Lewis County

Voluntary Stewardship Work Plan

September 17, 2018

VSP Submittal Checklist

Required Elements for the VSP Work Plan

RCW 36.70A.720 (1) requires each Voluntary Stewardship Program (VSP) Work Plan to address the following elements:

Element	Work Plan Location
(a) Review and incorporate applicable: • Water quality data and plans • Watershed management plans • Farmland protection data and plans • Species recovery data and plans	See each critical area goal and action plan, pages 11 - 25 Appendix F • Included in each subbasin profile and F-92 - 94 • Begins on page F-89 • Begins on page F-96 • Begins on page F-83
(b) Seek input from tribes, agencies, and stakeholders	Appendix A, page A-2
(c) Develop goals for participation by agricultural operators conducting commercial and noncommercial agricultural activities in the watershed necessary to meet the voluntary protection and enhancement benchmarks of the Work Plan	Chapter Two, Goals, Actions Plans, and Benchmarks, pages 10 through 36
(d) Ensure outreach and technical assistance is provided to agricultural operators in the watershed	Chapter Four, Outreach & Participation, pages 42 through 50 Appendix B, Individual Stewardship Plans
(e) Create measurable benchmarks that within ten years after receipt of funds, are designed to result in: (i) The protection of critical area functions and values (ii) The enhancement of critical area functions and values through voluntary incentive-based measures	Chapter Two, Goals, Actions Plans, and Benchmarks, pages 10 through 36
(f) Designate the entity or entities that will provide technical assistance	Chapter Three, Work Plan Implementation, page 37
(g) Work with the entity providing technical assistance to ensure that individual stewardship plans contribute to the goals and benchmarks of the Work Plan	Chapter Four, Outreach & Participation, pages 42 through 50 Appendix B, Individual Stewardship Plans

Element	Work Plan Location
(h) Incorporate into the Work Plan existing development regulations relied to achieve the goals and benchmarks for protection	Frequently flooded areas, page 20 Appendix E, Summary of Regulatory Framework Applying to Agricultural Lands & Activities
(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 voluntary protection and enhancement benchmarks developed for the watershed	Chapter Five, Monitoring, Adaptive Management, & Reporting Requirements, page 51 - 61
(j) Conduct periodic evaluation, institute adaptive management, and provide a written report of the status of plans and accomplishments to the county and the commission within sixty days after the end of each biennium	Chapter Five, Monitoring, Adaptive Management, & Reporting Requirements • Baseline Monitoring Schedule, page 54 • VSP Reporting Requirements, page 60 - 61
(k) Assist state agencies in their monitoring programs	Chapter Five, Monitoring, Adaptive Management, & Reporting Requirements • Cooperative Monitoring with Other Entities, page 59
(l) Satisfy any other reporting requirements of the program	Chapter Five, Monitoring, Adaptive Management, & Reporting Requirements • VSP Reporting Requirements, page 60

Acknowledgements

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Abbreviations

CARA ..... Critical Aquifer Recharge Area
County ..... Lewis County
DNR ..... Washington State Department of Natural Resources
ECY ..... Washington Department of Ecology
ESA ..... Endangered Species Act
FEMA ..... Federal Emergency Management Agency
FFA ..... Frequently Flooded Area
FIRM ..... Flood Insurance Rate Map
FOTG ..... Field Office Technical Guide
FWHCA ..... Fish and Wildlife Habitat Conservation Area
GHA ..... Geologically Hazardous Area
GIS ..... Geographic Information System
GMA ..... Growth Management Act
HRCD ..... High Resolution Change Detection
ISP ..... Individual Stewardship Plan
LCC ..... Lewis County Code
LCD ..... Lewis Conservation District
MOU ..... Memorandum of Understanding
NASS ..... National Agricultural Statistics Service
NDVI ..... Normalized Difference Vegetation Index
NFIP ..... National Flood Insurance Program
NRCS ..... Natural Resources Conservation Service
NWI ..... National Wetlands Inventory
RCW ..... Revised Code of Washington
TMDL ..... Total Maximum Daily Load
USDA ..... U.S. Department of Agriculture
USFWS ..... United States Fish and Wildlife Service
USGS ..... U.S. Geological Survey
VSP ..... Voluntary Stewardship Program
WAC ..... Washington Administrative Code
WDFW ..... Washington Department of Fish and Wildlife
WDOH ..... Washington Department of Health
WRIA ..... Water Resource Inventory Area
WSCC ..... Washington State Conservation Commission
WSDA ..... Washington State Department of Agriculture

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Introduction

Backdrop to VSP

Under the Growth Management Act (GMA), counties are required to protect critical areas and conserve agricultural lands of long-term commercial significance.

Critical areas under GMA are lands that support unique natural environments or contain natural hazards. Critical areas requiring protection under GMA include:

- Wetlands
- Frequently flooded areas
- Fish & wildlife habitat conservation areas
- Critical aquifer recharge areas
- Geologically hazardous areas

Poor management practices on critical area lands can jeopardize public safety as well as important natural resources that are important to the cultural and economic well-being of our state.

Conserving agricultural lands is equally important under GMA. Agriculture on a commercial and noncommercial scale contributes to feeding our nation and the world. It has, and continues to play, an essential role in the history, culture, and economy of the State of Washington.

Because critical areas and agricultural lands often overlap with one another, and with each having equal importance under GMA, finding the right balance for accommodating the needs of both can be a challenge for counties. Reconciling this challenge becomes particularly difficult when inadvertent or historic practices on some agricultural lands negatively affect the function and value of critical areas. Commonly accepted agricultural practices in the past are now conflicting with changing expectations for environmental management.

Retrofitting existing agriculture to meet these new demands can be problematic. The GMA reliance on protecting critical areas on agricultural lands through regulation created significant clashes between environmental interests and the agricultural community. Past attempts to find a solution generated a host of expensive and contentious lawsuits, GMA appeals, legislative battles, and voter initiatives. This created a high degree of uncertainty for everyone, but especially so for the economic survival of agriculture.

Washington's governor and legislature in 2007 recognized the importance of resolving this conflict when it asked the Ruckelshaus Center to facilitate a dialog between

representatives from government, agriculture, and environmental interests. The outcome of this three-year negotiation process was an agreement to create a program that would offer incentives to the agricultural community to implement voluntary-based actions that would maintain and enhance critical areas. The state soon after turned the agreement into law, which became the Voluntary Stewardship Program, an amendment to the GMA.[1]

Key VSP Concepts

The legislature adopted the Voluntary Stewardship Program (VSP) in 2011 with the intent to:

> "***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.***"[2]

VSP is unique in that it allows those counties that opt into the program to avoid the traditional regulatory approach to managing agricultural activities near or on critical areas. Instead, it allows counties to prepare a coordinated **Work Plan** with measurable objectives that encourages the implementation of voluntary actions on agricultural lands that protect and enhance critical areas on a watershed scale.

There are several key concepts under VSP that deserve special attention:

- **Voluntary**. VSP does not place any requirement on a landowner engaged in agricultural activities to restore, protect, or enhance critical areas under GMA regulations. Instead, it focuses on voluntary compliance coupled with incentives. However, VSP is not a replacement for compliance with other local, state or federal laws and regulations.

- **Agricultural activities**. VSP uses the broad definition for agricultural activities as defined under RCW 90.58.065. This very broad definition spans the range of agricultural operations - from the private landowner engaged in agriculture for their own sustenance to the largest commercial operations.

- **Protect**. Under VSP, "protect" means "to prevent the degradation of functions and values [of critical areas] existing as of July 22, 2011." This date represents a "red line" for agricultural activities. For the county to remain in VSP, agricultural activities cannot exceed a further loss in critical area functions and values that existed on this date as measured at a watershed scale.

- **Enhance**. Enhance or enhancement means "to improve the processes, the structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas." VSP encourages enhancement but does not mandate it. It is important to note that there is no set standard in VSP that

measures scope and extent of enhancement. Furthermore, enhancement does not have to restore critical area functions and values to original conditions.

- **Watershed scale**. VSP does not measure voluntary protection and enhancement of critical area functions and values on a property-by-property basis, but rather collectively on a watershed scale. A watershed means "a water resource inventory area, salmon recovery planning area, or a subbasin as determined by a county." The flexibility of working on a watershed scale allows for a more creative approach to voluntary protection and enhancement.

The **Work Group** and the **Work Plan** are the means for accomplishing VSP in Lewis County.

The **Work Group** is a broad coalition of representatives from county agriculture, community, environmental, and state and tribal government. They act as an independent committee responsible for developing and implementing a Work Plan consistent with VSP requirements.

The **Work Plan** is a document that establishes the framework for how the Work Group will implement VSP within the county. The process used in developing the Work Plan involves:

- Reviewing and incorporating plans relating to water quality, watershed management, farmland protection, and species recovery;
- Incorporating input from stakeholders;
- Creating measurable benchmarks that within ten years of receiving funding for the Work Plan:
  - Results in the protection of critical area functions and values as well as their enhancement through voluntary, incentive-based measures, and
  - Ensures the viability of agriculture and reduces the conversion of agricultural lands to other uses;
- Developing outreach goals for participation and technical assistance to agricultural producers in the watershed;
- Establishing baseline monitoring for participation activities, implementation of voluntary stewardship plans and projects, the effects on critical areas and agriculture relevant to the benchmarks; and
- Identifying a process for periodically evaluating the outcomes of the Work Plan and making appropriate changes when necessary to ensure achieving the originally set benchmarks.

Once the Work Group develops a Work Plan, they submit it directly to the Washington State Conservation Commission for approval, independent of the county. Lewis County

and the Lewis Conservation District provide technical and facilitation support to the Work Group.

Upon approval of the Work Plan by the Conservation Commission Technical Panel and Statewide Advisory Committee, the Work Group retains the responsibility for supervising the implementation of Work Plan. This may include making changes to the Work Plan to ensure it continues to make progress. The Work Group will also be responsible for reporting to the Conservation Commission the Work Plans progress after each biennium, assisting state agencies in their monitoring programs, and satisfy any other reporting requirements of the program.

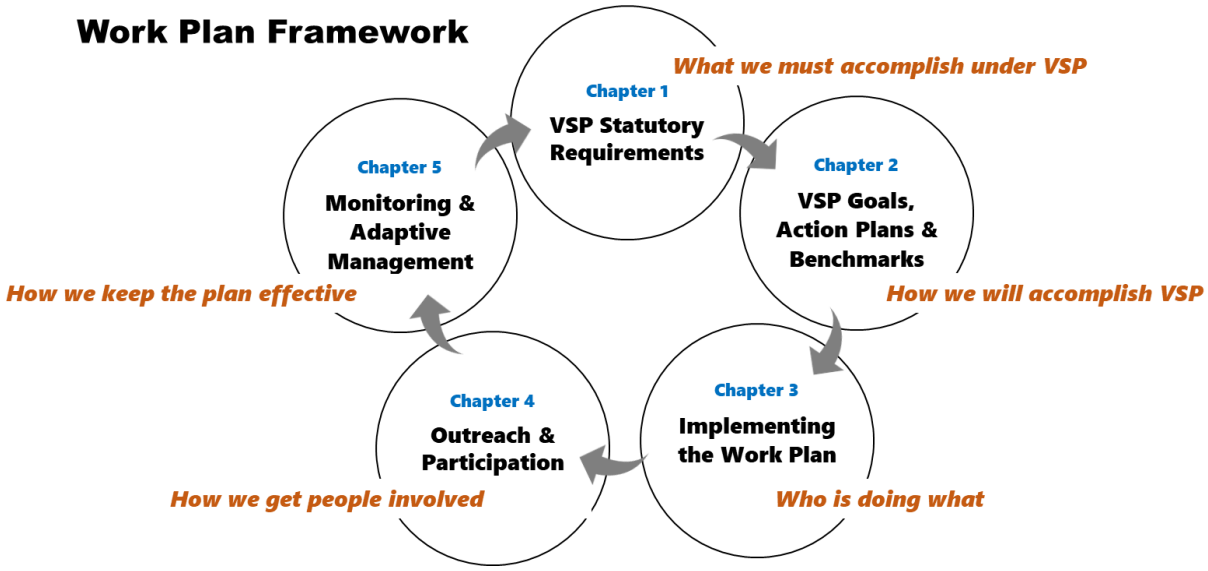
Advantages of VSP for County Agriculture

VSP offers significant advantages to the Lewis County agricultural community in that it:

- ☑ Keeps agricultural activities outside of the GMA regulatory framework in relation to protecting the function and values of critical areas;
- ☑ Enables a grassroots approach to find an appropriate balance between economically viable agricultural production and environmental protection that reflects Lewis County goals and values;
- ☑ Puts the individual agricultural producer in charge of making their own decisions about how they want to engage in voluntary stewardship practices in a manner that fits their land and resources;
- ☑ Provides agricultural producers greater flexibility in the choice of voluntary stewardship options rather than being forced to use fixed solutions like buffers;
- ☑ Facilitates the delivery of increased stewardship resources to agricultural producers;
- ☑ Introduces new opportunities for improving the long-term viability of agricultural operations that increase management skills, production, and profitability;
- ☑ Counts stewardship practices implemented since July 22, 2011 toward enhancement benchmarks, thereby recognizing the past good stewardship practices agriculture continues to accomplish;
- ☑ Measures VSP success on a watershed scale and not on a parcel-by-parcel basis; and
- ☑ Establishes a forum and builds local leadership that can promote agricultural interests on both a county and state level

Organization of the VSP Work Plan

The Lewis County VSP Work Plan consists of five chapters and supporting appendices. Altogether, they create a framework for implementing and sustaining VSP in the county.



Chapter 1. VSP Statutory Requirements

The first chapter highlights the two statutory requirements the Work group must achieve through the VSP Work Plan.

Chapter 2. VSP Goals, Action Plans, & Benchmarks

Chapter Two outlines how the Work Group will accomplish the VSP statutory requirements through 12 broad goals. There are five goals that address critical areas and seven goals that focus on agriculture viability.

Each goal has an Action Plan containing one or more objectives that include examples of stewardship practices and activities that can implement an objective. Stewardship practices are actions that agricultural operators can use to protect or enhance a critical area. Stewardship practices that enhance are particularly important for offsetting those actions taken on agricultural lands that degrade critical area functions and values.

Following each Action Plan are benchmarks for agricultural lands within a watershed that set standards for the protection of critical area and goals for voluntary enhancement. Benchmarks are an essential monitoring tool for evaluating progress in attaining a goal.

Chapter 3. Implementing the Work Plan

Effective implementation of the Work Plan depends on clearly defined responsibilities. Chapter 3 outlines the roles of and interaction between the Work Group, the Conservation District, and Lewis County. It also discusses the importance of integrating partnerships into VSP.

Chapter 4. Outreach and Participation

This chapter explains how the Work Plan will encourage commercial and noncommercial agricultural operators to engage in VSP and implement voluntary stewardship practices.

Chapter 5. Monitoring and Adaptive Management

Monitoring establishes a process for the Work Group to evaluate how well the Work Plan is accomplishing its goals, action plan, and benchmarks through implementation of stewardship practices and activities. If the Work Group discovers the Work Plan is not performing as expected, adaptive management explains how to make changes to stay on target. This chapter is critical for keeping the plan relevant. It also ensures that county agriculture remains in VSP and avoids the standard GMA regulatory approach for protecting critical areas on agricultural lands.

Appendices: Supporting Documents

The appendices contain specific information used by the Work Group to create the Lewis County VSP Work Plan. Keeping this information in the appendices allows Work Group members and interested readers to go back and understand the thought process behind the development of the Work Plan. This approach allows the Work Plan document to be a concise overview for Work Group members and the public regarding how VSP works without overburdening readers with extensive detail. The appendices include information about:

- Appendix A: History of Work Plan Development
- Includes information about when Lewis County opted into VSP, the Work Group formation, who participated in the development of the Work Plan, and a summary of the individual planning sessions. Appendix B: Individual Stewardship Plan Format

  Provides an overview of how the Technical Provider will work with agricultural operators to prepare Individual Stewardship Plans (ISP), including a template to use.

- Appendix C: Current List of Stewardship Projects since July 22, 2011

  This appendix includes a list of stewardship projects implemented between July 2011 and December 31, 2017.

- Appendix D: Potential Resources

  Includes a list of potential programs and resources available to the Work Group and the Technical Provider to assist agricultural operators in implementing stewardship practices with or without an ISP.

- Appendix E: Other regulations applying to agricultural activities

  The purpose of this appendix is to remind readers that VSP does not preclude other local, state, and federal laws and regulations applying to critical areas on agricultural lands. The appendix provides a table listing these laws, including a brief description and which critical areas they may affect.

- Appendix F: Work Plan Background Information

  Appendix F is a detailed source of information about: county agriculture; its intersection with critical areas in the county as they existed as of July 22, 2011 at a watershed scale; and a summary of key plans and information resources that identify management actions for protecting and enhancing critical area functions.

  The Work Group relied on the information within this appendix for setting Work Plan goals, management objectives, and benchmarks. The appendix will also be an important resource in evaluating VSP success through the monitoring program discussed in Chapter 5.

Chapter 1
VSP Statutory Requirements

The Lewis County Work Group prepared a Work Plan that will achieve the legislated requirements of the Voluntary Stewardship Program.[3] The Work Group embraces the principle that both legislative requirements stand on equal footing.

Voluntarily protect & enhance critical area functions & values on agricultural lands as they existed at a watershed scale as of July 22, 2011

This Work Plan will voluntarily protect and enhance critical areas on agricultural lands by:

- Adopting goals, an action plan, and benchmarks for each critical area;
- Establishing an outreach and participation effort for encouraging involvement in the Voluntary Stewardship Program; and
- Utilizing a monitoring and adaptive management program to evaluate and sustain the efficacy of the Work Plan.

While the Voluntary Stewardship Program does not require enhancement of critical area functions and values above and beyond the 2011 baseline, the Work Plan will strive to encourage agricultural operators to adopt stewardship practices that provide long-term benefit to the environment.

Ensure the long-term viability of agriculture and reduce the conversion of agricultural land to other uses

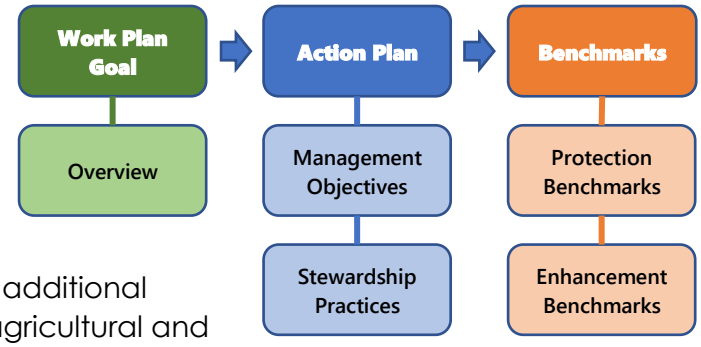
The requirements to protect and enhance critical areas on agricultural lands will not be successful unless agriculture itself is successful. The Work Plan can increase the viability of agriculture in the county by promoting voluntary stewardship practices that strive to increase the productivity and profitability for all types of agricultural activities.

The Work Group further recognizes that VSP can provide a unique opportunity for improving and expanding agriculture in the county. Within the VSP framework, the Work Group will strive to build leadership in the agricultural community, bring resources that increase its profitability, prevent the conversion of farmland to other uses, and prepare the next generation of commercial and noncommercial agricultural producers.

The Work Plan adopts seven goals for implementing agricultural viability.

Chapter 2
Goals, Action Plans & Benchmarks

Chapter Organization



Work Plan Goals are specific and measurable milestones that achieve statutory requirements. There are five goals that lay out detailed action plans that voluntarily protect and enhance critical areas.

Following the critical areas goals are an additional seven goals for ensuring the viability of agricultural and reducing the conversion of agricultural land in Lewis County.

Accompanying each goal is an introductory **Overview** that provides context to the goal and summarizes the key issues identified by the Work Group during its analysis of Appendix F, the Work Plan Background Information.

The Overview discussion serves as the foundation to each **Action Plan**, which describes how the Work Group will accomplish each goal using *management objectives* and *stewardship practices.*

- **Management objectives** identify pathways that lead towards accomplishing a goal. For critical areas, they are approaches to maintaining or improving functions and values. They also serve as an on-site diagnostic tool when developing an Individual Stewardship Plan for deciding how to address a specific site or situation.
- **Stewardship practices** are specific actions or activities that implement a management objective, whether through an incentive-based program or an agricultural operator's own resources. Stewardship practices are the "building blocks" of VSP; they consist of actions that voluntarily protect and enhance critical areas or promote agricultural viability.

  To ensure the protection of the July 22, 2011 baseline, the Work Group encourages new or expanding commercial and noncommercial agricultural operators to use these stewardship practices to prevent degrading critical areas on their lands. Stewardship practices that voluntarily enhance critical areas are equally important. They help offset degradation caused by agricultural operators who choose not to voluntary protect critical areas.

The list of stewardship practices is a *representative* one; the Work Plan recognizes that each agricultural site is unique and that there are an unlimited number of potential approaches for achieving an objective. Many of these stewardship practices are NRCS conservation practices from the Field Office Technical Guide (FOTG) for Lewis County. The specific FOTG code is included for reference. Other practices come from plans and programs that address critical area needs.

It is important to note that many stewardship practices that benefit critical area functions also provide significant productivity and profitability that benefit agricultural viability. These stewardship practices have an asterisk * next to them.

Appendix C inventories known stewardship practices implemented between June 2011 and 2017.

Benchmarks track progress at accomplishing Work Plan critical area goals. Benchmarks for critical areas are specific measures of key functions that evaluate if the Action Plan is maintaining or exceeding the 2011 Baseline at a watershed scale. The monitoring program described in Chapter 5 establishes a process using High Resolution Change Detection to measure any changes to a benchmark at selected points in the future.

The VSP statute does not require benchmarks for agricultural viability goals.

Tables 1 and 2 beginning on page 34 provide a summary of each critical area and agricultural viability goal.

Critical Areas Goal #1

Voluntarily Protect and Enhance Wetland Functions and Values

Overview

Wetlands are areas inundated or saturated by surface water or groundwater and support a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands assist in the reduction of erosion, siltation, flooding, and groundwater and surface water pollution, and provide wildlife, plant, and fisheries habitats.

Agriculture converted many of the wetlands within the river valleys of the Chehalis and Cowlitz and their tributaries over the past 100 years into cropland and livestock pasture that remain in use today. These are highly productive soils that greatly contribute to the agricultural viability of the county. However, wetlands still exist on many commercial agricultural lands along narrow river and stream corridors and within small areas retained in forest cover.

Established county commercial agricultural development patterns adjacent to wetlands have not changed much in recent years. Many commercial agricultural operators in the county have long been implementing voluntary or required voluntary protection and enhancement practices that benefit wetlands. Voluntary stewardship practices for commercial agricultural lands should focus on direct and indirect methods that enhance wetland functions for habitat, shoreline stabilization, and water collection and storage. Practices that restrict livestock access and reducing the introduction of fertilizers and pesticides into wetlands will be particularly beneficial to enhancing functions.

Expansion of existing and new noncommercial agricultural activities on residential parcels have the greatest potential for degrading wetland functions below the July 22, 2011 baseline. Inappropriate and inadvertent agricultural practices on smaller parcels near wetlands can severely reduce riparian cover, create concentrated livestock access, generate nutrient management issues, propagate invasive species, alters habitat, and reduces water quality. Stewardship practices that emphasize the implementation of both protection and/or enhancement is important for achieving this benchmark.

Action Plan

The following action plan will voluntarily protect and/or enhance the functions of wetlands:

Management objectives for protecting and enhancing wetland functions	Examples of stewardship practices to use
▶ Separate agricultural activities from wetlands	▪ Access control (NRCS Code 472) ▪ Alley cropping (NRCS Code 311)* ▪ Filter strips (NRCS Code 393) ▪ Fencing (NRCS Code 382) ▪ Grassed waterways (NRCS Code 412) ▪ Hedgerow planting (NRCS Code 422) ▪ Integrated pest management (NRCS Code 595)* ▪ Nutrient management (NRCS Code 590)* ▪ Vegetative barrier (NRCS Code 601) ▪ Watering facility (NRCS Code 614)* ▪ Sharing information about how to avoid impacts to existing wetlands
▶ Enhance functions & values adjacent to and in wetlands	▪ Critical area planting (NRCS Code 342) ▪ Fish passage ▪ Herbaceous weed treatment (NRCS Code 315) ▪ Riparian forest buffer (NRCS Code 391) ▪ Riparian herbaceous cover (NRCS Code 390) ▪ Tree/shrub establishment (NRCS Code 612) ▪ Wetland restoration (NRCS Code 657)* ▪ Wetland wildlife habitat management (NRCS Code 644)
▶ Protect existing or create new wetlands	▪ Sharing information about how to avoid impacts to existing wetlands ▪ Conservation easements* ▪ Open Space enrollment* ▪ Wetland creation (NRCS Code 658)*

** Practices that may increase productivity and/or profitability*

Key Plans, Studies and Reports Providing Further Guidance on Wetland Management Objectives:

- Field Office Technical Guide for Lewis County
- Chehalis Basin Salmon Habitat Restoration and Preservation Strategy for WRIAs 22 and 23 (page F-85)
- Detailed Implementation Plan for the Cowlitz and Upper Cowlitz Recovery Area in Lewis County (page F-86)
- Wetlands and Conservation Compliance – What Every Iowa Farmer Needs to Know (USDA/NRCS Publication – available through https://www.nrcs.usda.gov/wps/portal/nrcs/detail/null/?cid=nrcs142p2_008540)

- Framework and Ground/Surface-Water Interactions of the Chehalis River Basin, Southwestern Washington (page F-83)

Benchmarks

Protection Standard to Maintain 2011 Baseline
▶ No net loss of wetland functions on agricultural lands at a watershed scale as measured by the loss in acreage of forest cover or native vegetation within or adjacent to wetlands.
Voluntary Enhancement
▶ Increase of wetland functions on agricultural lands that existed on a watershed scale as of July 2011 as measured by a gain in acreage of forest cover or native vegetation within or adjacent to wetlands.

Critical Area Benchmark #2

Voluntarily Protect and Enhance Critical Aquifer Recharge Areas

Overview

Critical aquifer recharge areas (CARA) are common on commercial agricultural lands throughout the county. These recharge areas are important for protecting groundwater quality for individual wells and a limited number of wellhead protection areas for public water systems. They also play a vital role in maintaining wetlands, rivers, and lakes.

Critical aquifer recharge areas have 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.

To date, drinking water tests in the county have not shown appreciable nitrate levels in individual wells, indicating little to no impacts created by commercial agriculture. Previous contaminant issues associated with dairies have fallen with the adoption of Nutrient Management Plans. Overall, the low-intensity and wide dispersal of agriculture in the county, coupled by existing fertilizer and pesticide regulations, reduce the likelihood of widespread future contamination. Current public health regulations will also provide protection measures.

However, protection of aquifer recharge areas remains important, especially for drinking wells serving individual agricultural properties. Wells providing potable water supplies on small-scale and noncommercial agricultural lands may be at the greatest risk due to a lack of knowledge or understanding about nutrient management or appropriate fertilizer and pesticide application methods. Encouraging the implementation of voluntary stewardship practices that protect water quality will be important for these agricultural operators.

Improved irrigation practices that reduce drawdown from shallow aquifers would benefit recharge of nearby wetlands and streams, particularly in those waterbodies that provide habitat to salmon during the summer months.

Action Plan

The following action plan will voluntarily protect and enhance critical aquifer recharge area functions and values:

Management objectives for protecting & enhancing CARA functions	Examples of stewardship practices to use
▶ Promote agricultural practices that protect potable water supplies	▪ Agrichemical handling facility (NRCS Code 309) ▪ Conservation crop rotation (NRCS Code 328)* ▪ Cover crop (NRCS Code 340)* ▪ Integrated Pest management (NRCS Code 595)* ▪ Nutrient management (NRCS Code 590)* ▪ Prescribed grazing (NRCS Code 528)* ▪ Residue & tillage management (NRCS Codes 329 & 345) ▪ Waste storage facility (NRCS Code 313) ▪ Share information on how to protect wells and promote regular water testing*
▶ Promote improved irrigation & agricultural practices that reduce groundwater consumption from shallow aquifers that recharge wetlands, rivers, and lakes	▪ Conservation cover (327)* ▪ Conservation crop rotation (328)* ▪ Dam (402)* ▪ Deep tillage (324)* ▪ Irrigation land leveling (464)* ▪ Irrigation systems, including micro-irrigation, sprinkler, surface system, & tailwater recovery (441, 442, 443, & 447)* ▪ Irrigation water management (449)* ▪ Mulching (484)* ▪ Nutrient management (590)* ▪ Ponds (378)* ▪ Residue management, reduced and no till (345 & 329)* ▪ Water harvesting catchment (636)* ▪ Watering facility (614)*

** Practices that may increase productivity and profitability*

Key Plans, Studies and Reports Providing Further Guidance on CARA Management Objectives:

- Field Office Technical Guide for Lewis County
- Framework and Ground/Surface-Water Interactions of the Chehalis River Basin, Southwestern Washington (page F-83)
- Critical Aquifer Recharge Areas – Guidance Document (page F-83)
- Washington Nitrate Prioritization Project (page F-83)

Benchmarks

Protection Standard to Maintain 2011 Baseline
▶ No increase in coliform, nitrate, and pesticide levels in potable water supplies on or adjacent to agricultural lands as measured through monitoring drinking water test results available through local, state, and federal agencies.
Voluntary Enhancement
▶ Decrease in coliform, nitrate, and pesticide levels in potable water supplies on or adjacent to agricultural lands as measured through monitoring drinking water test results available through local, state, and federal agencies.

Critical Areas Goal #3

Voluntarily Protect and Enhance Fish & Wildlife Habitat Conservation Areas (FWHCA)

Overview

Fish and wildlife habitat conservation areas (FWHCA) interweave with many agricultural properties in Lewis County. While open agricultural lands support significant populations of deer, elk, and a great variety of birdlife, the county's rivers and streams take center stage as its most important FWHCA. These waters support salmon populations important to the culture and economy of the county.

Fish and wildlife habitat conservation areas are lands and waters managed to maintain populations of fish and wildlife species in suitable habitats within their natural geographic distributions. This management occurs over the long term and within connected habitat blocks and open spaces.

Protecting and enhancing functions related to habitat, water quality, and seasonal water quantity associated with rivers and wetlands on agricultural lands will provide the greatest benefit to FWHCA in the county. Approaches will vary whether it is an established agricultural operation or a new or expanding one.

The VSP focus for established agricultural operations should emphasize enhancement of current conditions through practices such as improving the quality of riparian areas, reducing livestock access, removing fish passage barriers, using more efficient irrigation systems, and improving instream habitat. Indirect practices are equally important as well; these can include incorporating improved nutrient management, integrated pest management, and erosion control methods that particularly benefit water quality.

For new agricultural operations, especially small noncommercial ones, VSP needs to emphasize stewardship practices that protect existing functions before their disruption. Voluntary adoption of practices that separate agricultural activities from waterbodies need special emphasis.

Overall, preventing the conversion of agricultural lands to other, more intensive uses is a priority benefit to FWHCA.

Depending on concentrations, wildlife nuisances can significantly decrease the economic viability of commercial agricultural operations. Elk, deer, and some bird species cause extensive damage to cropland and fence lines. Predators, such as coyotes, present a threat to young and smaller-sized livestock.

FWHCA conservation/restoration projects using salmon recovery funding will not count towards the goal providing for no net loss of ecological function; salmon recovery-funded projects *may* contribute to watershed scale enhancement. The intent of this limitation is to not create an opportunity to cause harm within a watershed due to the implementing of a salmon recovery project.

Action Plan

The following action plan will voluntarily protect and enhance FWHCA:

Management objectives for protecting and enhancing FWHCA functions	Examples of stewardship practices to use
▶ Separate agricultural activities from FWHCA	▪ Fencing (NRCS Code 382) ▪ Integrated pest management (NRCS Code 595) ▪ Nutrient management (NRCS Code 590)* ▪ Watering facility (NRCS Code 614)* ▪ Sharing information about avoiding impacts to FWHCA
▶ Enhance habit in FWHCA	▪ Access control (NRCS Code 472)* ▪ Alley cropping (NRCS Code 311) ▪ Aquatic organism passage (NRCS Code 396) ▪ CRP, CREP and CSP enrollment ▪ Conservation cover (NRCS Code 327) ▪ Critical area planting (NRCS Code 342) ▪ Early successional habitat development/ management (NRCS Code 647) ▪ Fencing (NRCS Code 382) ▪ Field border (NRCS Code 386) ▪ Filter strips (NRCS Code 393) ▪ Grassed waterways (NRCS Code 412) ▪ Hedgerow planting (NRCS Code 422) ▪ Herbaceous weed control (NRCS Code 315) ▪ Riparian forest buffer (NRCS Code 391) ▪ Stream habitat improvement & management (NRCS Code 395) ▪ Structures for wildlife (NRCS Code 649) ▪ Tree/shrub establishment (NRCS Code 612) ▪ Upland wildlife habitat (NRCS Code 645) ▪ Wetland enhancement & restoration (NRCS Code 659) ▪ Participate in salmon recovery organizations and projects that enhance or restore habitat
▶ Reduce conflicts between agriculture & wildlife	▪ Wildlife fencing* ▪ Food plots* ▪ Nuisance wildlife management*
▶ Retain intact habitat for FWHCA	▪ Open Space enrollment* ▪ Conservation easements* ▪ CRP, CREP and CSP enrollment

Management objectives for protecting and enhancing FWHCA functions	Examples of stewardship practices to use
▶ Maintain or increasing agricultural open space	▪ Enrollment in Open Space programs* ▪ Agricultural land protection within land use plans & development regulations*

** Practices that may increase productivity and profitability*

Key Plans, Studies and Reports Providing Further Guidance on FWHCA Management Objectives:

- Field Office Technical Guide for Lewis County
- Washington Coast Sustainable Salmon Plan (F-84)
- Chehalis Basin Salmon Habitat Restoration and Preservation Strategy for WRIAs 22 and 23 (page F-85)
- Washington Lower Columbia Salmon Recovery & Fish & Wildlife Subbasin Plan (F-86)
- Detailed Implementation Plan for the Cowlitz and Upper Cowlitz Recovery Area in Lewis County (page F-86)
- Stream Corridor Restoration: Principles, Processes, and Practices (page F-88)
- Threatened and Endangered Wildlife: 2012 Annual Report (F-88)
- Recovery Plans for specific ESA listed species (pages F-26 & 27)
- Various TMDL Studies addressing best management practices for agriculture (pages F-91 through F-94)

Benchmarks

Protection Standard to Maintain 2011 Baseline
▶ No net loss of FWHCA functions on agricultural lands at a watershed scale as measured by: ▪ The loss or gain of acreage in forest cover or native vegetation and of impervious surfaces on FWHCA lands that intersect with agricultural lands, and ▪ No change in 303(d) listings attributable to agricultural activities.
Voluntary Enhancement
▶ Increase in FWHCA functions on agricultural lands that existed on a watershed scale as of July 2011 as measured by: ▪ A gain in forest cover or native vegetation acreage or a decrease in impervious surface acreage on FWHCA lands that intersect with agricultural lands, and ▪ A decrease in 303(d) listings attributable to agricultural activities.

Critical Areas Goal #4

Reduce Risks from Frequently Flooded Areas

Overview

Frequently flooded areas are lands within the floodplain 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 levels.

Flooding is a widespread and persistent problem for many properties in Lewis County, including commercial and noncommercial agricultural lands. properties in the county, especially within the Chehalis watershed and the upper and lower sections of the Cowlitz. Protecting, enhancing, or mitigating their functions is essential for reducing their risk potential in the future.

Some agricultural practices can reduce the function of frequently flooded areas by increasing flows, degrading soil quality, reducing the capacity of land to store floodwaters, increasing streambank erosion, and degrading fish and wildlife habitat, especially along riparian areas and in streams.

The impacts of flooding on agriculture can be devastating. In the past, high velocity floods have eroded land, damaged crops, drowned livestock, destroyed structures and fence lines, and threatened the personal safety of commercial and noncommercial agricultural operators. Finding solutions to flooding problems in many of the county's subbasins can be complex and often requires a comprehensive effort at a very large scale.

While the application of VSP stewardship practices on agricultural lands is not an answer to comprehensive floodplain management, they can reduce individual risk and contribute to a wider benefit. The focus for established commercial agricultural operations should emphasize enhancement of natural functions on their lands both through direct and indirect voluntary stewardship practices. Because agricultural land provides significant open space, it provides benefit to overall countywide flood prevention. Avoiding its conversion to other more intensive uses with increased impermeable surfaces is probably the most significant contribution to protecting frequently flooded areas.

For new or expanding commercial and noncommercial agricultural operations, both voluntary protection and enhancement practices are important. Past flood events indicate that the most important stewardship practices to emphasize are retaining and enhancing riparian corridors that will reduce flood velocities, decreasing erosion, and increasing water storage. Practices that encourage proper location of farm structures and the protection of livestock are equally important.

While implementing voluntary protection and enhancement stewardship practices will reduce the risk of flooding over time, the overriding concern for public safety requires that current county floodplain regulations remain in effect on agricultural lands. This

requirement will retain flood insurance coverage for property under the National Flood Insurance Program (NFIP). The Action Plan will encourage practices that will reduce the risk of flood damage on agricultural lands and will not contradict any other laws or regulations in special flood hazard areas.

Action Plan

The following action plan will reduce flood risks:

Management objectives for reducing the risk of flooding	Examples of stewardship practices to use
▶ Protect or increase water storage in floodplains	▪ Dam (NRCS Code 402)* ▪ Ponds (NRCS Code 378)* ▪ Water harvesting catchment (NRCS Code 636)* ▪ Watering facility (NRCS Code 614)* ▪ Wetland creation, enhancement, or restoration (NRCS Codes 658, 659, and 657)
▶ Reduce floodwater velocities	▪ Dam (NRCS Code 402)* ▪ Riparian forest buffer (NRCS Code 391) ▪ Riparian herbaceous cover (NRCS Code 390) ▪ Rock barrier (NRCS Code 555)* ▪ Stream habitat improvement & management (NRCS Code 395)* ▪ Tree & shrub establishment (NRCS Code 612) ▪ Waterspreading (NRCS Code 640)*
▶ Protect farm structures, equipment, & livestock	▪ Livestock & equipment pads* ▪ Raising homes & structures within floodplains* ▪ Risk reduction projects* ▪ Sharing information about flood proofing structures*
▶ Promote regionwide efforts that reduce flood damage on agricultural lands	▪ Support efforts of the Chehalis Basin Strategy to address viable solutions that promote the protection of agricultural lands from flood damage
▶ Maintain or increase agricultural acreage	▪ Enrollment in Open Space Programs* ▪ Agricultural land protection within development plans & regulations*

** Practices that may increase productivity and profitability*

Key Plans, Studies and Reports Providing Further Guidance on Frequently Flooded Areas Management Objectives:

- ▶ Field Office Technical Guide for Lewis County
- ▶ Stream Corridor Restoration: Principles, Processes, and Practices (page F-88)
- ▶ Governor's Chehalis Basin Work Group – 2014 Recommendation Report (page F-94)

- Lewis County Comprehensive Flood Hazard Management Plan and LCC 15.35, Flood Damage Protection (page F-95)

Benchmarks

Protection Standard to Maintain 2011 Baseline
▶ No increase in the risk of flooding on agricultural lands at a watershed scale as measured by the loss or gain in acreage of impervious surfaces and forest cover or native vegetation within frequently flooded areas. ▶ Regulate floodplain development on agricultural lands consistent with Lewis County Code Chapter 15.35, Flood Damage Prevention.
Voluntary Enhancements
▶ Decrease the risk of flooding on agricultural lands at a watershed scale as measured by a decrease in the acreage of impervious surfaces and an increase in the acreage of forest cover or native vegetation within frequently flooded areas.

Critical Areas Goal #5

Reduce Risks from Geologically Hazardous Areas

Overview

Geologically hazardous areas are susceptible to erosion, sliding, earthquakes, tsunami, channel migration, and other geological events. Development often is not suitable in these areas due to public health or safety concerns.

The primary geologic risks facing agricultural lands in the county are channel migration along major rivers and earthquakes. Landslides present a limited risk to farmland located adjacent to steep slopes, especially along the high banks of the lower Cowlitz River.

Channel migration is known to occur on agricultural lands along the Chehalis River, several of its tributaries, and in the upper Cowlitz River. However, there is limited documentation of the problem in both watersheds.

The reasons for channel migration are complex and not readily solved, especially at a parcel level. Further efforts at understanding the reasons for channel migration within the county's watersheds and their respective subbasins are necessary before selecting specific solutions to the problem.

Voluntary stewardship practices, while not fool-proof, can assist agricultural operators at lessening the potential for channel migration on their properties. These include retaining or enhancing riparian vegetation, placing soft-armoring along streambanks, and/or improving instream functions.

Landslides pose a limited risk to a small number of agricultural properties in the county. Most landslide areas are forested areas on properties; the focus should be on retaining vegetative cover.

Addressing earthquake risks on agricultural lands falls more to education about the safe location of agricultural structures on properties prone to liquefaction or excessive shaking. Lahars pose a rare threat to the Cowlitz Valley upstream of Riffe Lake. Short of evacuation, little can be done to avoid Lahar impacts.

Action Plan

The following action plan will reduce geologic risks to agricultural lands:

Management objectives for reducing the risk of geologic hazards	Examples of stewardship practices to use
▶ Reduce bank erosion & channel migration	▪ Channel bed stabilization (NRCS Code 584) ▪ Fencing (NRCS Code 382) ▪ Heavy use area protection (NRCS Code 561)

Management objectives for reducing the risk of geologic hazards	Examples of stewardship practices to use
	▪ Hedgerow planting (NRCS Code 422) ▪ Riparian forest buffer (NRCS Code 391) ▪ Riparian herbaceous cover (NRCS Code 390) ▪ Stream habitat improvement & management (NRCS Code 395) ▪ Streambank & shoreline protection (NRCS Code 580) ▪ Watering facility (NRCS Code 614)* ▪ Participate in studies or projects that explore comprehensive approaches for addressing channel migration on agricultural lands* ▪ Sharing information about locating structures in suspected channel migration & erosion areas*
▶ Minimize erosion & sedimentation	▪ Channel bed stabilization (NRCS Code 584) ▪ Conservation cover (NRCS Code 327) ▪ Conservation crop rotation (NRCS Code 328)* ▪ Contour buffer strips & farming (NRCS Codes 332 & 330)* ▪ Cover crop (NRCS Code 340) ▪ Filter strips (NRCS Code 393) ▪ Grassed waterways (NRCS Code 412) ▪ Mulching (NRCS Code 484) ▪ Prescribed grazing (NRCS Code 528) ▪ Water & sediment control basin (NRCS Code 638)* ▪ Channel migration easements to keep rivers connected to floodplains
▶ Reduce landslide potential	▪ Range planting (NRCS Code 550) ▪ Tree/shrub establishment (NRCS Code 612) ▪ Appropriate farm design and land utilization*
▶ Minimize earthquake risk	▪ Sharing information on earthquake risk & building codes*

** Practices that may increase productivity and profitability*

Key Plans, Studies and Reports Providing Further Guidance on Geologically Hazardous Areas Management Objectives:

- ▶ Field Office Technical Guide for Lewis County
- ▶ Stream Corridor Restoration: Principles, Processes, and Practices (page F-88)
- ▶ Lewis County Comprehensive Flood Hazard Management Plan and LCC 15.35, Flood Damage Protection (page F-95)

Benchmarks

Protection Standard to Maintain 2011 Baseline
▶ No increase in risk of geologic hazards on agricultural lands at a watershed scale as measured by the loss or gain in acreage of forest cover or native vegetation.
Voluntary Enhancement
▶ Decrease the risk geologic hazards on agricultural lands that existed on a watershed scale as of July 2011 as measured by a gain in acreage forest cover or native vegetation.

Agricultural Viability Goal #1

Preserve Farmland and Ensure its Affordability

Overview

Years of growth in Lewis County has reduced the availability of affordable land for farming. The pre-Growth Management Act rush of creating five-acre lots resulted in intermixing agriculture with other land uses. The outcome has driven taxes and land costs upward for those attempting to expand or start a farm.

Agriculture is a low-intensity activity in Lewis County that benefits critical areas, particularly as it relates to retaining open space for aquifer recharge areas, fish and wildlife habitat conservation areas, and frequently flooded areas.

To encourage keeping farming on the land, the county needs to explore voluntary approaches for reducing farmland acquisition costs, such as promoting Open Space enrollment and establishing programs for purchasing or transferring development rights.

Action Plan

The following action plan aims at preserving farmland and promoting its affordability:

Management objectives	Examples of stewardship activities
▶ Retain agricultural lands in production	▪ Sharing information about Open Space programs ▪ Increase enrollment in Open Space Programs ▪ Investigate development of a program for purchasing development rights and/or establishing an agricultural land trust program ▪ Transfer of development rights program

Agricultural Viability Goal #2

Agriculture-Friendly Regulations that are Clear and Flexible

Overview

Farmers wanting to make changes to their land often face a formidable gauntlet of regulations. The number of local, state, and federal development regulations, each with their own permitting process, can be bewildering, expensive, and lengthy. In addition, farmers find that agencies frequently lack coordination and consistency between one another. Just knowing what regulations apply, where, when, and how can be a challenge for any citizen.

Federal regulations relating to prior converted croplands may significantly reduce agricultural viability in the county; if a prior converted cropland does not produce a commodity crop at least once every five years, federal regulation considers the land "abandoned" as an agricultural use.[4] This is a significant concern for older or infirm agricultural producers who do not transfer land ownership in a timely manner to keep the land in production. Additional regulatory concerns exist for those producers maintaining or upgrading drainage systems in prior converted cropland.

There is a need for regulatory reform that emphasizes clarity and consistency in regulations as well as a move towards a coordinated, one-stop permit application and review process.

In addition, there is a need to strengthen county land use and other regulations that protect the right-to-farm. Non-agricultural uses and their impacts continue to make farming difficult in some areas of the county.

Action Plan

The following action plan promotes agriculture friendly regulations:

Management objectives	Examples of stewardship activities
▶ Improve regulatory framework affecting agriculture	▪ Host workshops & seminars that share information about environmental regulations ▪ Explore establishing an agricultural ombudsman position that interfaces & coordinates with regulatory agencies on behalf of individual & agricultural organizations[5] ▪ Establish agricultural review committee to review & provide comment on plans & development regulations that affects agriculture ▪ Encourage agricultural representation on Planning Commission

Agricultural Viability Goal #3

Water and Water Rights are Important for Agriculture

Overview

Despite the wetness of winter, summers in Lewis County are quite dry; crops and pastureland depend heavily on irrigation. In many areas of the county, obtaining new water rights will prove difficult for new or expanded farming operations. This will be a limiting factor to future growth or diversification for county agricultural practices.

Future large-scale water storage projects have become a necessity for ensuring that irrigation dependent agriculture remains feasible for Lewis County. The simultaneous move towards more efficient irrigation systems will help reduce the water volumes needed by agricultural activities.

Stewardship actions in this benchmark creates a dual benefit for both agriculture and critical areas, especially critical aquifer recharge areas, wetlands, and fish and wildlife habitat conservation areas.

Action Plan

The following action plan promotes water and water rights for agriculture:

Management objectives	Examples of stewardship activities
▶ Increase water storage	▪ Dam (NRCS Code 402)* ▪ Mulching (NRCS Code 484)* ▪ Ponds (NRCS Code 378)* ▪ Water harvesting catchment (NRCS Code 636)* ▪ Watering facility (NRCS Code 614)* ▪ Wetland creation, enhancement, or restoration (NRCS Code 658, 659, & 657)*
▶ Improve efficiency of irrigation systems	▪ Deep tillage (NRCS Code 324)* ▪ Irrigation land leveling (NRCS Code 464)* ▪ Irrigation water management (NRCS Code 449)* ▪ Irrigation systems, including micro-irrigation, sprinkler, surface system, & tailwater recovery (NRCS Code 441, 442, 443, & 447)*
▶ Implement agricultural practices that reduce irrigation consumption	▪ Conservation cover (NRCS Code 327)* ▪ Conservation crop rotation (NRCS Code 328)* ▪ Integrated pest management (NRCS Code 595)* ▪ Nutrient management (NRCS Code 590)* ▪ Residue management, reduced and no till (NRCS Code 345 & 329)*

Agricultural Viability Goal #4

Funding for Educational Programs, Projects, & Technical Assistance

Overview

A key element to providing agricultural education for farmers is to rebuild lost funding capacity for extension programs. Over the years in Western Washington, there has been a shift away from funding technical assistance programs for the commercial farmer to those focused on the small-scale, subsistence farmer. This loss of one-on-one expertise to commercial producers has been sorely missed; self-learning about innovative farming techniques can be difficult for the busy farmer. One solution is to direct more funding to extension services to return services to the original level they were once offered to the local farming community.

However, it is important to note that there is a growing base of knowledge available through agricultural suppliers and producers. Commercial producers of pesticides and fertilizers can provide extensive information to individual farmers, if contacted. Building skills among farmers in teaching how to access this growing knowledge base may help supplant the loss of extension services.

Linking educational resources to agricultural landowners will be essential for teaching the advanced skills necessary for reducing impacts to critical areas.

Action Plan

The following action plan promotes educational programs, projects, and technical assistance:

Management objectives	Examples of stewardship activities
▶ Increase funding for agricultural technical assistance programs	▪ Seek grant funding to supplement extension services to encourage stewardship practices benefiting critical areas & agricultural viability
▶ Increase technical information resources about improved techniques	▪ Create an informational clearinghouse through the conservation district and the internet for information that links agricultural producers to suppliers & other private resources

Agricultural Viability Goal #5

Teaching about Agriculture and Ensuring its Succession

Overview

Agricultural education is a cornerstone to ensuring a future for agriculture in Lewis County. Starting with youth, programs like 4-H and FFA are essential for encouraging future careers in agriculture.

Building agricultural awareness among consumers is important, too. Programs like Farm to School offered by WSDA educate young people about how food produced through commercial farming puts their food on the table. Acquiring this awareness at a young age will carry through into adulthood, creating future citizens who are better aware of the issues farmers face.

In addition, the learning process continues with age, whether the individual is engaged in commercial or noncommercial agriculture. There is a need to expand educational opportunities about agriculture at Centralia College or at one-on-one mentorship opportunities. Agricultural viability in a changing economy means increasing knowledge about efficient business practices and finding specialty niches that increase profitability. Equally important is teaching about how to farm in an era of increasing environmental regulations.

Action Plan

The following action plan promotes agricultural knowledge, awareness, and succession:

Management objectives	Examples of stewardship activities
▶ Teach agriculture to youth and new farmers	▪ Enhancing 4-H and FFA programs throughout the county ▪ Create a mentor program that links established farmers with commercial & noncommercial newcomers ▪ Encourage Centralia College to increase the number of classes teaching about agriculture

Agricultural Viability Goal #6

Agricultural Infrastructure and Markets

Overview

The future retention and growth of agriculture in Lewis County will depend on its ability to access infrastructure, processing facilities, and regional and national markets.

Agricultural infrastructure is a unique challenge for county farmers in that it requires collaboration and restoring lost support services, such as livestock processing facilities, or creating new ones, such as grain storage facilities. Improvements in transportation networks, such as port and rail facilities are needed, too.

The key to retaining or expanding agricultural infrastructure, as well as reaching out to new markets, will be to achieve a critical mass in agricultural production. Lewis County farmers need to work together at increasing production for certain commodities that allow for local cooperatives to promote livestock marketing, grain storage, processing facilities for niche products, and distribution hubs.

Action Plan

The following action plan promotes agricultural infrastructure and markets:

Management objectives	Examples of stewardship activities
▶ Work towards improving agricultural infrastructure	▪ Recruit a sponsor to prepare a study that inventories agricultural infrastructure gaps and identifies potential projects for addressing needs
▶ Improve agricultural marketing	▪ Recruit a sponsor to prepare a study that explores the need for agricultural marketing in the county, including a strategic plan for implementing action ▪ Expand the role of agriculture on the Lewis Economic Development Council by participating as a board member

Agricultural Viability #7

Reduce Potential Impacts to Critical Areas by Small-Scale, Noncommercial Farms

Overview

Small-scale and noncommercial agriculture can be a rewarding experience for rural residents, whether doing it for their own food source, supplementing household income, or strictly for pleasure. Done well, they can coexist and sustain the environment. Done poorly, they can extract a toll on the ecosystem that extends well beyond their footprint.

Small-scale and noncommercial agricultural operators within the Work Plan occur on properties not classified under Land Use Codes 82 and 83 by the County Assessor. Currently, the location, number, size, and characteristics of these operations is unknown.

Critical areas are vulnerable to degradation from inadvertent practices by the occasional well-meaning but unskilled residential agricultural operator. While their small size often allows their operations to go unnoticed, collectively they can have a significant impact on the environment. The most frequently cited examples of these concerns relate to over-grazed pens, uncontrolled livestock access to critical habitat, excessive sediment run-off, poor nutrient and fertilizer management, inadequate control of invasive species, and potential drinking well contamination.

Reaching out to these small-scale and noncommercial agricultural operators can be difficult. They often come and go over time and are hard to locate. Small-scale and noncommercial agricultural activities are indistinguishable under the County Assessor's rolls because of their residential, rather than agricultural, land use classification. They often occur on small parcels five to ten acres in size. Regardless of their small size or noncommercial status, these agricultural activities come under the same VSP legislation as any large-scale, commercial operation.

The Work Plan acknowledges there may be unique challenges to maintaining the July 2011 baseline, given potential growth of small-scale and noncommercial agriculture in the county. Commercial agricultural operators have expressed their concern about how these agriculture activities could impact long-term participation of the county under VSP. In addition, they have mentioned potential spillover impacts of poor agricultural practices on the viability of their own operations. For these reasons, the Work Plan places special emphasis on the importance of reaching out to small-scale and noncommercial agricultural operators in the county. Ideally, the Work Group will aim to connect with property owners before they establish agricultural activities on the landscape.

Action Plan

The following action plan aims at reducing potential impacts on critical areas by noncommercial agricultural operators:

Management objectives	Examples of stewardship activities
▶ Learn more about the number & location of small-scale & noncommercial agriculture in the county	▪ Create an active database with information about the number, location, & characteristics of small-scale and noncommercial agricultural operations in the county ▪ Establish a program that encourages small-scale & noncommercial agricultural operators to self-register with the Conservation District for information & incentives
▶ Inform small-scale and noncommercial agricultural producers about VSP	▪ Inform community groups and organizations engaged in small-scale agriculture about VSP through presentations, flyers, and articles in organization newsletters ▪ Advertise VSP at feed and garden stores frequented by small scale farmers ▪ Keep real estate offices, landscapers, and contractors informed about VSP benefits for their clients
▶ Build the agricultural skills of noncommercial farmers	▪ Connect knowledgeable mentors with noncommercial operators ▪ Offer free classes in farm planning and operation ▪ Create website pages and videos that teach basic farming practices on or near critical areas

Table 1: Summary of Critical Area Goals, Action Plans, and Benchmarks

Critical Area Goal	Action Plan	Protection Benchmark	Enhancement Benchmark	Monitoring Tool & Frequency
Voluntarily protect and enhance wetland functions and values	► Separate agricultural activities from wetlands ► Enhance functions & values adjacent to & in wetlands ► Protect existing or create new wetlands	► No Net Loss of wetland functions on agricultural lands at a watershed scale as measured by the loss or gain in acreage of wetland area or riparian vegetation.	► Increase wetland functions on agricultural lands that existed on a watershed scale as of July 2011 as measured by a gain in acreage of wetland area or riparian vegetation	Conduct High Resolution Change Detection every two years Review stewardship practices implemented at quarterly meetings
Voluntarily protect and enhance critical aquifer recharge areas	► Promote agricultural practices that protect potable water supplies ► Promote improved irrigation & agricultural practices that reduce groundwater consumption from shallow aquifers that recharge wetlands, rivers, and lakes	► No increase in coliform, nitrate, and pesticide levels in potable water supplies on or adjacent to agricultural lands as measured through monitoring drinking water test results available through local, state, and federal agencies	► Decrease in coliform, nitrate, and pesticide levels in potable water supplies on or adjacent to agricultural lands as measured through monitoring drinking water test results available through local, state, and federal agencies.	Review County, state, federal & private drinking water test reports annually
Voluntarily protect and enhance fish & wildlife habitat conservation areas	► Separate agricultural activities from FWHCA ► Enhance habit in FWHCA ► Reduce conflicts between agriculture & wildlife ► Retain intact habitat for FWHCA ► Maintain or increasing agricultural open space	► No Net Loss of FWHCA functions on agricultural lands at a watershed scale as measured by the loss or gain of acreage in forest cover and impervious surfaces and the increase or decrease in 303(d) listings.	► Increase FWHCA functions on agricultural lands that existed on a watershed scale as of July 2011 as measured by a gain in forest cover acreage, a decrease in impervious surface acreage, and a decrease in 303(d) listings	High Resolution Change Detection every two years Review stewardship practices implemented at quarterly meetings

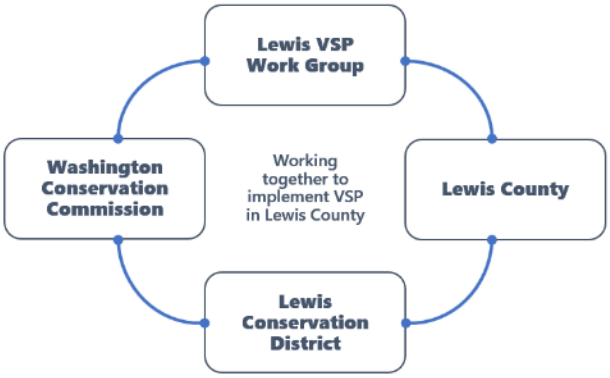
Critical Area Goal	Action Plan	Protection Benchmark	Enhancement Benchmark	Monitoring Tool & Frequency
Reduce risks from frequently flooded areas	► Protect or increase water storage in floodplains ► Reduce floodwater velocities ► Protect farm structures, equipment, & livestock ► Promote regionwide efforts that reduce flood damage on agricultural lands ► Maintain or increase agricultural acreage	► No increase in risk from frequently flooded areas on agricultural lands at a watershed scale as measured by the loss or gain in acreage of impervious surfaces and riparian land cover ► Regulate floodplain development on agricultural lands consistent with Lewis County Code Chapter 15.35, Flood Damage Prevention	► Decrease the risk of frequently flooded areas on agricultural lands at a watershed scale as measured by a decrease in the acreage of impervious surfaces and an increase in the acreage of riparian land cover	High Resolution Change Detection every two years Review stewardship practices implemented at quarterly meetings
Reduce risks from geologic hazardous areas	► Reduce bank erosion & channel migration ► Minimize erosion & sedimentation ► Reduce landslide potential ► Minimize earthquake risk	► No increase in risk of geologic hazards on agricultural lands at a watershed scale as measured by the loss or gain in acreage of vegetative land cover	► Decrease the risk geologic hazards on agricultural lands that existed on a watershed scale as of July 2011 as measured by a gain in vegetative land cover	High Resolution Change Detection every two years Review stewardship practices implemented at quarterly meetings

Table 2: Summary of Agricultural Viability Goals and Action Plans

Ag Viability Goals	Action Plan	Monitoring tool & frequency
Preserve farmland & ensure its affordability	• Retain agricultural lands in production	• Quarterly reporting on activities
Agriculture-friendly regulations that are clear & flexible	• Work towards improving regulatory framework affecting agriculture • Increase knowledge about regulatory framework among agricultural operators	• Quarterly reporting on activities
Water & water rights are important for agriculture	• Increase water storage • Improve efficiency of irrigation systems	• Quarterly reporting on activities
Funding for educational programs, projects & technical assistance	• Increase funding for agricultural technical assistance • Increase availability of technical information resources about improved agricultural techniques	• Quarterly reporting on activities
Teaching about agriculture & ensuring its succession	• Teach agriculture to youth & newcomers to farming	• Quarterly reporting on activities
Agricultural infrastructure & markets	• Work towards improving agricultural infrastructure • Improve agricultural marketing	• Quarterly reporting on activities
Reduce potential impacts to critical areas by small-scale, noncommercial agricultural operators	• Inform small-scale and noncommercial agricultural producers about VSP • Build the agricultural skills of small-scale or noncommercial agricultural operators	• Quarterly reporting on activities

Chapter 3
Work Plan Implementation

Successful Work Plan implementation relies on a coordinated effort by the Work Group, the Lewis Conservation District, and Lewis County. The Washington State Conservation Commission also plays an important role in providing funding contingent on the Work Plan achieving its stated goals and objectives. This chapter explains the involvement level of each entity within VSP implementation and how they work together.



Washington State Conservation Commission

The Washington State Conservation Commission (WSCC) plays two important roles for VSP Work Plan implementation in Lewis County: funding and oversight.

WSCC distributes and administers funds appropriated by the Washington State Legislature each biennium for VSP activities in each county. Currently, the legislature is funding VSP in Lewis County at approximately $110,000 annually. This appropriation could vary each biennium depending on legislative priorities. WSCC directs these funds to local VSP efforts through a grant contract with Lewis County.

To ensure proper expenditure of funds in accordance with state law, WSCC also monitors the success of the Work Group in implementing the Work Plan. The WSCC director performs this monitoring through the two- and five-year reporting requirements as discussed on page 60 in Chapter 5.

Beyond VSP, WSCC also offers a wide range of programs and services that benefits Work Plan implementation, such as the Conservation Reserve Enhancement Program (CREP) and the Irrigation Efficiencies Grant Program.

Lewis VSP Work Group

With adoption of the Work Plan, the Lewis VSP Work Group will transition from being an ad hoc planning group to a board with formalized roles, responsibilities, and procedures. This structural change underscores the importance of having a diligent Work Group implementing and retaining VSP in Lewis County long into the future.

Work Group Membership

The Lewis VSP Work Group will consist of eleven voting members selected by the original ad hoc planning Work Group:

- Nine members will represent the agricultural community. Agricultural recruitment goals include members from dairy, field crops, berries, Christmas trees, beef/other livestock, and poultry. Ideally, these members should reside in different watersheds within the county and have memberships in agricultural-related organizations, such as the Lewis County Farm Bureau and the Lewis Conservation District.
- One environmental representative, with an initial appointment going to the Chehalis Basin Lead Entity. Lead entity representation on the Work Group emphasizes the importance of salmon recovery efforts within the county's watersheds.
- One community at-large position. Preferably, this individual should have a direct or in-direct interest in agriculture, such as a current or past noncommercial agricultural producer, an agricultural retail supplier, or agricultural educator.

All Work Group members are volunteers and do not receive compensation for their participation. In addition, all members undergo Open Public Meetings Act training annually.

Officers

The Work Group will have a Chair and Vice-Chair as officers. The Chair will be responsible for running Work Group meetings, and in his/her absence, the Vice-Chair.

Filling Vacant Positions

Whenever a vacancy occurs on the Work Group, members will recruit individuals to apply for the position. At the next regular meeting, the Work Group will consider all applicants and then select by majority vote who should fill a vacant position.

Terms

The initial terms for Work Group members will be at staggered one-, two-, and three-year periods, chosen by lot. After completion of the initial term, members will serve standard term of three-years. Any member missing more than two meetings annually shall forfeit their position. The Work Group can then elect a replacement to fulfill the remaining term.

Responsibilities

The primary responsibilities for the Work Group are to:

1. Monitor Work Plan progress in implementing goals and benchmarks;
2. Set implementation priorities for critical area protection and enhancement efforts by the Conservation District (as technical provider) based on monitoring outcomes;
3. Set annual outreach and participation targets;
4. Fulfill the two- and five-year VSP reporting requirements to the county and the Washington State Conservation Commission;
5. Carry out Work Plan adaptive management if monitoring reveals unsuccessful implementation of Work Plan goals and benchmarks; and
6. Work with and encourage partner organizations to implement agricultural viability goals and benchmarks.

Meetings and Decision Making

The Work Group will meet at least quarterly; (February, May, September, November). The Work Group will have minutes for each meeting. All meetings shall be consistent with the Open Public Meetings Act. There must be a minimum of five members, whether in person or by teleconference, to establish a quorum for a meeting.

The Work Group will strive to listen and consider all opinions and ideas offered during meetings. Decisions require a simple majority of members participating at a meeting.

The quarterly meetings will be particularly important for monitoring reports from the Conservation District regarding outcomes from Individual Stewardship Plans, participation rates, and protection and enhancement of critical areas. The Work Group will adaptively manage the plan at these meetings as described in Chapter Five.

Advisory Group

The Work Group periodically may appoint individuals to an ad hoc non-voting advisory group to assist or advise on specific issues. Advisory group members typically have specialized technical expertise from local, state, federal, and tribal government. Examples include representatives from NRCS, WDFW, WSDA, ECY, WSCC, Lewis Economic Development Council, the Confederated Tribes of the Chehalis Reservation and the Cowlitz Indian Tribe. There is no term required for advisory group members.

Lewis Conservation District

Lewis Conservation District (LCD) has agreed to be the designated technical provider for the Work Group in implementing the Work Plan. The LCD manager was a co-manager of the Work Plan planning phase with Lewis County and several board members participated on the development of the Work Plan.

Responsibilities

LCD staff will play an active role in implementing the Work Plan. Their responsibilities will include:

1. Providing outreach and extension services (including preparation of Individual Stewardship Plans) to commercial, small-scale, and noncommercial agricultural producers focused on implementing Work Plan critical area goals and benchmarks;
2. Coordinating and performing tasks necessary for monitoring Work Plan goals and objectives and reporting outcomes to the Work Group at each quarterly meeting;
3. Investigating and leveraging resources for implementing and monitoring goals and benchmarks (e.g., working with NRCS, Lead Entities, WSU Extension, etc.);
4. Producing and distributing of VSP-related outreach materials, both print and on-line;
5. Participating with Work Group members in planning and running public outreach events and activities;
6. Assisting the Work Group in completing the two- and five-year reporting requirements;
7. Completing miscellaneous administrative tasks, such as invoicing and coordinating communications between the Work Group, the county, the Washington State Conservation Commission (WSCC), and the public.
8. Providing meeting coordination tasks for the Work Group, including preparation of minutes.

LCD will work closely with the Work Group to coordinate staffing support for these responsibilities at a level commensurate to the compensation received through a memorandum of understanding.

Lewis County

Lewis County is the conduit for funding from WSCC for VSP Work Plan implementation.[6] They will be serving as the fiscal agent for the Work Group and will be responsible for

monitoring Work Group and LCD activities in accordance with WSCC grant contract requirements.

Staff from the Lewis County Department of Community Development will attend Work Group meetings to monitor Work Plan progress, share information or advice, and to coordinate technical services requested of other county departments.

Working Relationships

The Work Group, Lewis County, and LCD will consider each other as equal working partners in implementing the Work Plan. They will jointly prepare a memorandum of understanding (MOU) to clarify their roles and responsibilities, including fiscal arrangements. The parties will review the MOU at the beginning of each state biennium to establish a budget and determine if any changes are necessary.

Proposed General Budget

If the Washington State Legislature continues to fund VSP at current levels, there should be $110,000 available annually for VSP implementation within the county.

Anticipated budgetary items include:

- LCD expenses for fulfilling the roles and responsibilities discussed within this chapter;
- County administrative costs associated with fiscal management; and
- Expenses related to outreach materials and activities

Chapter 4
Outreach & Participation

The success of the Work Plan in achieving its critical area and agricultural viability goals and benchmarks relies on the ability of the Work Group and LCD to connect with commercial and noncommercial agricultural producers.[7] In addition to setting goals for participation, this chapter discusses some key extension outreach concepts and identifies specific strategies for implementing the Work Plan. An outreach and participation action plan complete the chapter by setting measurable objectives for the initial the 2018-2020 biennium.

Participation Goals

The Work Plan adopts the following goals for participation by agricultural operators conducting commercial and noncommercial activities in the county's watersheds to meet the protection and enhancement benchmarks in Chapter 2:

- Reach out and share information with all citizens, especially those engaged in agricultural activities, about the purpose and intent of VSP
- Provide useful knowledge in "plain speak" about voluntary stewardship practices on agricultural lands that protect and enhance critical areas
- Promote the adoption and implementation of Individual Stewardship Plans by commercial and noncommercial operators that benefit critical areas and promote the economic viability of their operations
- Target agricultural operators for outreach and participation that will deliver the greatest potential for improvement to critical areas within a watershed
- Engage citizens involved in agricultural activities in programs and activities that improve the future viability of agriculture in Lewis County
- Be patient, realistic, and manage expectations about VSP participation during its introductory period

Outreach Concepts

Outreach is the process of building interest within the agricultural community for VSP and showing how it can improve their success. It emphasizes the positive impacts of participation - gaining new knowledge and skills as well as increasing awareness about the benefits of critical areas for agriculture. Because VSP is voluntary, effective outreach, especially the quality and content of the message, is essential to opening the door to participation.

Keeping VSP flexible and focused on the individual producer will be the key to participation. It recognizes that each producer has unique motivations, ideas, and needs for their land. Flexibility also acknowledges that each agricultural property and the activities on it have distinctive characteristics in relation to critical areas. One size does not fit all.

Agricultural extension literature emphasizes several key points that are worthy of consideration when expecting voluntary participation in VSP and the implementation of the Work Plan's benchmarks.

- **Motivation**. Reasons for participation will vary from one individual to the next. While good stewardship of their land is foremost in the mind of most agricultural producers, the voluntary protection and enhancement of critical areas are often subservient considerations in relation to the long-term viability and survival of the operation itself. The reality is that many VSP stewardship practices are mutually beneficial to both agriculture and critical areas. By understanding an individual's motivations, it becomes easier to connect on a personal level the importance of operational sustainability with VSP voluntary protection and enhancement benchmarks.
- **Participation progresses through stages**. In general, VSP implementation should expect that individual adoption rates for stewardship practices will be slower at first but can gain ground as trust and success increases. Adoption of practices must prove to be:
  - Economically feasible;
  - Observable, simple to use, and divisible into manageable parts;
  - Compatible with the producer's beliefs, ideas, and management style; and
  - Flexible, easily fitting into the producer's management of the operation.

  Producers often go through a trial period to evaluate a practice before fully adopting it. In terms of implementing VSP voluntary protection and enhancement stewardship practices, initial use of the practice may not always conform to accepted standards.[8]
- **Consider the potential for barriers**. There will be many obstacles that will affect the capacity of VSP to implement benchmarks. Primary among them will be:
  - Organizational barriers caused by the lack of coordination between and among agencies providing incentive programs, including limited resources;
  - Many producers will lack the personal funds or equipment for cost share programs;
  - Landlord-tenant relationships may inhibit the installation and maintenance of long-term stewardship practices and improvements; and
  - Respecting confidentiality of farm operations.

- **Seek to prioritize participation that will provide the most long-term benefit to the watershed**. While it is difficult to anticipate the level of enthusiasm for VSP over time, the Work Group should seek to prioritize outreach efforts to those agricultural operators with lands that will deliver the greatest improvement to critical areas in the watershed. Outcomes from the on-going monitoring program discussed in Chapter 5 will help identify these priorities as will available funding opportunities.

Keeping these factors in mind, the Work Group has adopted a simple and effective strategy to encourage agricultural producers to implement voluntary stewardship practices on their land. It relies on a combination of individual stewardship plans, leveraging resources, and recognition. The Conservation District will play a significant implementation role within each facet of the program.

Outreach & Participation Strategies

The Lewis County VSP Work Group will be the lead messenger for the Work Plan's outreach effort. This is important for building trust in VSP within the agricultural community as the people farmers trust most are other farmers. Assisting the Work Group in the implementation of its outreach message will be the Lewis Conservation District, another trusted entity within the agricultural community.

- **Pioneer Participants**. The Work Group initially will pursue a focused outreach strategy targeting the recruitment of a group of individuals from the commercial and noncommercial agricultural community who can serve as 'ambassadors' for the program. Preferably, these are respected leaders in the agricultural community who are prone to be early adopters of innovative practices and willing to share their VSP experiences publicly with others. Their assistance will be invaluable at hosting field demonstrations, sharing testimony, or allowing their operations to be featured on the website.[9]

  Individual Work Group members, along with Conservation District representatives, will be crucial in recruiting these participants. This can happen through one-on-one contact, presentations at targeted groups, or working through organizations who are supportive of VSP, such as the Farm Bureau. It will be important to have literature, a website, and a clear marketing message available by this time.

  Eventually once a 'core group' is on-board, the Work Group can shift to recruiting tactics that aim at a wider audience. Not only will there be Work Group members and Conservation District representatives to aid in this process, but there should be 'ambassadors' to augment the effort. This will be particularly helpful in establishing the Farmer-to-Farmer Network.
- **Passive information dissemination**. A VSP website will be a focal point of this effort. It will have the most extensive information available about the program,

including how the program works, how to get involved, featured practices and farms, and links to resources. In addition, there will be a series of pamphlets that share information about VSP, the services it provides, and the intersection of critical areas and agricultural activities. The focus of pamphlets will vary – emphasis especially will be directed to the numerous noncommercial agricultural producers.

- **Presentations**. Work Group members and Conservation District representatives will play an important role in sharing information about VSP to local agricultural organizations and groups on a personal, interactive level to encourage participation. Examples of organizations include the Farm Bureau, Lewis County Table, Beekeeper's Association, Master Gardeners, Grange Halls, and Back Country Horsemen. Having a 'human approach' to marketing VSP will greatly enhance the chances of recruiting people into the program.
- **Direct marketing**. Using GIS information that matches critical area locations with known agricultural lands, the Work Group can selectively market to specific agricultural producers. In addition, kiosks will distribute information at select locations that target agriculture – particularly noncommercial agriculture – such as farm and feed stores in the county.
- **Events**. The Work Group will sponsor or participate in events that reach out to the agricultural community. This may include manned or unmanned booths at the county fair or other community events. Over time, provided the availability of volunteers, the Work Group may host field demonstrations for highlighting voluntary protection and enhancement stewardship practices.
- **Farmer-to-Farmer Network**. This approach relies on a team of respected, practicing farmers participating in VSP who are willing to make themselves available to chat with other farmers about the program. This is a critical marketing piece for those individuals considering VSP participation or evaluating the benefits of stewardship practices. There should be network contacts for commercial and noncommercial agricultural producers, including those who have access to niche groups, such as horse owners.
- **Site visits**. Site visits are probably the most effective outreach method that can lead to participation. They allow a one-on-one approach to marketing VSP to agricultural producers. Site visits may include developing an Individual Stewardship Plan (see next section) or simply an opportunity to discussing potential interest in VSP at some level.
- **Building partnerships**. The Work Group, along with the assistance of the Conservation District, will groom partnerships with other agricultural and environmental organizations for reaching out to their memberships. Partnerships will be helpful in accessing mailing lists, obtaining VSP endorsement, and providing a platform for recruiting membership into VSP. Another benefit of building partnerships is the potential for leveraging funding and technical resources for conservation practices or the collection of information about

conservation practices implemented on lands through programs by other organizations or agencies.

- **Recognition**. Agricultural producers who participate in implementing conservation practices deserve public recognition for their stewardship contributions to the community and the land. Participation in the recognition program is voluntary and it acknowledges several levels of participation in VSP:
  - The VSP **Achievement Level** recognizes any agricultural producer who completes an Individual Stewardship Plan.
  - The VSP **Gold Level** recognizes agricultural producers who have implemented conservation practices on their property since July 2011, regardless if they have an Individual Stewardship Plan.
  - The Work Group will give an **Annual Achievement Award** to the agricultural producer who deserves special recognition for the scope and extent of their implementation of conservation practices.

  The recognition program will be invaluable for elevating the profile within the community of VSP and its successes.

- **Individual Stewardship Plans (ISP).** The "flagship" of the VSP participation strategy will be the Individual Stewardship Plan (ISP). In its simplest form, the ISP is both an information sharing process and a documentation of the conversation between the Conservation District representative and an individual producer about the potential for implementing a comprehensive and effective approach to stewardship practices on the land. It also connects the agricultural producer to the implementation of the goals and benchmarks within the Work Plan.

  Foremost to keep in mind about an ISP:
  - The agricultural producer designs the ISP with the assistance of the Conservation District representative;
  - Because the ISP is a specialized element to farm plans, it remains a confidential document; and
  - The ISP puts no obligations on the agricultural producer to implement any of the recommendations in it.

  The ISP also will serve an important tool for the Work Group for collecting information in an **aggregate** format about conservation practices being implemented within a watershed. This means that the only information the Work Group will be using from an ISP is what has been accomplished within a watershed – there will be no information collected and shared that is attributed to an individual agricultural producer.

  The following steps describe the general process about developing ISPs:
  - **Invitation**. To begin the ISP process, an agricultural producer must invite a Conservation District representative to the property. Invitations typically will

be a result of the outreach strategy used by the Work Group and Conservation District. If helpful, a VSP 'ambassador' can tag along.

- **Information sharing**. The information sharing process is a two-way conversation between the Conservation District representative and the producer. It begins with the Conservation District representative bringing informational handouts about VSP and any known information about critical areas on the property. As the CD representative and the agricultural producer tours the property, the conversation may cover:
    - Farming, ranching or other land management objectives;
    - Anticipated changes in practices that might impact critical areas;
    - Natural resource and critical area concerns and opportunities;
    - Past conservation practices implemented by the agricultural producer on the property;
    - Conservation practices that protect or enhance critical areas;
    - Conservation practices that can increase productivity and profitability; and
    - How VSP and the ISP can assist the operation.

  As the conversation continues, the Conservation District representative will process the information shared and begin considering which benchmark strategies are applicable to the agricultural producer and the property. This in turn will aid the Conservation District representative in suggesting possible recommendations for conservation practices. If there is interest on the part of the agricultural producer, the Conservation District representative will return to the office to prepare a draft ISP using the general format in Appendix B.

- **Preparation of the ISP document**. The ISP may provide general information about the location of critical areas on the property, how to protect or enhance them, descriptions of conservation practices the agricultural producer may be interested in trying, actions that can benefit the viability of their operation, and a list of contacts and resources available for assistance. The ISP will particularly emphasize how the Work Group and the Conservation District can assist in the implementation of stewardship practices. Once complete, the Conservation District will deliver the document to the agricultural producer for potential implementation. The pace of that implementation, if any, is solely up to the agricultural producer.

  If the agricultural producer has interest in receiving information about certain conservation practices but decides not to participate in an ISP, the Conservation District representative can simply leave information sheets, such as standard print-outs available through NRCS or other sources on specific practices.

- **Linking resources to the ISP**. For some agricultural producers, access to financial and technical resources will be essential for implementing potential conservation practices, whether it be for protecting or enhancing critical areas, ensuring agricultural viability, or both. The Work Group and the Conservation District will strive to connect agricultural operators with the resources they need.

  While it is expected that resources from within the state's funding allocation for VSP efforts will outstrip demand, the Work Group and the Conservation District will seek to leverage or channel other resources from private, local, state, and federal sources. A list of these potential resources is in Appendix D.

- **On-going consultation**. An ISP is never a "final document;" it may continue to evolve over time as the agricultural operator becomes more interested in expanding recommended conservation practices or adopting new ones. Other issues may also arise that were not addressed in a previous ISP.

  The Conservation District representative can keep the VSP process alive by continuing to work with the agricultural producer through a regular, on-going consultation process. All consultations remain confidential. Whether that involvement entails updating the ISP as efforts move forward, linking new resources to conservation practices, or simply giving advice on inquiries, keeping communication channels open is essential for keeping the agricultural producer engaged in VSP. All consultations between the Conservation District representative and the agricultural producer remain confidential.

  On-going consultation also is essential for tracking benchmarks. For those agricultural operators who implement conservation practices entirely with their own resources, invited field visits may be the only way for the Work Group to learn about what has been accomplished.

- **Providing Non-ISP Assistance**. There will be agricultural producers who may be interested in participating in VSP at a limited level and who do not want to complete an ISP. Their reasons may vary from needing only very limited assistance to concerns about maintaining privacy.

  While preparing an ISP is the ideal comprehensive approach to enhancing critical areas on agricultural lands, the Work Group maintains it is more important to get enhancement projects accomplished. Therefore, the Work Group will provide the same level of service to producers who do not want an ISP.

Documenting the Work of Others

While VSP is a great new initiative for agricultural producers, it has not been, nor will it be, the only resource program encouraging good stewardship practices on agricultural lands. Individual agricultural producers, conservation districts, local governments, state

and federal agencies, and nonprofit organizations all have a long history of implementing good stewardship practices on agricultural lands that benefit the functions and values of critical areas.

VSP will become an excellent tool for "telling the story" about how much work and progress agricultural producers are accomplishing in relation to protecting and enhancing critical areas. Documenting this work will be critical in negating public misconceptions about agriculture's impact on these lands.

The Conservation District will assist the Work Group in this effort by collecting and regularly publishing through its outreach media stewardship efforts being accomplished by the agricultural community. They will do this by organizing and maintaining lines of communication with resource providers to collect this information on an aggregate and watershed level. While it will be difficult to secure information about stewardship practices implemented by individual agricultural producers, the Conservation District will seek to document their work as well. This may require special outreach efforts to these individuals or working through organizations they may hold membership in.

Outreach and Participation Action Plan

Appendix C contains a list of stewardship practices implemented during the 2011-2017 period. While NRCS data provides the number of contracts, it does not reveal the number of unduplicated individuals receiving assistance. LCD, during the same period, has implemented approximately 110 unduplicated stewardship practices through a variety of assistance programs. LCD provides general technical assistance to 60 or more commercial and non-commercial agricultural operators annually.[10]

As described in Chapter 3, the Work Group will be responsible for setting annual outreach and participation targets for implementing the Work Plan. They will be monitoring progress in meeting these targets at their quarterly meetings. The selection of these outreach and participation targets need to reflect a variety of factors, such as current VSP funding levels, capacity of the Work Group and LCD to implement them, and the potential for achieving benchmarks. The setting of future targets will be closely linked to monitoring; failure to meet critical area benchmarks will trigger adaptive management actions that may require increasing outreach efforts.

Table 3 outlines the VSP outreach and participation targets set for the 2017-2019 biennium. These targets reflect the effort necessary to establish a VSP program foundation, past LCD outreach efforts, and current staffing capacity.

Table 3: Outreach & Participation Implementation Actions for the 2017-2019 Biennium

Action	Responsibility	Number	Notes
Recruit Pioneer Participants	Work Group & LCD	2	Ideally there will be a Pioneer Participant in the Chehalis and one in the Cowlitz watersheds
Establish website	Work Group & LCD	1	Website development will require contracted assistance with the goal of LCD staff providing updates when necessary
Preparation & distribution of handouts	LCD	Multiple	LCD staff, potentially with contracted assistance, will produce and distribute a series of handouts about VSP and how operators can protect and enhance each of the critical areas
Direct marketing campaign	LCD	5	Identify and establish locations for informational kiosks that serve agricultural interests (e.g., feed stores & garden centers) to distribute information and handouts about VSP
Organize a VSP Event	Work Group & LCD	1	Organize and implement an individual event, or in coordination with a larger event, that features VSP in general or a specific aspect of the program (e.g., farm tour, county fair)
Site visits and other contact	LCD	75	Reach out and conduct site visits to individual farmers to evaluate needs, share information about voluntarily protecting and enhancing critical areas, encourage the preparation of Individual Stewardship Plans, and verify completion of stewardship practices on critical areas.
Individual Stewardship Plans	LCD	10	Prepare Individual Stewardship Plans for commercial or noncommercial agricultural operators
On-going consultation	LCD	10	Check in on those agricultural operators who adopted Individual Stewardship Plans on a quarterly basis
Monitor outreach & participation activities quarterly	Work Group & LCD	Quarterly	The Work Group and LCD will monitor the progress of outreach and participation efforts during quarterly meetings. This will include tracking work completed to date, and if HRCD monitoring shows benchmarks in the watershed are not being met, adaptive management will need to adjust the outreach and participation biennial targets to reach them.

Chapter 5
Monitoring, Adaptive Management & Reporting Requirements

Work Plan Monitoring

VSP legislation requires the Work Group to monitor and show their progress towards achieving Work Plan goals and critical area benchmarks. **Monitoring** is a process that entails collecting, tracking, and interpreting information to evaluate how agricultural activities at a watershed scale affect the July 22, 2011 Baseline. This section describes a three-step approach to conducting this monitoring process.

Three-Step Work Plan Monitoring Process

Monitoring the Work Plan entails assessing changes to the status of the July 22, 2011 Baseline using the critical area benchmarks. This involves detecting landscape changes on agricultural lands through aerial imagery, evaluating the effect of implemented voluntary stewardship practices; and, assessing whether there was a positive, neutral, or negative change to the Baseline. The information collected through this monitoring process is key to the adaptive management process and preparing the two- and five-year reports described on page 60.

Step 1. Monitoring the Status of Critical Areas on Agricultural Lands since July 2011

General Approach

The purpose of this monitoring step is to detect watershed-scale landscape changes to critical areas on agricultural lands since July 22, 2011 using benchmarks. This involves superimposing 2011 aerial imagery over imagery from future reference points to detect and analyzing where landscape changes occurred on agricultural lands within a watershed. Additional indicators will assist in evaluating impacts to those critical area functions and values not detectable through aerial imagery.

Using HRCD to Detect Landscape Changes

The Washington Department of Fish and Wildlife (WDFW) will assist the Work Group and the Lewis County Conservation District (LCD) in this process through its High-Resolution Change Detection (HRCD) Project.[11] HRCD relies on a highly sophisticated method of creating like polygons from two aerial images; each polygon subjected to a rigorous error analysis that includes a person validating each computer-identified potential change. The result of this process is change detection which is much more accurate

and finer resolution than any other countywide analysis method available. For example, if a portion of a treed riparian corridor is converted to pastureland, HRCD can reveal that change. HRCD, which operates on a two-year cycle, can detect rapid changes such as a removal of canopy or installation of impervious surfaces, however it does not see gradual change such as regrowth of trees. Detecting such change may be possible using a longer time frame or other methods. HRCD imagery will be most useful in monitoring landscape changes affecting wetlands, fish and wildlife habitat conservation areas (FWHCA), frequently flooded areas (FFA), and geologically hazardous areas (GHA).[12]

The table below lists GIS data layers to use in combination with HRCD that aid in locating potential landscape changes to critical areas on agricultural lands:

Table 4: GIS Layers Used with Aerial Imagery

GIS Data Layer	Data Source(s)	Critical Areas
County parcel data (Land use codes 82, 83)	Lewis County	Commercial agricultural production
Agricultural Land Use Inventory	WSDA	Agriculture
Cropland Data Layer	NASS	Agriculture
National Wetlands Inventory/2011 Wetlands Inventory/Coastal Change Analysis Program	USFWS/ECY/NOAA	Wetlands
Flood Insurance Rate Maps	FEMA	FFA
Geologic Hazard Maps	WDNR	GHA
Priority Habitats & Species	WDFW	FWHCA
303(d) List	ECY	FWHCA

The HRCD analysis will cover all non-federal lands within the county. LCD first will focus its monitoring efforts on lands with agricultural activities, using county parcel and the WSDA agricultural inventory. As LCD builds its inventory of non-commercial agricultural locations, these will be added as a secondary layer. To test the accuracy of each HRCD application, LCD staff will ground truth as many properties as possible that revealed having landscape changes within critical areas.

Analysis of Aerial Imagery

It is important to note that while HRCD detects landscape changes on critical areas, it does not explicitly reveal which critical area functions were gained or lost as a result of the change. However, LCD will rely on literature citing accepted standards for drawing reasonable conclusions as to the impact landscape changes have on in enhancing or degrading critical area functions. LCD staff will make this assessment by conducting additional imagery analysis or site inspection if access to the property is possible.

The table below summarizes by critical area how LCD will use HRCD to analyze landscape changes through aerial imagery.

Table 5: Using HRCD to Analyze Landscape Changes & Their Effect on Critical Areas

Critical Area	Changes to look for through Imagery	Functions Potentially Affected
Wetlands	• Alterations to wetland (within limits of detected change) • Changes in wetland area • Increase or decrease in forest cover or native vegetation within wetland and their buffers	• Groundwater recharge/streamflow maintenance • Shoreline stabilization • Habitat • Sediment, nutrient, & chemical capture • Nutrient production export • Flood flow alteration
FWHCA	• Increase or decrease to forest cover or native vegetation within riparian areas • Upland activities that influence sediment and nutrient inputs to streams and wetlands	• Upland and in-stream habitat
FFA	• Increase or decrease in impervious surfaces or structures area • Increase or decrease in forest cover or native vegetation within riparian area (or adjacent to stream) • Increase or decrease of agricultural land use within FFAs	• Decrease or expansion of the 100-year flood plain area • Decrease or increase in flood flow and water velocities • Decrease or increase in risk to people, property, & livestock
GHA	• Increase or decrease in forest cover or native vegetation within riparian areas • Movement or alteration of river channel & streambank • Decrease in forest cover or native vegetation within riparian zones due to forestry, development, or stream migration. Other change factors may be reported by aerial imagery if requested. • Increase or decrease of forest cover or native vegetation on potential landslide areas • Increase or decrease of structures in earthquake risk areas	• Increase or decrease in channel migration & severe bank erosion • Increase or decrease in landslides • Increase or decrease in earthquake risks to people & property

<u>Other Monitoring Indicators</u>

The monitoring process will also incorporate other indicators shown in the Table 6 below to assess impacts to critical areas.

Table 6: Other Monitoring Indicators for Assessing Impacts to Critical Area Functions

Critical Area	Monitoring Indicators	Data Source
FWHCA	303(d) listings to evaluate potential impacts to critical area functions within watershed	ECY Washington State Water Quality Assessment[13]
CARA	Well water testing reports within proximity to agricultural lands that show nitrate levels greater than 10 ppm and pesticides that exceed drinking water standards	WDOH Source Water Assessment Program[14] County Environmental Health Dept. Water Lab

LCD will prepare a report summarizing monitoring outcomes that the Work Group can use for tracking and assessing progress in accomplishing goals and benchmarks.

Baseline Monitoring Schedule

While the Work Group assumes commercial agricultural activities in the county have not made significant landscape changes to critical areas since July 2011, this assumption is untested. Furthermore, the Work Group currently has little knowledge about the overall impact that small-scale and noncommercial agriculture is having on critical areas.

The absence of this data recognizes the need to establish a monitoring program for the 2011 Baseline at a frequency greater than the Five-Year Status Report required under VSP legislation (see VSP Reporting Requirements on page 60). This frequency will allow for timely adaptive management discussed in the next section.

WDFW's HRCD will be assisting the Work Group in initiating their first monitoring of the 2011 Baseline using 2015 imagery beginning in July 2018. Information about the scale of noncommercial agricultural operations will be collected as described under Agricultural Viability Goal 7 on page 32. LCD will be responsible for interpreting the results and preparing a summary report for the Work Group's review. The expectation is that this initial monitoring process could take several months, depending upon when LCD hires VSP coordination staffing.

The Work Group anticipates that this first monitoring sequence may trigger some level of adaptive management as data becomes available to the assess the rate of change to critical areas on agricultural lands. If the rate of change is greater than originally predicted, enhancement benchmarks for some critical areas the Work Group may need to increase to offset losses to critical area functions and values.

A second Step 1 monitoring process will happen around December 2020 in preparation for the Five-Year Work Plan Status Report due in April 2021. With each monitoring event, the Work Group will gain precision in determining to which critical areas and to what extent they need to encourage voluntary conservation practices voluntary protection and enhancement to stay on track with Work Plan goals.

Depending on the results of the first two monitoring cycles, the Work Group will evaluate whether there is a need to continue monitoring the baseline every two and one-half years.

The Work Group may decide in the future to incorporate other datasets from other public and nongovernmental agencies not presently available or known to determine the rate of change to critical areas.

Step 2. Monitoring Voluntary Protection & Enhancement of Critical Areas

The Work Group will monitor the implementation and discontinuance of stewardship practices that achieve critical area benchmarks. This entails monitoring:

- The number of Individual Stewardship Plans (ISP) prepared and the number of agricultural operators consulted since July 22, 2011;
- The type, number, scope (i.e., acreage or feet), and effect of stewardship practices and activities implemented through ISPs and non-ISP efforts since July 22, 2011;
- The type, number, scope, and effect of stewardship practices discontinued or reaching their lifespan since July 22, 2011.

LCD will track the status of a stewardship practice through periodic site visits to the agricultural operation. Information collected will be entered into a spreadsheet for reporting at a watershed scale to the Work Group at their quarterly meetings and in required VSP reports.

Evaluating the Effect of Stewardship Practices

LCD will measure the effect of an implemented stewardship practice by contrasting it with accepted practices, such as NRCS Conservation Practice or WDFW's Fish Passage Program guidelines. If it meets an accepted practice, the stewardship practice will receive a +2. If an implemented stewardship practice does not fully meet an accepted practice, it will still count, but receive a lesser score of +1.

Table 7: Rating Effect of Stewardship Practices on Critical Areas

Effect of Stewardship Practice on Critical Areas	Score
Stewardship practices meeting accepted standards that protect or enhance a critical area	+2
Stewardship practices that are less than an accepted standard, yet provides some level of protection or enhancement to a critical area	+1

Appendix C contains a list of voluntary stewardship practices implemented on agricultural lands between July 2011 and the end of 2017. The Conservation District will continue to expand this list with quarterly reporting to the Work Group. This will allow the

Work Group to evaluate if implementation activities are meeting the projected number in benchmarks.

At two-year intervals, the Work Group will need to summarize and submit a report on its voluntary protection and enhancement efforts to the WSCC and the county. All information and counts in the report will be at a watershed scale. To protect confidentiality, counts will not identify individual participants.

Step 3. Monitoring Agricultural Viability

The monitoring process also will gauge progress in achieving the agricultural viability goals in the Work Plan. Monitoring indicators will include:

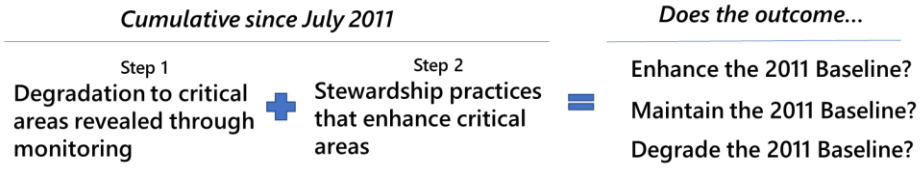
- Implementation of benchmark measures for each agricultural viability goals; and
- Changes in agricultural acreage.

The Conservation District shall provide this information in its quarterly report to the Work Group. The formal report provided at two-year intervals to the WSCC and the county at the end of each state fiscal year will also include a summary of this information.

Interpreting Monitoring Results

The most important step in the monitoring process is interpreting what it tells the Work Group about implementation progress in relation to meeting Work Plan critical area benchmarks.

This begins by gauging whether the cumulative benefits of stewardship practices at a watershed scale have off-set any cumulative negative impacts to a critical area benchmark. A comparison of monitoring results from Steps 1 and 2, as the figure below demonstrates, will tell the Work Group if they are meeting voluntary protection and enhancement benchmarks for critical area goals.



If Step 1 monitoring reveals degradation to a critical area through landscape changes since July 2011, the Work Group must consult the list of completed projects collated through Step 2 (Appendix C) to evaluate and document if implemented stewardship practices completed elsewhere in the watershed compensated for any loss of function.

Depending upon the outcome, the Work Group needs to consider the following questions:

- Was the Work Plan successful in meeting the goals and benchmarks for the **protection of critical areas** on agricultural lands at a watershed scale?
  - If the answer is "yes," the Work Group continues to implement the goals in the Work Plan.
  - If the answer is "no," the Work Group will need to analyze why and may need to initiate adaptive management.

- Was the Work Plan successful in meeting the goals and benchmarks for the voluntary **enhancement of critical areas** on agricultural lands at a watershed scale?
  - If the answer is "yes," the Work Group continues to implement critical area goals in the Work Plan.
  - If the answer is "no," the Work Group will need to analyze why and may need to initiate adaptive management.

Interpreting benchmarks for ensuring the long-term agricultural viability requires a slightly different, simple approach. It involves asking the question:

- Was the Work Plan successful in meeting the goals and benchmarks for **ensuring agricultural viability** and preventing the conversion of agricultural land to other uses?
  - If the answer is "yes," the Work Group continues to implement the agricultural viability goals of the Work Plan.
  - If the answer is "no," the Work Group will need to analyze why and may need to initiate adaptive management.

Using Caution When Interpreting Monitoring Results

There can be a great number of "uncertainties" when interpreting monitoring data. The Work Group must exercise caution to avoid certain "traps" as it goes through this process.

For one, enhancing the functions and values of a critical area in one area of a watershed in compensation for a loss in another is not an easy "apples-to-apples" exercise. Exact replication of a critical area in another location may not always render the same functions and values given the uniqueness of every site situation.

In some cases, it can take years before some level of parity occurs, such as clear-cutting a riparian corridor in one place and restoring one equal in size somewhere else. The opposite can be true as well; the enhancement value gained from a three-acre

riparian restoration project meeting NRCS practices may significantly exceed the loss of a five-acre riparian corridor consisting of non-native vegetation. To fully quantify the exactness of these "equations" far exceeds budget, time, and skill. The lesson to learn here is that interpretation of monitoring data is not always an exact science and will often involve a certain amount of guesswork as to implementation outcomes.

Another factor to keep in mind is the wide variation of stewardship practices that can overcome actions that degrade critical area functions. Focus on the impacts to critical areas rather than the action itself. For instance, the response to one farmer allowing livestock to enter a stream is not always reliant on encouraging another farmer to keep theirs out. If the problem caused by livestock access is over-sedimentation or excessive nutrients, other stewardship practices completed elsewhere by other agricultural operators can fully compensate for those impacts by implementing NRCS practices such as cover crops, nutrient management, filter strips, or channel bed stabilization. "Thinking outside of the box" will facilitate a more complete picture of protecting and enhancing the July 2011 Baseline.

Finally, it is important to consider the potential for off-site land uses and environmental change to negatively affect critical area functions and values on agricultural lands. An increase in flood risk to agricultural lands may be the result of development actions elsewhere in the watershed. The degradation of fish and wildlife habitats on agricultural land that fail to support species, such as salmon, could be the result of forest practices upstream. Aquifer recharge areas are vulnerable to pollution and over withdrawals from residential and commercial growth. Climate change may also significantly affect the function and values of critical areas. These are but a few situations that can degrade critical area functions and values on agricultural lands.

The Work Group can overcome their discomfort with these uncertainties, however, by using reasonable assumptions and approximations when evaluating Work Plan progress in meeting goals and benchmarks. "Showing your work" is very important when drawing any conclusions from the monitoring data, especially when submitting Five-Year Status Reports.

Cooperative Monitoring with Other Entities

The Work Group will cooperate with state agencies and nongovernmental organizations in VSP monitoring efforts. This may include sharing data or exploring adding new monitoring methodologies into the Work Plan.

Factors to consider when exploring the addition of new monitoring methodologies into the Work Plan include its:

- Long-term funding and support;
- Ease of data interpretation;
- Scope and extent of the monitoring methodology within the watershed; and

- Ability to distinguish agriculture as a source of the impact to critical areas.

Work Plan Adaptive Management Process

Adaptive Management Concept

Adaptive management enables the Work Group to revise the Work Plan when monitoring activities reveal that the Work Plan is not meeting its critical area goals and benchmarks. This process can entail reassessing the assumptions relied upon in the Work Plan, taking steps to adjust action plans, and exploring new alternatives for outreach and participation.

Initiating Adaptive Management

The Work Group can initiate the adaptive management process as frequently as each quarterly meeting, as discussed in Chapter 3. For example, the Work Group may make small tweaks regarding how they manage outreach methods and strategies to encourage greater participation or prevent disenrollment of stewardship practices on specific critical areas.

On the other hand, a more demanding adaptive process becomes necessary if the monitoring process documents the degradation of a critical area below the July 22, 2011 baseline. Critical area monitoring using HRCD requires adaptive management when critical area landcover on agricultural lands results in a change of 120% or greater from the July 22, 2011 baseline.[15] Other monitoring processes, such as an increase in 303(d) listings or degraded water quality in well reports will also require reassessment of the Work Plan through adaptive management.

Adaptive Management Considerations

There may be a variety of reasons why the Work Plan is not achieving its goals and benchmarks. These may include:

- Implemented stewardship practices are not fully compensating for losses to critical area functions and values;
- Outreach and participation activities are not engaging the agricultural community;
- Inadequate funding is available to implement the stewardship practices necessary to overcome degradation;
- Negative public perceptions of VSP create obstacles to participation;
- Poor economic conditions limit participation by agricultural producers; and/or.

- Monitoring methodologies are inadequate at filtering out impacts caused by other surrounding non-agricultural land use activities.

Pinpointing the root cause of the shortfall is an essential task for the Work Group to effectively choose the appropriate adaptive management response. This could result in small or major changes to benchmark monitoring and data collection methods as well as outreach and participation goals, methods, and action plans.

However, it is important to note that not all shortfalls are resolvable. For instance, poor economic conditions that dissuade agricultural operators to participate in VSP may prove insurmountable for the Work Group to overcome. In such cases, clear documentation of the problem will be important when submitting required reporting to the county and WSCC.

VSP Reporting Requirements

Monitoring and adaptive management will aid the Work Group in meeting its two- and five-year reporting requirements to the WSCC and the county.

Two-Year Reporting Requirement

Within sixty days after the end of the state's two-year fiscal period, known as the "biennium," the Work Group must file a written report with WSCC and the county regarding its accomplishments during that time.[16] This report minimally must include:

- Aggregate information on the number stewardship practices implemented that address critical area benchmarks
- Progress in meeting agricultural viability benchmarks
- Changes to the 2011 critical area baseline, if known
- Adaptive management actions taken, if any
- Any other reporting requirements of the program

Submitting the two-year report to the WSCC and the county is an on-going responsibility of the Work Group that continues into the future.

Five-Year Reporting Requirement

Not later than five years from the date of receiving funding (April 18, 2021), the Work Group must report to the WSCC director and the county on whether it has met the work plan's voluntary protection and enhancement goals and benchmarks.[17]

The following reporting procedures apply to goals and benchmarks for **protecting** the 2011 critical area baseline:

- If the Work Group determines they have met the protection goals and benchmarks in the Work Plan, and the WSCC director concurs, the Work Group continues to implement the work plan.
    - If the director does not concur with the Work Group report, the director shall consult with the Statewide Advisory Committee for a recommendation as to how to proceed.
    - If the director, acting upon recommendation from the Statewide Advisory Committee, determines that the Work Group is likely to meet the goals and benchmarks with an additional six months of planning and implementation time, the director must grant an extension.
    - If the director, acting upon a recommendation from the statewide advisory committee, determines that the Work Group is unlikely to meet the goals and benchmarks within six months, the county becomes subject to RCW 36.70A.735.
- If the Work Group determines they have not met the protection goals and benchmarks, it must propose and submit to the WSCC director an adaptive management plan to achieve the goals and benchmarks. If the director does not approve the adaptive management plan under RCW 36.70A.730, the watershed is subject to RCW 36.70A.735.

The following reporting procedures apply to goals and benchmarks for **enhancing** the 2011 critical area baseline:

- If the Work Group determines they have not met the enhancement goals and benchmarks, they must determine what additional voluntary actions are necessary to meet the benchmarks, identify the funding necessary to implement these actions, and implement these actions when funding is available.

As with the two-year reporting requirement, the Work Group must submit the five-year report every five years thereafter.[18]

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Hobby Farms – Saving the Farm. https://www.hobbyfarms.com/saving-the-farm-2/

US Department of Agriculture:

Conservation Programs. www.fsa.usda.gov/programs-and-services/conservation-programs/index

Conservation Practices. www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849

National Agricultural Statistics Service. www.nass.usda.gov/Data_and_Statistics/

Washington State Department of Agriculture:

Agricultural Land Use. https://agr.wa.gov/pestfert/natresources/aglanduse.aspx

Washington State Department of Ecology. Water Quality Assessment & 303(d) List. https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d

Whatcom Conservation District. Farm Planning. Small Farm. http://www.whatcomcd.org/small-farm

Appendix A: Work Plan Development Process

Opting into the Voluntary Stewardship Program (VSP)

The Lewis County Board of County Commissioners opted into the Voluntary Stewardship Program (VSP) when it adopted Resolution #2011-365 on October 31, 2011. The resolution designated "…all watersheds within the county as eligible for participation in the Voluntary Stewardship Program." The resolution further stated that the county would proceed once the Washington State Conservation Commission provides adequate funding for plan development.

Due to budget constraints, the Washington State Legislature delayed VSP funding for several years. The county and the Washington State Conservation Commission eventually executed a contract on April 25, 2016.[19]

Project Design & Work Group Formation

Lewis County and the Lewis Conservation District (LCD) agreed to act as co-managers for facilitating a Lewis VSP Work Group. Representing their agencies were Lee Napier, Lewis County Community Development Director, and Bob Amrine, LCD Manager. John Kliem of Creative Community Solutions, Inc., assisted in project design, facilitation, and document preparation. Brianna Teitzel, Lewis County Community Development, and Matt Hyatt, Lewis County GIS Manager, provided additional staff support.

The county and LCD initiated community discussion on developing a Work Plan by inviting members of the agricultural community to a workshop on December 10, 2015 to discuss how the VSP Work Plan development process should move forward. With approximately 20 participants in attendance, the group shared ideas about preferences and concerns regarding a future VSP program in the county.

Ideas from the workshop surfaced into a general project approach released by the county and LCD entitled "Strategy for Developing the VSP Work Plan." This "planning-to-plan" report discussed a framework for participation in the Work Plan development and the steps for developing the Work Plan, including the approval process.

In August of 2016, the county and LCD began the process of soliciting individuals to serve on the Work Group. The first focus of this effort was to recruit members from the agricultural community involved in ranching, dairies, berry growers, cannery crops, Christmas trees, CSA/organic growers, feed stores, flower grower, poultry farms, and noncommercial agriculture. Also considered were membership in agricultural

organizations and farm location in the county's watersheds. In all, 51 letters went out to individuals requesting their participation.

The table below lists the individuals who agreed to serve on the Work Group.

Member	Representing
Bill Schroepfer	Beef
Brian Merryman	Beef/hay
Brian Thompson	Custom harvesting/agronomic consultant
Chris Aldrich	Blueberry/Christmas trees
Chuck Hays	Crops/hay
Dave Fenn	Crops/beef/hay/farm store
Don Taylor	Beef/hay
Glenn Aldrich	Blueberry/Christmas trees
John Lucas (resigned)	
Julie Powe-Balmelli (resigned)	Beef/hay
Katherine Humphrey	Hazel nuts/crops/beef/ hay
Kirsten Harma	Chehalis Basin Lead Entity
Pam Kinsman	Dairy
Ron Averill, Chair	Horses
Steven Johnson	Beef/vegetables/sheep
Tom Christin	Beef
Tracy Spencer	Beef/hay

In addition, the Chehalis Tribe and representatives from state and federal agencies received invites to participate in an advisory capacity to the Work Group. Of these invites, the following individuals participated in one or more Work Group meetings:

Member	Representing
Scott Brummer	Washington Department of Fish and Wildlife
Bill Eller	Washington State Conservation Commission
Kelly McLain	Washington Department of Agriculture
Even Sheffels	Washington State Farm Bureau
Sheila Gray	WSU Extension

The county and LCD were unsuccessful in getting responses from the Chehalis Tribe regarding participation on the Work Group.[20] Additional outreach to environmental organizations similarly failed to attract interest.[21]

Work Plan Development

The Work Group held a series of workshops beginning in the Fall 2016 to develop a draft Work Plan. The table below provides the date and describes the focus of each workshop.

Date	Agenda
September 20, 2016	• Introduction to VSP • Overview of Work Plan development • Identifying positive work group skills
October 11, 2016	• Outreach approaches • Introducing agricultural & critical area profile reports
November 15, 2016	• Workshop on concerns about the future for agriculture in Lewis County
December 20, 2017	• Workshop on setting agricultural viability goals
January 12, 2017	• Overview of VSP efforts going on in other counties • Open Public Meetings Act Training
February 21, 2017	• Overview of county watersheds • Wetlands, agriculture, & stewardship practices
March 21, 2017	• Critical aquifer recharge areas, agriculture, & stewardship practices
April 13, 2017	• Conceptual framework for Lewis VSP
May 16, 2017	• Frequently flooded areas, agriculture, & stewardship practices • Geologically hazardous areas, agriculture, & stewardship practices • Fish & wildlife habitat conservation areas, agriculture, & stewardship practices
October 17, 2017	• Introducing the Draft VSP Work Plan
November 21, 2017	• Continued review of Draft VSP Work Plan
December 19, 2017	• Continued review of Draft VSP Work Plan
January 16, 2018	• Continued review of Draft VSP Work Plan • Preparation for Preliminary Technical Panel Review
February 9, 2018	• Preliminary Technical Panel Review
March 20, 2018	• Review of Preliminary Technical Panel comments • Work Plan implementation framework
April 17, 2018	• Creating an Individual Stewardship Plan
May 15, 2018	• Final Draft Work Plan Review • Discussion on submittal of Work Plan to Technical Panel for Formal Review
July 27, 2018	• First Formal Review before the Technical Panel
August 24, 2018	• Second Formal Review before the Technical Panel
September 11, 2018	• Work Group meeting to review recommended Technical Panel changes
September 17, 2018	• Third Formal Review before the Technical Panel; adoption of Work Plan

STATE OF WASHINGTON
CONSERVATION COMMISSION
PO Box 47721 • Olympia, Washington 98504-7721 • (360) 407-6200 • FAX (360) 407-6215

September 18, 2018

Ms. Lee Napier
Lewis County
Community Development Director
2025 NE Kresky Avenue
Chehalis, WA 98532

Re: Approval of Lewis County Voluntary Stewardship Program Work Plan

Dear Ms. Napier:

The Voluntary Stewardship Program (VSP) Technical Panel has reviewed the work plan submitted by the County and has approved the work plan at a formal review meeting on September 17, 2018.

As a result of the approval of the work plan by the Technical Panel, and in accordance with RCW 36.70A.725 (3) (a) (ii), the Director of the Conservation Commission must approve the work plan.

Therefore, by this letter, as Executive Director of the Washington State Conservation Commission, I formally approve the work plan for the County as of the date of this letter.

If any amendments have been made to the work plan during the Technical Panel review process, please provide the Conservation Commission an electronic link to the final version of the work plan. That link can be sent to Alicia McClendon at **amcclendon@scc.wa.gov**.

Thank you for your continued engagement in and support of VSP, and congratulations on the approval of the county's plan. If you have any questions, please feel free to contact me.

Sincerely,

Mark Clark
Executive Director

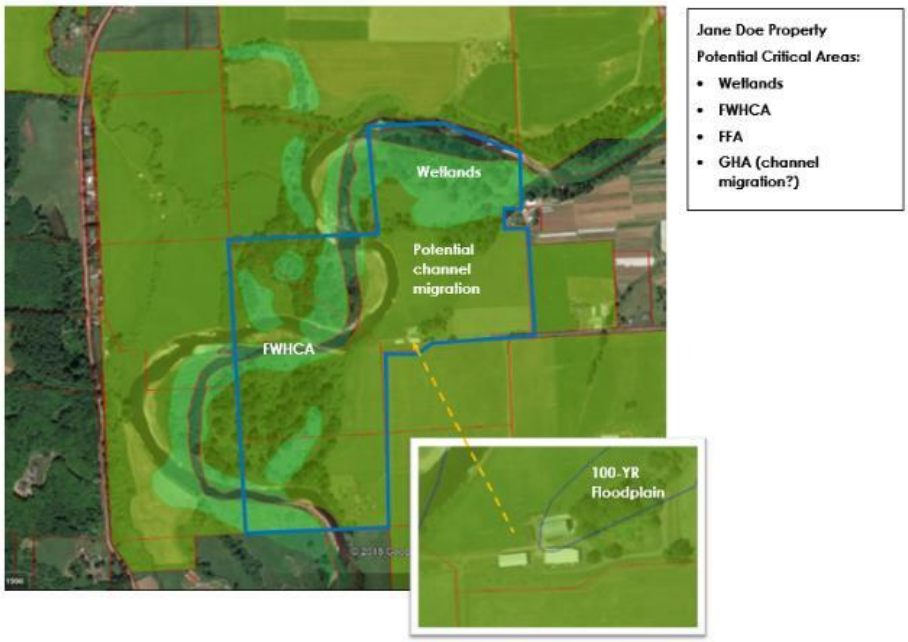
Appendix B:
Individual Stewardship Plans

The Individual Stewardship Plan (ISP) is a fundamental VSP tool as described in Chapter Three, Outreach and Participation. The Work Plan recognizes that each property is unique and that an ISP must be flexible, so it best serves the needs of the agricultural operator. An ISP also needs to be simple, user friendly, and communicates clearly that it is voluntary and confidential. Most importantly, it must link stewardship practices to the achieving Work Plan critical area goals, action plans, and benchmarks.

This appendix provides additional detail regarding its preparation, format, and contents.

Pre-Site Visit Stage

1. Upon receiving an invite for a site visit by a prospective agricultural operator, LCD will assemble any information available about the property. This may involve:
    - Looking at Assessor's data relating to the land use code, ownership, and parcel size for the property
    - Examining and printing out aerial images for the property with KMZ overlays of potential critical areas (see example below)



- Reviewing the most recent WSDA survey data about agricultural activities on the property

2. After reviewing general information about the site, LCD will review the Work Plan to consider which critical area goals, action plan objectives, and potential stewardship practices may be relevant to the property.

Initial Site Visit

3. During the site visit, LCD will begin by explaining the purpose of VSP and providing a printed brochure about the program. LCD will then ask the agricultural operator about the operation, any concerns, and long-term goals. LCD will listen carefully to the operator to evaluate their individual situation and disposition to determine their interest level in VSP in general as well as completing an ISP.

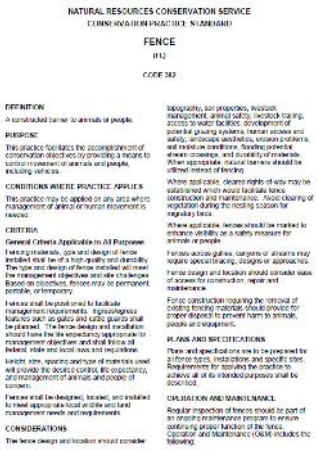
4. LCD will also ask if the operator has completed any improvements to the land since July 2011. LCD will examine those and take notes to record and rate upon return to the office.

5. Once the initial interview is complete, LCD will discuss with the operator their observations about how VSP and an ISP can benefit their operation, including which potential stewardship practices and activities to implement. If the operator continues to show interest in participating in VSP and potentially implementing certain practices whether that be independently or with technical and financial assistance, LCD will schedule a date and time for a second site visit. The LCD representative will then go back to the office to prepare an ISP for the operator.

Second Site Visit

6. At the second site visit, LCD will bring the ISP in a simple folder that may include:

   - An Individual Stewardship Plan that includes: a summary of the conversation; a list of recommended stewardship practices and activities; and, a list of contact information for accessing voluntary incentives through technical providers.



NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FENCE

(ft)

CODE 382

DEFINITION

A constructed barrier to animals or people.

PURPOSE

This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied on any area where management of animal or human movement is needed.

CRITERIA

General Criteria Applicable to All Purposes

Fencing materials, size and design of fence installed shall be of a high quality and durability. The type and design of fence installed will meet the management objectives and site limitations. Based on objectives, fences may be permanent, portable, or temporary.

Fence shall be positioned to facilitate management requirements. Ingress/egress features such as gates and cattle guards shall be planned. The fence design and installation should have the life expectancy appropriate to management objectives and shall listed all federal, state and local laws and regulations.

Height, size, spacing and type of materials used will provide the desired control, life expectancy, and management of animals and people of concern.

Fence shall be designed, located, and installed to meet appropriate local or state and land management needs and requirements.

CONSIDERATIONS

The fence design and location should consider: topography, soil properties, livestock management, animal safety, livestock training, access to water facilities, development of potential grazing systems, human access and safety, landscape aesthetics, erosion problems, wet meadow conditions, flooding potential, stream crossings, and durability of materials. When appropriate, natural barriers should be utilized instead of fencing.

Where applicable, clearance rights-of-way may be established which would facilitate fence construction and maintenance. Avoid clearing of vegetation during the nesting season for migratory birds.

Where applicable, fences should be marked to enhance visibility as a safety measure for animals or people.

Fences across gullies, canyons or streams may require special bracing, designs or approaches.

Fence design and location should consider ease of access for construction, repair and maintenance.

Fence construction requiring the removal of existing fencing materials should provide for proper disposal to prevent harm to animals, people and equipment.

PLANS AND SPECIFICATIONS

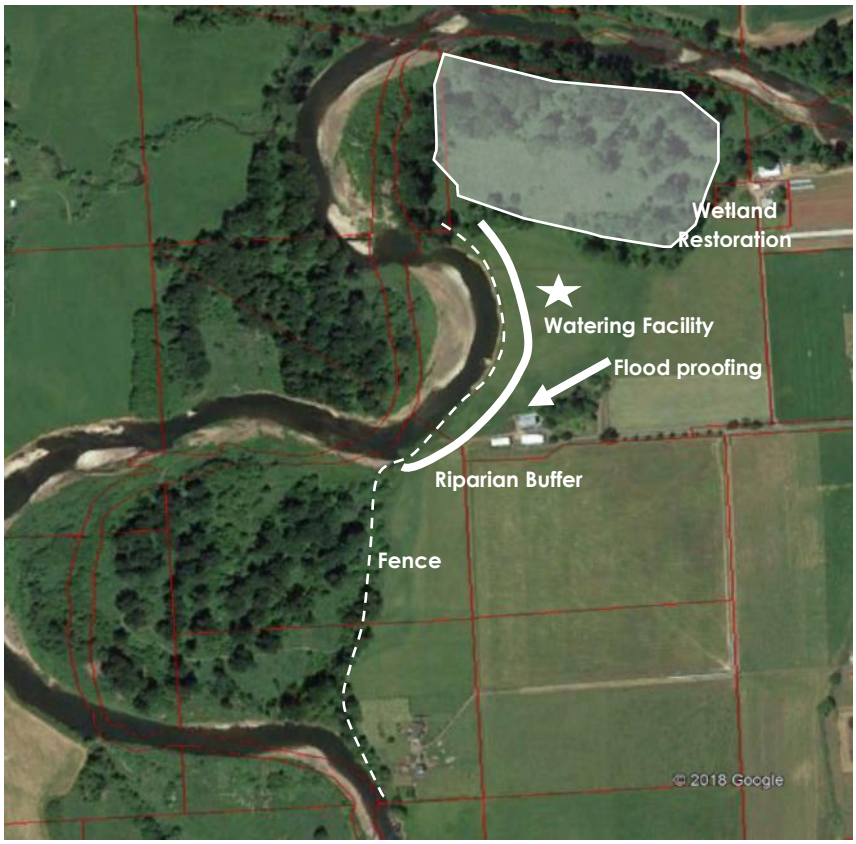
Plans and specifications are to be prepared for all fence types, installations, and specific sites. Requirements for applying the practice to achieve all of its intended purposes shall be described.

OPERATION AND MAINTENANCE

Regular inspection of fences should be part of an ongoing maintenance program to ensure continuing proper function of the fence. Operation and Maintenance (O&M) includes the following:

- One aerial photograph showing the potential location of critical areas on the property and a second one generally showing the location of implementing stewardship practices (see example on next page).
- Any printed materials explaining a specific stewardship practice or program, such as NRCS FOTG sheets, simple diagrams or pictures, and program information brochures.


Conservation Reserve Enhancement Program (CREP)



7. LCD will go over the contents and answer any question or provide additional detail, if necessary. LCD also will emphasize their commitment to facilitating the operator in implementing stewardship practices. That may include implementing practices with LCD resources, working as an intermediary to connect the operator with another technical provider, or simply to providing technical assistance if the operator chooses to complete practices on their own.

8. If the operator is not interested in preparing an ISP but still may be interested in implementing one or two stewardship practices, LCD can still provide the cover sheet, along with any printed materials related to the practice. The level of continued interface between LCD and the operator is the operator's choice.

Contact and Record Keeping

9. LCD will maintain a contact file that includes a copy of the ISP. The contact file will also contain any notes regarding subsequent contact with the operator or if there were practices implemented.

10. LCD will contact the operator at least annually to determine if any of the recommended stewardship practices were completed, learn about any changes to the agricultural operation, and assess if additional assistance is needed.

11. For two- and five-year reporting requirements, LCD will maintain a database/spreadsheet that contains aggregate data by watershed regarding the number of ISPs completed, projects completed (by quantity and unit), project rating, and critical areas affected.

Individual Stewardship Plan Template

LCD will rely on a standardized template of for the Individual Stewardship Plan. The template is a simple MS Word™ form that allows LCD to modify the form to meet the individual needs of the agricultural operator. If needed, LCD can fill in the template on a site visit.

Individual Stewardship Plan

The purpose of your Individual Stewardship Plan is to provide you with a record of your conversation with your Lewis Conservation District VSP representative. It also provides you with information about possible stewardship practices and activities you may choose to use on your property.

Because an Individual Stewardship Plan is part of a Farm Plan, information within it remains confidential. However, the Washington State Conservation Commission requires the District to report the total number of Individual Stewardship Plans and projects completed in the watershed. The District will keep a copy of your plan on file for future reference when you contact them.

Please remember that the stewardship practices suggested in the Individual Stewardship Plan are **voluntary** and **do not place any commitment on your part**.

Please feel free to call or visit the Lewis Conservation District Office for further assistance at:

(360) 748-0083 • 1554 Bishop Road • Chehalis, WA 98532

Section 1. Individual Stewardship Plan Owner Profile

This Individual Stewardship Plan is for: Name

Address: Site address and mailing address if different

Telephone: Number **Email:** Email

Type of Landownership: Choose type of tenure

Plan prepared on: Click or tap to enter a date.

Interested in receiving emails from the District about:

The Voluntary Stewardship Program Yes ☐ No ☐

Other District news, activities, & events Yes ☐ No ☐

Section 2. Current Agricultural Activities

Type of agricultural activities currently on the property:

Current agricultural activities

Goals for managing agricultural activities on the property:

Goals

Concerns about continuing agricultural activities on the property:

Concerns about continuing agricultural activities

Current or past participation in conservation programs:

List program

Section 3. Critical Areas

The following critical areas may be on the property:

- ☐ **Wetlands**
- ☐ **Critical aquifer recharge areas**
- ☐ **Fish & wildlife habitat conservation areas** (Describe.)
- ☐ **Frequently flooded areas**
- ☐ **Geologically hazardous areas** (Describe.)

Current concerns about critical areas on the property:

Critical area concerns

Please see attached aerial image of your property for potential location of critical areas on your property.

Section 4. Recommended Stewardship Practices

Stewardship practices or conservation projects completed since July 2011:

Practice	Quantity/Unit	Date

Suggested stewardship practices to protect and/or enhance critical areas:
(See Work Plan Chapter 2 for the list of goals, stewardship practices, and management objectives for each critical area)

Practice	Objective

Please see the information sheets in the folder that provide explanation about these practices.

Section 5. Contact List

The Lewis County Conservation District is available to help you anytime. Please feel free to contact us with your questions or when you need assistance.

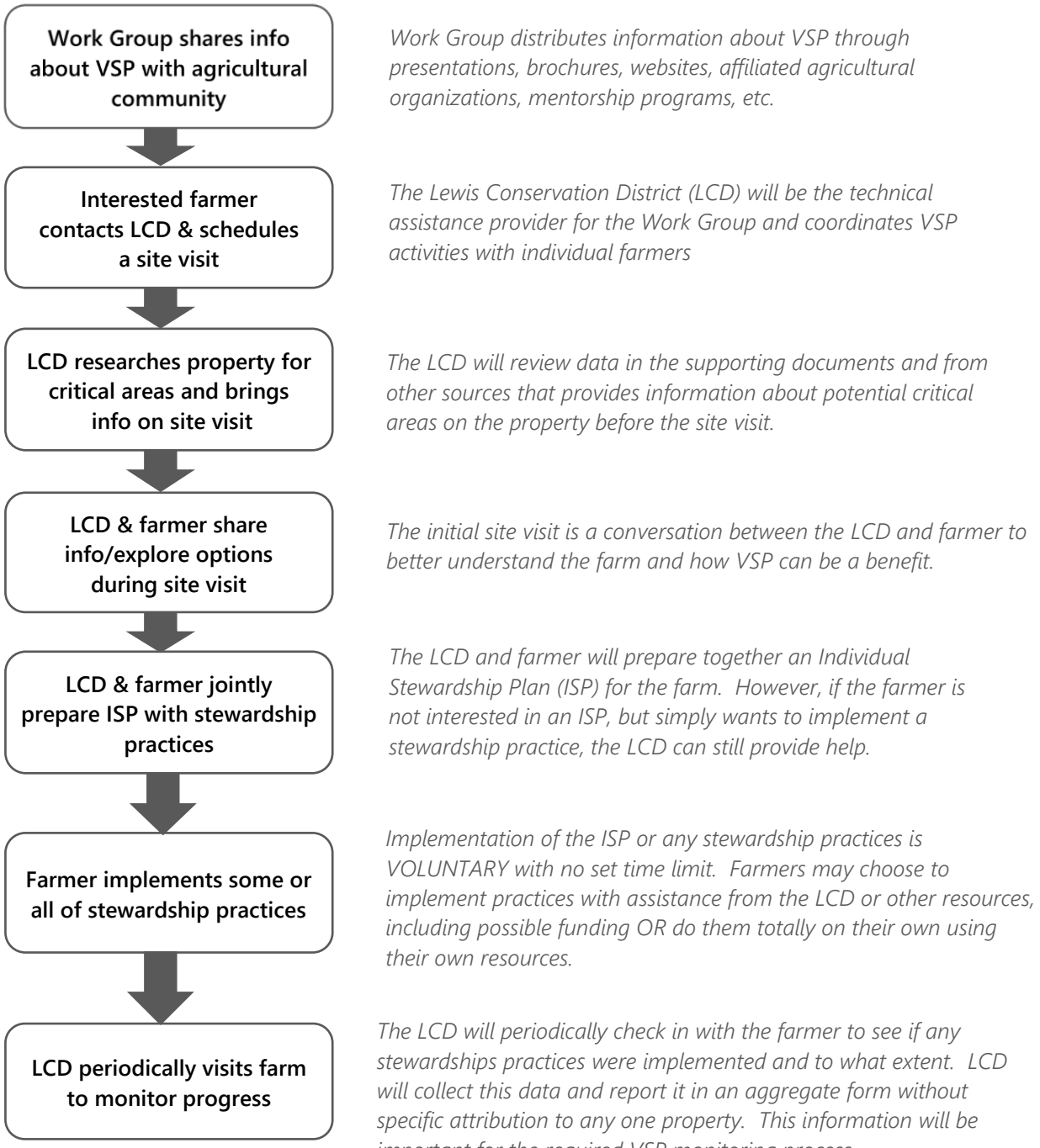
The list below are other resources available that can provide you with technical and/or financial assistance for the recommended stewardship practices in your Individual Stewardship Plan. If you like, the Conservation District can help you with contacting these resources.

Contact	Telephone	For:

Section 6. Other Notes

Add other notes here

Steps to Facilitating and Implementing Individual Stewardship Plans



Appendix C:
Stewardship Practices Since 2011

Introduction

Since July 22, 2011, natural resource agencies have been implementing stewardship practices that benefit critical areas under VSP on agricultural lands throughout Lewis County. Appendix F currently provides an inventory of these stewardship practices implemented between July 22, 2011 and December 31, 2017. The Work Group will be making updates to this list on a quarterly basis beginning in 2018.

Implemented Stewardship Practices

Natural Resource Conservation Service

The Natural Resource Conservation Service (NRCS) implements a wide range of projects in Lewis County through the Chehalis Service Centers. The information provided by the NRCS Service Center in Chehalis only shows the number of contracts by practice. The number of individual farmers who benefited from these contracts was not available.

Table 1 below includes NRCS projects completed between July 2011 and December 31, 2017 assumed to provide a direct or indirect beneficial impact to the five critical areas based on their description in the Field Office Technical Guide (FTOG). Table 2 that follows shows the critical area each practice benefits, including its calculated project lifespan[22]. Because these projects met NRCS FTOG specifications, they receive a Stewardship Rating of +2 for their benefit to critical areas.

Table 1. NRCS Projects Completed; July 2011 through 2017[23]

Code	Practice	Contracts	Number	Unit	Practice Lifespan*
560	Access Road	2	3,600	Feet	10
316	Animal Mortality Facility	2	1	Count	15
575	Animal Trails and Walkways	2	2,380	Feet	10
396	Aquatic Organism (Fish) Passage	2	2	Miles	5
314	Brush Management	6	49	Acres	10
326	Clearing and Snagging	1	130	Feet	5
317	Composting Facility	5	1	Count	15
340	Cover Crop	6	35	Acres	1
342	Critical Area Planting	5	6	Acres	10
382	Fence	5	12,989	Feet	20
512	Forage & Biomass (Pasture and Hay) Planting	1	2,622	Acres	5
106	Forest Management Plan - Written	8	8	Count	1

Code	Practice	Contracts	Number	Unit	Practice Lifespan*
666	Forest Stand Improvement	44	1,007	Acres	10
548	Grazing Land Mechanical Treatment	4	334	Acres	1
561	Heavy Use Area Protection	14	17,632	Feet^2	10
315	Herbaceous Weed Control	1	4	Acres	5
595	Integrated Pest Management	1	22	Acres	1
516	Livestock Pipeline	3	4,103	Feet	20
484	Mulching	3	4	Acres	1
590	Nutrient Management	14	724	Acres	1
582	Open Channel	2	137	Feet	15
528	Prescribed Grazing	2	89	Acres	1
533	Pumping Plant	1	1	Count	15
643	Restoration and Management of Rare and Declining Habitats	26	759	Acres	1
391	Riparian Forest Buffer	10	24	Acres	15
654	Road/Trail/Landing Closure and Treatment	2	400	Feet	10
558	Roof Runoff Structure	5	335	Count	15
798	Seasonal High Tunnel System for Crops	7	11,539	Feet^2	4
578	Stream Crossing	3	3	Count	10
649	Structures for Wildlife	8	36	Count	5
612	Tree/Shrub Establishment	47	594	Acres	1
490	Tree/Shrub Site Preparation	21	182	Acres	15
634	Waste (Manure) Transfer	11	11	Count	15
633	Waste Recycling	3	79	Count	1
313	Waste Storage Facility	4	4	Count	15
614	Watering Facility	3	6	Number	10

* Years

Table 2. NRCS Practices Implemented; 2011 – 2017: Benefits to Critical Areas

Code	Practice	WET	CARA	FWHCA	FFA	GHA
560	Access Road			•		
316	Animal Mortality Facility	•	•	•		
575	Animal Trails and Walkways			•		•
396	Aquatic Organism (Fish) Passage	•		•		
314	Brush Management			•		•
326	Clearing and Snagging				•	
317	Composting Facility		•	•		
340	Cover Crop	•		•		•
342	Critical Area Planting	•		•	•	•
382	Fence	•		•		•
512	Forage and Biomass Planting	•		•		
106	Forest Management Plan - Written			•		•

Code	Practice	WET	CARA	FWHCA	FFA	GHA
666	Forest Stand Improvement			•		
548	Grazing Land Mechanical Treatment					•
561	Heavy Use Area Protection			•		•
315	Herbaceous Weed Control	•		•		•
595	Integrated Pest Management	•	•	•		
516	Livestock Pipeline	•		•		
484	Mulching			•		•
590	Nutrient Management		•	•		
582	Open Channel			•	•	•
528	Prescribed Grazing	•	•	•		•
533	Pumping Plant			•		
643	Restoration and Management of Rare & Declining Habitats	•		•		
391	Riparian Forest Buffer	•		•	•	•
654	Road/Trail/Landing Closure and Treatment	•		•		•
558	Roof Runoff Structure		•	•		
798	Seasonal High Tunnel System for Crops		•			
578	Stream Crossing		•	•		•
649	Structures for Wildlife	•		•		
490	Tree/Shrub Establishment					
612	Tree/Shrub Establishment	•	•	•		•
634	Waste (Manure) Transfer		•	•		
633	Waste Recycling		•	•		
313	Waste Storage Facility		•	•		
614	Watering Facility	•		•		•

Lewis Conservation District

The Lewis Conservation District (LCD) implements a wide range of agricultural stewardship programs for both commercial, small-scale, and noncommercial agricultural operators in Lewis County. LCD also has been an active project sponsor under the Salmon Recovery Grant program.

Table 3 inventories projects completed on agricultural lands July 2011 through 2017 and Table 4 shows the critical area each practice benefits. The Washington State Conservation Commission provided funding for these projects. Because these projects satisfied NRCS FTOG specifications, they all receive a Stewardship Rating of +2 for their benefit to critical areas.

Table 3. LCD projects completed, July 2011 through 2017

Code	Practice	Projects	Quantity	Unit	Practice Lifespan*
340	Cover Crop	5	571	Acres	1
382	Fence	21	51,904	Feet	20
	Livestock & Equipment Pads	20	2,656	Animals	
590	Nutrient Management (spreader equipment)	4	313	Acres	1
329	Residue & Tillage Management, No Till	1	1,628[24]	Acres	1
654	Road/Trail/Landing Closure & Treatment	2	1,838	Feet	10
395	Stream Habitat Improvement & Management	23	111	Miles	5
313	Waste Storage Facility	5	3	Count	15
629	Waste Treatment	3	3	Count	10
614	Watering Facility	1	1	Count	10
	CREP	25	196	Acres	10-15

* Years

Table 4. LCD projects completed, July 2011 through 2017

Code	Practice	WET	CARA	FWHCA	FFA	GHA
340	Cover Crop	•		•		•
382	Fence	•		•		•
	Livestock & Equipment Pads				•	
590	Nutrient Management (spreader equipment)		•	•		
329	Residue & Tillage Management, No Till		•	•		•
395	Stream Habitat Improvement & Management	•		•		•
313	Waste Storage Facility		•	•		
629	Waste Treatment		•	•		
614	Watering Facility	•		•		•

LCD has been active in sponsoring salmon recovery projects through the Salmon Recovery Grant Program and the Family Forest Fish Passage Program since July 2011. All but one of the projects listed in Table 5 were in WRIA 23. Most of these projects primarily addressed fish passage issues.

Table 5. LCD Salmon Recovery Projects

Year	Project	Stream	Habitat Miles Opened
2011	Murphy Fish Passage Project	Trib. to NF Newaukum	0.4
2011	Alexander Fish Passage Project	Unnamed trib. to Chehalis River	0.7
2011	Mill Creek Fish Passage Project	Mill Creek	5.7
2013	Schilter –Van Ornum Creek Project	Van Ornum Creek	4.7
2013	Snider – Taylor Creek Project	Taylor Creek	0.6
2013	WHT – Parks – Ceres Hill Project	Unnamed Trib. to Chehalis River	1.0

Year	Project	Stream	Habitat Miles Opened
2013	WHT – Parks – Muller Project	Unnamed Trib. to Chehalis River	0.6
2013	WHT – Parks – Rainbow Falls Project	Unnamed Trib. to Chehalis River	0.5
2014	Devereaux – Bunker Creek Project	Bunker Creek	11.7
2014	Borg – Trib. to Lincoln Creek X 2	Unnamed Trib. to Lincoln Creek	1.1
2014	Meskill Tree Farm – Trib. to Bunker Creek	Unnamed Trib. to Bunker Creek	3.2
2015	McMillin – SF Olequa Creek R-12	SF Olequa Creek[25]	5.2
2015	Palmer – Trib. to Stearns Creek – R12	Tributary to Stearns Creek X 2	1.1
2015	Scammon Creek Barrier Removal	Scammon Creek X 2	3.6
2016	Layden –Trib. To Chehalis River	Tributary to Chehalis River	2.5
2016	Martin – Trib. To Independence Creek	Tributary to Independence Creek	0.6
2016	Phelps – Trib. To Independence Creek	Tributary to Independence Creek	0.7
2016	Niemi – Trib. To Salzer Creek	Tributary to Salzer Creek	0.7
2016	Fahey – Lincoln Creek	Lincoln Creek	43.0
2016	Woods – Fronia Creek	Fronia Creek	3.0
2016	Fox – Middle Fork Newaukum	Middle Fork Newaukum	17.0
2016	Fox – Trib. Middle Fork Newaukum	Tributary Middle Fork Newaukum	1.1
2016	Lumsden – Trib. To Stearns Creek	Tributary to Stearns Creek	2.0
		Total Habitat Miles Opened	**110.7**

Irrigation Projects

LCD has been assisting agricultural operators in Lewis County prepare irrigation management plans. Beginning in 2011 through December 2017, LCD has assisted in preparing 28 irrigation plans covering 1,566 acres. In 2018, LCD will be installing fish screens on irrigation intakes. These plans will provide significant benefit to fish and wildlife habitat conservation areas by increasing water quantity in streams during summer months as well as reducing juvenile salmon mortality from unscreened intakes.

Funding for this project came from US Fish and Wildlife Service, the Department of Ecology, and the Rose Foundation. The grant expires September 2018.

Stewardship Practices by Individual Agricultural Operators

Once the outreach program begins, the Technical Provider will be collecting information from individual agricultural operators regarding self-installed stewardship practices since July 2011. Along with the type and extent of the practice, the Technical Provider will also evaluate its impact to a critical area and assign an appropriate score.

This information will be added to the list of completed projects since July 2011.

Description of Implemented Stewardship Practices

The following descriptions for each practice are purpose statements from the Field Office Technical Guide for Lewis County (2017).

560 Access Road

An access road is used to provide a fixed route for vehicular travel for resource activities involving the management of timber, livestock, agriculture, wildlife habitat, and other conservation enterprises.

316 Animal Mortality Facility

This practice may be applied to achieve one or more of the following purposes: • Reduce pollution impacts to surface water and groundwater resources. • Reduce the impact of odors. • Decrease the spread of pathogens.

575 Trails & Walkways

A trail/walkway is used to accomplish one or more of the following purposes: •Provide or improve animal access to forage, water, working/handling facilities, or shelter. • Facilitate improved grazing efficiency and distribution. • Protect ecologically sensitive, erosive, or potentially erosive sites. •Provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations. •Provide trails/walkways for recreational activities or access to recreation sites.

396 Aquatic Organism Passage

Improve or provide passage for aquatic organisms.

314 Brush Management

Create the desired plant community consistent with the ecological site or a desired state within the site description. • Restore or release desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, or enhance hydrology. • Maintain, modify, or enhance fish and wildlife habitat. • Improve forage accessibility, quality, and quantity for livestock and wildlife. • Manage fuel loads to achieve desired conditions. • Pervasive plant species are controlled to a desired level of treatment that will ultimately contribute to creation or maintenance of an ecological site description "steady state" addressing the need for forage, wildlife habitat, and/or water quality.

326 Clearing & Snagging

Reduce risks to agricultural resources or civil infrastructure by removing obstructions that hinder channel flow or sediment transport to: • Restore flow capacity and direction. • Prevent excessive bank erosion by eddies or redirection of flow.

• Reduce the undesirable formation of bars. • Minimize blockages by debris and ice.

317 Composting Facility

To reduce water pollution potential and improve handling characteristics of organic waste solids, reuse organic waste as animal bedding, or use as a soil amendment that provides soil conditioning, slow-release plant-available nutrients and plant disease suppression.

340 Cover Crop

This practice is applied to support one or more of the following purposes: • Reduce erosion from wind and water. • Maintain or increase soil health and organic matter content. • Reduce water quality degradation by utilizing excessive soil nutrients. • Suppress excessive weed pressures and break pest cycles. • Improve soil moisture use efficiency. • Minimize soil compaction.

342 Critical Area Planting

• Stabilize areas with existing or expected high rates of soil erosion by wind or water. • Stabilize stream and channel banks, pond and other shorelines, earthen features of structural conservation practices. • Stabilize areas such as sand dunes and riparian area.

382 Fence

This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

512 Forage and Biomass Planting

Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that can provide the structure and composition needed to enhance livestock and wildlife habitat, particularly when targeted forage supply and quality, cover, and shelter are not available in other pasture.

106 Forest Management Plan

Conservation Activity Plan labor to manage nonindustrial private forest lands to conserve wildlife habitats, improve water quality, and soil stability, and how best to comply with environmental regulations. May devise plans for planting and growing new trees, monitor trees for healthy growth, and determine optimal thinning schedules.

666 Forest Stand Improvement

• Improve and sustain forest health and productivity • Reduce damage from pests and moisture stress • Initiate forest stand regeneration • Reduce fire risk and hazard

and facilitate prescribed burning • Restore or maintain natural plant communities • Improve wildlife and pollinator habitat • Alter quantity, quality, and timing of water yield • Increase or maintain carbon storage.

548 Grazing Land Mechanical Treatment

Fracture compacted soil layers and improve soil permeability. • Reduction in water runoff and increased infiltration. • Break up root-bound conditions and thatch to increase plant vigor. • Renovation and stimulation of plant community for greater productivity and yield.

561 Heavy Use Area Protection

Heavy Use Area Protection is used: •To provide a stable, non-eroding surface for areas frequently used by animals, people or vehicles. • To protect or improve water quality.

315 Herbaceous Weed Control

• Enhance accessibility, quantity, and/or quality of forage and/or browse. • Restore or release native or create desired plant communities and wildlife habitats consistent with the site potential. • Protect soils and control erosion. • Reduce fine fuel loads and wildfire hazard. • Pervasive plant species are controlled to a desired level of treatment that will ultimately contribute to creation or maintenance of an ecological site description "steady state," addressing the need for forage, wildlife habitat, and/or water quality.

595 Integrated Pest Management

• Prevent or mitigate off-site pesticide risks to water quality from leaching, solution runoff and adsorbed runoff losses. • Prevent or mitigate off-site pesticide risks to soil, water, air, plants, animals and humans from drift and volatilization losses. • Prevent or mitigate on-site pesticide risks to pollinators and other beneficial species through direct contact. • Prevent or mitigate cultural, mechanical and biological pest suppression risks to soil, water, air, plants, animals and humans.

516 Livestock Pipeline

This practice may be applied as part of a resource management system to achieve one or more of the following purposes: •Convey water to points of use for livestock or wildlife. •Reduce energy use. •Develop renewable energy systems.

484 Mulching

This practice is applied to achieve the following purpose(s): • Improve the efficiency of moisture management • Reduce irrigation energy used in farming/ranching practices and field operations • Improve the efficient use of irrigation water

• Prevent excessive bank erosion from water conveyance channels • Reduce concentrated flow erosion • Reduce sheet, rill, & wind erosion • Improve plant productivity and health • Maintain or increase organic matter content • Reduce emissions of particulate matter.

590 Nutrient Management

To budget, supply, and conserve nutrients for plant production. • To minimize agricultural nonpoint source pollution of surface and groundwater resources. • To properly utilize manure or organic by-products as a plant nutrient source. • To protect air quality by reducing odors, nitrogen emissions (ammonia, oxides of nitrogen), and the formation of atmospheric particulates. • To maintain or improve the physical, chemical, and biological condition of soil.

582 Open Channel

Construct, improve, or restore an open channel to convey water required for flood prevention, drainage, wildlife habitat protection or enhancement, or other authorized water management purpose.

528 Prescribed Grazing

Apply this practice as a part of a conservation management system to achieve one or more of the following: • Improve or maintain desired species composition, structure and/or vigor of plant communities. • Improve or maintain quantity and/or quality of forage for grazing and browsing animals' health and productivity. • Improve or maintain surface and/or subsurface water quality and/or quantity. • Improve or maintain riparian and/or watershed function. • Reduce soil erosion and maintain or improve soil health. • Improve or maintain the quantity, quality, or connectivity of food and/or cover available for wildlife. • Manage fine fuel loads to achieve desired conditions.

533 Pumping Plant

This practice may be applied as part of a resource management system to achieve one or more of the following purposes: •Delivery of water for irrigation, watering facilities, wetlands, or fire protection. • Removal of excessive subsurface or surface water. • Provide efficient use of water on irrigated land. • Transfer of animal waste as part of a manure transfer system. • Improvement of air quality. • Reduce energy use.

329 Residue and Tillage Management, No Till

• Reduce sheet, rill and wind erosion and excessive sediment in surface waters. • Reduce tillage-induced particulate emissions. • Maintain or increase soil health

and organic matter content. • Increase plant-available moisture. • Reduce energy use. • Provide food and escape cover for wildlife.

643 Restoration and Management of Rare and Declining Habitats

To restore the physical conditions and/or unique plant community on sites that partially support, or once supported, a rare or declining natural community. Application of this practice addresses resource concerns of a degraded plant condition and/or inadequate wildlife habitat.

391 Riparian Forest Buffer

Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms. • Create or improve riparian habitat and provide a source of detritus and large woody debris. • Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow. • Reduce pesticide drift entering the water body. • Restore riparian plant communities. • Increase carbon storage in plant biomass and soils.

654 Road/Trail/Landing Closure and Treatment

To minimize various resource concerns associated with existing roads, trails, and/or landings by closing them and treating to a level where one or more the following objectives are achieved: • Controlling erosion (road, sheet and rill, gully, wind), chemical residues and off-site movement, sediment deposition and damage, accentuated storm runoff, and particulate matter generation. • Restoring land to a productive state by reestablishing adapted plants and habitat (wildlife food, cover, and shelter), reconnecting wildlife habitat and migration corridors including streams and riparian areas and controlling noxious and invasive species. • Reestablishing drainage patterns that existed prior to construction of the road, trail, or landing to restore the form and integrity of associated hill slopes, channels and floodplains and their related hydrologic and geomorphic processes. • Minimizing human impacts to the closure area to meet safety, aesthetic, sensitive area protection, or wildlife habitat requirements.

558 Roof Runoff Structure

This practice is applied to achieve one or more of the following purposes: • Protect surface water quality by excluding roof runoff from contaminated areas. • Protect a structure foundation from water damage or soil erosion from excess water runoff. • Increase infiltration of runoff water. • Capture water for other uses.

798 Seasonal High Tunnel System for Crops

Improve plant quality • Improve soil quality • Reduced nutrient and pesticide transport • Improve air quality through reduced transportation inputs • Reduce energy use through local consumption.

578 Stream Crossing

This practice is applied to: • Improve water quality by reducing sediment, nutrient, or organic loading to a stream. • Reduce streambank and streambed erosion.

649 Structures for Wildlife

To provide structures, in proper amounts, locations and seasons to: • Enhance or sustain non-domesticated wildlife; or • Modify existing structures that pose a hazard to wildlife.

612 Tree/Shrub Establishment

Establish woody plants to: • Maintain or improve desirable plant diversity, productivity, and health by establishing woody plants. • Create or improve habitat for desired wildlife species compatible with ecological characteristics of the site. • Control erosion. • Improve water quality. • Reduce excess nutrients and other pollutants in runoff and groundwater. • Sequester and store carbon. • Restore or maintain native plant communities. • Develop renewable energy systems. • Conserve energy. • Provide for beneficial organisms and pollinators.

490 Tree/Shrub Site Preparation

• Encourage natural regeneration of desirable woody plants. • Permit artificial establishment of woody plants.

620 Underground Outlet

To carry water to a suitable outlet from terraces, water and sediment control basins, diversions, waterways, surface drains, other similar practices or flow concentrations without causing damage by erosion or flooding.

634 Waste (Manure) Transfer

To transfer agricultural waste material associated with production, processing, and harvesting to: a storage facility, a treatment facility, a handling or loading area, agricultural land for agronomic application.

633 Waste Recycling

This practice is applied to: • Improve soil health. • Reduce contamination of surface and ground water resources. • Reduce emissions of air pollutants.

313 Waste Storage Facility

To store manure, agricultural by-products, wastewater, and contaminated runoff to provide the agricultural operation management flexibility for waste utilization.

614 Watering Facility

To store or provide designated access to drinking water for livestock or wildlife to: supply daily water requirements; improve animal distribution; and, provide a water source that is an alternative to a sensitive resource.

Appendix D:
Voluntary Stewardship Program Resources

Introduction

The Work Group and the Lewis Conservation District (LCD) will need to leverage resources from a wide range of federal, state, local, and non-profit agencies and organizations to provide the financial incentives necessary for some agricultural producers to implement the stewardship practices identified in the Work Plan. While LCD is the designated technical provider for the Work Group, other entities also play a role as technical providers who can provide both financial and technical assistance to producers. The stewardship practices and activities implemented through these other technical providers count towards meeting Work Plan goals, whether the Work Group or LCD are directly, indirectly, or not involved.

The realm of resources available to VSP in Lewis County is quite large. Success in leveraging resources for VSP will depend on finding out where the resources are, building partnerships with the technical providers, and linking them into Work Plan implementation.

This appendix seeks to list many of the most commonly used resources as well as some lesser known ones. It also includes some suggested approaches for considering non-traditional resources that may prove useful.

Please note that programs change frequently both in scope and available funding; it is important for the Work Group and LCD to stay current on this topic. For those reading the e-version of this appendix, each Program has a link to a website that is current as of April 2018.

Resources Addressing Critical Area Goals

Farm Service Agency

The United States Department of Agriculture Farm Service Agency (FSA) oversees a number of voluntary conservation-related programs. These programs work to address many farming and ranching related conservation issues.

Program	Overview
Conservation Reserve Program	The Conservation Reserve Program (CRP) pays a yearly rental payment in exchange for farmers removing environmentally sensitive

Program	Overview
	land from agricultural production and planting species that will improve environmental quality.
Conservation Reserve Enhancement Program	The Conservation Reserve Enhancement Program (CREP) is a joint federal and Washington State funded program that restores streamside habitat for salmon and protects that habitat for 10-15 years. CREP plants native trees and shrubs to improve stream conditions and enhance wetlands along salmon streams. All of the costs for these improvements are paid by the program. In addition, the program provides oversight and maintenance for about five years after planting to assure success. The landowners are paid rent for allowing their land to be used for fish and wildlife improvements and receive a monetary bonus for signing up. Interested landowners should contact their local conservation district.
Emergency Conservation Program	The Emergency Conservation Program (ECP) helps farmers and ranchers to repair damage to farmlands caused by natural disasters and to help put in place methods for water conservation during severe drought. The ECP does this by giving ranchers and farmers funding and assistance to repair the damaged farmland or to install methods for water conservation. Up to 75% of the cost to implement emergency conservation practices can be provided, however the final amount is determined by the committee reviewing the application. Qualified limited resource producers may earn up to 90% cost-share.
Farmable Wetlands Program	The Farmable Wetlands Program (FWP) is designed to restore wetlands and wetland buffer zones that are farmed. FWP gives farmers and ranchers annual rental payments in return for restoring wetlands and establishing plant cover.

Natural Resources Conservation Service (NRCS) Washington

NRCS Washington offers voluntary programs to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources in a sustainable manner. Through these programs the agency approves contracts to provide financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land.

Program	Overview
Conservation Stewardship Program (CSP)	The Conservation Stewardship Program (CSP) 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. Focus areas include degraded plant conditions, fish and wildlife

Program	Overview
	habitat, inefficient energy use, soil quality degradation, & water quality degradation.
Environmental Quality Incentives Program (EQIP)	EQIP provides financial and technical assistance to agricultural producers in order to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation or improved or created wildlife habitat. Eligible program participants receive financial and technical assistance to implement conservation practices, or activities like conservation planning, that address natural resource concerns on their land. Payments are made to participants after conservation practices and activities identified in an EQIP plan of operations are implemented. Contracts can last up to ten years in duration. Also see High Tunnel System Initiative.
Agricultural Conservation Easement Program (ACEP) - Wetland Reserve Easements (ACEP-WRE)	NRCS also provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetland reserve easement. Through the Wetland Reserve Easement enrollment options, NRCS may enroll eligible land through: Permanent Easements – Permanent Easements are conservation easements in perpetuity. NRCS pays 100 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 75 to 100 percent of the restoration costs. 30-year Easements – 30-year easements expire after 30 years. Under 30-year easements, NRCS pays 50 to 75 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 50 to 75 percent of the restoration costs. 30-year Contracts – 30-year contracts are only available to enroll acreage owned by Indian tribes, and program payment rates are commensurate with 30-year easements. For wetland reserve easements, NRCS pays all costs associated with recording the easement in the local land records office, including recording fees, charges for abstracts, survey and appraisal fees, and title insurance.
Conservation Innovation Grants	The Conservation Innovation Grant (CIG) is a voluntary, competitive grants program intended to stimulate the development and adoption of innovative approaches and technologies for conservation on agricultural lands. CIG uses Environmental Quality Incentives Program (EQIP) funds to award competitive grants to non-federal governmental or non-governmental organizations, American Indian Tribes or individuals. Producers involved in CIG funded projects must be EQIP eligible.

US Fish and Wildlife Service

The US Fish and Wildlife Service offers a technical and financial assistance program to individual landowners under the Partners for Fish & Wildlife Program that benefit critical areas.

Program	Overview
Partners for Fish & Wildlife Program	The Partners program provides expert technical assistance and cost-share incentives directly to private landowners to restore fish and wildlife habitats. To implement a project, a cooperative agreement with a minimum duration of 10 years is signed. The landowner is reimbursed after project completion, based on the cost-sharing formula in the agreement.

Washington State Resource & Conservation Office

Program	Overview
Salmon Recovery Grant Program	Salmon recovery grants are awarded by the Salmon Recovery Funding Board to protect and restore salmon habitat. The board funds projects that protect existing, high quality habitats for salmon, and that restore degraded habitat to increase overall habitat health and biological productivity. Applicants can be private landowners and must submit their proposals through the local Lead Entity, Chehalis Basin Lead Entity (WRIA 23), the Lower Columbia Fish Recovery Board (WRIA 26), or Nisqually River Salmon Recovery Lead Entity (WRIA 11).

Washington State University Extension – Lewis County

Program	Overview
Master Gardner Program	Master Gardeners train volunteers to be effective community educators in gardening and environmental stewardship. Master Gardeners provide information generated from research at WSU and other university systems. The program focuses on teaching community members about managing their gardens and landscapes in a science-based, sustainable manner; addressing environmental and social priorities such as water conservation and water quality protection; reducing the impact of invasive species; and, increasing public awareness of healthy living through gardening.

Lewis County

Program	Overview
Open Space Taxation Act	The Open Space Taxation Act allows property owners to have their open space, farm and agricultural, and timber lands valued at their current use rather than at their highest and best use. The 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 to produce 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.

Resources Addressing Agricultural Viability Goals

The US Department of Agriculture provides a variety of programs aimed at the agricultural viability goals identified in the Work Plan. Most of these programs require an organization or local government to sponsor the grant.

Program	Overview
Open Space Taxation Act	The Open Space Taxation Act allows property owners to have their open space, farm and agricultural, and timber lands valued at their current use rather than at their highest and best use. The 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 to produce 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.
Beginning Farmer & Rancher Development Program (USDA)	The Beginning Farmer and Rancher Development Program provides grants to organizations for education, mentoring, and technical assistance initiatives for beginning farmers or ranchers. Grants go to partnerships and collaborations led by or including nongovernmental, community-based organizations and school-based agricultural, educational organizations with expertise in new agricultural producer training and outreach.
Rural Business Development Grants (USDA Rural Development)	This program is a competitive grant designed to support targeted technical assistance, training and other activities leading to the development or expansion of small and emerging private businesses in rural areas which will employ 50 or fewer new employees and has less than $1 million in gross revenue. Grants available to communities, authorities, nonprofit organizations, institutions of higher education, and rural cooperatives.

Program	Overview
Farmers Market Promotion Program (USDA Ag Marketing Service)	The purpose of the Farmers Market Promotion Program (FMPP) is to increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets by developing, improving, expanding, and providing outreach, training, and technical assistance to, or assisting in the development, improvement, and expansion of, domestic farmers markets, roadside stands, community-supported agriculture programs, agritourism activities, and other direct producer-to-consumer market opportunities.
Value Added Producer Grants (USDA Rural Development)	The Value-Added Producer Grant (VAPG) program helps agricultural producers enter into value-added activities related to the processing and/or marketing of new products. The goals of this program are to generate new products, create and expand marketing opportunities, and increase producer income. Applicants may receive priority if they are a beginning farmer or rancher, a socially-disadvantaged farmer or rancher, a small or medium-sized farm or ranch structured as a family farm, a farmer or rancher cooperative, or are proposing a mid-tier value chain. Examples of planning activities include conducting feasibility studies and developing business plans for processing and marketing the proposed value-added product. Examples of working capital expenses include: Processing costs, Marketing and advertising expenses, Some inventory and salary expenses.
4-H Program (WSU Extension Lewis County)	Youth program that provides hands-on projects in agriculture, science, health, and citizenship. Key programs include Science, Technology, Engineering, and Math (STEM) with a focus on agricultural science, veterinary science, raising and training animals, and forestry.
Washington Farm Bureau	The Washington Farm Bureau is an independent, non-governmental, voluntary organization governed by and representing farm and ranch families united for the purpose of analyzing their problems and formulating action to achieve educational improvement, economic opportunity and social advancement and, thereby, to promote the national well-being. The local chapter is the Lewis County Farm Bureau.
Washington State Dairy Association	The Washington State Dairy Federation develops and promotes initiatives directed toward the financial strength, political support, and public awareness of the dairy industry to achieve a successful business climate in Washington State.

Program	Overview
Washington FFA Association	FFA delivers programs to youth to foster leadership, personal growth, and career success through agricultural education. Agricultural education instruction is delivered through: classroom/laboratory instruction; supervised agricultural experience programs (work-based learning); and student leadership organizations, such as National FFA Organization, National Young Farmer Educational Association and National Post-Secondary Agricultural Student Organization. Local county chapters are in Centralia, Chehalis, Adna, Napavine, Toledo, Winlock, and Mossyrock.

Other Potential Resources

There are numerous resources available that the Work Group and LCD can access not exclusively linked to agricultural programs. Using these resources depend on creative program and project development ideas.

Conservation Land Trusts

Land trusts are charitable organizations that acquire land or conservation easements to achieve conservation purposes. They often focus on protecting natural habitat, water quality, scenic views, recreation uses, forestry, and agricultural uses. While there are numerous land trusts, the following ones focus on lands in Lewis County:

- Chehalis River Basin Land Trust
- Capitol Land Trust
- Nisqually Land Trust
- Forterra
- Center for Natural Lands Management
- The Nature Conservancy

There are land trusts specifically oriented towards protecting agricultural lands, although none have operated in Lewis County in the past. The PCC Land Trust operates in the state, with an acquisition in 2015 in nearby Rochester. Agricultural land trusts typically provide three approaches to protection:

- Conservation easements: A conservation easement is a voluntary legal agreement between a landowner and a qualified land trust where the landowner agrees to restrict certain uses of the land as they continue managing it. The trust holds the agricultural conservation easement with a landowner, which ensure that the property is forever in agricultural use. In exchange for the permanent removal of a farm's development rights, the trust pays the landowner

for the value of those rights, and commit to stewarding the soil, water, and open space on that property in perpetuity.

- Simultaneous sale: For farmers who are ready to purchase property but limited by the cost of land, a trust will arrange a "simultaneous sale," wherein the trust purchases a conservation easement simultaneous to the farmer purchasing the land. This enables a farm buyer to purchase land at the true agricultural value and ensures that the property is protected as farmland forever.

- Buy-protect-sell: Like a simultaneous sale, buy-protect-sell is a strategy designed to support landowners limited by land costs. To implement buy-protect-sell, a trust raises the capital necessary to purchase farmland and get it off the market quickly. This removes development potential through a conservation easement. With development rights removed, farmers can lease or purchase the property over time at a more affordable rate.

Nonprofit Foundations

Nonprofit foundations are a non-governmental organization with the purpose of making grants to organizations for charitable purposes. Each foundation typically has a focus for giving, usually to an established entity such as a local nonprofit organization or government.

The Work Group has an excellent chance of acquiring funding for specific projects or programs for VSP. Success will depend on careful project or program planning, researching which foundations are the best match to pursue, and grant writing skills. An excellent initial project for LCD is to conduct a research project for matching Work Plan goals with potential foundation funders.

Appendix E: Summary of Regulatory Framework Applying to Agricultural Lands & Activities

Introduction

The Voluntary Stewardship Program (VSP) is a nonregulatory, alternative approach under the Growth Management Act for protecting critical areas on agricultural lands. Through the Work Plan, VSP provides a unique opportunity to complement other laws designed to protect water quality and fish habitat.[26]

VSP is not a replacement for compliance with other federal, state, and county laws and regulations that may regulate agricultural activities on critical areas. The VSP statute emphasizes this by stating:

> "Nothing in RCW 36.70A.700 through 36.70A.760 may be construed to… (5) Limit the authority of a state agency, local government, or landowner to carry out its obligations under any other federal, state, or local law."[27]

The purpose of this appendix is to inventory the most common of these regulations that still apply to agricultural lands and activities with critical areas; they are not adopted into the Work Plan and are merely cited for reference. Please note that this appendix in not an all-inclusive list of laws and rules potentially impacting agricultural producers and is meant for general information purposes only.

It is important to emphasize that the Work Plan, the Work Group, and the Conservation District do not enforce or participate in the enforcement of any laws and regulations inventoried in this appendix. Please contact the appropriate federal, state, or county representatives regarding questions about the application of these laws and regulations to specific agricultural lands and activities.

Abbreviations used in this appendix include the following:

- CARA: Critical Aquifer Recharge Area
- FFA: Frequently Flooded Areas
- FWHCA: Fish & Wildlife Habitat Conservation Areas
- GHA: Geologically Hazardous Areas
- LCC: Lewis County Code
- RCW: Revised Code of Washington
- US EPA: US Environmental Protection Agency
- USDA: US Department of Agriculture

- USACE: US Army Corps of Engineers
- WAC: Washington Administrative Code
- WDFW: Washington Department of Fish & Wildlife
- ECY: Washington Department of Ecology
- WSDA: Washington State Department of Agriculture

Federal Acts and Regulations

Congress has adopted a variety of laws (Acts) that establish requirements related to managing activities that may affect agricultural activities on lands with critical areas.

Federal Law	Farming Practices Affected	Application to Critical Areas
Agricultural Act of 2014 Public Law 113-79 Conservation, Title II USDA	• Producers who fail to apply approved soil conservation plans on highly erodible cropland or who drain wetlands could become ineligible for agricultural programs, including commodity programs, conservation programs, disaster assistance, and crop insurance premium subsidies.	Wetlands
Clean Water Act 33 U.S.C. §1251 et seq. (1972) US EPA, USACE & ECY[28]	• EPA administers the Act through ECY. The following regulations fall under the act o Section 303. Water Quality Standards & Implementation Plans sets standards for water quality, identifies impaired waters, & total maximum daily loads (TMDL) o Section 402. National Pollutant Discharge Elimination Systems (NPDES) requires permits for point-source discharges and limits pesticide applications to waterbodies. o Section 404. Discharge of Dredged & Fill Material requires permits for converting wetlands to agricultural lands. Some exemptions apply to cranberry production.	Wetlands FWHCA
Safe Water Drinking Act 42 U.S.C. §300f et seq. (1974) US EPA & ECY	• Regulates small drinking water systems for human consumption serving 25 or more people or 15 service connections more than 59 days per year • Regulates discharges to ground to protect drinking water sources	CARA
Federal Insecticide, Fungicide, & Rodenticide Act 7 U.S.C. §136 et seq. (1996) US EPA	• Regulates the safe distribution & application of pesticide chemicals & containers	Wetlands FWHCA CARA

Federal Law	Farming Practices Affected	Application to Critical Areas
Resource Conservation & Recovery Act 42 U.S.C. §6901 et seq. (1976) US EPA	• Regulates underground storage tanks with capacity greater than 1,000 gallons of motor fuel • Tanks holding 110 gallons or more of heating oil, septic	CARA

The US EPA website, Agriculture: Laws and Regulations that Apply to Your Agricultural Operation by Statute, is an excellent resource that provides additional information and greater detail on federal regulations applicable to agriculture. It can be accessed at: https://www.epa.gov/agriculture/agriculture-laws-and-regulations-apply-your-agricultural-operation-statute#CWA-SDWA.

USDA provides an expanded summary of the 2014 Farm Bill available at this website: https://www.usda.gov/sites/default/files/documents/usda-2014-farm-bill-highlights.pdf.

State of Washington Laws and Administrative Code

The State of Washington has a wide range of laws and regulations directly and indirectly governing agricultural activities. The Revised Code of Washington (RCW) is the official compilation of these laws. Many of these laws direct state agencies to adopt and enforce more specific administrative rules related for implementing them. The Washington Administrative Code (WAC) is the official compilation of these rules.

RCWs and WACs are organized by Title and Chapter. The example below shows the relationship between a state law and agency rules:

RCW

- Title 90, Water Rights - Environment
  - Chapter 90.64, Dairy Nutrient Management

WAC

- Title 16, Department of Agriculture
  - Chapter 16-611, Nutrient Management

It is necessary to consult both the law and the administrative rules for a full understanding of all requirements.

The table below is a summary of the state laws and administrative regulations that frequently govern agricultural activities on critical areas that apply to agricultural lands outside of the VSP Work Plan.

State Laws/Rules	Agricultural Practices Affected	Intersection w/ Critical Areas
Agriculture and Marketing **Title 15 RCW**	• Regulates a broad range or agricultural practices that may directly or indirectly affect some critical areas o **RCW 15.04.110 Control of Predatory Birds** o **RCW 15.54 Fertilizers, Minerals, and Limes** establishes requirements to protect human health and environment o **RCW 15.58 Washington Pesticide Control Act** governs the formulation, distribution, storage, transportation, and disposal of pesticides	Wetlands CARA FWHCA
Animals & Livestock **Title 16 RCW**	• Regulates a broad range or agricultural practices that may directly or indirectly affect some critical areas (including feed lots, fencing, disposal of dead animals, reporting of diseases, pesticide & fertilizer use, nutrient management). Administrative rules follow in Chapter 16 WAC.	CARA FWHCA
Department of Agriculture **Title 16 WAC**	• Covers WSDA rules related to the following o **WAC 16-25 Disposal of Dead Livestock** sets procedures for disposing of dead livestock o **WAC 16-200 Grain and Chemical** covers storage and application of fertilizers, herbicides, & pesticides o **WAC 16-202 Application of Pesticides and Plant Nutrients through Irrigation Systems** o **WAC 16-611 Nutrient Management** establishes procedures for nutrient management recordkeeping, discharge of pollutants, & civil penalties for RCW 90.64 o **WAC 16-750 State Noxious Weed List & Schedule of Monetary Penalties** identifies noxious weeds by Site Class and establishes State Weed Control Board	Wetlands CARA FWHCA
Weeds, Rodents, and Pests **Title 17 RCW**	• Includes provisions for the following o **RCW 17.10 Noxious Weeds – Control Boards** enabling legislation for Lewis County Noxious Weed Control Board o **RCW 17.21 Pesticide Application Act** establishes requirements for safe use and application methods	Wetlands CARA FWHCA

State Laws/Rules	Agricultural Practices Affected	Intersection w/ Critical Areas
Growth Management Act **Ch. 36.70A RCW**	• Requires counties to adopt comprehensive plans and development regulations to avoid uncoordinated and unplanned growth o **RCW 36.70A.030 Definitions** defines critical areas o **RCW 36.70A.130 (8) (b) (iv)** allows counties that opt into VSP to adopt regulations necessary to address a threat to human health or safety o **RCW 36.70A.700 through .760 Voluntary Stewardship Program** establishes the program; - **RCW 36.70A.720 (1) (h)** allows the Work Group to incorporate into the Work Plan any existing development regulations relied upon to achieve the goals and benchmarks for protection.	Wetlands CARA FWHCA FFA GHA
Protection of Critical Areas **WAC 365-196-830**	• Establishes procedural requirements for comprehensive plans and development regulations. o **WAC 365-196-830 Protection of Critical Areas** establishes guidelines for protecting critical areas, including defining protection and relationship to function and values - **WAC 365-196-830 (8)** allows local government to develop alternative means of protecting critical areas, assure no loss of functions, and use best available science. Also states local governments hall not broadly exempt agricultural activities from their critical areas regulations.	Wetlands CARA FWHCA FFA GHA
Wildlife Damage **Chapter 77.36**	• Allows for the killing of wildlife threatening human safety or causing property damage; allows for the establishment of rules (see WAC 220-440)	FWHCA
Fish & Wildlife **Title 220 WAC**	• Regulates fish and wildlife resources, particularly o **Chapters 220-440 Wildlife Management and Wildlife Interaction** establishes allowances for damage prevention from wildlife to property, crops and livestock o **Chapter 220-660 WAC Hydraulic Code**, establishes permitting for the construction or performance of work that uses, diverts, obstructs, or changes the natural flow or bed of any salt or fresh waters of the state	Wetlands FWHCA
Floodplain Management **Ch. 86.16 RCW**	• Statewide floodplain management exercised through county administration of National Flood Insurance Program regulations	FFA GHA

State Laws/Rules	Agricultural Practices Affected	Intersection w/ Critical Areas
Water Rights – Environment **Title 90 RCW**	• Regulates various aspects of water rights and quality, including o **RCW 90.03 Water Code** o **RCW 90.48 Water Pollution Control** o **RCW 90.64 Dairy Nutrient Management** (see WAC 16-611) o **RCW 90.66 Family Farm Water Act** permits right to withdraw water for irrigation use of family farm o **RCW 90.76 Underground Storage Tanks**	Wetlands FWHCA CARA
Department of Ecology **Title 173 WAC**	• Regulates a broad range of requirements that may affect agricultural lands with critical areas: o **WAC 173-18 Shoreline Management Act – Streams & Rivers Constituting Shorelines of the State** o **WAC 173-152 Water Rights** o **WAC 173-160 Minimum Standards for Construction and Maintenance of Wells** o **WAC 173-220 National Pollutant Discharge Elimination System Permit Program** o **WAC 173-522 Water Resources Program in the Chehalis River Basin, WRIA-22 and 23**	Wetlands CARA FWHCA

Lewis County

The table below outlines key Lewis County Codes (LCC) that may apply to agricultural activities and lands within critical areas.

County Code	Agricultural Practices Affected	Intersection w/ Critical Areas
Buildings & Construction **Title 15**	• The following provisions may apply to agriculture in critical areas: o **Chapter 15.05 LCC Building Codes** may place seismic requirements on certain buildings o **Chapter 15.35 Flood Damage Prevention** are regulations to minimize public and private losses due to flood conditions within designated areas; enables participation in the National Flood Insurance Program	GHA FFA

County Code	Agricultural Practices Affected	Intersection w/ Critical Areas
Land Use & Development Regulations **Title 17**	• Regulations relating to land development, including o **Chapter 17.25 Shoreline Management**, the Lewis County Shoreline Master Program, exempts existing agriculture but requires new agriculture to meet regulations o **Chapter 17.42 Rural Area Zoning Summary** identifies allowed permitted and special uses	Wetlands CARA FWHCA

Definitions

"Agricultural activities" 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" includes, but is not limited to:

- 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;
- Corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands;
- Farm residences and associated equipment, lands, and facilities; and
- Roadside stands and on-farm markets for marketing fruit or vegetables

"Agricultural land" means those specific land areas on which agricultural activities are conducted.

"Agricultural products" 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

"Critical areas" as defined under chapter 36.70A RCW includes the following areas and ecosystems:

- Wetlands;
- Areas with a critical recharging effect on aquifers used for potable waters;
- Fish and wildlife habitat conservation areas;

- Frequently flooded areas; and
- Geologically hazardous areas.

"Channel migration zone (CMZ)" means the area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings.

"Critical aquifer recharge areas" 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.

"Enhance" or "enhancement" means to improve the processes, structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas.

"Erosion hazard areas" are those areas containing soils which, according to the United States Department of Agriculture Natural Resources Conservation Service Soil Survey Program, may experience significant erosion. Erosion hazard areas also include coastal erosion-prone areas and channel migration zones.

"Fish and wildlife habitat conservation areas" are areas that 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. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species.

"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.

"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.

"Geologically hazardous areas" are areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to siting commercial, residential, or industrial development consistent with public health or safety concerns.

"Habitats of local importance" designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities.

"Landslide hazard areas" are areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

"Protect" or "protecting" means to prevent the degradation of functions and values existing as of July 22, 2011.

"Wetland" or "wetlands" 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 nonwetland sites, 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. However, wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate conversion of wetlands, if permitted by the county or city.

"Work plan" means a watershed work plan developed under the provisions of RCW 36.70A.720.

Endnotes

[1] See RCW 36.70A.700 through 36.70A.904
[2] RCW 36.70A.700
[3] RCW 36.70A.720 (1)
[4] Drained, dredged, filled, leveled, or otherwise manipulated wetlands converted to agricultural lands before December 23, 1985 are classified as "prior converted croplands" under the Food Security Act. Prior converted croplands/wetlands information.
[5] See article "Agricultural ombudsman streamlines permit process for Marin farmers and ranchers"
[6] See 36.70A.715, Funding by Commission – County's Duties – Watershed Group Established
[7] See RCW 36.70A.720(1)(c)
[8] For example, the producer may elect to implement filter strips at a lesser standard than required by the CREP program.
[9] Rogers and Shoemaker (1971) describes these individuals as having above average income, greater number of years of formal education, high number of agency contacts, high participation rates in agricultural organizations, greater reliance on mass media, high awareness of conservation problems, willingness to take risks, full-time producer, and desire to pass farm/ ranch on to children.
[10] Information obtained from LCD reports and through personal communications with staff Bob Amrine and Kelly Verd.
[11] For more information on WDFW's HRCD Program, see https://wdfw.wa.gov/conservation/research/projects/aerial_imagery/ and http://www.pshrcd.com/#/intro. The latter website allows users to access HRCD applied to Puget Sound at http://www.arcgis.com/home/webmap/viewer.html?webmap=ea32b676a2de4c419939f9f70e05298c&extent=-125.3401,46.091,-118.7703,49.2487
[12] CARA will be monitored using information from County Health Department Water Lab test reports on coliform bacteria, nitrates, and pesticide levels present in private and public wells.
[13] https://fortress.wa.gov/ecy/approvedwqa/ApprovedSearch.aspx
[14] https://fortress.wa.gov/doh/eh/dw/swap/maps/
[15] A change of landcover of 120% or more reflects the 115% omission rate inherent to HRCD.
[16] RCW 36.70A.720 (1) (j)
[17] RCW 36.70A.720 (2) (b) (i) through (iv)
[18] RCW 36.70A.720 (2) (c)
[19] Contract K1647 between the Washington State Conservation Commission and Lewis County.
[20] August 15, 2016 Letters to Fawn Sharp, President, Quinault Indian Nation, and Don Seneca, Chairman, Confederated Tribes of the Chehalis Reservation
[21] Email outreach to Garrett Dalan, The Nature Conservancy; Janet Strong, Chehalis Basin Land Trust; Luke Kelly, Trout Unlimited.
[22] Conservation Practice Lifespans in Washington, November 2017. Accessed at: https://efotg.sc.egov.usda.gov/references/public/WA/CP_Lifespans_in_WA_110117.pdf
[23] NRCS project list obtained through Christopher Wright, Resource Conservationist Wenatchee Field Office, 02/13/17
[24] 1,228 acres in WRIA 23 and 400 acres in WRIA 26
[25] WRIA 26

[26] RCW 36.70A.700 (1) (f)
[27] 36.70A.702 Construction
[28] While these are federal laws, the State of Washington Department of Ecology administers them within Washington State.