CHELAN COUNTY VOLUNTARY STEWARDSHIP PROGRAM WORK PLAN

Working Draft

Revisions since November 24, 2015: Text changes were made to reflect the VSP Work Group Comments regarding additions of success stories. Updates to Habitat Work Schedule projects and other funded projects were also made.

Appendices:

A. Agriculture and Critical Areas Mapping
B. Summary of Geographic Information System Sources and Methods
C. VSP Work Plan Development – Jobs and Sideboards, Prepared by the Washington State Farm Bureau
D. List of Conservation Practices in Use in Chelan County
E. Summary of Watershed Resource Inventory Area Plans
F. Existing Regulations
G. Role of Technical Providers
H. Optional VSP Checklist

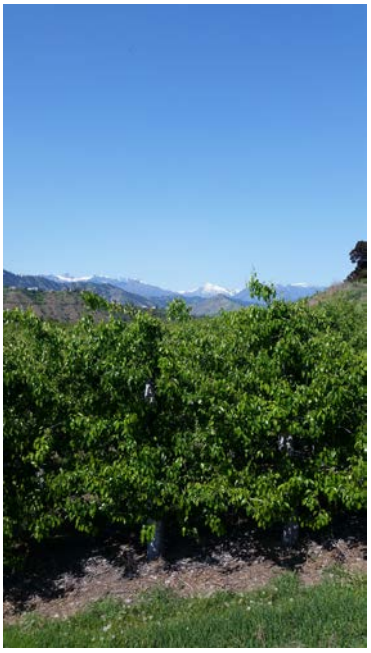
1.0 INTRODUCTION

The Voluntary Stewardship Program (VSP) is an optional, incentive-based approach to protecting critical areas while promoting agriculture. The VSP is allowed under the Washington State Growth Management Act (GMA; RCW 36.70A.700-760) as an alternative to traditional approaches to critical areas protection, such as “no touch” buffers. VSP applies only where critical areas and agricultural activities overlap.

The goals of the VSP are to:

- Promote plans to protect and enhance critical areas 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,

- Focus and maximize voluntary incentive programs to encourage good riparian and ecosystem stewardship as an alternative to historic approaches used to protect critical areas,
- Leverage existing resources by relying upon existing work and plans in counties and local watersheds, as well as existing state and federal programs to the maximum extent practicable to achieve program goals,
- Encourage and foster a spirit of cooperation and partnership among county, tribal, environmental, and agricultural interests to better assure program success, and
- Improve compliance with other laws designed to protect water quality and fish habitat
- Rely upon voluntary stewardship practices as the primary method of protecting critical areas and not require the cessation of agricultural activities. (RCW 36.70A.700)



Orchard in Wenatchee Valley, BERK

Chelan County has opted into the VSP, and has reached out to stakeholders to form a VSP Watershed Work Group formed in order to develop and guide implementation a work plan to protect critical areas while maintaining the viability of agriculture in the watershed. The VSP Watershed Work Group has prepared this Work Plan to provide goals, measurable benchmarks, and incentives, leveraging existing watershed plans and other programs, to protect critical areas and promote agriculture.

In enacting the VSP (SHB 1886 of 2011), the Legislature intended counties and VSP Work Groups to "Focus and maximize voluntary incentive programs to encourage good riparian and ecosystem stewardship as an alternative to historic approaches used to protect critical areas." RCW 36.70A.700. As an alternative to litigious and costly regulatory approach of the past, VSP is a voluntary approach to 1) protect critical areas, 2) maintain and enhance the viability of agriculture, and 3) promote the voluntary enhancement of critical areas through incentive-based measures.

This VSP Work Plan applies to the intersection of agriculture and five critical areas – including fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, geologically hazardous areas, and critical aquifer recharge areas used for potable water – in unincorporated areas of Chelan County. (See Appendix A for maps and Appendix B for methods and data sources.)

This Work Plan is intended to fulfil the VSP legislative requirements to create a voluntary set of goals, benchmarks, and planned activities, and is organized as follows:

1. Introduction: Work Group Structure and Duties, Core Elements of the Work Plan.
2. County and Environmental Context
3. Agricultural Context
4. Background Information, Other Plans and Regulations
5. VSP Definitions
6. Technical Assistance
7. Baseline Conditions and Measurable Benchmarks
8. Monitoring, Reporting, and Adaptive Management
9. Plan Approval Process
10. Appendices

1.1 Work Group Structure

The Watershed Work Group was convened by invitation from the County. Initial invitees included representatives of tribes, agencies, environmental groups, WRIA basin planning units, and agricultural groups. VSP encourages good stewardship, with a statutory goal of fostering cooperation among agricultural, tribal, environmental, and county interests. RCW 36.70A.700.

The Watershed Work Group established includes the following committee members:

- Chelan County
- Cascadia Conservation District
- Department of Ecology (non-voting member)
- Washington Department of Fish and Wildlife (non-voting member)
- Washington State Farm Bureau
- Chelan-Douglas County Farm Bureau
- Washington State Tree Fruit Association
- Washington State University Extension
- Natural Resources Conservation Service
- Irrigation Districts
- Individual Citizens
- Yakama Nation
- Colville Tribe

The Work Group remains open to additional members over time.

1.2 VSP Work Group and State and County Roles

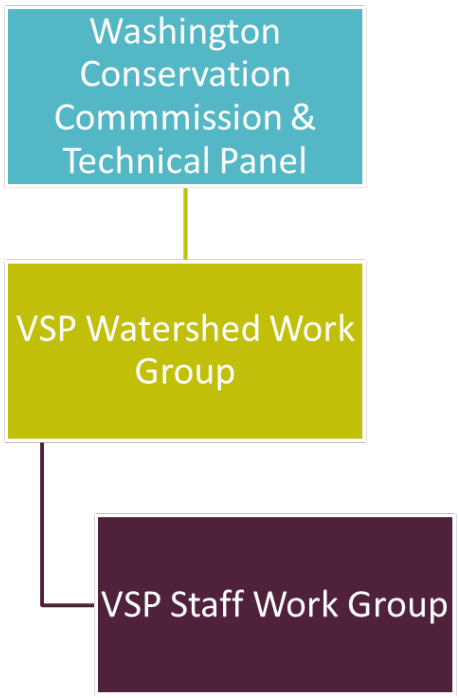
The County. The County has the initial authority to opt-in to the VSP program, designate participating watersheds, recommend priority watersheds, convene and confer with stakeholders, and designate the VSP Watershed Work Group and Administrative Entity. If a VSP Work Plan is not approved within 3 years of initial funding, or if plan goals and benchmarks are not met after adaptive management efforts, the County maintains the responsibility for protecting critical areas under GMA with standard regulatory approaches.

The VSP Work Group. The VSP Watershed Work Group is responsible for developing and agreeing to this Work Plan, designating technical assistance providers, identifying outreach and implementation approaches, setting goals and benchmarks, establishing a monitoring plan, regular reporting and adaptive management toward those goals. The Work Group is responsible for developing and administering the Work Plan on an ongoing basis throughout implementation and monitoring. The Work Plan would be submitted by the Watershed Work Group to the Director of the **State Conservation Commission and technical panel** (Departments of Fish and Wildlife, Ecology, and Agriculture) for approval.

The VSP Staff Work Group. The VSP Staff Work Group includes staff and consultants to the Chelan County Natural Resources Department, and Agricultural and Conservation Technical Assistance Providers that provide Technical Advice to the VSP Watershed Work Group.

See Figure 1 for authorities regarding the state, Work Group and Staff Work Group.

Figure 1. VSP Work Group and Roles



A detailed description of the role of both the County and VSP Work Group is provided in Appendix C. Specific legislative requirements for the program are further described in this document in Sections 1.3 and 1.4.

1.3 Work Group Duties and Work Plan Requirements under VSP Legislation

The VSP legislation at RCW 36.70A.720 specifically outlines the duties of the Work Group and requirements of this VSP Watershed Work Plan (Plan). These are:

> (1) A watershed group designated by a county under RCW 36.70A.715 must develop a work plan to protect critical areas while maintaining the viability of agriculture in the watershed. The work plan must include goals and benchmarks for the protection and enhancement of critical areas. In developing and implementing the work plan, the watershed group must:
>
> (a) Review and incorporate applicable water quality, watershed management, farmland protection, and species recovery data and plans;
> (b) Seek input from tribes, agencies, and stakeholders;
> (c) Develop goals for participation by agricultural operators conducting commercial and noncommercial agricultural activities in the watershed necessary to meet the protection and enhancement benchmarks of the work plan;
> (d) Ensure outreach and technical assistance is provided to agricultural operators in the watershed;
> (e) Create measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through the voluntary, incentive-based measures;
> (f) Designate the entity or entities that will provide technical assistance;
> (g) Work with the entity providing technical assistance to ensure that individual stewardship plans contribute to the goals and benchmarks for protection;
> (h) Incorporate into the work plan any existing developmental regulations relied upon to achieve the goals and benchmarks for protection;

(i) Establish baseline monitoring for: (i) Participation activities and implementation of the voluntary stewardship plans and projects; (ii) stewardship activities; and (iii) the effects on critical areas and agriculture relevant to the protection and enhancement benchmarks developed for the watershed;
(j) Conduct periodic evaluations, institute adaptive management, and provide a written report of the status of plans and accomplishments to the county and to the commission within sixty days after the end of each biennium;
(k) Assist state agencies in their monitoring programs; and
(l) Satisfy any other reporting requirements of the program.

RCW 36.70A.720

1.4 Core Elements of the Work Plan

In terms of project management, the VSP Work Group's first core task is meeting the statutory test the Technical Panel, Statewide Advisory Committee and Conservation Commission Director will apply in determining whether or not to approve the VSP Work Plan:

> *"… at the end of ten years after receipt of funding, the work plan, in conjunction with other existing plans and regulations, will protect critical areas while maintaining and enhancing the viability of agriculture in the watershed."*
> *RCW 36.70A.725*

According to the VSP statutes, the Work Plan must be approved if the above test is met within three years after receipt of funding, as determined through the VSP Work Plan Approval process.

The Work Group's second core task is to create measurable ten-year benchmarks designed to promote voluntary, incentive-based measures 1) to provide long-term protection of critical areas and 2) to encourage voluntary enhancements to improve critical areas.

Together these voluntary incentive-based efforts reflect the three core "test" elements of an approvable VSP Work Plan: 1) protection of critical areas; 2) maintenance and enhancement of agricultural viability; and 3) voluntary enhancement of critical areas through promotion of incentive-based measures.

These core elements, their relationship to the VSP statute, and Work Plan organization are shown in Table1.

Table1. Plan Organization and VSP Requirements

Plan Section	Work Plan Requirements (RCW 36.70A.720(1) a through l unless stated)
Introduction	b
Protect Critical Areas Test	RCW 36.70A.725
Maintain and Enhance Ag Viability Test	RCW 36.70A.725
Create Protection and Enhancement Goals and Benchmarks	RCW 36.70A.720 (1)
Background Information, Other Plans, and Regulations	a, h
Baselines and Measurable Benchmarks	c, e, i
Technical Assistance	d, f, g
Monitoring, Reporting, and Adaptive Management	j, k, l

Meet the "Protect Critical Areas" Test

This Work Plan must detail how Chelan County through VSP will protect critical areas while maintaining and enhancing the viability of agriculture in the watershed. The definition of protection in the legislation for the Voluntary Stewardship Program indicates that

> *"Protect" or "protecting" means to prevent the degradation of functions and values existing as of July 22, 2011.*
> *RCW 36.70A.703*

Important elements of this definition of "protection" include the terms "degradation", "functions and values", and the baseline date of July 22, 2011 and what information is available as of that date.

Example Vineyard, Lake Chelan Area, Google Maps 2015

To help guide how the Work Plan would provide "protection" of critical areas, this section references the Washington Supreme Court's *Swinomish* decision (*Swinomish Indian Tribal Community v. Ecology*, 178 Wn.2d 571, 311 P.3d 6 (2013)), which has interpreted "degradation" and other key terms in critical area context of existing agricultural activities under GMA (chapter 36.70A RCW). The *Swinomish* court clarified that critical area protection requirements are satisfied where existing agricultural activities do not cause additional harm or degradation to the "functional values" of the critical area. Thus the VSP standard for protection of critical areas is the maintenance of existing conditions.

The 2011 VSP statutes effectively codified the *Swinomish* court's "no new harm/no further degradation" standard into the VSP sections of the GMA, setting critical area conditions "existing as of July 22, 2011" as the protection baseline. Following *Swinomish*, the VSP statutes encourage but do not require improvements or enhancements to critical areas already in a degraded condition. The VSP requirement "to protect critical areas" is met where a critical area is protected, at the aggregate or watershed level, from new harms or degradations. *Swinomish Indian Tribal Community v. Western Washington Growth Management Hearing Board*, 161 Wn.2d 415 (2007).

A reference to the *Swinomish* case was recently made in a Washington Court of Appeals decision regarding *Whatcom County v. Western Washington Growth Management Hearing Board* (February 23, 2015; No. 70796-5-1 [consolidated with Nos. 72132-1-1 and 70896-1-1]). The case addressed GMA provisions regarding the protection of natural surface water flows and groundwater and surface water recharge and discharge areas. The Court of Appeals indicated: "The requirement under the GMA to "protect" critical areas is met when local governments prevent new harm to critical areas; the 'no harm' standard protects critical areas by maintaining existing conditions."

Meet the "Maintain and Enhance Agricultural Viability" Test

The VSP Work Plan must "maintain and enhance" agricultural viability to receive approval. RCW 36.70A.725.

Some VSP statutory sideboards implicitly help to maintain agricultural viability. For instance, the VSP Work Plan is to rely on voluntary stewardship "as the primary method of protecting critical areas and not require cessation of agricultural activities." (RCW 36.70A.700.) The County, and the VSP Work Plan, may not "require an agricultural operator to discontinue agricultural activities legally existing before July 22, 2011." RCW 36.70A.702.

Also, VSP statutes do not grant counties or state agencies any additional regulatory authority to protect critical areas on lands used for agricultural activities. (RCW 36.70A.702.) In order to promote producer participation and productive discussion among Work Group members, VSP statutes prohibit county promulgation of new critical area regulations related to agricultural activities during the VSP process (narrow exceptions apply). (RCW 36.70A.130(8)(a).) Further, nothing in the VSP statutes requires participation from agricultural operators, which is voluntary only. (RCW 36.70A.705.)

With regard to conservation programs, VSP is not to be administered in a manner that prevents operator eligibility for environmental incentives (RCW 36.70A.702), and volunteer "agricultural operators implementing an individual stewardship plan consistent with a work plan are presumed to be working toward the protection and enhancement of critical areas." (RCW 36.70A.750.) Agricultural operators volunteering to participate may withdraw from the program at any time. (RCW 36.70A.702.) Also, VSP may not require participating operators who voluntarily enter conservation contracts to protect or enhance critical areas to continue such voluntary measures after expiration of the applicable contract. (RCW 36.70A.760.)

Orchard and Packing Crates, Wenatchee Valley, BERK

Create and Meet Protection and Enhancement Benchmarks

VSP statute requires the Work Group to:

> ***"Create measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through voluntary, incentive-based measures."***
> *RCW 36.70A.720(2)(b).*

The VSP legislation further states the "Program shall be designed to protect and enhance critical areas on lands used for agricultural activities through voluntary actions by agricultural operators." (RCW 36.70A.705(1).) Failure to meet a goal or benchmark set in the Work Plan will result in plan failure and will trigger a regulatory approach to critical areas protection. (RCW 36.70A.720(2); RCW 36.70A.735; RCW 36.70A.130(8).)

Though critical area enhancement is not part of the initial VSP Work Plan Approval test, the Work Plan must also include benchmarks for promotion and implementation of voluntary actions *designed to* protect and enhance critical areas. The definition of "protection" is provided above. The VSP legislation's definition of "enhancement" establishes that:

> *"enhance" means "to improve the processes, structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas." RCW 36.70A.703*

Setting Pragmatic Goals and Benchmarks for Protection and Enhancement

Goals and benchmarks need to be practical, achievable and reasonable to measure and meet. Metrics potentially affected by non-agricultural activities or factors should be avoided. The Work Group also needs to account for potential VSP participant withdrawals when establishing goals and benchmarks: "If the watershed group determines that additional or different practices are needed to achieve the work plan's goals and benchmarks, the agricultural operator may not be required to implement those practices but may choose to implement the revised practices on a voluntary basis and is eligible for funding to revise the practices." (RCW 36.70A.750.)

Voluntary Riparian Enhancement on Orchard Property, Wenatchee River

Conversely, if voluntary critical area enhancements have been implemented since July 22, 2011, the county can take credit for such improvements. These credits can help the county meet its statutory obligation to protect critical areas and keep the aggregate level of critical area protection from degrading below the July 22, 2011 VSP protection baseline.

The five-year "goal and benchmark" testing and reporting process is separate from the "plan approval" test and reporting process. If goals and benchmarks are not met as described in the Work Plan, the Work Group must go through an adaptive management process. Regulatory enforcement may be part of the adaptive management process: "Following approval of a work plan, a county or watershed group may request a state or federal agency to focus existing enforcement authority in that participating watershed, if the action will facilitate progress toward achieving work plan protection goals and benchmarks." (RCW 36.70A.720.) If adaptive management is not successful, the county must comply with the regulatory requirements for critical area updates and agricultural activities under RCW 36.70A.735.

2.0 COUNTY AND ENVIRONMENTAL CONTEXT

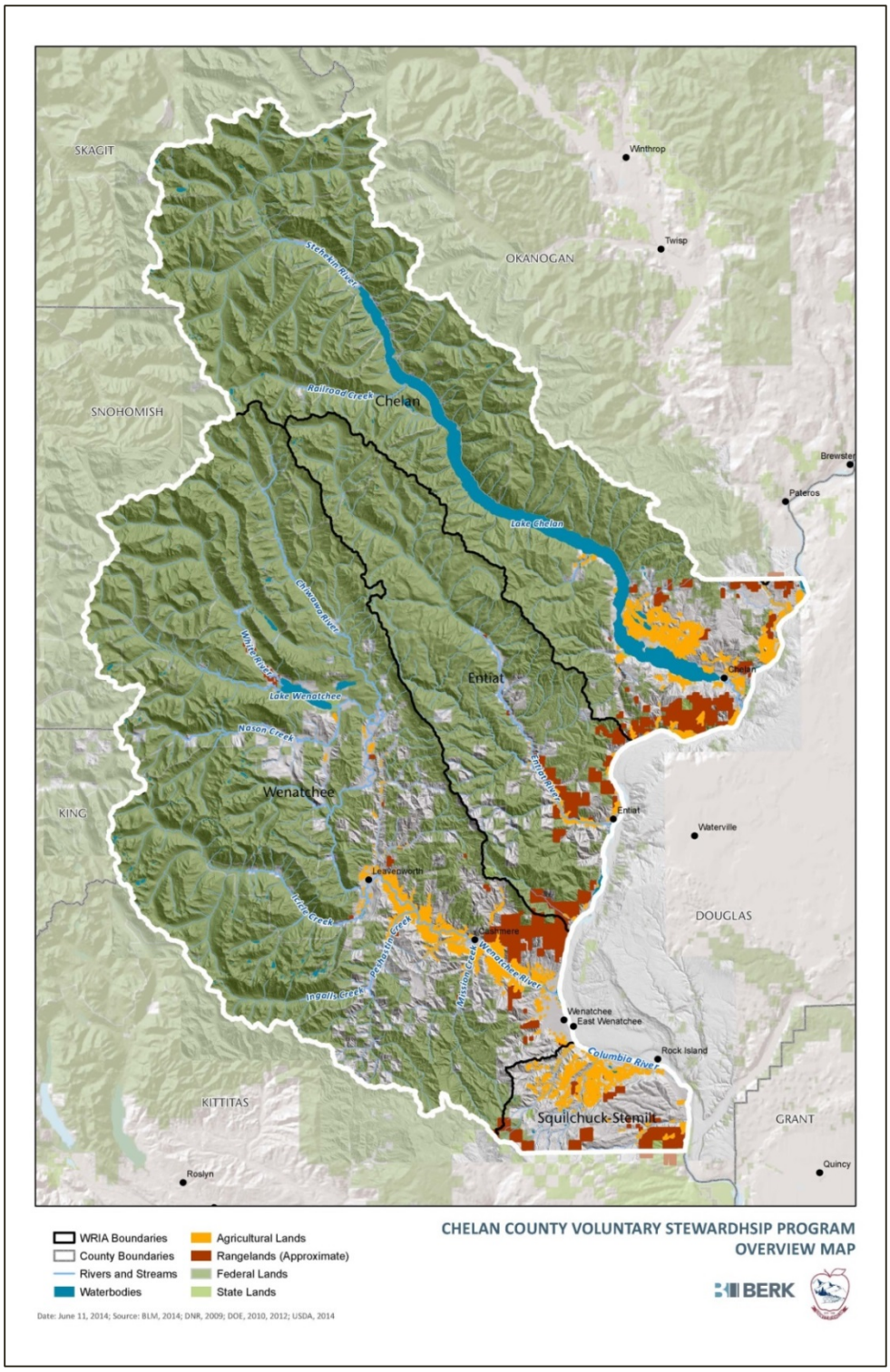
The VSP includes requirements that the Watershed Work Plan is to develop goals for participation by agricultural operators conducting *commercial and noncommercial* agricultural activities in the *unincorporated* portions of watersheds included in the VSP.

Chelan County nominated all four watersheds in its boundaries in Resolution 2012-03 in 2012. Watersheds are shown in Figure 2, and include, from north to south:

- Chelan basin, Watershed Resource Inventory Area (WRIA) 47,
- Entiat basin, WRIA 46
- Wenatchee basin, WRIA 45, and
- Squilchuck/Stemilt basin, WRIA 40a.

In each basin, significant environmental features include riparian areas supporting wildlife and salmonid resources and extensive forest and shrub steppe resources. Other primary factors indicating the County's reasoning for nominating its watersheds, responding to the factors listed under RCW 36.70A.710 (2), include "the role of farming," "the risk of the conversion of farmland," "the importance of salmonid resources" and other indicators "of biological diversity" in each basin.

Figure 2.Watersheds, Agriculture, and Rangelands



Sources: Washington State Departments of Ecology and Natural Resources, US Department of Agriculture, Bureau of Land Management, and BERK Consulting 2014

Critical areas are specifically defined under GMA (RCW 36.70A.030) and include fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, geologically hazardous areas, and critical aquifer recharge areas used for potable water. See Table 2 for additional detail.

Table 2. Critical Areas Definitions under Growth Management Act

Fish and Wildlife Habitat Conservation Areas

Land and waters managed to maintain populations of fish and wildlife species in suitable habitats within their natural geographic distribution over the long term within connected habitat blocks and open spaces.

Includes:

- Ranges and habitat elements where federal and state listed endangered, threatened and sensitive species have a primary association
- Lakes, rivers, ponds, streams, inland waters, and underground waters

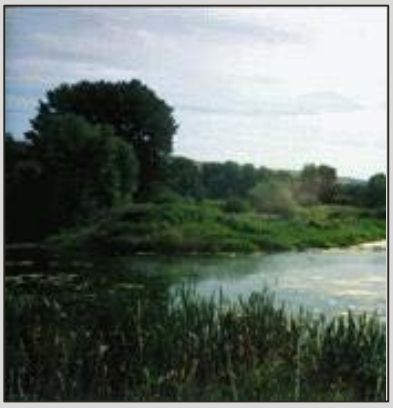
Does not include (when no salmonids are present):

- Artificial features such as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches maintained by a port district or an irrigation district or company

Icicle Creek Restoration Site, Chelan County Department of Natural Resources

Bald eagles, Chelan County PUD

Wetlands, Confluence State Park, Historylink.org



Horan Nature Area, Confluence State Park, Chelan PUD

Wetlands

Areas that are inundated or saturated by surface water or groundwater supporting a prevalence of vegetation adapted for life in saturated soil conditions.

Includes

- Swamps, marshes, bogs, and similar areas

Frequently Flooded Areas

Colockum Creek Road Washout, WSU Chelan-Douglas Extension

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.

Includes

- Streams, rivers, lakes, wetlands, and areas where high groundwater forms ponds on the ground surface

Malaga Mudslide, Komo News

Stehekin Mudslide, King5 News

Geologically Hazardous Areas

Areas susceptible to erosion, sliding, earthquake, or other geological events, where development is not suitable due to public health or safety concerns.

Critical Aquifer Recharge Areas

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.

Potential Aquifer and Alluvial Soils, Wenatchee Basin Area

Source: Definitions are adapted from RCW 36.70A and WAC 365-190. See photo sources above. Aquifer map, BERK 2014

Over eighty percent of the County (more than 1.5 million acres) is under federal or state management and therefore protected under separate regulatory frameworks. The types of public land ownership in Chelan County, by acreage and percentage, are as follows:

Chelan County holds 4,700 acres (<1 % of the County), with 700 acres (15%) of that located in the shoreline area.

State of Washington holds 66,600 acres (3% of the County), with 710 acres (1%) of that located in the shoreline area. Major State Landowners include:

- *Department of Natural Resources***:** 38,300 acres (2 %), with 180 acres in the shoreline area.
- *Department of Fish and Wildlife***:** 27,000 acres (1 %), with 400 acres in the shoreline area.

Federal Government holds 1,522,000 acres (80% of the County), with 28,900 acres (2%) of that located in the shoreline area. Major Federal landowners include:

- *US Forest Service: 1,365,000 acres (71%), with 25,000 acres (2%) in the shoreline area.*
- *National Park Service: 134,880 acres (7%), with 3,600 acres in the shoreline area.*
- *US Bureau of Land Management: 20,260 acres (1%), with 158 acres (1%) in the shoreline area.*

Private ownership lands (about 272,000 acres or 409 square miles or about 14 percent) are focused along the Wenatchee River, Columbia River, Entiat River, and Lake Chelan.[1] Within this same relatively narrow portion of the landscape, agriculture and range land is prevalent, and a key part of the economy.

[1] Chelan County. 2014. Chelan County Comprehensive Plan, February 1, 2000. LAST AMENDED BY Resolution 2014-10, effective February 3, 2014. Available: http://www.co.chelan.wa.us/cd/data/comp_plan_amended.pdf. Accessed: June 27, 2014.

Numerous natural resource programs are already in place through each watershed. Each watershed participates in Watershed Planning (under RCW 90.82) and those programs form a strong basis for the VSP program. Representatives of Watershed Groups include tribal, environmental, agricultural, and governmental interests. Many parties also participate in Upper Columbia Salmon Recovery planning and existing TMDL programs. Review of these watershed efforts is consistent with the legislative directive that the VSP Watershed Group "Leverage existing resources by relying upon existing work and plans" and "programs to the maximum extent practicable to achieve program goals." (RCW 36.70A.700)

3.0 AGRICULTURAL CONTEXT

3.1 Value and Extent of Agriculture in Chelan County

Chelan County Apple Orchard, WSU Extension

In 2012 the US Census of Agriculture reported the market value of agricultural products sold was $206,479,000. As in prior Censuses, in 2012, the majority of the value was in crops ($202,854,000) versus livestock ($3,625,000). The top crop items were pears, apples, and cherries. The County ranked ninth of 39 Washington counties in terms of its crop value. In terms of the acreage in pears, the County ranked first among state counties with that crop and second among United States counties with that crop. It is also in the top counties of the US for its acreage in sweet cherries (5th) and apples (11th).

Agriculture is the most significant single industry in Chelan County with 23.5 percent of total covered employment in 2013 (ESD, October 2014)[2].

Over 2013-14, Chelan County farmers had an economic impact of $335 million largely in tree fruit (pers. com. Smith, March 12, 2015).

- $100M – apples
- $75M – process apples
- $29M – Bartlett pears
- $0.5M – process Bartlett Pears
- $118M – winter pears (storage)
- $75M – cherries
- $0.7M- peaches, apricots, other
- Totals: $335M grown in Chelan County

The County has seen annual increases in production consistently. A climate that is cool and dry spring, summer, and fall results in high quality fruit with less need for management of disease and pests. The climate together with the demand for organic tree fruit nationally and internationally, has resulted in year over year increases production and value of tree fruit.

[2] Employment Security Department. 2014. Chelan and Douglas Counties Profile by Donald W. Meseck, regional labor economist, updated October 2014.Available: https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/county-profiles/chelan-and-douglas-counties-profile.

Grape growing for wine production has been a burgeoning area of agriculture in Chelan County, in particular in the Peshastin, Stemilt-Squilchuck, and Lake Chelan regions. A summary of the Lake Chelan area is provided below:

Vineyard, Lake Chelan, cornichon.org

Lake Chelan Wine Country: This beautiful region is located in north central Washington and now offers twenty-one wineries, with others making plans to join them soon.

Lake Chelan AVA: The Lake Chelan Winegrowers Association filed an American Viticultural Area (AVA) application in 2006; in April 2009, official authorization of the Lake Chelan AVA was published in the Federal Register. This newest of Washington State's authorized AVAs establishes the 24,040-acre area surrounding Lake Chelan as the 11th appellation in the state.

Source: Wines Northwest, 2015, http://www.winesnw.com/lakechelanhome.htm#Navigating

A 2012 study prepared for the Washington State Wine Commission estimated that the wine industry supports 1,374 jobs in the County with wages of approximately $35 million, producing a total economic impact of about 221.4 million. The study also indicated that Washington wine generates $9.5 million in state and local taxes and $9 million in federal taxes in Chelan County. (Stonebridge, April 2012)[3]

Rangeland Replanting after Fire

NRCS Wenatchee Field Office, 2015

Though there is significant acreage in rangeland as described below, the value of sales in livestock and their products was relatively small at $3.6 million of a total $206.5 million in market value of all agricultural products sold per the 2012 Census of Agriculture.

Quantifying the total acreage of agriculture varies depending on the method used. As part of the VSP Work Plan development, an aerial survey of active agriculture was produced. The total amount of apparently “active” agriculture in the County is described in Table 3, below, and illustrated on Figure 2. Rangeland acreage was estimated based on known ranges and the presence of public lands that may be used as rangeland. Of the over 76,000 of rangeland in the County, approximately 75% (nearly 57,000 acres) is on public lands.

[3] , *The Economic Impact of Washington State Wine and Grapes,* http://www.wawgg.org/files/documents/2012_Economic_Impact_WA_Wine-Grapes.pdf

Table 3. Estimated Agricultural and Rangeland Acres in Nominated Watersheds

WRIA	Agricultural Acreage	Rangeland Acreage*
Chelan	10,102	21,317
Entiat	1,228	17,183
Wenatchee	10,289	22,664
Squilchuck/Stemilt	5,997	15,021
Total	27,616	76,184

*Estimated based on the recent mapping exercise. Census values vary.

Sources: Cascadia Conservation District, 2013: Department of Natural Resources (DNR), Washington Department of Ecology (Ecology), and US Bureau of Land Management (BLM), and BERK Consulting 2014

In 2012 the Census of Agriculture reported 890 farms on 75,820 acres, with 776 of these farms on 31,537 acres consisting of harvested cropland such as orchards. The total number of acres reported in the Census at 75,820 is less than the combined agricultural and range land acres defined for this VSP White Paper at 103,800 acres. Also the acreage of harvested cropland at 31,537 in the Census is higher than the 27,616 acres determined for this VSP Work Plan. In 2007, the Census of Agriculture reported 979 farms on 93,883 acres, closer to the estimates of acreage in this White Paper.

In addition to the physical extent of agriculture, its socioeconomic significance to the County is evidenced by the large share of employment in the industry. As described above, nearly one-quarter of all covered employment in the County is in agriculture. Just as significantly, agriculture has long been a large part of the community identity and stability throughout the County. (ESD October 2014)

Planting a cover crop between tree rows of forbs and grasses for beneficial pollinators and bugs
NRCS Wenatchee Field Office, 2015

3.2 Typical Tree Fruit Practices

Tree fruit production accounts for the vast majority of agriculture in the County. Because of this predominance and because of the particular nature of the tree fruit industry, some discussion of typical orchard practices is warranted here.

The US Census of Agriculture reports a 2012 average size of all farms at 85 acres, down from 96 acres in 2007. The agricultural landscape of Chelan County is typified by orchards, which can be smaller than the countywide average farm size. For example orchards in the Lake Chelan area average around 30 acres in

size.[4] These are permanent stands of trees, planted with cover crops such as grass or legumes between rows. The permanent nature of orchards results in little land disturbance (e.g., tilling) once an orchard is established.

Local growers have a strong culture of innovation and improving agricultural practices. Growers improve their own businesses, and many improvements also have positive environmental characteristics and protect critical areas. Production efficiencies introduced over the last several decades work directly to reduce water usage, chemical inputs, and soil disturbance within orchards. For example, irrigation technologies have shifted from flood irrigation toward the use of micro- and ground-level drip systems, reducing overall water usage and subsequent run-off. Improved nozzle technologies allow for more precise spray application of water and chemical inputs, reducing the quantity and potential waste of both. Soil testing is commonly used (and is sometimes required by food safety plans) and facilitates the targeted and measured application of water and chemical inputs.

Integrated pest management practices have also helped to reduce the amount and frequency of pesticide application. For example, kaolin clay is often applied to fruit trees and has been shown to reduce pest infestation, support beneficial species, and reduce the number (and cost) of insecticide applications. Chemicals that are used are used in significantly smaller quantities. It is now more common to use ounces of a nontoxic chemical rather than pounds of a toxic compound.

Mulching is another example of changing practices. Previously, producers often burned branches, and now they are mulching them. Orchardists are taking advantage of improved soil conditions in the drive rows where mulching is applied and replanting trees there.

Orchard: Converted from hand lines to a solid set irrigation system in 2012

NRCS Wenatchee Field Office

[4] Washington Apply Country History, Chelan: http://www.appleorchardtours.com/hist01.htm. Accessed: May 7, 2015.

Regulatory changes have also spurred new practices. Several environmentally hazardous chemicals have been outright banned from use within the County. Various quality control programs also implement various federal and industry-specific environmental requirements to minimize spraying in proximity to waterways. (See Section 4.0 and Appendix F for information on the regulatory backstop and industry-specific programs.)

Orchardists have also balanced agricultural viability with habitat and species conservation. Producers have adapted their orchards to accommodate raptors and bats as compatible species that reduce rodents, such as by installing raptor poles and bat boxes. Plantings that attract pollinators and mason bee houses have been installed to support the orchards and bees. Audio recordings of predator birds to scare off starlings and flickers have been employed to reduce fruit loss and discourage nesting.

Mule deer and elk present challenges as they can damage trees and eat fruit, but practices such as plastic fencing to protect orchards and reduce mammal "hang up", and isolating young trees for the first 10 years until they are established have been installed.

A diagram of common conservation practices is presented in Figure 3 below.

Raptor Pole with Nesting Box, NRCS Wenatchee Field Office

Figure 3. Example Conservation Practices Concept Plan

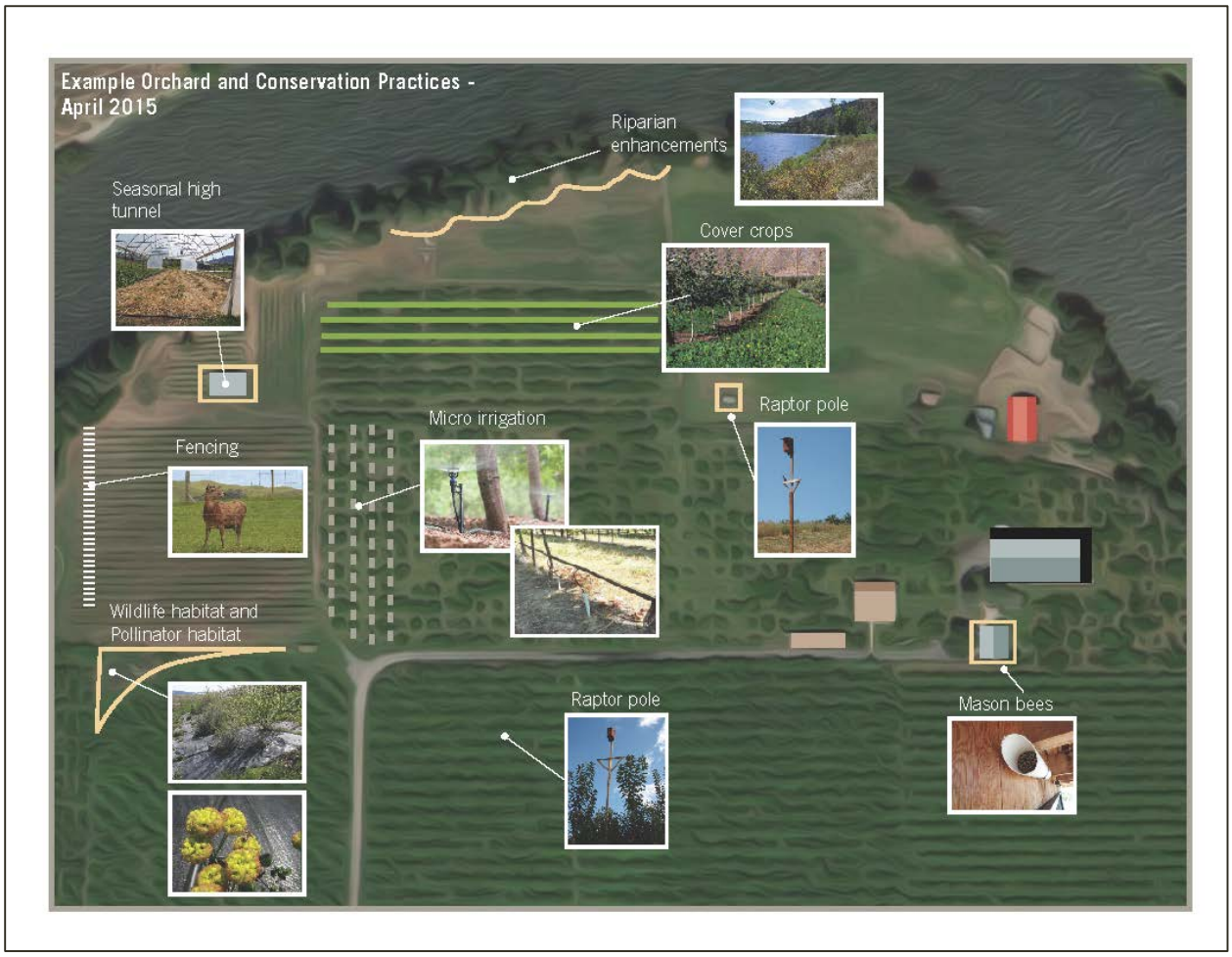


Photo Credits: NRCS Wenatchee Field Office, Chelan County Natural Resources Department

Source: BERK Consulting 2015

Appendix D includes a list of NRCS conservation practices that are commonly used for tree fruit production in Chelan County.

3.3 Importance of and Challenges to Agricultural Viability

Producer business innovations and efficiencies and other market-based and federal regulatory changes in tree fruit practices instituted over the past decades have had the benefit of boosting production, reducing inefficiencies, and contributing positively to environmental protection and conservation. Overall production has increased, particularly for pears and cherries, and Chelan County has become a nationally significant agricultural region. For example, 85% of the winter pears available in the United States, come from Chelan County.

The County land use plan designation of agricultural land of long term significance has likely helped maintain the land in Chelan County for agriculture. However, the quantity of actual agriculturally-productive land in the County has reduced over the years. As is true throughout the state, conversion to residential or other uses presents the most obvious threat to agriculture. Local land use regulations help to maintain agricultural designation, however long-term viability is not strictly measured by the presence of zoned agricultural land. Presence of actual agricultural production is necessary in order to maintain the critical mass and economies of scale of product storage and distribution networks. A large

labor pool in the Wenatchee area has meant that packing operations have stayed in Chelan County, and Chelan County serves as a hub for fruit packing, serving Okanogan, Douglas, and Grant Counties as well as Chelan County.

In addition to direct conversion, changes in adjacent land uses and management of nearby public lands have resulted in new challenges to agricultural production. Adjacent uses, particularly residential, can impact the methods and timing that farmers may use to maintain their orchards. Recreational uses near orchards, such as trails and parks, also serve to restrain agricultural activity such as limiting the location and timing of pesticide application or tree management. Changes to hunting regulations and herd management practices have in some cases increased the usage of orchards by wildlife, leading to potentially negative effects for both wildlife and orchards.

This VSP Work Plan recognizes these potential threats to the long-term viability of agriculture in order to ensure that the program design works to maintain such viability. Under this framework, the protection of critical areas and the maintenance of agricultural viability (e.g., prevention of conversion to residential or other land uses) are recognized as complementary goals in Chelan County. The use of existing and consistently improving agricultural practices also work to further both goals: the protection of critical areas and the maintenance and enhancement of agriculture.

3.4 Intersection of Agriculture and Critical Areas

Though acreage of potential critical areas is fairly expansive across the county, the intersection of critical areas with agriculture is relatively smaller.

The map folio in Appendix A illustrates that:

- A relatively small percentage of agricultural acreage lies in proximity to rivers and streams, though in terms of length of contact between agricultural activities and waterbodies, it is more extensive. Many of these water bodies have priority fish presence. Mapped riparian and wetland areas are often found in association with river and stream corridors.
- There are some agricultural lands within floodplains and channel migration areas.
- There are some locations of agriculture in proximity to public wells and areas that may be potential aquifers.
- There is relatively less agricultural land near landslides, steep slopes and erodible soils given they are often in river valley lowlands, but a higher percentage of range lands in these potential geologic hazard areas since range lands tend to occur on higher elevations.
- Agriculture is sometimes located near mule deer or elk habitat and range land even more so. Some basins have higher percentages of mule deer or elk habitat such as the Entiat and Wenatchee basins.

Table 4 shows the acres of agriculture in relation to critical areas.

Table 4. Intersection of Agriculture and Critical Areas

	Total Acreage		Percentage of Intersection	
Critical Area	**Agriculture**	**Rangeland**	**Agriculture**	**Rangeland**
Total	27,616	76,185	--	--
WETLANDS	63	616	0%	1%
FREQUENTLY FLOODED AREAS				
100-year Floodplain	564	1,259	2%	2%
FISH AND WILDLIFE HABITAT CONSERVATION AREAS				
PHS Area	11,227	68,968	41%	91%
100-ft Hydrologic Study Area	1,050	2,691	4%	4%
GEOLOGICALLY HAZARDOUS AREAS				
Landslide Hazard Areas	2,941	7,579	11%	10%
Channel Migration Zones	557	1,378	2%	2%
Steep Slope Areas (>15%)	18,561	73,962	67%	97%
Erodible Soils	2,125	53,157	8%	70%
CRITICAL AQUIFER RECHARGE AREAS				
Possible CARA Area	7,260	3,847	26%	5%
Wellhead Protection Area	3,904	1,989	14%	3%

Notes: [1] Fish and Wildlife Habitat Conservation Areas include lakes, ponds, streams, and rivers. For the purposes of the GIS analysis, hydrologic study areas include the waterbodies, wetlands, and lands within 100 feet of these water bodies. See Wetlands above – the acres are relatively small.

Source: Chelan County Code; WAC 365-190; BERK, 2014

Examples of Activities that Protect Critical Areas and Maintain the Viability of Agriculture

This Chapter identified the context of agriculture in Chelan County including typical conservation practices, its economic value, and its intersection with critical areas. Examples of voluntary conservation practices and their ability to protect critical areas and maintain the viability of agriculture are described below. There may be upfront costs by property owners to implement the practices, with opportunities for cost matches by technical providers of 50-75% (see Section 6.0). Once installed, there can be savings realized.

Example 1: Wenatchee River Riparian Enhancement project

The Wenatchee River Riparian Enhancement project is located on a private apple and pear orchard. The third generation owner of the property intends to continue agriculture uses over the long term. The project consisted of installing native plants, an irrigation system and herbivory protection (exclusion fencing) along 5 separate planting areas where the existing riparian vegetation was minimal or non-existing. The project replaced and fixed portions of the wildlife exclusion fence by adding in additional fence posts and fence fabric as needed. The purpose of the fence is to minimize the impacts of beaver activity to the riparian planting project and the landowner's adjacent orchard. (Habitat Work Schedule, CCNRD 2010) Project elements such as irrigation and fencing supported the agricultural activity by controlling water inputs and protecting trees from wildlife damage, while voluntarily enhancing critical areas including riparian areas.

Example 2: Orchardist saves large quantities of water

With the assistance from the NRCS and the Okanogan Conservation District, an orchardist began monitoring his soil moisture and developed irrigation water management plans. One block of the orchard was found to be sub-irrigated and remain moist through midsummer. His trees were yellow and produced small fruit. He changed his management here from irrigating once a week with 12 hour sets, to only two or three times a year with a 6 to 8 hour set to refill the upper soil profile. In another block, he had unhealthy and dying young trees in very course droughty soil. The orchardist changed his irrigation in this block from weekly 12 hour sets to 6 hour sets as needed based upon the evapotranspiration rate (about every four days in the hot season). Due to the low water holding capacity of the soil, shallow root zone of the trees, and variable rate of evapotranspiration, utilizing irrigation water management was critical to apply the right amount of water at the right time. By utilizing irrigation water management, including the use of automated soil moisture sensors, the trees are producing large healthy fruit, and the orchardist estimates nearly 60 percent in water savings through implementing irrigation water management. (NRCS Success Stories)

Example 3: Deficit Irrigation and Vineyards

WSU Study Regarding Vineyards in Eastern Washington: "Deficit irrigation, when done properly, can improve grape quality…Deficit irrigation benefits include substantial savings in irrigation water, limiting unnecessary shoot growth, manipulating berry size, and modifying wine style in the vineyard. Having a more open canopy sets off a chain of positive events—better fruit exposure and air circulation in the fruit zone leads to reduced disease pressure and improved fruit -quality." (Good Fruit Grower)[5]

4.0 BACKGROUND INFORMATION, OTHER PLANS, AND REGULATIONS

To leverage existing resources and avoid redundancy with ongoing watershed efforts, the Work Group performed a comprehensive review of existing plans, regulations, and activities, consistent with the requirements of RCW 36.70A.700. The aim of this review was to identify what critical areas exist within each watershed, the scope and extent of the critical area protection baseline and ongoing protection

[5] Good Fruit Grower. 2014. Authors: Melissa Hansen, TJ Mullinax The good and bad of deficit irrigation. The good and bad of deficit irrigation: Partial root zone drying deficit irrigation has potential for white varieties. Available: http://www.goodfruit.com/the-good-and-bad-of-deficit-irrigation/. Accessed: June 28, 2014.

activities, and what areas may need further attention from this Workgroup to promote voluntary enhancement of critical area functions and values (above the critical area protection baseline) through incentive-based measures.

4.1 Existing Watershed Plans

All four Chelan County watersheds have undertaken Watershed Planning processes under RCW 90.82, and have established implementation and monitoring plans for those basins. Watershed plans focus on issues relating to water quality, water quantity, and habitat. Through this process, each basin planning unit has identified areas where water resources and habitats are functioning well, local issues of concern, objectives and strategies, and methods to monitor progress toward those objectives.

The purpose of referencing these watershed planning documents is to help the Work Group develop a Work Plan that reflects VSP objectives to "maximize voluntary incentives" and "encourage good stewardship." (RCW 36.70A.700.) In reviewing existing watershed plans and documents it is also important to recognize that the VSP Work Plan may not "require an agricultural operator to discontinue agricultural activities legally existing before July 22, 2011." (RCW 36.70A.702.)

The Work Plan is to rely on voluntary stewardship "as the primary method of protecting critical areas and not require cessation of agricultural activities." RCW 36.70A.700. Nonetheless, existing watershed planning documents can help the Work Group identify where to focus efforts to promote voluntary enhancement of critical area functions and values (above the critical area protection baseline) through incentive-based measures.

One statutory VSP objective is the incentive-based promotion of enhancements to "improve compliance with other laws designed to protect water quality and fish habitat." (RCW 36.70A.700.) In context of the water quality and water quantity oriented plans described below, voluntary VSP enhancements can also support agricultural viability by reducing regulatory risks and increasing regulatory certainty for agricultural operators.

Several of the issues and objectives identified through watershed planning also serve to address critical areas, particularly wetlands, critical aquifer recharge areas, frequently flooded areas, and fish and wildlife habitat. Appendix E summarizes issues, strategies, and recommendations identified within each watershed plan. Strategies related to agricultural production which may be relevant to VSP goals and objectives are specifically highlighted below.

Lake Chelan Subbasin Plan (WRIA 47). Lake Chelan the longest and deepest natural lake in the state. Most of the Lake Chelan watershed is under Federal management, but in the Wapato basin, communities have developed along the lake shoreline, and nearby hillsides are irrigated for orchard and pasture.

The Lake Chelan Planning Unit identified water quality concerns including elevated concentrations of pesticide residues (resulting from a number of contributing factors and pollution loadings). A Total Maximum Daily Load (TMDL) program is in place for the lake and surface water monitoring is ongoing. Activities specific to agricultural production include the voluntary implementation of conservation practices regarding soil erosion and irrigation management. Strategies, including the use of voluntary conservation and habitat restoration practices (e.g., restoring riparian function), are identified in the plan and have been implemented in some locations.

Example voluntary enhancement and stewardship activities on agricultural lands in the Lake Chelan basin include:

Because of the extensive presence of agriculture, it is considered a habitat type today. In the Lake Chelan subbasin, the dominant agricultural cropland habitat is fruit orchards. …Because of the extent, and likely permanence and economic importance of this habitat, it should be considered in the management of wildlife in the subbasin. …The Conservation Reserve Program (CRP) has had some success encouraging farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover (native grasses, wildlife plantings, trees, filter strips, or riparian buffers) that help establish wildlife habitat, improve water quality (by reducing soil erosion and sedimentation), and generally enhance shrubsteppe and wetland resources. Lake Chelan Subbasin Plan 2004

Entiat Subbasin Plan (WRIA 46). The Entiat Water Resource Inventory Area (WRIA 46) includes the Entiat and Mad River watersheds, as well as some minor Columbia River tributary drainages. Lower reaches of the principal streams within each of the subbasins are almost completely privately owned and primarily managed through agricultural practices. The Entiat Planning Unit has identified concerns mostly regarding water quality and subsequent impacts on endangered fish populations. Improvement strategies include minimizing the effect of livestock within riparian corridors. Several agriculture-related enhancements are recommended for the lower and middle basin reaches, including the re-establishment of riparian vegetation, reduction of livestock access to streams, and potential adapted use of irrigation ditches for additional rearing habitat.

Example voluntary enhancement and stewardship activities in the Entiat basin include:

Chelan County PUD owns and operates a surface water irrigation system which delivers water to seven (7) landowners through a pipeline and open channel system located between Entiat River Miles (RM) 1.49 and 3.45. The system diverts 4.52 cfs in the mainstream Entiat River, while actual water need has been established at 2.24 cfs. Additionally, 8-9 cfs savings will be realized along the 0.15 mile long diversion structure. Objectives of this project are to decommission the PUD irrigation pipeline and delivery system, upgrade to modern and efficient delivery systems located closer to the point of use (creating water savings), improve lower Entiat River instream flow conditions, enhance off-channel habitat conditions, and prevent juvenile fish entrainment. (CCD 2013)

Wenatchee Watershed (WRIA 45). The WRIA extends from the snowfields, glaciers and steep, forested Cascade Mountains through orchards in the Wenatchee River Valley, to the shrub-steppe of the eastern watershed at the confluence of the Wenatchee and Columbia Rivers. The Wenatchee Watershed Management Plan addresses water quantity, instream flows, water quality, and habitat within the basin and is consistent with the TMDL program strategies. Specific implementation actions have been developed for each of the nine sub-basins of the watershed. Strategies relevant to agriculture include reducing unnatural sediment recruitment to the stream by restoring riparian habitat and improving road maintenance (e.g. Mission Creek) or reducing nutrient inputs on agricultural lands (e.g. near Icicle Creek) through conservation practices.

Benefits of Agriculture and Challenges of Agricultural Viability as stated in the Wenatchee Watershed Vision, The Trust for Public Land, 2007

Fragmentation of the rural landscape limits the long-term viability of orchards and other agriculture. As residential growth bears down on working orchards, spray-drift conflicts and rising land values make it difficult to stay in the orchard business. Growers are looking for an alternative to restrictive and expensive land-use regulations and potential conflicts with recreational users.

…Did you know? …In the Wenatchee watershed, tree-fruit growers farm 9,000 acres - nearly 2.3 million fruit trees - that absorb about 14 tons of greenhouse gases per acre per year in Washington State or 126,000 tons per year in the Wenatchee Valley. The patchwork of orchards creates an ecosystem that supports a range of insects, protects the stability of stream banks, and cools the water table. ~ Contributed by Kirk B. Mayer, manager, Washington Growers

Stemlit-Squilchuck Subbasin Plan (WRIA 40a). WRIA 40A is made up of the drainage areas for Stemilt and Squilchuck Creeks in the Malaga area. This area is dominated by fruit orchards and is world famous for the cherries that are grown here. The need for reliable water supplies in order to irrigate the agricultural lands and provide some domestic water is vital for this area which only receives on average 8 inches of precipitation in the lower elevations. Watershed planning objectives in the Stemlit-Squilchuck are focused primarily on water quantity and storage issues. Recommended enhancement strategies relevant to agricultural producers refer to increasing efficiencies in irrigation, for example, by reducing leakage and evaporation from ditches, or by updating pipe and sprinkler systems.

In WRIA 40a, through coordinated planning with agricultural and environmental interests, the *Stemilt-Squilchuck Community Vision* (2008) was conceived to help conserve 2,580 acres of land in the watershed in part to protect the rural landscape and recognize the long-term viability of agriculture that depends on water resources.

A Guiding Principal indicates: "Protection of water resources is a paramount concern and goal of the community, and integral to sustaining the agricultural economy and heritage of the area."

4.2 Upper Columbia Salmon Recovery Plan

The Upper Columbia Salmon Recovery Board is a local program addressing the voluntary restoration and management of salmon, steelhead, and other at-risk fish species. The regional approach includes the Lake Chelan, Entiat, and Wenatchee WRIAs as well as portions of Okanogan, Methow, and Crab Creek Subbasins. The Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan recommends several enhancement and implementation measures to restore and protect habitat throughout the region. The plan is designed to promote salmon recovery "while recognizing that agriculture and urban development are beneficial to the health of the human environment within the recovery region." Some habitat actions considered in the plan include "preventing livestock access to riparian zones and streams" and applying "best management practices (BMPs) to agriculture and grazing practices where they are proven to restore riparian condition." (Upper Columbia Salmon Recovery Board, 2007)

4.3 Regulatory Backstop

In addition to watershed-level plans, the VSP Watershed Work Group delineated the existing regulatory structures and agriculture-specific programs to which agricultural producers are already in compliance; for regulators these may be seen as security that critical area functions and values are protected. Appendix F summarizes the application of existing federal, state, and local regulations to agricultural activity in Chelan County.

It is important to note that VSP does not "limit the authority of a state agency, local government, or landowner to carry out its obligations under any other federal, state, or local law." (RCW 36.70A.702.)

One statutory VSP objective is the incentive-based promotion of enhancements to "improve compliance with other laws designed to protect water quality and fish habitat." (RCW 36.70A.700) Voluntary enhancements can also support agricultural viability by reducing regulatory risks and increasing regulatory certainty for agricultural operators.

Relevant Federal Regulations

Federal laws including the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Food Quality Protection Act regulate use of pesticides. The Clean Water Act (CWA), Safe Drinking Water Act (SDWA), and National Pollution Discharge Elimination System (NPDES) regulate water quality, though most regulatory actions are the responsibility of Washington State. See Appendix F.

Relevant State Regulations

State of Washington programs implement CWA requirements for waterways regarding nonpoint source pollution. The Department of Ecology has developed water quality improvement projects (TMDLs) for Lake Chelan and the Wenatchee River Basin. Water quality issues relating to pesticide use have been specifically noted within these watersheds, and implementation strategies including use of conservation practices in agricultural settings have been developed. Improved compliance with state and federal clean water laws was a factor in the creation of the VSP; it is expected that implementation of state and federal water laws will be part of the regulatory backstop. (Ecology publication 13-10-030)

The Shoreline Management Act (SMA) addresses shoreline uses, conservation, and public access along shoreline waterbodies with mean annual flow over 20 cubic feet per second, lakes over 20 acres in size and an area 200 feet landward of these waters plus associated wetlands, floodways, and up to 200 feet of floodway-contiguous floodplains.

In Chelan County these include numerous shoreline waterbodies (80 streams/rivers and 53 lakes) include: Lake Chelan, Wapato Lake, Dry Lake, Roses Lake, Lake Wenatchee, Cortez Lake, Meadow Lake, Columbia River, Entiat River, Mad River, Wenatchee River, Icicle Creek, Peshastin Creek, and Colockum Creek and many others that run through and along agricultural and rangeland areas.

The SMA requires local agencies including Chelan County to prepare Shoreline Master Programs (SMPs). When SMPs are comprehensively updated they include regulations to address critical areas [WAC 173-26-221(2)]. The GMA clarifies that critical area regulations transfer to the SMP after a comprehensive update (RCW 36.70A.480 (3)(d)). Regardless of the integration of critical areas regulations into SMPs:

- The SMA does not allow updated SMPs to require modification of or limit agricultural activities on agricultural lands (RCW 90.58.065(1)).
- The SMP only applies to agriculture when new land is brought into production (relatively rare) or when a new development is added (WAC 173-26-241 (3)(a)).
- SMPs do not apply to replacement, maintenance, or repair of existing agricultural facilities [RCW 90.58.065(2)(a)].

The SMP does not need to incorporate the VSP Work Plan. The SMP cannot limit or modify agricultural activities as defined in the SMA (essentially existing, ongoing agriculture). The VSP Work Plan should apply wherever agriculture and critical areas exist inside or outside of shoreline jurisdiction.

State rules address the intersection of agriculture in floodplains. Chapter 173-158 WAC Flood Plain Management regulates floodplain management and includes allowances and restrictions regarding farm infrastructure within floodplains and recommendations for wetland management.

See Appendix F for additional information on state laws and rules applicable to agriculture and critical area regulations.

Voluntary Programs

Agricultural producers participate in numerous voluntary industry programs that may contribute to the protection or voluntary enhancement of critical areas. It is important to note that these programs are dynamic and influenced by changing federal regulations, industry norms, and market conditions. See Appendix F.

5.0 VSP DEFINITONS

Protect is defined in the legislation for the Voluntary Stewardship Program as follows:

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

Enhance is defined in the legislation for the Voluntary Stewardship Program as follows:

> *"enhance" means "to improve the processes, structure, and functions existing, as of July 22, 2011, of ecosystems and habitats associated with critical areas." RCW 36.70A.703*

Enhancement improves ecosystems and habitats associated with critical areas. There may be direct improvements that result in a net increase of critical areas, such as net increases in riparian vegetation planted along waterbodies. Indirect enhancement may also occur where onsite conservation practices have offsite benefits such as onsite water conservation practices s assisting with stream flow offsite.

Functions and Values is not a phrase defined in GMA itself, but is defined in various State rules (WAC 365-196-830(6)) and scientific and professional literature. State rules that implement GMA indicate that functions are "the conditions and processes that support the ecosystem." The conditions and processes referenced in the definition can "operate on varying geographic scales ranging from site-specific to watershed and even regional scales." Wetland protection guidance (see attachment) offers a definition of values that can be generalized to other critical areas: "wetland *processes, characteristics, or attributes that are considered to benefit society*." Some values of critical areas could be promoted in the Work Plan as a way to promote participation, e.g. water quality as benefiting agricultural operators and the community more broadly.

Agricultural Activities is defined in the legislation for the Voluntary Stewardship Program as follows:

> *"Agricultural activities" means all agricultural uses and practices as defined in RCW 90.58.065."*

The definition of agricultural activities in VSP references detailed definitions in RCW 90.58.065, which encompass a wide range of production activities including crop rotation, fallow land, land in conservation, etc.:

> *RCW 90.58.065 (2) (a) "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;

(b) "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;

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

(d) "Agricultural land" means those specific land areas on which agriculture activities are conducted.

Viability of Agriculture is not defined in the law but dictionary definitions of viable offers some understanding that it means that agriculture as a business can be conducted in a successful way:

- capable of being done in a practical and useful way[6]
- ability to work as intended or to succeed[7]
- able to be done, or worth doing[8]

6.0 TECHNICAL ASSISTANCE

The VSP legislation places emphasis on outreaching to technical assistance providers that support agricultural operators in the watersheds as a work plan is prepared to develop goals and benchmarks to protect critical areas and maintain and enhance agriculture. In creating Work Plans under the program Work Groups are in turn required to designate one or more entities to provide technical assistance to help operators develop or implement individual stewardship plans to contribute to the goals and benchmarks of the work plan. (RCW 36.70A.720). Though their participation and completion of a stewardship plan is entirely voluntary, “Agricultural operators implementing an individual stewardship plan consistent with a work plan are presumed to be working toward the protection and enhancement of critical areas” RCW 36.70A.750.

[66] http://www.vocabulary.com/dictionary/viability

[7] http://dictionary.cambridge.org/us/dictionary/english/viability

[8] http://www.macmillandictionary.com/us/dictionary/american/viable

Technical assistance should be tailored for the particular area and funded appropriately to reflect the mix of goals and benchmarks set. Some of the goals and benchmarks will address producer participation. Some will address protecting critical areas (avoiding further degradation of critical area functions and values existing as of July 22, 2011 for a particular critical area). Some will address promotion of voluntary incentive-based critical area enhancements (to improve upon the July 22, 2011 protection baseline), and some will address maintaining and enhancing a viable agricultural industry. Key federal, state, county, and nonprofit technical providers operating in Chelan County, include, but are not limited to:

- Cascadia Conservation District
- Chelan County Natural Resources Department
- United States Department of Agriculture, Natural Resources Conservation Service
- Washington State University Extension

These providers provide direct assistance to agricultural operators in the County to address conservation practices that improve the environment and help productivity. Table 5 summarizes the key technical assistance the listed agencies provide.

Table 5. Summary of Key Technical Assistance Providers in Chelan County

Agency	Highlighted Technical Assistance Programs
Cascadia Conservation District (CCD) http://cascadiacd.org/	Landowner Assistance Program - Countywide: CCD can pay up to 50% of the total project cost for irrigation-related projects and up to 75% of the total project cost for forest health and riparian practices. Wenatchee Watershed Water Quality Improvement Program: Soil testing and associated technical assistance for nutrient planning for citizens with livestock, agricultural land or residential lawns; riparian plantings of native trees and shrubs; pasture health and riparian livestock exclusion fencing. CCD is the designated Lead Agency for administering and coordinating the watershed planning processes for the Entiat Basin (WRIA 46).
Chelan County Natural Resources Department (CCNRD) http://www2.co.chelan.wa.us/nr/	Chelan County is the designated Lead Agency for administering and coordinating the watershed planning processes for the Stemilt/Squilchuck (WRIA 40a), Wenatchee (WRIA 45) and Chelan (WRIA 47) Watersheds. CCNRD develops and implements with willing landowners fish passage barrier removal and habitat complexity projects coordinated with Upper Columbia Salmon Recovery Planning Board.

Agency	Highlighted Technical Assistance Programs
United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) http://www.usda.gov/wps/portal/usda/usdahome	NRCS offers the Natural Resource Conservation Planning Program, where its staff work with agricultural operators to assess conditions on their property, help identify conservation practices that can ameliorate environmental conditions affecting the operation (e.g. erosion), and monitor practices. Conservation practices are designed for local property conditions following a site specific assessment. The NRCS has developed objectives and standards for numerous conservation practices addressing common agricultural activities or environmental conditions. NRCS offers financial assistance to help agricultural producers install and maintain conservation improvements on their land. The financial assistance can be 50-70% of the cost of the practice, with some caps applying per practice.
Washington State University Extension (WSU) http://county.wsu.edu/chelan-douglas/agriculture/Pages/default.aspx http://county.wsu.edu/chelan-douglas/agriculture/treefruit/Pages/default.aspx	WSU Extension maintains a local office in Chelan County. WSU provides the following services: • Education and research, turning results into best practices regarding irrigation, weed management, pesticide application, pest management, • Opportunities for certifications, such as pesticide application certification, online certificate in organic farming, and • Training and outreach such as Hort Days.

Additionally, there are industry associations and state commissions providing education and training as well as advocacy for the local agricultural industries. These include:

- Washington State Tree Fruit Association
- Washington Tree Fruit Research Commission
- Washington Association of Conservation Districts
- Washington Conservation Commission
- Washington Association of Wheat Growers
- Washington Cattlemen's Association
- Washington Dairy Federation
- Washington Farm Bureau
- North Central Washington Fieldmen's Association

These agencies, associations and others could be outlets by which participation in the VSP program in Chelan County can be encouraged.

Appendix G provides more information on the key technical assistance providers and other associations that assist landowners with practices that could benefit critical areas protection, critical areas enhancement on a voluntary basis, and advance agricultural production.

Role of Technical Assistance Providers: For the purposes of this work plan the following roles are established for technical assistance providers:

- Administration of work plan monitoring and implementation: Chelan County Natural Resources Department
- Lead technical assistance provider: Cascadia Conservation District
- Supporting technical assistance providers:
  - United States Department of Agriculture, Natural Resources Conservation Service
  - Washington State University Extension
- Additional sources of technical assistance:
  - North Central Washington Fieldmen's Association
  - Washington Association of Conservation Districts
  - Washington Association of Wheat Growers
  - Washington Cattlemen's Association
  - Washington Conservation Commission
  - Washington Dairy Federation
  - Washington Farm Bureau
  - Washington State Tree Fruit Association
  - Washington Tree Fruit Research Commission

7.0 BASELINE CONDITIONS AND MEASURABLE BENCHMARKS

The effective date of the VSP legislation is July 22, 2011. This is the statutory date for identifying the applicable baseline for county requirements related to protecting a particular critical area, and for maintaining and enhancing agricultural viability. This baseline also delineates the assessment line between critical area protection and voluntary enhancement that may be promoted where needed, through incentive-based measures, to improve critical area functions and values above the July 22, 2011 protection baseline. (RCW 36.70A.703)

This is also the date from which the County will measure progress in implementing the Work Plan measurable benchmarks. VSP programmatic assessments should occur at the watershed scale (not farm by farm or ranch by ranch), as all VSP participation by agricultural operators is voluntary. "Program shall be *designed to* protect and enhance critical areas *on lands used for agricultural activities through voluntary actions by agricultural operators*." (RCW 36.70A.705 (1))

VSP law calls for:

> *…goals and benchmarks for the protection and enhancement of critical areas (RCW 36.70A.720 (1)*
>
> *Create measurable benchmarks that, within ten years after the receipt of funding, are designed to result in (i) the protection of critical area functions and values and (ii) the enhancement of critical area functions and values through voluntary, incentive-based measures; RCW 36.70A.720 (2) (e)*
>
> *Establish baseline monitoring for: (i) Participation activities and implementation of the voluntary stewardship plans and projects; (ii) stewardship activities; and (iii) the effects*

on critical areas and agriculture relevant to the protection and enhancement benchmarks developed for the watershed (RCW 36.70A.720 (2)(i))

The baseline status of critical areas and their intersection with agricultural activities – both productive agriculture and rangeland – are identified below. Goals and measurable benchmarks relating to those critical areas, participation, and stewardship are also listed.

Suggested activities relating to the maintenance and enhancement of agricultural viability are included as well. Though goals and measurable benchmarks are not directly required by the VSP legislation and do not form requirements for program compliance, these suggested activities should be considered throughout plan implementation to further the combined goals of "protect[ing] critical areas while maintaining and enhancing the viability of agriculture in the watershed" (RCW 36.70A.725)

7.1 Critical Areas Intersection with Agriculture / Critical Areas Goals and Benchmarks

Intersection with Agriculture

In order to establish baseline monitoring of critical areas and agriculture conditions within the watershed, the VSP Work Group conducted an inventory of agriculture and critical area resources. See maps in Appendix A and methodology in Appendix B. The dates of information collected are as follows:

- **VSP Agricultural mapping** prepared in conjunction with the VSP White Paper June 2014 is based on a combination of Chelan County Assessors records, WSDA agricultural census data, and high-resolution aerial images. Potential rangelands were determined using data from DNR, Department of Ecology, US Bureau of Land Management, and information provided from local technical assistance providers. Google Earth provides aerial photography at various years, and the data set developed to date can be compared to 2011. No marked changes have been noted in the agricultural land base between 2011 and 2014 based on simple reviews of aerials and Assessor data. However, confirmation is ongoing.
- **Critical areas data layers:** Per Appendix B, the dates data was available varies from federal, state, and county sources, ranging from 2006-2014. The intent was to employ the best available data. These data were also referenced to the Shoreline Master Program Analysis Report, June 2011 for which base data was collected between 2008 and 2011. Between 2011 and 2014, some adjustments in priority habitats and species data occurred by WDFW such as removing mapped riparian and wetland areas; however this appears to be a technical map evaluation and correction, not due to known habitat loss.

Table 6 details the approximate acreage of agriculture and potential rangeland intersecting with critical areas throughout Chelan County by watershed.

Table 6. Agriculture and Critical Areas by Watershed

A. Chelan Watershed

Chelan Watershed - WRIA 47

Critical Area	Total Acreage		Intersection	
	Agriculture	Rangeland	Agriculture	Rangeland
Total	10,102	21,317	--	--
FREQUENTLY FLOODED AREAS				
100-year Floodplain	179	6	2%	0%
FISH AND WILDLIFE HABITAT CONSERVATION AREAS				
PHS Area	3,628	20,215	36%	95%
100-ft Hydrologic Study Area	294	336	3%	2%
GEOLOGICALLY HAZARDOUS AREAS				
Landslide Hazard Areas	-	196	0%	1%
Channel Migration Zones	-	7	0%	0%
Steep Slope Areas (>15%)	6,873	21,194	68%	99%
Erodible Soils	754	14,352	7%	67%
CRITICAL AQUIFER RECHARGE AREAS				
Possible CARA Area	1,537	799	15%	4%
Wellhead Protection Area	849	91	8%	0%

Note: Hydrologic study areas include wetlands and waterbodies and areas within 100 feet of the features which may include riparian areas. PHS = Priority Habitats and Species

b. Entiat Watershed

Entiat Watershed - WRIA 46

Critical Area	Total Acreage		Intersection	
	Agriculture	Rangeland	Agriculture	Rangeland
Total	1,228	17,183	--	--
FREQUENTLY FLOODED AREAS				
100-year Floodplain	97	24	8%	0%
FISH AND WILDLIFE HABITAT CONSERVATION AREAS				
PHS Area	1,117	16,838	91%	98%
100-ft Hydrologic Study Area	123	593	10%	3%
GEOLOGICALLY HAZARDOUS AREAS				
Landslide Hazard Areas	-	174	0%	1%
Channel Migration Zones	132	93	11%	1%
Steep Slope Areas (>15%)	807	17,067	66%	99%
Erodible Soils	44	14,309	4%	83%
CRITICAL AQUIFER RECHARGE AREAS				
Possible CARA Area	996	1,035	81%	6%
Wellhead Protection Area	132	949	11%	6%

Note: Hydrologic study areas include wetlands and waterbodies and areas within 100 feet of the features which may include riparian areas. PHS = Priority Habitats and Species

B. Wenatchee Watershed

Wenatchee Watershed - WRIA 45

Critical Area	Total Acreage		Intersection	
	Agriculture	Rangeland	Agriculture	Rangeland
Total	10,289	22,664	--	--
FREQUENTLY FLOODED AREAS				
100-year Floodplain	282	1,221	3%	5%
FISH AND WILDLIFE HABITAT CONSERVATION AREAS				
PHS Area	5,282	20,967	51%	93%
100-ft Hydrologic Study Area	572	1,527	6%	7%
GEOLOGICALLY HAZARDOUS AREAS				
Landslide Hazard Areas	374	3,217	4%	14%
Channel Migration Zones	425	1,278	4%	6%
Steep Slope Areas (>15%)	6,214	21,296	60%	94%
Erodible Soils	612	18,196	6%	80%
CRITICAL AQUIFER RECHARGE AREAS				
Possible CARA Area	4,440	1,974	43%	9%
Wellhead Protection Area	2,305	900	22%	4%

Note: Hydrologic study areas include wetlands and waterbodies and areas within 100 feet of the features which may include riparian areas. PHS = Priority Habitats and Species

C. Stemlit-Squilchuck Watershed

Stemlit-Squilchuck Watershed - WRIA 40a

Critical Area	Total Acreage		Intersection	
	Agriculture	Rangeland	Agriculture	Rangeland
Total	5,997	15,021	--	--
FREQUENTLY FLOODED AREAS				
100-year Floodplain	6	8	0%	0%
FISH AND WILDLIFE HABITAT CONSERVATION AREAS				
PHS Area	1,200	10,948	20%	73%
100-ft Hydrologic Study Area	61	235	1%	2%
GEOLOGICALLY HAZARDOUS AREAS				
Landslide Hazard Areas	2,567	3,992	43%	27%
Channel Migration Zones	-	-	0%	0%
Steep Slope Areas (>15%)	4,667	14,405	78%	96%
Erodible Soils	715	6,300	12%	42%
CRITICAL AQUIFER RECHARGE AREAS				
Possible CARA Area	287	39	5%	0%
Wellhead Protection Area	618	49	10%	0%

Note: Hydrologic study areas include wetlands and waterbodies and areas within 100 feet of the features which may include riparian areas. PHS = Priority Habitats and Species

Table 7, Part A, accounts for restoration and conservation actions taken since 2011 as documented in the Habitat Work Schedule data system. Watershed lead entities and project sponsors enter in project information into the schedule. Many agencies and non-governmental organizations have been active in restoration and conservation activities in the four watersheds in the County, including Chelan County Natural Resources Department, Cascadia Conservation District, Tribes, US Bureau of Reclamation, Trout Unlimited, and the agricultural community. Restoration and enhancement actions would improve the quality of critical areas functions and values while acquisition and conservation are likely to protect and preserve high quality habitat. These actions in Table 7.A are not limited to those occurring on agricultural land, but are comprehensively stated recognizing critical area functions and values include conditions and processes that support the ecosystem at more than a site-specific scale. Activities that are more related to agricultural lands are shown in Table 7.B. Going forward, the Watershed Work Group should track such conservation and restoration actions based on intersection with agricultural activities.

Table 7. Restoration and Conservation Actions Since 2011 – Habitat Work Schedule[9]

A. Restoration, Enhancement, and Acquisition Projects 2011-2015 in Chelan County Basins: January 2015

	Metric	Relationship to Critical Area
Habitat Restoration		
Riparian Acres Planted	12.15	Riparian & PHS
Wetland Acres Planted	1.5	Wetland & PHS
Riparian Buffer Acres Planted	5.83	Riparian & PHS
Trees Planted	> 300	Riparian & PHS
Other Plants Installed	2,735	Riparian & PHS
Feet of Debris Removed from Riparian Areas	370	Riparian & PHS
Miles Restored (Riparian)	4.8	Riparian & PHS
Miles of Livestock Exclusion Fencing Installed	0.12	Water Quality
Irrigation and Streamflow Enhancement		
Increased Streamflow (cfs)	18.2	Water Quantity
Structures Installed for Fishery Habitat	40	PHS
Culverts Replaced	11	PHS
Land Acquisition and Conservation Easements		
Acres Acquired	273.15	Riparian & PHS
Feet of River Bank Acquired (both sides)	15,070	Riparian & PHS
Feet of River protected via Conservation Easement (both sides)	18,280	Riparian & PHS

Legend: PHS = Priority Habitats and Species. Direct relationship of Restoration and Conservation = dark blue. Some activities occurring on agricultural land and non-agricultural land = light blue.
Source: Habitat Work Schedule (http://hws.ekosystem.us/), Chelan County Natural Resources Department, BERK, 2015.

[9] Additional information may be available from Trout Unlimited and Department of Ecology but has not been received to date. That information may be reported over time by the VSP workgroup in addition to ongoing actions as documented in Habitat Work Schedule and by the Cascadia Conservation District. Since July 2011 CCD has assisted landowners with installing the following acres of riparian restoration in the identified WRIA's. These may overlap Habitat Work Schedule reporting.
WRIA 45: 6 acres WRIA 46: 9.4 acres

B. Restoration and Enhancement Projects 2011-2015 in Chelan County Basins on Agricultural Properties: December 2015

Project Name	Date Completed	Number of Landowner Participants	Acres of Riparian Enhancement / Restoration	Other Improvements
CCD 2011 Lower Entiat Riparian Restoration	11/30/2011	5	4.2	635 lineal feet of livestock exclusion fence.
CCNRD Eagle Creek Riparian Planting	12/31/2012	3	1.6	
CCD Old Barn Farm Restoration	06/30/2013	1	0.4	Drip irrigation, livestock exclusion fencing, stream cleanup.
CCNRD Lower Wenatchee Levee Removal	06/02/2014	1	0.29	Removal of a 300 foot long levee and addition of 1 well.
YN - Entiat River RM 2.6-3.5 Habitat Enhancement Project	08/01/2014	5	0	Channel Structure Boulders and LWD 4,800 linear feet
CCNRD Chumstick Creek Riparian Planting (Carlton)	12/31/2014	1	0.22	
CCD Entiat PUD Canal System Conversion Phase II	12/31/2015 (Active)	7	0	Quantity of water added to instream flow: 8.55 cfs. Modify existing wells, add wells, create shared intake.
Total		**23**	**6.71**	

Source: Recreation Conservation Office, December 2015; BERK Consulting 2015

The US Bureau of Reclamation is often a sponsor or funder of habitat enhancement projects in order to implement the 2010 Federal Columbia River Power System Biological Opinion. Table 8 lists projects that have been implemented after the baseline July 2011 date of the VSP legislation. Some of the projects likely overlap or relate to some of the projects included in the Habitat Work Schedule above, and those are noted with an asterisk. Most have occurred on private property with willing landowners.

Table 8. Bureau of Reclamation List of Tributary Habitat Projects: 2011-2014

Project Name	Completion Date	Area Enhanced or Conserved
ARRA Wells*: Conversion of surface water irrigation diversions to wells	Sept. 30, 2011	2.4 cfs; 38 stream miles affected; private landowners
Ecology Wells*: Conversion of surface water irrigation diversions to wells	Nov. 8, 2011	0.64 cfs; 38 stream miles affected; private landowners
Peshastin Pipeline, Schedule B*: Instream flow	Dec.16, 2011 (B)	360 acre-feet per year; 2.4 miles affected (Part A + B); Peshastin Irrigation District Easement
Upper Chumstick Barriers (Removal) Project*	Nov.11, 2011 (pt 1), Nov. 1, 2012 (pt 2), Oct. 31, 2013 (pt 3)	1.8 miles, 0.3 miles to the next partial culvert barrier; private landowners
Tyee Complexity*	Nov. 15, 2012	0.7 miles of channel complexity; private landowners
PID Fishway Repair Project: Adaptive management	Sept. 15, 2012	addressed erosion and flood control, upstream left bank; Peshastin Irrigation District (PID) and private landowners
First Bend Project (Nason Creek)*: Installation of five LWM structures, and riparian vegetation planting	Aug. 2013	0.13 miles (700 feet) of increased complexity and floodplain enhancement; private landowner
Lower White Pine Reconnection Project	Oct. 22, 2013	Full barrier removal opening up access to 4,200 feet (0.8 miles) and 152 acres of secondary/off-channel and floodplain habitat. BNSF landowner.
Lower Wenatchee Instream Flow Project: Changing a gravity earthen canal system into pressurized pump-back system	April 11, 2013	38.27 cfs increased instream flow for 7 miles, year-round; private landowners
Lower Wenatchee Pioneer Dam Removal	Aug. 26, 2013	0.1 miles access to top of side channel; Pioneer Water Users Association landowner.

Project Name	Completion Date	Area Enhanced or Conserved
Entiat Fish Hatchery Complexity Phase II: In-stream and off-channel complexity	Sept. 15, 2014	0.1 miles of side-channel complexity; Entiat National Fish Hatchery, USFWS landowners
Harrison Side Channel and Main Stem Habitat Enhancement	Nov. 21, 2014	Improve off-channel habitat connection to 1,300 feet; add logjams along 700 feet of main stem; increase riparian cover along 1,000 feet of shoreline. Landowners: private, WDFW.
Entiat -Keystone to Kiosk RM 0.8 to 2.3 Habitat Enhancement Project: In-stream and off-channel complexity	September 1, 2014	0.25 miles side channel, 0.1 miles mainstem: Landowners Keystone Ranch, Chelan PUD, WDFW and other private
Lower Entiat River Side Channel Enhancement RM 1.9 to RM 2.3	August 9, 2014	0.1 mile side channel enhancement; private landowner
Entiat River RM 2.6-3.5 Habitat Enhancement Project	August 1, 2014	0.9 miles main-channel complexity: private landowners
Wenatchee -Beaver Creek Diversion Access Enhancement: Water Quantity and Passage	Oct.1, 2014	0.5 CFS for one-half mile, one screen removed, one barrier removed, 2.5 miles of increased access, 1 acre riparian enhanced; landowner Alpine Acres
Coulter Creek Barrier Removal Access Enhancement Project: Replace barrier culvert with properly sized CMP arch	Nov. 21, 2014	1.6 miles access; private landowner
Lower Nason RM 3.7-4.7 (N1) Habitat Enhancement Project: Floodplain fill removal and oxbow enhancement	Oct. 31, 2014	Removal of 0.75 acres of floodplain fill and placement of 28 logs to enhance 0.7 acre of oxbow side channel habitat for 0.1 miles of side channel: landowners U.S. Forest Service and Weyerhauser

*Likely in Habitat Work Schedule Database
Source: Bureau of Reclamation, 2012, 2013, 2014, 2015

These habitat restoration and enhancement activities are a result of the work of Watershed Planning Units, Upper Columbia Salmon Recovery, Water Quality Improvement Programs (TMDLs), the Chelan County Natural Resources Department, Natural Resource Conservation Service, Cascadia Conservation District, as well as individual landowners.

Another source of information about practices that can protect critical areas and improve the viability of agriculture include application of NRCS Conservation Practices, particularly those between 2011 to 2014. The information is presented at a summary level as NRCS maintains confidentiality of detailed information. Because contracts for conservation practice installation can span multiple years, the acres should not be totaled across the rows, but the acres in any given period can give a sense of participation in conservation practices designed to protect soils, water quality, habitat, and other functions and values of critical areas. Both the NRCS and the CCD track activities by Conservation Practice and the use of the system may be helpful in monitoring of benchmarks. See Table 9 for NRCS practices employed during 2011-2014.

Table 9. NRCS Conservation Practices 2011-2014

Program	Range of Practices	Year Start	Year End	# Contracts	Approx. Acreage - Can Overlap Multiple Periods
Conservation Security Program (CSP) 2002 2005-2014	Enhancement - Energy Management Enhancement - Forestry Enhancement - Grazing Management Enhancement - Habitat Management Enhancement - Nutrient Management Enhancement - Pest Management Enhancement - Soil Management Enhancement - Water Management	2005	2014	8	4,979

Program	Range of Practices	Year Start	Year End	# Contracts	Approx. Acreage - Can Overlap Multiple Periods
EQIP 2008	Forest Stand Improvement Irrigation Water Management Nutrient Management Pest Management Prescribed Grazing Tree/Shrub Establishment Tree/Shrub Site Preparation	2011	2013	16	1,189
EQIP 2008 2009 Sign Up Year	Forest Slash Treatment Forest Stand Improvement Hedgerows Irrigation System, Microirrigation Mulching Nutrient Management Pest Management Tree/Shrub Pruning Upland Wildlife Habitat Management	2011	2013	5	305
EQIP 2008 2010 Sign Up Year	Forest Slash Treatment Forest Stand Improvement Hedgerows Irrigation System, Microirrigation Mulching Nutrient Management Pest Management Tree/Shrub Pruning Upland Wildlife Habitat Management	2011	2014	5	377
EQIP 2008 2011 Sign Up Year	Forest Slash Treatment Forest Stand Improvement Hedgerows Irrigation System, Microirrigation Irrigation Water Conveyance Mulching Nutrient Management Pest Management Seasonal High Tunnel Tree/Shrub Pruning Upland Wildlife Habitat Management	2012	2014	8	220
EQIP 2008 2012 Sign Up Year	Forest Slash Treatment Forest Stand Improvement Irrigation System, Microirrigation Irrigation Water Conveyance Pumping Plant Seasonal High Tunnel Tree/Shrub Pruning	2013	2014	7	107
EQIP 2008 / 2013 Sign Up Year	Farm Energy Plan (1 Site)	2013		1	
EQIP 2008 /2014 Sign Up Year	Prescribed Grazing	2014	2014	Unknown	1,575
Wildlife Habitat Incentive Program (WHIP) / 2011 Sign Up	Restoration and Management of Rare and Declining Habitats	2014	2014	1	200

Note: Forestry is not covered by VSP though listed in part above. Agricultural activities, however, include "Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting" (RCW 90.58.065 (2)(b)).NRCS practices regarding forest management and FireWise programs can create a healthier forest that retains soil and water processes; where fire or other activity destroys cover, soils may wash downstream and affect agricultural activities.

Source: NRCS, Wenatchee Field Office, May 5, 2015

These NRCS tracked activities such as Water Management or Habitat Management could result in changes to the baseline condition of critical areas at a site or basin scale and illustrate implementation of some of the watershed plan strategies that have implicit enhancement objectives:

> *Decrease water temperatures and improve water quality by restoring riparian vegetation along the stream (Wenatchee Watershed Plan, example strategy for Chumstick Creek)*

Other agencies that may have additional information to track and monitor include:

- Ecology's riparian enhancement program as part of the Water Quality program offers funding for projects that improve water quality. For example, with its combined federal and state funding program, Ecology is funding the Wenatchee Watershed Riparian Enhancement Project that will identify existing riparian habitat condition at the parcel level and prioritize potential riparian protection and enhancement projects. Ecology also awarded Husseman grants in 2014 for the Nason Creek Upper White Pine Restoration project to remove derelict cars and dilapidated structures in the creek and to stabilize eroding banks with property owners and the Cascadia Conservation District along Colockum Creek.[10] [11]
- Non-governmental agency activities such as those by Trout Unlimited. Nationally, Trout Unlimited has supported stream restoration projects with willing landowners; locally, the organization has supported the Peshastin Lumber and Box mill restoration for fishing and other purposes.[12]

Critical Areas Goals and Benchmarks

The following goals, benchmarks, and measurement and monitoring approaches were developed to protect the value and functions of critical areas in the basins, and allow for the enhancement of these critical area functions through voluntary measures. Benchmarks identify specific measurable benchmarks that would be monitored in accordance with the VSP legislation. The tables identify overarching goals, benchmarks, and measurements applicable to all critical areas, as well as those specific to geologically hazardous areas, fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, and critical aquifer recharge areas.

As described in Section 4.3, the regulatory backstop will continue to apply, including federal or state laws that protect elements of the environment. An example is water quality, where state and federal clean water laws will continue to be implemented to assure water quality standards are met. Some of the practices or projects implemented with VSP, such as methods to avoid erosion or to reduce water use, may have an indirect benefit to water quality. However, it is difficult to directly correlate changes in water quality, either positive or negative, to agriculture or any individual activity on a water body given the non-point nature of the runoff and numerous activities taking place in a basin.

[10] Washington State Department of Ecology. July 2015. State Fiscal Year 2016 Final Water Quality Funding Offer List and Intended Use Plan. Available: https://fortress.wa.gov/ecy/publications/SummaryPages/1510027.html.

[11] Washington State Department of Ecology. March 31, 2014. Grants boost local environmental projects. Available: http://www.ecy.wa.gov/news/2014/052.html.

[12] Trout Unlimited. 2016. Farm and Ranch Stewardship and Fishing. Available: http://www.tu.org/node/358.

Table 10. Overarching Critical Areas Goal, Benchmark, and Measurement

Critical Area Protection (RCW 36.70A.720 (1)(e)(i) and (i)(iii))	
Goal	CA Goal-I. Prevent the degradation of critical area functions and values existing as of July 22, 2011 including: • Geologically hazardous areas • Fish and wildlife habitat conservation areas (e.g., streams, wildlife corridors, etc.) • Wetlands • Frequently flooded areas • Critical aquifer recharge areas
Benchmark	Benchmark-A. Maintain or improve critical area functions and values in areas of intersect across watersheds.
Critical Areas Measurement and Monitoring	M-1 The County Baseline critical area mapping may be repeated for each reporting period and significant changes in extent, amount, or quality of critical areas intersecting agriculture identified similar to Appendices A and B and Table 6. M-2 Cumulative effects of direct and indirect participation should also be quantified (e.g., number of habitat acres protected, enhanced, restored, etc.) to determine the cumulative impacts of conservation practices on critical areas throughout the County similar to Table 7 and Table 9. M-3 Acres of agricultural activities with direct participation in conservation practices related to critical areas is documented using self-certification (e.g. checklist in Appendix H), or random sampling in the field, or phone, mail, or online surveys.

Table 11. Geologically Hazardous Areas Goals, Benchmarks, and Measurements

Agriculture Intersecting with Geologically Hazardous Areas (RCW 36.70A.720 (1)(e)(i) and (i)(iii))	
Agriculture Viability Aims	Critical Areas Goals
AG Aim-I. Protect agricultural activities from geologic hazards such as erosion and landslides.	CA Goal-II. Geologic hazard goals: • Avoid increases in erosion. • Avoid steep slopes or help to stabilize steep slopes where practical. • Manage risk of landslides. • Avoid compaction of soil. • Avoid disturbing top and toe of steep slopes and landslide hazard areas. • Avoid irrigating unstable slopes.

	Critical Areas Benchmarks
	Benchmark-B. Sheet and rill erosion is reduced over basin acres, particularly in areas of intersect. • Conservation practices are implemented for new or altered orchards, vineyards, and rangeland. • Fire danger is managed with conservation practices such as FireWise to avoid damage to soils and downstream agricultural operations and critical areas.
Agricultural Viability Information Tracking	Critical Areas Measurement and Monitoring
AG Track-1. Increased agricultural crop production and economic value annually. AG Track-2. Designated agricultural land in Comprehensive Plan continues to be protected.	M-4 Countywide or basin level estimates of tons of sediments due to sheet and rill erosion using USDA NRCS National Resources Inventory method or equivalent method.[13] M-5 Water quality monitoring of sediments in hydrologic study areas as defined in Appendix B, where such results can be attributed to agricultural activities. Existing or new water quality sampling locations may be used.

Table 12. Fish and Wildlife Habitat Conservation Areas Goals, Benchmarks, and Measurements

Agriculture Intersecting with Fish and Wildlife Habitat Areas (RCW 36.70A.720 (1)(e)(i) and (ii) and (i)(iii))	
Agriculture Viability Aims	Critical Areas Goals
AG Aim-II. Promote economical water, soil, pest, and nutrient management that maximizes produce quality. AG Aim-III. Protect orchards and vineyards from wildlife and pest damage.	CA Goal-III. Protect fish and wildlife populations and their associated habitats. CA Goal-IV. Promote voluntary restoration and enhancement of fish and wildlife populations and their associated habitats.
	Critical Areas Benchmarks
	Benchmark-C. Stems per acre (tree/shrub density) in critical areas and adjacent buffer areas are maintained or increased. • Consider height and variety for proper microclimate and to avoid agricultural pests.

[13] See description, at USDA NRCS, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/mo/technical/dma/nri/?cid=stelprdb1041925.

	Benchmark-D. Riparian areas are restored, as measured in acres or miles. Benchmark-E. Miles of fencing for wildlife exclusion. • Avoid animal "hang ups" such as with plastic fencing; protect young trees/crops during establishment. Benchmark-F. Habitat for complementary wildlife species is maintained or increased (e.g., pollinators, raptors, bats, etc.).
Agricultural Viability Information Tracking	Critical Areas Measurement and Monitoring
Same as Ag Track 1 and Ag Track 2.	M-6 The number and extent of conservation practices that increase stems per acre (tree/shrub density) in areas of agriculture-critical area intersect or in areas that contribute to critical areas functions and value in sub-basins where intersection occurs. Implemented activities show intactness and survival based on specifications of installed projects. M-7 The number and extent of riparian restoration projects in areas of agriculture-critical area intersect or in areas that contribute to critical areas functions and value in sub-basins where intersection occurs. Implemented activities show intactness and survival based on specifications of installed projects. M-8 Conservation practices that install or replace wildlife exclusion fencing in areas of intersect during monitoring period. M-9 Extent of mapped or documented Priority habitat in areas of intersect or in sub-basins where intersection occurs are maintained or increased during monitoring period. M-10 Conservation practices that maintain or add complementary species or habitat (e.g., pollinators, raptors, bats, etc.) in areas of intersection during monitoring period.

Table 13. Wetlands Goals, Benchmarks, and Measurements

Agriculture Intersecting with Wetlands (RCW 36.70A.720 (1)(e)(i) and (ii) and (i)(iii))	
Agriculture Viability Aims	Critical Areas Goals
Same as AG-II and AG-III.	CA Goal-V. Protect the ecological and environmental functions of wetlands and protect the public health, safety and welfare benefits provided by wetlands by preventing loss of wetlands. CA Goal-VI. Where practical, encourage voluntary enhancing or restoring of wetland functions and values.
	Critical Areas Benchmarks
	Same as Benchmarks C, D, and E applicable to wetlands and wetland buffers.
Agricultural Viability Information Tracking	Critical Areas Measurement and Monitoring
Same as AG-1 and AG-2.	M-11 See monitoring methods M-6, 7, and 8 tailored to wetlands protection, enhancement, and restoration.

Table 14. Frequently Flooded Areas Goals, Benchmarks, and Measurements

Agriculture Intersecting with Frequently Flooded Areas (RCW 36.70A.720 (1)(e)(i) and (i)(iii))	
Agriculture Viability Aims	Critical Areas Goals
AG Aim-IV. Avoid water contamination, damage to crops, loss of livestock, increased susceptibility of livestock to disease, and damaged farm machinery due to flooding.	CA Goal-VII. Avoid environmental damage due to flooding such as from loss of floodplain storage or due to agricultural chemicals.
Agricultural Viability Information Tracking	Critical Areas Benchmarks and Measurement
Same as AG Track-1 and AG Track-2.	Intersect areas are protected by the regulatory backstop including flood hazard management regulations and pesticide regulations. No benchmarks or measurement required.

Table 15. Critical Aquifer Recharge Areas Goals, Benchmarks, and Measurements

Agriculture Intersecting with Critical Aquifer Recharge Areas (RCW 36.70A.720 (1)(e)(i) and (i)(iii))	
Agriculture Viability Aims	Critical Areas Goals
Same as AG Aim-II.	CA Goal-VIII. Protect water quality and water quantity in areas having a critical recharging effect on aquifers used for potable water.
Agricultural Viability Information Tracking	Critical Areas Benchmarks and Measurement
Same as AG Track-1 and AG Track-2.	Intersect areas are protected by the regulatory backstop including pesticide regulations. No benchmarks or measurement required.

7.2 Participation and Stewardship Activities

Participation and stewardship goals and benchmarks are to be identified in the VSP Work Plan. Neither term is defined in the law. However, common definitions include:

- Participation: the act or state of participating, or sharing in common with others.[14]
- Stewardship: The activity or job of protecting and being responsible for something.[15]

Farmers and ranchers directly participate in VSP by implementing conservation projects on their properties, often with the help of participating technical providers. Examples of such activities include the creation of individual stewardship plans and implementation of conservation practices such as water, pest, habitat and nutrient management. See Appendix H for a checklist that could serve as an individual stewardship plan. Indirect participation of agricultural producers in stewardship activities consists of many of the standard industry practices identified in Section 3.2 that are implemented on the initiative of a producer without the use of a federal, state, or non-profit incentive program. Examples of standard practices that have protective or beneficial impacts to critical areas to those identified in Appendix H Checklist or Appendix D Conservation Practices. Because many practices are installed without participation in a particular program, but they have the effect of protecting or enhancing critical areas, the presence of the practices should be tracked and monitored.

Table 16. Participation and Stewardship Goals and Benchmarks

Participation and Stewardship (RCW 36.70A.720 (1)(i)(i) and (ii))	
Goal	CA Goal-IX. Promote volunteerism and stewardship of agricultural land and critical areas.

[14] Definition of Participation, Webster Dictionary, at: http://www.definitions.net/definition/participation.

[15] Definition of Stewardship, Merriam-Webster: http://www.merriam-webster.com/dictionary/stewardship

Benchmarks	Benchmark-G. Active participation by commercial and non-commercial agricultural operators increases over 10 years by: • Farmers • Ranchers Benchmark-H. Passive participation by commercial and non-commercial agricultural operators in VSP conservation practices is maintained or increased over 10 years on agricultural land (including but not limited to those listed in Appendices D and H).
Measurement	M-12 Indicators of active participation include: • Number of outreach events • Number/percentage of landowners contacted • Number of event attendees • Number of VSP participation signs and marketing materials distributed • Education opportunities provided • Technical assistance sought by producers (as tracked through meetings, calls, applications, and contracts with technical assistance providers) • Percentage of acres and producers by type of agriculture • Percentage of acres and producers in agricultural/critical areas interface • Self-certification: See Appendix H for a checklist. M-13 Passive participation in common stewardship practices may be tracked and reported using one or more methods: • Mapping and aerial photo evaluation of practices in place • Random sampling of farmers and ranchers in the field • Phone, mail, or online surveys

7.3 Suggested Activities to Maintain and Enhance Agricultural Viability

Baseline estimates of agricultural production in acres are provided in Table 1. Section 3.1 describes the current economic impact of agricultural activity within the County. These values are both indicative of agricultural viability, however other factors including market dynamics, economies of scale, local regulation, and land use changes are also major contributing factors to agricultural viability within the County. Suggested activities to improve agricultural viability are presented to encourage program goals of "maintaining and enhancing the viability of agriculture in the watershed" (RCW 36.70A.725). These are not formal measureable benchmarks, nor do they determine whether the plan meets compliance. Their purpose is to help the County do its planning for resource lands and to help the local agricultural economy. Suggested aims, incentives and activities relate to the protection and enhancement of agriculture in the watershed. These should be considered throughout implementation, monitoring, and adaptive management of the VSP Work Plan.

Suggested Agricultural Viability Aims:

In addition to the Agricultural Viability Aims in Tables 10-15, promote the following aim:

AG Aim-V. The prevalence of conservation practices, helps avoid unnecessary local critical area regulations.

Suggested Agricultural Viability Incentives and Activities:

Incentive-1 Priority funding set aside and made available by federal, state, and local sources to support VSP Program participation by farmers and ranchers. Applications for conservation practices could score higher for VSP participants such as through CCD, NRCS, and other agencies.

Incentive-2 Provide information to farmers and ranchers about available tax incentives for participating agricultural producers.

Incentive-3 Seek new tax incentives by the state legislature that recognize VSP participation. Due to local tax burden shifts when an incentive program is authorized by state law, carefully consider new tax incentives.

Incentive-4 Promote VSP participation through recognition, branding for marketing purposes (such as through farmers markets, CSAs, others).

Incentive-5 Ensure carbon taxes and cap and trade systems for greenhouse gas emissions do not apply to agricultural activities like tree fruit that are a permaculture.

Incentive-6 Ensure the County Comprehensive Plan, capital investments, and zoning code provide strong support for agricultural infrastructure that may be located within urban areas, such as packing houses, etc.

Incentive-7 Promote Comprehensive Plan Policies and regulations that support agricultural operators to keep land in farming. Evaluate allowances for agricultural accessory uses or homes for agricultural operators; for example consider where homesteading in County code can be made more flexible.

Incentive-8 Consider alternative alignments for recreational trails to avoid abutting farmers and ranchers.

Incentive-9 Evaluate appropriate densities and site planning for rural residential or urban residential uses that abut designated agricultural lands to minimize interface, protect necessary agricultural practices, and reduce pressure for agricultural conversion.

Incentive-10 Establish an agricultural viability committee that can advise Chelan County and other agencies on measures to promote the agricultural economy.

Incentive-11 Explore a “farmbudsman” program where farmers and ranchers can obtain objective and comprehensive advice on federal, state, and local laws that affect agricultural activities, e.g. water rights.

Suggested Agricultural Viability Outcomes for Information Tracking:

Based on implementing Agricultural Viability Aims, Incentives, and Activities, track the following desired outcomes:

Outcome-1 Increased agricultural crop production and economic value annually. See Section 3.1 for baseline as of VSP Work Program.

Outcome-2 Designated agricultural land in Comprehensive Plan continues to be protected.

8.0 MONITORING, REPORTING, AND ADAPTIVE MANAGEMENT

The VSP Work Group is responsible for ongoing monitoring, reporting, and adaptive management of the Work Plan implementation. RCW 36.70A.720 describes the schedule and actions the Work Group must follow during implementation of the plan.

> *(b)(i) Not later than five years after the receipt of funding for a participating watershed, the watershed group must report to the director and the county on whether it has met the work plan's protection and enhancement goals and benchmarks.*
>
> *(ii) If the watershed group determines the protection goals and benchmarks have been met, and the director concurs under RCW 36.70A.730, the watershed group shall continue to implement the work plan.*
>
> *(iii) If the watershed group determines the protection goals and benchmarks have not been met, it must propose and submit to the director an adaptive management plan to achieve the goals and benchmarks that were not met. If the director does not approve the adaptive management plan under RCW 36.70A.730, the watershed is subject to RCW 36.70A.735.*
>
> *(iv) If the watershed group determines the enhancement goals and benchmarks have not been met, the watershed group must determine what additional voluntary actions are needed to meet the benchmarks, identify the funding necessary to implement these actions, and implement these actions when funding is provided. (RCW 36.70A.720)*

The statute further requires reporting, evaluation and, if necessary, adaptive management at "ten years after the receipt of funding… and every five years thereafter". Section 7 identifies specific benchmarks and monitoring and measuring efforts for each.

[Note: A tracking tool is in progress, and as it is developed, information will be inserted here. Generally, the tracking tool would allow the technical service providers to enter information about projects or practices that are installed voluntarily by VSP participants. The tracking tool will provide information about the extent and type of conservation practices included, and general information on the basin where the practice is occurring. Parcel-specific information would not be part of the tool.]

9.0 PLAN APPROVAL PROCESS AND TIMELINE

The Conservation Commission Director must approve the Work Plan within 3 years of funding (January 2014)[16] or the county must comply with the non-VSP (regulatory) critical area protection requirements of RCW 36.70A.735. See Table 17.

The Work Group submits the VSP Work Plan to the Conservation Commission Director, who gives it to the Technical Panel for review. (RCW 36.70A.720(2)(a)) The Technical Panel has 45 days to make a recommendation. If the Technical Panel says the Work Plan doesn't pass the statutory Work Plan Approval test, the Work Group must modify and resubmit the Work Plan.

If the Conservation Commission Director does not approve the Work Plan within 2 years and 9 months of the county's receipt of funding, the Director must submit the Work Plan to the Statewide Advisory

[16] Chelan County signed the agreement in January 2014 and it was signed by the Conservation Commission in February 2014. If February becomes the "receipt of funding" date the months due could move.

Committee for resolution. If the Statewide Advisory Committee has final say. If the Statewide Advisory Committee recommends Work Plan approval, the Conservation Commission Director must approve it.

Table 17. VSP Work Plan Preparation, Approval, and Monitoring Timeline

	Action	Timeline
1.	**Receipt of funding** to create a VSP Watershed Work Plan.	January 2014[1]
2.	**Prepare a watershed work plan** within 18 months after the receipt of funding.	June 2015[2]
3.	**Approval of Work Plan.** Director of the State Conservation Commission and technical panel (see RCW 36.70A.735) approves work plan within two years and nine months after receipt of funding (September 2016) - technical panel has 45 days to review and provide response to Director. • **If no agreement in 2 years 9 months**, work plan is sent to the Statewide Advisory Committee made up of representatives of environmental, agricultural, local governmental, and tribal agencies and stakeholders. • **If no agreement in 3 years**, the work plan does not go into effect and an alternative regulatory path must be selected. See RCW 36.70A.735 for alternative paths.	August 2015 if plan approved - OR - September 2016 if back and forth with technical panel occurs
4.	**Conduct periodic evaluations**, institute adaptive management, and provide a written report of the status of plans and accomplishments to the county and to the commission within sixty days after the end of each biennium.	August 2015, 2017, 2019 et seq.
5.	**Report on whether goals and benchmarks have been met** in 5 years after receipt of funding (January 2019), and also at the ten year mark and every 5 years after that.	January 2019 January 2024
6.	**Adaptive management** or additional voluntary actions and funding may need to be identified if goals and benchmarks are not met.	ongoing after Jan. 2019

Notes: 1 Chelan County signed the agreement in January 2014 and it was signed by the Conservation Commission in February 2014. If February becomes the "receipt of funding" date the months could move accordingly rows 2-6.
2 The technical panel was not formed at the state level as of June 2015. The state authorized a later submittal for Chelan County. The ultimate approval timeline is September 2016.

Source: RCW 36.70A.700-760; BERK Consulting 2014

10.0 APPENDICES

A set of appendices provides **information considered** in the development of the VSP Work Plan, including:

A. Agriculture and Critical Areas Mapping
B. Summary of Geographic Information System Sources and Methods
C. VSP Work Plan Development – Jobs and Sideboards, Prepared by the Washington State Farm Bureau
D. List of Conservation Practices in Use in Chelan County
E. Summary of Watershed Resource Inventory Area Plans
F. Existing Regulations
G. Role of Technical Providers
H. Optional VSP Checklist