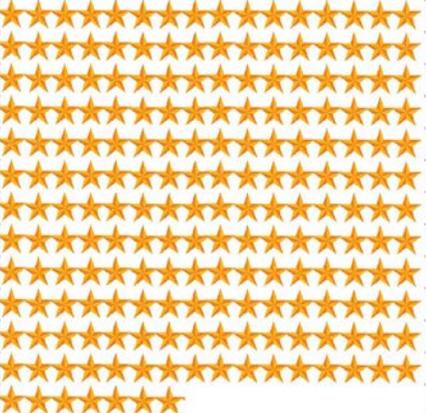
4.2.1 NRCS Conservation Practices

Conservation projects have been implemented over 14,000 acres in Columbia County since 2011 through NRCS-funded programs on agricultural lands. The top practices that have been implemented include projects that protect water quality, reduce soil erosion and enhance soil quality, such as nutrient and pest management, access control, livestock watering and cover crops. As summarized in Table 4-1 (above), these practices also promote agricultural viability.

Figure 4-2 provides a summary of top NCRS practices implemented under the Environmental Quality Incentives Program (EQIP), Wildlife Habitat Improvement Program (WHIP), and Agricultural Water Enhancement Program (AWEP) for number of projects and acreages.

VSP definitions determine whether a stewardship activity or project qualifies as a protection or an enhancement under the VSP. Under the VSP definitions “enhance...means to improve the processes, structure and functions existing as

Figure 4-3
NRCS Practices Implemented under CSP from 2011 to 2016

CSP Conservation Practice	Acres Affected	Projects Implemented
Pest Management		20,375 11
Nutrient Management		14,130 4
Integrated Pest Mgt		2,379 1
Livestock Pipeline		523 3
Tree/Shrub Establishment		13 2

(each star represents 100 acres)

4.2.2 Conservation District-led Projects

Numerous other projects have also been implemented through the local conservation district (CD) and are often funded directly by the CD or through programs administered by other agencies. Major stewardship strategies and practices implemented by the CD include Conservation Planning (which must be done in order to implement practices from NRCS or FSA. The District does not require them yet, but may in the future.), Cultural Resource Evaluations (which is required for any project with ground disturbing activities (Governors Executive order 0505), Residue and Tillage Management (#329), Nutrient Management (#590), Fencing (#382), Watering Facilities (#614), Heavy Use Area Protection (#561), Riparian Forest Buffer (#391), Stream Habitat Improvement and Management (#395) and Upland Wildlife Habitat Management (#645).

Table 4-3 below summarizes those projects. These projects provide further protection and enhancement of critical area functions and values.

Table 4-3
Conservation Practices Implemented by the Local CD from 2011 to 2016

NOTE TO READERS: This section is still under consideration. It is unclear if any information we may place here would differ from the Figure 4-2 and Figure 4-3 above. If it's the same, then we don't need this separate table?

Not by much. We could use fencing, riparian forest buffer, stream habitat improvement if we want to have a small short table. Or we could use the similar practices to show we do them as well and are adding to the total acres of the implemented practices. What are your thoughts?

In addition to the above, there are other efforts which have been implemented that are effective stewardship strategies and practices. **These include**

NOTE TO READERS: This section is still under consideration. Question: Are there other efforts besides the ones already shown? Yes, but unless there is a way to self certify or a way to give the producers credit, we may not be able to actually say what they are and have proof to back it up.

4.2.3 Conservation Reserve Program

NOTE TO READERS: This section is still under construction The Conservation District has had a difficult time obtaining numbers from FSA,

but will be able to have something for our next meeting. It is suggested that we should input info about CREP in this section/ subsection. The info Justin will give us is up to date until 10/1/2018. Just as a side note, FSA goes by program year, example – 2018 program year is from 10/01/17 to 9/30/18. Justin will have the numbers of CRP and CREP acres (as best we can according to FSA, the reports are questionable) from program years 2011 – present. For our baseline, Justin will be tallying up contracts from 2000 to 2010 because it is not a simple easy report to get acres for these programs. Also, most info is spotty before 2006 ish.

Congress created the CRP in the 1985 Farm Bill as a land conservation program to address concerns over soil erosion and as a cropland retirement mechanism to help a struggling farm economy due to the large surplus of crops. The CRP is managed by the Farm Service Agency (FSA) and is a federally-funded program that pays a yearly rental amount in exchange for farmers removing cropland from agricultural production and establishing native plant species. Acres enrolled in CRP vary from year to year, depending upon the availability of federal funding.

Federal funding for land retirement programs (like CRP) has been decreasing in recent years, while spending on performance-based programs like the CSP, EQIP and the Conservation Reserve Enhancement Program (CREP) has increased. **Need help with these quantities: CRP acreage in Columbia County decreased by approximately _____ acres between 2011 (_____ acres) and 2016 (_____ acres).** *These numbers may be harder to get due to the reason why acreage has decreased. Example – new mapping technology has generally decreased most contracts by an acre or two, or lands have transferred to public, or split up between parties and the District does not have current contracts of such things. Justin will do what he can and add/subtract changes and try to get an average for the past 3 year sign ups.* Much of the land coming out of CRP in the County is transitioned into other stewardship strategies (e.g. direct seeding and reduced tillage). Additionally, these CRP lands are federally classified as agricultural lands and per the Shoreline Management Act (RCW 90.58.065) “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” is also an agricultural activity.

Accordingly, CRP lands with temporary habitat improvements have been determined through the VSP process to not be designated as critical areas in Columbia County. Habitat benefits from CRP lands are included in VSP as enhancements and the level of CRP-base enhancement varies based upon the public funding available and how this translates into acres enrolled in the program in a given year. For the 2011 baseline condition, this land was accounted for as agricultural land with temporary habitat enhancements benefits, not as a critical area that would need to be protected or offset by other stewardship strategies and practices to meet protection benchmarks. CRP will be

accounted for in the enhancement benchmark as a reported value for each year CRP acreage is enrolled, on a county basis.

Producers with expiring CRP contracts are encouraged to renew or transition into higher priority practices (e.g., direct seeding, CSP, field-edge filter strips, wetland restoration) while maintaining agricultural viability through self-funded efforts, or through public partnership programs, as applicable. Agricultural viability can be affected by CRP when it reduces the amount of land in agricultural production and the economic viability of local businesses which support agricultural viability.

4.2.4 Other Programs

Additional programs, entities and agencies that support farmers in implementing stewardship strategies and practices are further described in Chapter 6.4. Technical assistance is available from the Columbia County Cattlemen's Association, the Columbia County Farm Bureau, the Washington Association of Wheat Growers and the Washington State University Extension Service. Additional technical assistance and stewardship programs and incentives are also provided through Washington State Department of Ecology, Washington State Department of Fish and Wildlife and the Washington State Conservation Commission and through private lands programs such as the Farmed Smart Partnership and Aquatic Land Enhancement Account.

Here is a link to NRCS practice numbers. It doesn't matter which program, CSP, EQIP, etc that the practices are through in NRCS, they should all be labeled/numbered the same from this link.

<https://efotg.sc.egov.usda.gov/toc.aspx?CatID=16204>