



August 2021
Kittitas County Voluntary Stewardship Program

Biennial Report: 2019 to 2021



Prepared by the Kittitas County Conservation District

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Prepared for
Kittitas County Board of Commissioners and
the Washington State Conservation
Commission

Prepared by
Kittitas County Conservation District
Kittitas County VSP Watershed Group

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EXECUTIVE SUMMARY

This Kittitas County Voluntary Stewardship Program (VSP) Biennial Report for fiscal years 2019 to 2021 has been prepared in compliance with the two-year reporting procedures for VSP implementation pursuant to the Revised Code of Washington Chapter 36.70A. As part of the implementation phase, the Kittitas County Conservation District (KCCD) documented implementation of **217** conservation practices that benefit critical areas and help to maintain the viability of agriculture; conducted outreach including presenting VSP at three producer meetings, and maintaining a webpage, a story map explaining VSP, and an on-line map and survey to both inform and recruit producers to participate; and facilitated six meetings of the Watershed Group. The Kittitas County VSP 5-Year report was successfully submitted to the Conservation Commission in November 2020 documenting that the Work Plan goals and benchmarks for 2020 had been met. The Washington State Conservation Commission concurred in April 2021.

KCCD has ongoing and future outreach efforts planned to include periodic Work Group meetings and outreach efforts, providing technical assistance, continuing to develop the monitoring and reporting framework, and identifying adaptive management needs. Through the implementation of conservation practices and active monitoring, the KCCD is on track to meet or exceed goals and benchmarks outlined in the approved Work Plan, indicating successful implementation of VSP.

ABBREVIATIONS

CDS	Community Development Services (Kittitas County)
EQIP	Environmental Quality Incentives Program
KCCD	Kittitas County Conservation District
KCWP	Kittitas County Water Purveyors
KRD	Kittitas Reclamation District
NRCS	USDA Natural Resources Conservation Services
PIT	Passive Integrated Transponder
RCPP	Regional Conservation Partnership Program
RCW	Revised Code of Washington
USDA	U.S. Department of Agriculture
VSP	Voluntary Stewardship Program
Watershed Group	Kittitas County VSP Watershed Group
Work Plan	Kittitas County VSP Work Plan
WSCC	Washington State Conservation Commission
USFWS	United States Fish and Wildlife Service
YBIP	Yakima River Basin Integrated Water Resource Management Plan
YN	Yakama Nation
YTAHP	Yakima Tributary Access and Habitat Program

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1 Introduction

The Biennial Report provides the status and accomplishments of the Kittitas County Voluntary Stewardship Program (VSP) Work Plan (Work Plan; Anchor QEA 2018) implementation process for fiscal years (FY) 2019 to 2021. This report was developed by the Kittitas County Conservation District (KCCD) and the Kittitas County VSP Watershed Group as an evaluation of the effectiveness and accomplishments of the County's Work Plan in meeting the purpose and intent of VSP pursuant to the Revised Code of Washington (RCW) 36.70A.700(2).

The information provided in this report documents work that has been completed and highlights progress made during VSP implementation over the last 2 years. Ongoing and planned implementation efforts were also documented and reported in the 5-year status report, submitted to the Washington State Conservation Commission (WSCC) in November 2020 (5 years from VSP funding award). The contents of this report include the following:

- Summary of actions and accomplishments by the KCCD and the Work Group in meeting the VSP goals for the 2019-2021 biennium.
- Report on the progress towards meeting the goals identified in the Work Plan as measured by the Work Plan metrics
- Description of how adaptive management procedures are or will be instituted
- Report of the status of Work Plan implementation, including progress toward meeting the protection and enhancement benchmarks identified in the Work Plan

1.1 Requirements

The purpose of this report is to fulfill state requirements pursuant to RCW 36.70A.720 (1)(j), which states that as a part of Work Plan implementation, the Work Group must *"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."* Consistent with WSCC Policy Advisory #05-18 (WSCC 2018), this report includes a

summary of how Work Plan implementation is making progress toward meeting the purpose and intent of VSP per RCW 36.70A.700(2).

Table 1 provides a brief summary of the status and progress towards meeting the intent of VSP, consistent with WSCC Policy Advisory #05-18. Section 2 of this report provides a more detailed description of these efforts.

Table 1 Summary of progress toward meeting the intent of the Voluntary Stewardship Program.

No.	VSP Intent	Kittitas County VSP Biennial Report FY 2020 to 2021
1	The protection and enhancement of critical areas within the area where agricultural activities are conducted	<ul style="list-style-type: none"> • Section 2.1 describes outreach to landowners by KCCD to encourage participation in VSP to promote critical areas protection and agricultural viability. • Section 2.2 describes conservation practices that have been implemented in the biennium. • Table 3 summarizes conservation practices implemented in the 2019-2021 biennium.
2	The maintenance and improvement of the long-term viability of agriculture	<ul style="list-style-type: none"> • Section 2.3 describes how implementation efforts positively impact agricultural viability within Kittitas County.
3	Reducing the conversion of farmland to other uses	<ul style="list-style-type: none"> • Table 3 describes conservation practices that have been implemented since Work Plan approval that have had a beneficial effect on agricultural viability. • Table 5 summarizes outreach efforts by KCCD and participation by landowners to implement conservation practices that benefit agricultural viability.
4	The maximization of the use of voluntary incentive programs to encourage good riparian and ecosystem stewardship as an alternative to historic approaches used to protect critical areas	<ul style="list-style-type: none"> • Section 2.2 summarizes projects implemented by landowners since Work Plan approval. • Section 3 Highlights program success that directly demonstrate the maximization of the use of voluntary incentive programs to protect and enhance critical areas.
5	The leveraging of 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	<ul style="list-style-type: none"> • Section 2.3 summarizes voluntary incentive programs that provide funding to implement stewardship practices. • Work Plan Appendix D: Existing and Related Plans, Programs, and Regulations describes available resources, plans, and programs being used or available to support VSP implementation. One program, the Fish Barrier Removal Board through the Washington State Recreation and Conservation Office has been added since Work Plan approval.
6	Ongoing efforts to encourage and foster a spirit of cooperation and partnership among county, tribal, environmental, and agricultural interests to better assure the program success	<ul style="list-style-type: none"> • Section 2.1 summarizes the methods that KCCD is applying for outreach to interested parties and landowners, including public meeting presentations and regular outreach to encourage partnerships in the community.

7	Ongoing efforts to improve compliance with other laws designed to protect water quality and fish habitat	<ul style="list-style-type: none"> • Section 2.2 summarizes projects implemented by landowners since Work Plan was assembled. • Section 2.3 describes technical assistance efforts by KCCD and other partners including applying for and acquiring permits in compliance with laws designed to protect water quality and fish habitat laws. •
8	A description of efforts showing how relying upon voluntary stewardship practices as the primary method of protecting critical areas and does not require the cessation of agricultural activities.	<ul style="list-style-type: none"> • Table 3 demonstrates that Kittitas County continues to meet or exceed goals and benchmarks outlined in the approved Work Plan, indicating successful implementation of VSP. This will be further supported and verified through continued monitoring and implementation efforts captured in the 5-year status report. • Section 2.3 describes how participating in VSP allows landowners to protect and enhance critical area functions while also promoting agricultural viability.



2 Summary of Actions and Accomplishments

This section includes a summary of activities KCCD has implemented in the 2019-2021 biennium. This includes outreach, conservation practices, monitoring, and adaptive management. This section also provides a summary of reporting efforts, a status report on agricultural viability in Kittitas County as it relates to VSP implementation.

2.1 Outreach

2.1.1 *Completed Outreach Activities*

KCCD is responsible for managing and facilitating the VSP through its implementation. Continued public outreach and education is integral to the success of this process. As described therein, KCCD is committed to reaching out annually to at least 10% of the approximately 300 producers that operate lands with critical area intersects. The 19-21 biennium was severely impacted by the COVID-19 pandemic and the resulting executive orders that stopped in-person public meetings for most of 2020 and 2021. KCCD was able to complete the following outreach to producers in this reporting period:

- The VSP Coordinator provided presentations of VSP at 2020 meetings of the Organization of Kittitas County Timothy Hay Growers & Suppliers (45 producers), Saddle Mountain Supply Company (40 producers), and KCCD/Kittitas County Farm Bureau's joint Annual Meeting (46 attendees). These meetings occurred shortly before the COVID-19 restrictions.
- A Soil Health Workshop was conducted in February 2020 with a focus on soil biology and cover crops. (47 attendees)
- A self-assessment checklist and VSP informational handouts were available at the KCCD office, CDS, WSU Extension offices and were provided at various grower meetings.

- The KCCD [2019](#) and [2020](#) newsletters included large articles about VSP. Circulation was 12,800 for each year and included all rural routes in the County.
- Kittitas County VSP webpages hosted on KCCD website were maintained. Page analytics indicated 112 unique visitors to the page during this biennium.
- A story map was maintained, explaining VSP in Kittitas County. It was viewed 107 times in this reporting period. It is available on the KCCD website and here: <https://kccd.maps.arcgis.com/apps/Cascade/index.html?appid=c08cb177b4004708bc2c563fcf14a225>
- An on-line map and survey (<https://kittitascountyvsp.mapseed.org/>) were created and launched in October 2019. The map is intended as an informational and recruitment tool for producers as well as an opportunity to collect information about implemented conservation practices. Since the map's launch, 8 producers have reported 81 stewardship actions.
- The KCCD Facebook page posted seven times about VSP. Performance records indicate those posts reached an average of 130 people each, except for the post advertising the roll-out of the on-line map which reached an estimated 1,200 people.
- KCCD collaborated on "The Yakima Basin: A Handbook for Healthier Waters", an outreach booklet intended for private landowners in the basin. The 16-page document shares information about habitat types, restoration project types, and how to find assistance. The Voluntary Stewardship Program is mentioned as a resource for landowners.

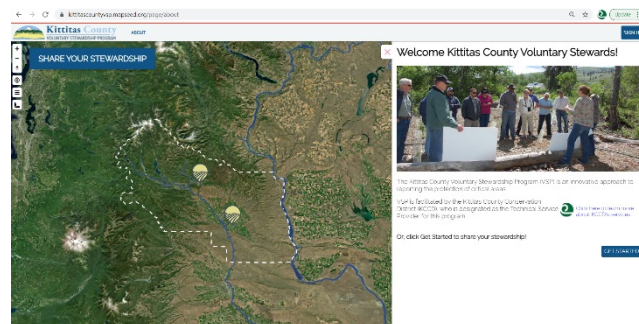


Figure 1. On-line map and survey.

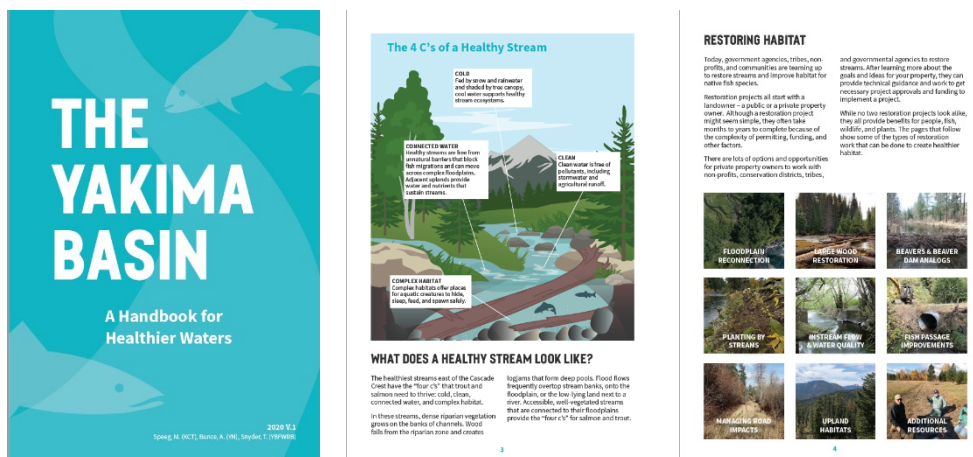


Figure 2. The Yakima Basin: A Handbook for Healthier Waters and selected pages. The handbook is available on-line at: <https://ybfwr.org/wp-content/uploads/2021/03/Yakima-Basin-Handbook-for-Healthier-Waters.pdf>

Some of these outreach activities are more impactful than others. In general, the in-person workshops and grower meetings allow for potential interaction between the presenter and the audience. Questions can be asked and answered, and the side conversations occur in breaks or at the end of the presentations/meetings. The impact of the presentation can be felt in those interactions. The passive outreach activities are harder to judge as the contacts are impersonal and only as interactive as the medium allows. The website, story map, on-line map and survey, and the social media posts are documented along with the visits and even time spent, but without any direct interaction, it's difficult to know the impact. The on-line map and survey haven't been as successful as was hoped. Those producers who did participate in the survey all attended in-person events where the purpose of the on-line map and survey was presented. When the in-person events stopped, so did the participation.

2.1.2 *Planned Outreach Activities*

VSP success relies on producer participation and the implementation of conservation practices where critical areas are present. Ongoing and future outreach and implementation efforts are anticipated to include continuing periodic VSP Work Group meetings and outreach efforts, providing technical assistance, continuing to develop the monitoring and reporting framework, and identifying adaptive management needs. Outreach activities are planned for the next biennium and are summarized in **Table 2**. Outreach activities are subject to the impacts of the COVID-19 restrictions and may change or not occur depending on circumstances.

Table 2. *Planned outreach activities*

Type	Ongoing and Planned Activities
Maintain Email List	Email list for the Watershed Group and interested parties is maintained by the VSP Coordinator.
Update Website (and Social Media)	The VSP informational and Watershed Group pages on KCCD's website will continue to be updated and maintained and links to VSP material (e.g. the Story Map) shared on Facebook.
Newsletter	The annual KCCD newsletter will contain at least the equivalent of a full-page article about VSP, as well as providing information about programs that provide assistance with conservation practice implementation supporting the VSP work plan.
VSP Self-Assessment Checklist	The Self-Assessment checklist will continue to be available at various offices, grower meetings and other events. The on-line map and survey will also be promoted as a way to learn about critical areas and self-report conservation practices.
Educational Videos	No educational videos have yet been created

Tours and Workshops	A tour of projects (in-person or virtual) and landowner workshop are planned for 2021 and 2022. A continuation of the Soil Health Workshop with an emphasis on cover crops and grazing is likely topic.
KCCD Meetings	KCCD will include VSP in all grower meetings, workshops and annual meetings of the District.
County Fair	VSP will continue to be included in the KCCD display at the Kittitas County Fair
Association Meetings	VSP Coordinator will continue to reach out to the various associations and businesses to offer presentations.
Watershed Group Member Outreach	Watershed Group members are encouraged to continue to include VSP in their organizations annual meetings and invitations extended to the VSP Coordinator to provide presentations.
Newspapers	Occasional articles may be submitted to the Ellensburg Daily Record and the Northern Kittitas County Tribune.

2.2 Conservation Practice Implementation

This report documents implementation of conservation practices identified by and/or reported to the KCCD in the 2019-2021 biennium, as well as the conservation practices implemented in the previous biennium and the practices reported in Section 4.2 of the Work Plan (July 22, 2011 through 2016).

From 2019 through June 2021, approximately 218 conservation practices have been implemented in partnership with federal, state and local programs that are available to landowners and producers.

Table 3 summarizes the types of conservation practices implemented in the 2019-2021 biennium as well as the previous biennium and the previously reported practices (2011-2016), and identifies protection and enhancement performance objectives for 2020, consistent with Table 5-7 in the Work Plan (Anchor QEA 2018). The table does separate infrastructure practices and management practices, particularly for the water management category. Irrigation water management is the act of timing and regulating irrigation water application in a way that will satisfy the water requirement of the crop without wasting water, energy, and plant nutrients or degrading the soil resource. It is only effective when applied, whereas a sprinkler system conversion is a semi-permanent infrastructure practice that remains effective for at least the practice design life of 15 years. Reporting acres for these practices in a lump sum does not accurately reflect the level of impact to critical areas, so they have been separated in this table.

Projects implemented in the biennium have realized benefits including improving water use efficiency, reducing irrigation induced erosion, opening previously blocked habitat for listed fish species, improving instream and upland habitat conditions, and improving grazing conditions. The projects included varying levels of protections for all five critical areas (wetlands, habitat conservation areas, critical aquifer recharge areas, geologically hazardous areas, and frequently flooded areas). The level of protection and the specific critical area is dependent on the individual project details.

In addition to the above reported practices, four projects involving the entry of water rights into the Trust Water Rights Program to benefit instream flow were completed. The projects included on-farm irrigation system improvement practices (converting from rill or flood irrigation to sprinkler irrigation systems). Together, they resulted in 600 acre-feet dedicated to the Trust Water Rights program for 15 years in four tributaries to the Yakima River. These projects were funded through the Yakima Basin Integrated Plan funding provided through their Water Use Subcommittee and administered by the Department of Ecology.

Table 3 Summary of Implement Projects and 2020/2025 Performance and Enhancement Objectives

	Type	Practice Name	2020/2025 Protection Objectives	2020 /2025 Enhancement Objectives	2011-2016 Reported Data	17-19 Biennial Implemen- tation	19-21 Biennial Implemen- tation	Total Implementation to Date (2011 to 2021)
Indirect Intersects	Water Management	Irrigation Water Management	533 acres/ 829 Acres	8,521 acres/ 12,173 acres	2753 acres	12,952 acres	6,876 acres	22,581 acres
		Sprinkler System			4,351 acres	712 acres	1,536 acres	6,599 acres
		Irrigation Pipeline	6,686 ft/ 10400 ft	139,904 ft/ 199,863 ft	148,569 ft	52,102 ft	30,178 ft	266,001 ft
	Nutrient Management	Nutrient Management	76 acres/ 118 acres	694 acres/ 991 acres	720 acres	12,131 acres	6,066 acres	18,917 acres
	Pest Management	Pest Management	148 acres/ 230 acres	967 acres/ 1,382 acres	1,406 acres	3,811 acres	1,906 acres	1406 acres
	Soil Management	Cover Crop				100 acres	115 acres	13,075 acres
		No-Till/Reduced Till	886 acres/ 1,378 acres	6,141 acres/ 8,773 acres	8,438 acres			
		Polyacrylamide				1,645 acres	2,777 acres	
	Range Management	Range Planting Prescribed Grazing	225 acres/ 351 acres	1,786 acres/ 2,552 acres	2,147 acres	699 acres		4,131 acres
		Stockwater Facility	2 facilities/ 3 facilities	41 facilities/ 58 facilities	36 facilities	3 facilities	3 Facilities	42 facilities
Direct Intersects	Habitat Management	Riparian Forest Buffer Tree/Shrub Establishment Wetland Restoration	38 acres/ 59 acres	570 acres/ 814 acres	495 acres	0.25 acres	6 acres	854 acres
		Upland Wildlife Habitat Management/Restoration of Rare & Declining Habitat			353 acres			
	Stream Enhancement	Streambank Protection Channel Bed Stabilization	172 ft/ 267 ft	3,813 ft/ 5,448 ft	3,813 ft	195 ft	743 ft	4,751 ft
		Aquatic Species Passage And Fish Screen	1 project/ 1 project	29 projects/ 42 projects	17 projects	9 projects	12 Projects	38 projects

2.3 Agricultural Viability

Maintaining and enhancing agricultural viability is a multi-faceted effort. It includes providing both technical and financial assistance to landowners and producers to implement conservation practices, as well as continuing efforts to explore new technologies and opportunities to address challenges and limiting factors for local producers. The following sections describe additional efforts to maintain and enhance agricultural viability.

2.3.1 Technical Assistance

Technical assistance is provided to landowners and producers on request. It includes stewardship assessments that provide individual producers with a summary of the critical areas and agricultural lands on their property as well as a listing of potential practices and program resources. Nineteen of these stewardship assessments were produced in this reporting period.

KCCD staff also utilize the drone equipment to assist landowners with irrigation water management and with nutrient management. In 2020 and 2021, the drone was used to monitor a cover crop/grazing project that was a direct result of the Soil Health Workshop. Two producers partnered to plant a cover crop and graze it per the recommendations of Marlon Winger, Soil Health Specialist. A 10-species mix was planted in July 2020. It included peas, beans, vetch, corn, sudan grass, millet, oats, collards, turnips, and sunflower. It was seeded into an existing stand of timothy hay that was sprayed out after the first harvest in 2020. Livestock grazing is an important component of cover crop implementation.

Utilizing VSP grant funding, specific technical assistance has been provided primarily focused on habitat planting assistance to landowners. This assistance ranges from a single site visit to fully developed planting plans and includes both upland (shrub-steppe) and riparian habitats. Approximately

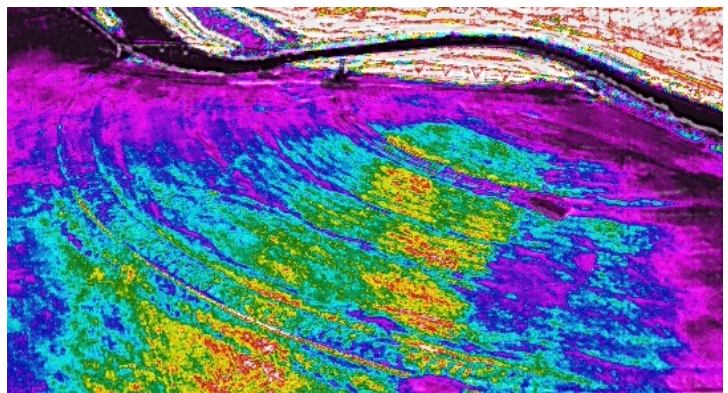


Figure 3. Drone images with thermal camera to assist producer with irrigation water management.



Figure 4. Drone image of cover crop field with cattle grazing a section at a time.

10 landowners have been assisted in this reporting period and four have resulted in planting projects.

In addition to the VSP funded technical assistance, the conservation practices that are installed with funding through USDA Natural Resources Conservation Service (NRCS) and the KCCD grant programs include technical assistance to ensure that suitable conservation practices are selected and that the practices are implemented to USDA NRCS standards or to the project design completed by a license professional engineer. That technical assistance includes engineering and design work for fish screen, fish passage and habitat projects, as well as irrigation system upgrades. It also includes archeological surveys and reports to meet cultural and historic resource consultation requirements, and assistance securing permits (e.g. US Army Corps of Engineers 404 permit, WDFW's Hydraulic Permit Application (HPA), Endangered Species Act, etc.). Ensuring compliance with federal, state and local permits assists the landowners in meeting regulatory requirements. This level of technical assistance is essential to the implementation of priority practices to meet the goals and benchmarks of the VSP Work Plan.



Figure 5. *Mid-Columbia Fisheries Regional Enhancement Group crew planting at one of the shrub steppe sites (above) and one of the riparian sites (below).*



2.3.2 *Financial Assistance*

During this reporting period the implementation of the conservation practices was achieved with financial assistance through federal, state and local programs. The implemented conservation practices were funded through Farm Bill programs of the USDA Natural Resources Conservation Service (NRCS), and grants through the Washington State Conservation Commission, Department of Ecology, Salmon Recovery Funding Board, Bonneville Power Administration, Kittitas County and KCCD. **Table 4** summarizes the 19-21 biennium payments to producers and funds used to construct projects on private lands. This includes only those funds used to implement conservation practices identified in the Kittitas County VSP Workplan, not all funds provided to producers through these sources.

Funding through the Salmon Recovery Funding Board and Yakima Tributary Access and Habitat Program is targeted to fish habitat improvement, a positive impact on the Fish & Wildlife Habitat Conservation Areas. Some funding sources though allow KCCD to determine or at least provide input

into the selection of individual producer applications for funding. This is true with the Conservation Commission funding and with the RCPP funding. The “Yakima Integrated Plan – Toppenish to Teanaway RCPP Project”¹ is an ongoing project that utilizes Farm Bill program funds through the Regional Conservation Partnership Program (RCPP) along with state and local contribution funds. This project addresses critical needs to Improve access to and quality of stream habitat, protect fish from entrainment in irrigations systems, and increase quality of and quantity of the water supply. The application ranking criteria provide additional points for projects that:

- Convert from surface irrigation to sprinkler irrigation
- Include irrigation water management
- Have tailwater flowing directly into a river, stream, side channel or canal
- Have a 2% or greater slope on half or more of the planning unit
- Establish or enhance a 35-50 foot average width buffer on at least 50% of the stream or river in a planning unit
- Install a fish screen
- Remove a fish passage barrier
- Place water in the Trust Water Rights Program for at least 15 years

These ranking criteria provide both incentive to producers to implement more conservation practices in order to improve their chances of funding, but also prioritizes the funding to be used in a way that provides the greatest impact to the natural resource concerns. In all cases of funding for on-the-ground implementation, KCCD consistently seeks to incorporate ranking criteria that align with the VSP Work Plan for Kittitas County.

Through a Washington State Conservation Commission grant contribution to the RCPP project, KCCD provided reimbursement to all producers who entered into RCPP contracts for their associated electrical power services costs for their sprinkler conversions. The NRCS programs specifically exclude this expense as a national policy. In this County, power expenses are a limiting factor for producers, so this cost share effort is essential to implementing water conservation practices. The cost share is provided as 50% reimbursement of costs with a maximum of \$25,000 per producer.

Another component of the RCPP project is the Agricultural Conservation Easement Program (ACEP). A sign-up was conducted in 2018 for funding to extinguish the development rights on agricultural land through an easement purchase. One application was received from Kittitas County, assisted by Forterra, for a 270-acre property. That easement acquisition was completed in 2020. Advertisement for the sign-up for this funding produced interest from landowners who were exploring conservation easements. The Kittitas Conservation Trust is leading a group of partner organizations (KCCD, NRCS, Kittitas County Flood Control Zone District, Washington Department of Fish & Wildlife, and Forterra)

¹ The Yakima Integrated Plan – Toppenish to Teanaway Project is a 5-year project funded through the USDA NRCS’s Regional Conservation Partnership Program (RCPP) in 2017. The project is led by the Yakama Nation and the Kittitas County Conservation

with monthly meetings to discuss plans to seek additional funding and to capitalize on the momentum in the County.

Table 4. *Financial assistance to farmers and ranchers in Kittitas is essential to the implementation of conservation practices that protect and enhance critical areas in Kittitas County.*

Funding Source	Payments to Producers²	Construction on Private Lands³	Total
USDA Natural Resources Conservation Service – EQIP ⁴	\$2,118,909		\$2,118,909
USDA Natural Resources Conservation Service – RCPP ⁵	\$1,565,397		\$1,565,397
Washington State Conservation Commission	\$300,062	\$49,673	\$349,735
Department of Ecology	\$635,890		\$635,890
BPA – (Yakima Tributary Access & Habitat Program)	\$39,467	\$30,363	\$69,830
Salmon Recovery Funding Board		\$783,488	\$783,488
Local Funds (KCCD and Kittitas County Public Works)	\$6,896		\$6,896
Total			\$5,530,145

Yakima Basin Integrated Plan (YBIP) funding through a Department of Ecology grant focused on the conversion of surface irrigation to sprinkler irrigation in Kittitas County. This funding was secured through an application to the YBIP Water Use Subcommittee by KCCD, Washington Water Trust and Trout Unlimited-Washington Water Project. The projects developed all have a Trust Water component.

VSP grant funds were utilized for the first time in this biennium to assist producers working to implement tree and shrub plantings to benefit fish and wildlife habitat conservation areas. Producers interested in implementing planting projects are offered primarily assistance with planting labor, but also a level of cost share for material (plants, weed mats, irrigation supplies, etc.) purchases depending on other funds they may have secured. This action was implemented in order to further incentivize habitat planting projects and with the acknowledgement that NRCS cost share rates are

² These payments are made through an agreement between either USDA Natural Resources Conservation Service or the Kittitas County Conservation District and individual producers.

³ Construction on private lands includes projects implemented through public works (competitively bid) projects by the Kittitas County Conservation District. Typically, this includes large fish screen, fish passage or habitat planting projects.

⁴ USDA Natural Resources Conservation Service's Environmental Quality Incentive Program (EQIP) provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits.
<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

⁵ USDA Natural Resources Conservation Service Regional Conservation Partnership Program (RCPP) is the Yakima Integrated Plan – Toppenish to Teanaway project 2017-2021.

much too low to provide the incentive alone. In this reporting period, four planting projects were completed. Two were in upland areas (shrub steppe habitat) and two were riparian (Wilson Creek and Naneum Creek). Assistance with maintenance will continue (contingent on funding availability) in order to ensure adequate survival rates.

KCCD continues to seek financial assistance sources for agricultural producers in Kittitas County. A second RCPP project ("Mid-Columbia Steelhead Partnership") was approved in 2021 and is slated to begin in early 2022. Like the existing RCPP, there is a focus on private agricultural lands in Kittitas County. A second round of YBIP funding for sprinkler conversions has also been secured. Applications to the Salmon Recovery Funding, the Fish Barrier Removal Board, and to BPA for continuation of the Yakima Tributary Access & Habitat Program continue as well.

2.4 Monitoring

2.4.1 Conservation Practice Implementation

All conservation practices implemented and inventoried for this report were part of a landowner agreement with either USDA NRCS or KCCD. The practices were planned to meet NRCS specifications or were designed by a licensed professional engineer. Implementation was monitored by KCCD staff or NRCS staff and then certified by the staff or engineer that implementation met the design. By contract, the participating producers are required to maintain their practices for the practice design life designated by NRCS. KCCD involved projects also require producers to certify their practice for the first five years. This typically done with a letter attestation at the end of each year.



Figure 6. KCCD staff and consulting engineers tour site of fish barrier removal project to certify completion.

2.4.2 Streamflow

The KCCD continues to monitor stream flow in Manastash Creek as part of the Manastash Creek Restoration Project. In the summer of 2019, a stream gauge was installed with the help of USGS to provide continuous flow monitoring above the irrigation diversions. This data collection is very helpful to staff operating the irrigation diversions, but also as work continues to acquire instream flow from willing sellers in Manastash Creek. Efforts continue to acquire winter stock water in order to benefit Mid-Columbia summer steelhead.

KCCD also conducts streamflow measurements as needed for project implementation in other tributaries to the Yakima River.

2.4.3 Fish Presence in Tributaries

KCCD, through VSP funding, continues to participate in the monitoring of tributaries of the Yakima River for fish presence. VSP funds were utilized to purchase passive integrated transponder (PIT) arrays to be installed by the Yakama Nation and monitored through a cooperative effort by USFWS, Washington Department of Fish & Wildlife at the confluence of Wilson Creek and Cherry Creek. PIT arrays are already maintained in Manastash Creek, Taneum Creek, Swauk Creek, the Teanaway River, Big Creek, Little Creek, Tucker Creek, and Tillman Creek. In the biennium, VSP funds assisted with installation at Big Creek. The data collected is begin used as a potential indicator of the impacts of various project implementation along with efforts by the Kittitas Reclamation District to supplement flows in these tributaries. In this reporting period, an increasing percentage of the mid-Columbia steelhead detected at Roza dam have been documented in Manastash Creek⁶ (see **Figure 7**) since the removal of the last fish passage barrier in November 2016.

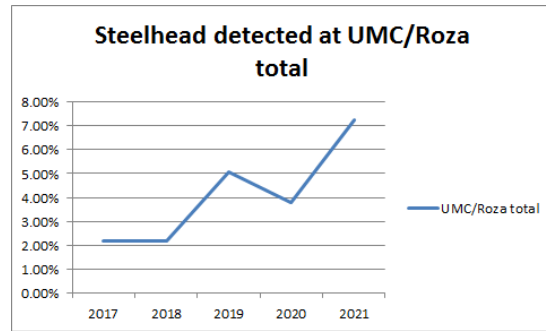


Figure 7. Chart indicating the percentage of Roza Dam steelhead detected in Manastash Creek.

2.4.4 Water Quality

Water quality monitoring is ongoing in the upper Yakima with the Kittitas County Water Purveyors (KCWP) continuing to sample streams and canals for turbidity. In 2019, the Washington Department of Ecology conducted TSS and turbidity monitoring as part of a final report card for the Upper Yakima Suspended Sediment TMDL. Raw data is available, but Ecology's analysis and report is still being drafted. The KCWP data indicates a downward trend for turbidity at the Wilson Creek at Canyon Road site, a compliance point for the Upper Yakima River Basin Suspended Sediment, Turbidity, and Organochlorine Pesticide Total Maximum Daily Load (see **Figure 8**).

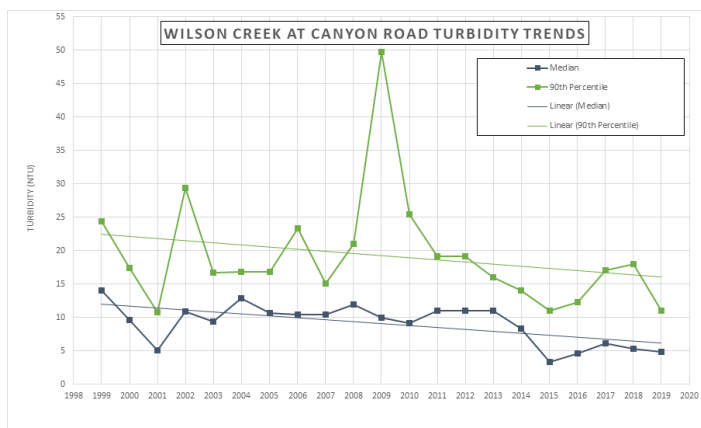


Figure 8 Wilson Creek at Canyon Road is a compliance point for the Upper Yakima River Basin Suspended Sediment, Turbidity, and Organochlorine Pesticide Total Maximum Daily Load (TMDL). The Kittitas County Water Purveyors have sampled this location continuously for two decades and their data shows a downward trend for turbidity. The watershed above this compliance point contains approximately two thirds of the cropland in the Kittitas Valley.

⁶ Mays, Zach. Email to Anna Lael. June 24, 2021.

In addition to the TMDL compliance points, the KCWP also samples at several locations on various tributaries, establishing background location and comparing the sites (see **Figure 9**). This information is helpful in targeting the financial assistance to producers, particularly the irrigation upgrades to sprinkler systems that reduce return flow (and associated sediment and nutrients) to streams and waterways.

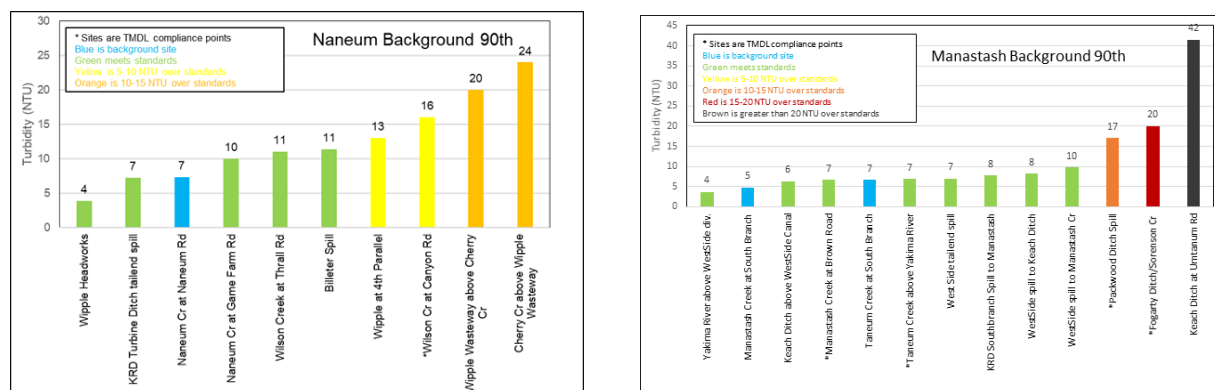


Figure 9. KCWP samples at various locations on tributaries to monitor turbidity levels. The charts above contain 2019 data for cropland east of the Yakima River (Naneum) and west of the Yakima River (Manastash). The TMDL set the compliance at 5 NTU over background for tributaries. Note the blue for the background sites and then a color scale for the other locations including green for within 5 NTU, yellow for 5-10 NTU over, orange for 10-15 NTU over, red for 15-20 over, and brown for more than 20 NTU over background.

2.4.5 High Resolution Change Detection Data

High Resolution Change Detection (HRCDD) for Kittitas County was completed by Washington Department of Fish & Wildlife in late 2020. The data utilizes high resolution aerial imagery to identify land cover and changes. Imagery from 2011 was compared to 2017 imagery producing polygons where changes were detected. Although the data was not received in time to be included in the 5-year report submitted in November 2021, it continues to be analyzed for accuracy and for usefulness in monitoring conditions in Kittitas County.

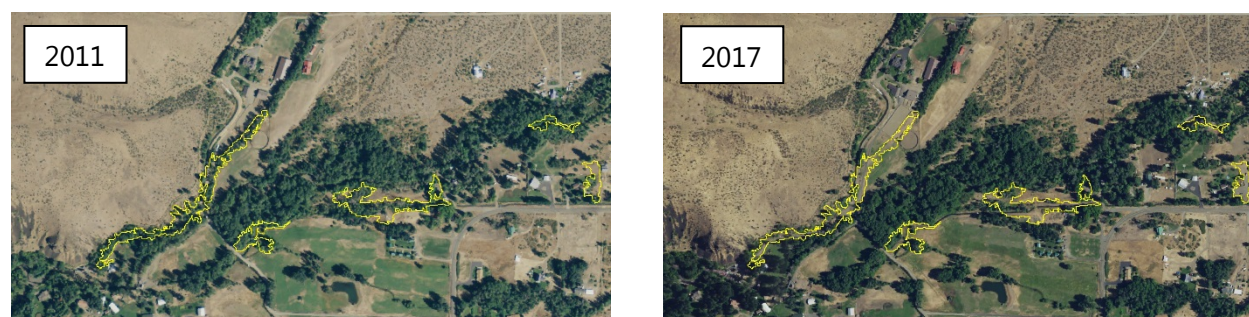


Figure 10. High Resolution Change Detection polygons in the area of a past project. The upper left long polygon was an earthen irrigation ditch that is now in a buried pipe. Upper right small polygon is the location of a concrete irrigation diversion that was removed in 2016.

2.4.6 Producer Participation

The VSP Coordinator at KCCD is committed to monitoring public participation and stewardship practices every 2 and 5 years. Results of efforts by KCCD to monitor producer participation are summarized in **Table 5**, consistent with the Work Plan.

Table 5 Producer Participation Monitoring

Participation Goal: Promote producer participation in voluntary stewardship of agricultural lands and critical areas to meet the protection and enhancement benchmarks and protect critical areas functions and values at a County-wide watershed level.		
Objectives/Benchmarks	Performance Metric/ Monitoring Method	Biennial Status
Sufficient active participation by commercial and non-commercial agricultural operators (farmers and ranchers) over 10 years that achieves the protection of critical area functions and values at a County-wide watershed level.	<ul style="list-style-type: none">• Number of acres reported in key stewardship practices or number of key stewardship practices• Sufficient producer participation necessary to meet protection and enhancement benchmarks	KCCD has been tracking and reporting conservation practices as summarized in Table 3 . Producer participation is on track to meet benchmarks. In particular, the RCPP sign-ups have regularly seen as many as one third of the annual applications from new/beginning farmers and producers who've not previously had NRCS contracts.
Passive participation by commercial and noncommercial agricultural operators in VSP stewardship practices is maintained or increased over 10 years on agricultural land.	<ul style="list-style-type: none">• Mapping and aerial photo evaluation and/or rapid watershed assessment of practices in place• Random sampling of farmers and ranchers in the field by technical assistance providers with willing landowners	KCCD is developing a methodology for tracking passive participation and impacts to critical areas via GIS to document passive participating and also to assist in targeted landowner outreach.
Technical assistance and outreach are provided to agricultural producers to encourage stewardship practices and VSP participation.	<ul style="list-style-type: none">• Number of outreach and education events• Number of event attendees	KCCD provided 4 presentations in this reporting period with total attendance of 130 ⁷ and outreach materials presented at each. 12,000 newsletters were mailed (all rural routes) featuring VSP.

2.5 Adaptive Management

Adaptive management is applied on an ongoing basis as needed. After completion of the five-year report, it was determined that monitoring of stewardship practices needed additional structure and data collection to satisfy concerns shared by the Technical Panel. While KCCD staff monitor stewardship practices through planning and implementation, follow-up monitoring is not well

⁷ The presentations were given at events often attended by many of the same producers. The estimate of different individual producers reached by these presentations is 50 to 70.

documented. Site visits do occur for larger construction projects to ensure that planting projects are meeting survival rates and fish screen/passage projects are properly functioning, but this monitoring is not well documented. On-farm practices (e.g. sprinkler conversions or watering facilities) funded through KCCD are monitored for the first five years through a self-certification process but are not monitored if solely funded by NRCS Farm Bill programs. A structured monitoring program will be initiated in the next reporting period to spot check a portion of all reported practices to ensure they are still functional and maintained and protocol will be established to ensure documentation of monitoring that is occurring (site visits to fish screen and passage projects, etc.).

The format of the 5-year status report resulted in some difficulty reporting stewardship practice implementation. The key stewardship practices incorporated into the categories of stewardship strategies and tracked as performance objectives are in two categories – structural and management. For example, the Water Management Stewardship Strategy includes structural practices like installation of sprinklers and pipelines, and management practices like irrigation water management (IWM). The structural practices have a design life of 15 to 25 years, but IWM has a one year design life. Reporting the number of acres treated by structural and management practices as a lump sum doesn't clearly demonstrate the long-term impact of the practices. In this report (see **Table 3**), the practices are separated, however the benchmarks remain a mix of both types. All benchmarks will be reviewed in the next reporting cycle to clearly separate structural practices from management practices.

2.6 Reporting

The VSP statute sets two main reporting requirements during the implementation of an approved VSP work plan: a two-year status report at the end of each biennia, and a five-year review and evaluation report. This document is the two-year status report and thus provides a summary of accomplishments in the 2019-2021 biennium. The 5-year performance review for Kittitas County was submitted in November 2020 indicating all goals and benchmarks were met. The Washington State Conservation Commission concurred in April 2021.

2.7 Fostering Partnerships

The continuing development of robust partnerships between the Watershed Group members, including the agricultural, tribal, environmental, and county interests is clearly apparent in this reporting period. Outreach opportunities have been set up through and promoted by Watershed Group members for their organizations.

On-the-ground projects have been and are being developed with input and assistance (both technical and financial) from Technical Committee members and Watershed Group members. For example, the USDA Natural Resources Conservation Service RCPP funded projects, the "Yakima

Integrated Plan Toppenish to Teanaway” and the “Mid-Columbia Steelhead Partnership” are led by the Yakama Nation as the contracting partner with NRCS, but involve a large group of partners including the KCCD and members of the Kittitas County Watershed Group and Technical Committee.

Overall, the VSP program has been promoted within the community by individual members of the Watershed Group and the Technical Committee members. This level of involvement by all partners is crucial to continuing success of VSP in Kittitas County. Communication to and between the Watershed Group members and the Technical Committee members will be maintained through regular meetings of the Group, updating the website and sharing the successes of VSP with the community.

3 Voluntary Stewardship Program Successes

Many projects have been successfully constructed or implemented in the County since the VSP Workplan was approved in 2018. A few project highlights are noted below.

3.1 Sprinkler Conversion Projects

KCCD continues to implement projects that address water quality and inefficient use of irrigation water through various funding sources. This includes the “Yakima Integrated Plan – Toppenish to Teanaway Project” funded through the USDA Natural Resource Conservation Services’ (NRCS) Regional Conservation Partnership Program (RCPP) with contributions from several state agencies (e.g. Ecology and the Washington State Conservation Commission). The RCPP project includes the Environmental Quality Incentives Program (EQIP), which is a voluntary conservation program that provides producers with technical and financial assistance to invest in solutions that conserve natural resources for the future while also improving agricultural operations. EQIP applications are accepted and then ranked to determine funding. For the RCPP- EQIP funds, screening and ranking criteria were established by the Kittitas County Conservation District (KCCD) Board of Supervisors in August 2017, defining three funding pools (“Insufficient Water-Drought”, “Livestock”, and “Fish & Wildlife”) and further prioritizing activities and geographic areas within the eligible areas. The ranking criteria provide additional points for projects that address the major resource concerns of this RCPP



Figure 11 KCCD’s Mark Crowley and NRCS engineer Lynelle Knehans conduct a site visit for sprinkler conversion project funded through RCPP.



including insufficient water, water quality and fish & wildlife habitat. These resource concerns directly impact critical areas including fish and wildlife habitat conservation areas,

Four sign-ups for this RCPP project have been conducted. Collectively the first three resulted in 19 contracts on 1,290 acres. Of the 19 producers, 11 had no previous EQIP contracts and 6 were beginning farmers (less than 10 years of farm management). The fourth and final sign-up conducted in November 2020 will likely result in 8 contracts on 869 acres.

In addition to the RCPP funds, there is also funding available through Washington State Conservation Commission (SCC) and Department of Ecology grants. The SCC grants, Natural Resource Inventory and RCPP Contribution, funded three sprinkler conversions in this reporting period. The Ecology grant (Yakima Basin Integrated Plan Water Use Subcommittee) funded three sprinkler conversions.

3.2 Safe Fish Passage

The Yakima Tributary Access & Habitat Program (YTAHP) is a long-standing program to work on unscreened irrigation diversions, fish passage barriers and instream and riparian habitat improvements. In this reporting period, a large project was constructed consolidating diversions from two structures to the location of the upper one, allowing the lower structure to be removed and upper to be modified to install a fish screen and fishway. Pre-project, the diversions included three unscreened headgates serving different landowners and two fish passage barriers. After construction was completed, all diverted water is screened and both fish passage barriers are corrected.



Figure 13. Fish screen and fishway structure construction at the upper diversion site (bridge) for consolidation of three diversions and correction of the fish barrier.



Figure 12. The lower irrigation diversion structure before (left) and after (right) project construction. Removal of this barrier provided 0.3 additional stream miles of habitat.



4 References

Anchor QEA, 2018. Kittitas County Voluntary Stewardship Program Work Plan. Prepared for the Kittitas County Conservation District and the Washington State Conservation Commission. May 2018. Available at:

https://docs.wixstatic.com/ugd/cec2f9_432221a2747249bda5c995da605ad23b.pdf

WSCC (Washington State Conservation Commission), 2018. Policy Advisory #05-18: Approved VSP Work Plan Implementation Reporting Requirements & Procedure. Revised July 2020.

Available at: <https://www.scc.wa.gov/vsp/statewide-advisory-committee-roles-responsibilities>.

Appendix A

Outreach Materials

- KCCD Website Pages for VSP and the VSP Watershed Group
- On-Line Map and Survey
- KCCD Newsletter Articles October 2019 and October 2020
- VSP Story Map
- Soil Health Workshop February 2020
- Social Media Posts

Website for VSP (<https://www.kccd.net/voluntary-stewardship-program>)



Voluntary Stewardship Program

Washington State's Voluntary Stewardship Program (VSP) was created in 2011 to provide an alternative approach for counties to address Growth Management requirements for agricultural activities.

How it Works

The [Washington State Conservation Commission](#) (SCC) administers funding for counties to implement the program. Counties then designate a work group to develop a watershed-scale plan that will:

- Identify critical resource concerns.
- Identify agricultural activities in the critical areas.
- Create a plan for targeted outreach to assist landowners in developing farm plans that address agricultural impacts to critical areas on their property.
- Identify and maintain economically viable agriculture while protecting and restoring critical areas

In October 2015, the Board of County Commissioners (BOCC) worked with the Kittitas County Conservation District to enlist our assistance with facilitation of the Watershed Group. We entered into an interlocal agreement with the County in November. The BOCC passed [Resolution 2016-001](#) in January 2016 designating the Kittitas County Conservation District as the lead entity for the Voluntary Stewardship Program.

What are Critical Areas?

There are five critical areas identified in Washington's GMA:

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

**Learn about critical areas on your property -
Click here to visit the Kittitas County
VSP On-Line Map & Survey.**

Kittitas County VSP Watershed Group webpage

[Click here for meeting notices, meeting minutes, materials, maps, data, etc.](#)

Next Meeting:

The next meeting is scheduled for **October 22, 2021 10 AM to 12 PM at Kittitas Valley Event Center Armory. Find the [updated agenda here with virtual meeting participation instructions.](#)**

Biennial Report Issued:

KCCD, on behalf of the Kittitas County VSP Watershed Group, issued the Biennial Report for Kittitas County. Click the link below to learn about the progress made in our County.



Final Kittitas County VSP Work Plan

The Kittitas County VSP Work Plan was submitted to the Washington State Conservation Commission on March 1, 2018. The Work Plan was presented to the State Technical Panel on March 30,

Website for Watershed Group (<https://www.kccd.net/kittitas-county-watershed-group>)

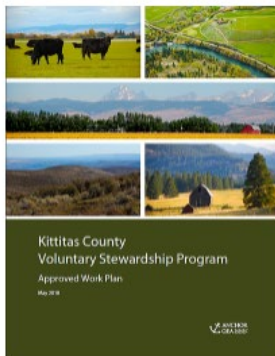


[Home](#) [Announcements](#) [About KCCD](#) [Programs](#) [Contact Us](#)

Kittitas County VSP Watershed Group

Final Kittitas County Work Plan

The Kittitas County VSP Work Plan was submitted to the Washington State Conservation Commission on March 1, 2018. The Work Plan was presented to the State Technical Panel on March 30, 2018. It was approved by unanimous vote of the Technical Panel on April 27, 2018. The final Work Plan is available here:



Watershed Group Membership List

(Updated October, 2019)

VSP Watershed Group Members are requested to review the Open Public Meetings Act training video produced by the Attorney General's office. [Click here to view the video](#). Please let KCCD know when you have completed this training.

What are Critical Areas?

There are five critical areas identified in Washington's GMA:

- Wetlands
- Frequently Flooded Areas
- Critical Aquifer Recharge Areas
- Geologically Hazardous Areas
- Fish and Wildlife Habitat Conservation Areas

**Learn about critical areas on your property -
Click here to visit the Kittitas County
VSP On-Line Map & Survey**

Meeting Documents

The next meeting of the Watershed Group will occur in on **October 22, 2021** from **10 AM to 12 PM** in the Armory Hall (Kittitas Valley Event Center 901 E 7th Avenue, Ellensburg). The meeting will also be on the Zoom platform. See agenda below for details. Agendas, minutes and other meeting materials are available below.

October 22, 2021
[Agenda \(pending\)](#)

July 23, 2021
[Agenda](#) (with virtual meeting instructions)
[Meeting Power Point](#)

March 26, 2021
[Agenda](#)
[Meeting Power Point](#)
[Draft Minutes](#)

November 6, 2020
[Agenda](#)
[Meeting Power Point](#)
[Minutes](#)

March 20, 2020
[Agenda \(cancelled\)](#)

February 20, 2020
[Soil Health Workshop Agenda](#)
[Soil Health & Restoring Soil Function PowerPoint](#)
[Linking Soil Biology to Soil Health PowerPoint](#)
[Cover Crop Management PowerPoint](#)
Handouts -
[Soil Pamphlet](#)
[Spheres of Influence](#)
[Critical Role of Cover Crops](#)
[Cover Crop Periodic Chart](#)
[Jones Light Farming](#)

January 17, 2020
[Agenda](#)
[Meeting Power Point](#)

On-Line Map and Survey - <https://kittitascountyvsp.mapseed.org/>

[ABOUT](#)

[SHARE YOUR STEWARDSHIP](#)

Welcome Kittitas County Voluntary Stewards!

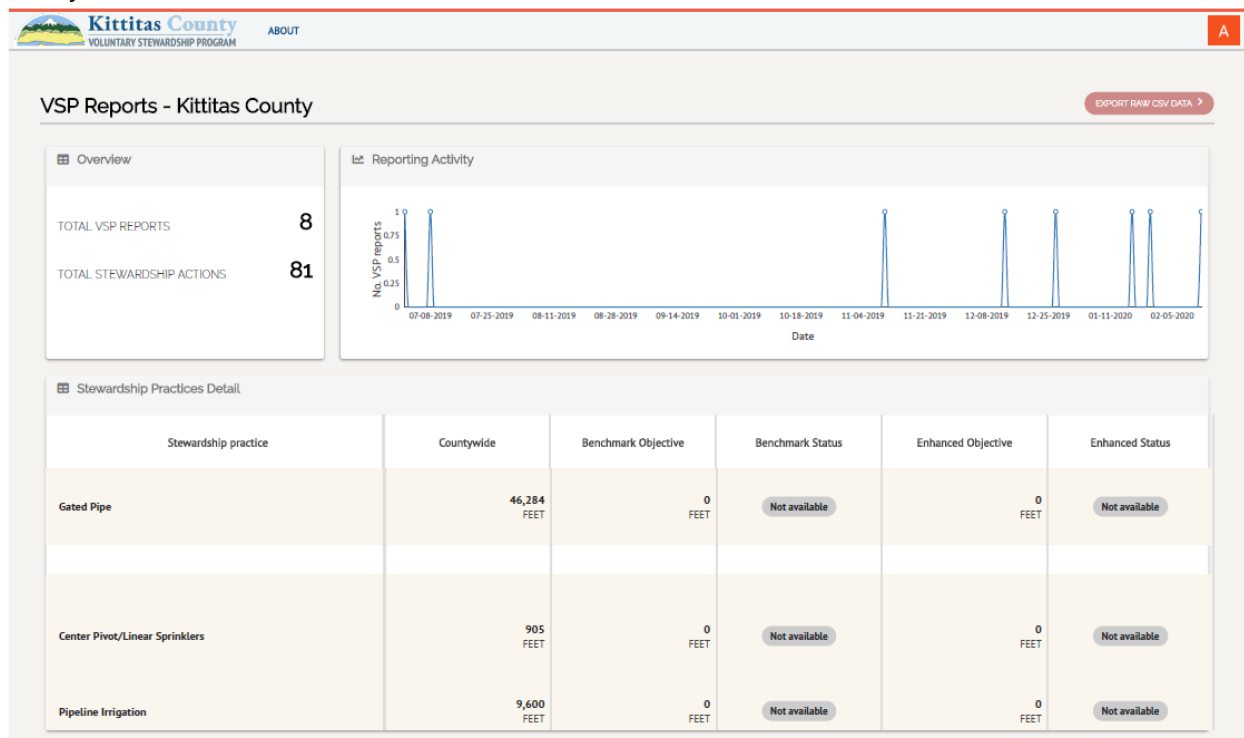
The Kittitas County Voluntary Stewardship Program (VSP) is an innovative approach to reporting the protection of critical areas.

VSP is facilitated by the Kittitas County Conservation District (KCCD), who is designated as the Technical Service Provider for this program. [Click here to learn more about KCCD's services](#)

Or, click [Get Started](#) to share your stewardship!

[GET STARTED](#)

Survey DashBoard Oct 2019 to June 2021



Voluntary Stewardship Program Underway



The Voluntary Stewardship Program (VSP) is well underway and is being implemented by the Kittitas County Conservation District (KCCD). VSP is a non-regulatory, incentive-based approach to protecting critical areas on agricultural lands, while maintaining agriculture viability. VSP allows farmers and ranchers to continue agricultural practices without regulation under Kittitas County's Critical Areas Ordinance by promoting voluntary stewardship strategies and practices that protect critical areas and maintain and enhance agricultural viability. To date, the goals and objectives set out by the

The Work Plan was completed and approved in May 2018 and includes protection and enhancement objectives to be met by both 2020 and 2025. A recent interim report submitted to the Washington State Conservation Commission, documented 169 stewardship practices implemented from 2017 through June 2019 in partnership with federal, state and local programs that are available to landowners and producers. The practices implemented realized benefits including improving water use efficiency, reducing irrigation induced erosion, opening previously blocked habitats for listed fish

Kittitas County Conservation District

October 2019 Newsletter • Page 6 of 8

VSP - continued from page 1



improving grazing conditions. The projects included protections for all five critical areas (wetlands, habitat conservation areas, critical aquifer recharge areas, geologically hazardous areas, and frequently flooded areas).

Stewardship practices are broadly defined as any practice that, when implemented, further protects critical areas directly or indirectly, and maintains or improves agricultural viability whether or not they meet a Natural Resources Conservation Service (NRCS) conservation practice or other standard recognized by VSP. Successful implementation of VSP will require that the agricultural community demonstrate their ability to protect critical areas potentially impacted by agricultural activities using voluntary approaches.

All private landowners who conduct agricultural practices on their property are strongly encouraged to

learn more about the five critical areas and whether they are present where agricultural practices are occurring. KCCD now has an on-line interactive map (<https://kittitascountyvsp.mapseed.org>) that landowners may use to review critical areas relative to their property. It also includes a survey where landowners may report stewardship practices they've implemented (whether they are funded through state and federal programs or self-funded). Any stewardship practices shared by a landowner will only be reported together with all other reported data at the watershed level. Data collected by the KCCD is generally exempt from the Public Records Act and privacy of individual landowners will be maintained.

If landowners prefer, KCCD staff can complete a more detailed VSP inventory that includes a summary of all critical areas, suggestions of stewardship practices to implement and documenting practices already implemented that can count toward the Work Plan goals. Interested landowners may contact Brent Dixon at the KCCD office (925-3352 ext. 3 or brent-dixon@conservewa.net) to request a VSP inventory.

For more information, visit www.kccd.net/voluntary-stewardship-program



Agricultural Appreciation Day a Success

The 18th annual Elementary Agriculture Appreciation Day was held on Tuesday April 9, 2019 with all 3rd grade classrooms in Kittitas County attending.

The Kittitas County Conservation District extends a great thank you to the school administrators and teachers for believing in the importance of students learning the value of agriculture in our County.

Ag Day is provided to the schools at no cost through generous donations from the Kittitas County Cattlemen's Association, Kittitas County Farm Bureau, Kittitas County Timothy Hay Growers & Suppliers, and the Kittitas County Water Purveyors to cover the transportation expenses. The Kittitas County CattleWomen provide lunch for the station presenters. The Kittitas County Board of Commissioners and Kittitas Valley Event Center ensure the facilities are available for this event.

This year's event consisted of ten stations with 10 minute presentation about: Crops (KCCD, Wendy Mee),

(Noxious Weed Board, Marc Eyster), Hand Washing (Stefanie McCann and Connie Dunnington), Technology (Kittitas FFA), Water (Water Purveyors, Kat Satnik), and Dairy (Ellensburg FFA). Seven senior 4-H members from Get Up & Go, Country Roots, Fairview, and This N That 4-H clubs and five members from Kittitas FFA served as group leaders. The time and enthusiasm of all these volunteers are greatly appreciated.



The Kittitas County VSP Watershed Group leads and guides the implementation of the VSP Work Plan. They are responsible to ensure that the goals and benchmarks meet the intent of the program while protecting and enhancing agriculture in Kittitas County.

The Watershed Group includes representatives of agriculture, tribes and environmental interests. Current members include representatives of the Kittitas County Farm Bureau, Organization of Kittitas County Timothy Hay Growers, Kittitas County Cattlemen, Cascade Irrigation District, Kittitas Reclamation District, individual farmers from upper county, lower county, dryland and small acreages, Swauk-Teaaway Grange, Yakama Nation, Kittitas Conservation Trust, Trout Unlimited and Washington Water Trust. The next meeting of the Watershed Group is October 25.

Soil Health and Cover Crops

Back in February, the KCCD hosted a Soil Health Workshop featuring noted regional expert Marlon Winger (USDA NRCS). Marlon's presentations started with a review of Soil Health basics and an introduction to the core principles for restoring soil function:

- Minimize Disturbance of the soil
- Maximize Diversity of plants in rotation/cover crops
- Keep Living Roots in the soil as much as possible
- Keep the soil covered at all times with plants and plant residues
- Integrate livestock on the cropland

Marlon's message was focused around understanding soil health and soil biology so that more natural conditions can be achieved on-farm by encouraging natural functions. He encourages producers to choose practices that build soil organic matter, that minimize disturbance soil aggregates, and that support a stable condition without major swings in temperature, water, and chemistry. This especially includes reduced tillage practices and use of cover crops.

Cover crops slow the velocity of runoff from rain-

fall and snowmelt, and reduce soil loss due to sheet and rill erosion. Over time, a cover crop regimen will increase soil organic matter, leading to improvements in soil structure, stability, and increased moisture and nutrient holding capacity for plant growth.

Livestock is an important component of the cover crop rotation. Animals, plants, and soils have played a synergistic role over geological time. In recent years though, animals are playing a reduced role due to being placed in confinement and fewer farms now include livestock as part of their overall operation. Returning livestock to the landscape can provide significant benefits. Fall or winter grazing converts high carbon annual crop residue to low carbon organic material; balances the carbon/nitrogen ratio. Spring or summer grazing with short grazing exposure periods followed by long recovery periods allows the plants to regrow. It also reduces nutrient export from our cropland and hayland fields by having the livestock graze the material in place. Grazing cover crops and/or crop residue allows producer to remove livestock from perennial grasslands earlier in the fall. [adopted from Soil Pamphlet by Marlon Winger]



Local producers are experimenting with cover crops. This 10-species mix was planted in July 2020. It includes peas, beans, vetch, corn, sudan grass, millet, oats, collards, turnips, and sunflower. It was seeded into an existing stand of timothy hay that was sprayed out after first cutting.



Livestock grazing is an important component of the cover crop implementation. Here the mix planted in July is being grazed in late September. Once grazing is complete, a winter cover crop will be planted and the site will be grazed again in the spring.

COVER CROPS

Cover crops have the potential to provide multiple benefits in a cropping system. They can prevent soil and wind erosion, improve soil's physical and biological properties, supply nutrients, suppress

weeds, improve the availability of soil water, and break pest cycles along with various other benefits. The species of cover crop selected along with its management determine the benefits and returns.

Voluntary Stewardship Program

The Kittitas County Voluntary Stewardship Program (VSP) is led by the Kittitas County Conservation District (KCCD) and is a voluntary approach supporting both agriculture and natural resources. The purpose of the VSP is to "promote plans to protect and enhance critical areas within the area where agricultural activities are conducted, while maintaining and improving the long term viability of agriculture" (RCW 36.70A.700(2)(a)). Agricultural practices are broadly defined and are not limited by size of the agricultural operations. Critical areas are those defined in statute to include fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, geologically hazardous areas, and critical aquifer recharge areas. KCCD facilitates a local Watershed Group who completed a Work Plan that was approved by the Washington State Conservation Commission in 2018. The plan is in the implementation phase now. The five-year progress report is due in November 2020.

All private landowners who conduct agricultural practices on their property are strongly encouraged to learn more about the five critical areas and whether they are present where agricultural practices are occurring. KCCD now has an on-line interactive map (<https://kittitascountyvsp.mapseed.org>) that landowners may use to review critical areas relative to their property. It also includes a survey where landowners may report stewardship practices



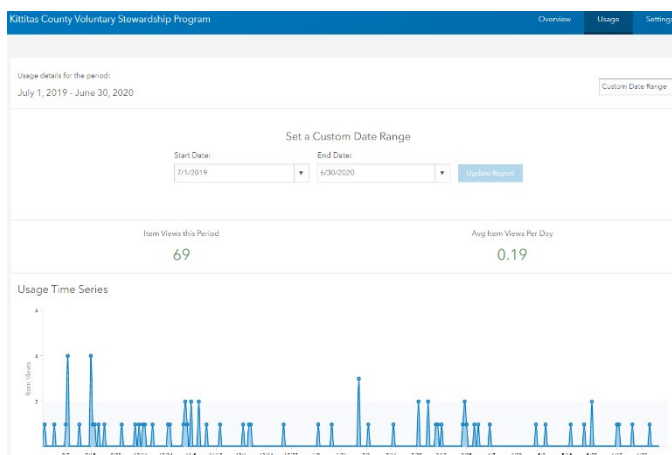
they've implemented (whether they are funded through state and federal programs or self-funded). Any stewardship practices shared by a landowner will only be reported together with all other reported data at the watershed level. Data collected by the KCCD is generally exempt from the Public Records Act and privacy of individual landowners will be maintained. If landowners prefer, KCCD staff can complete a more detailed VSP inventory that includes a summary of all critical areas, suggestions of stewardship practices to implement and

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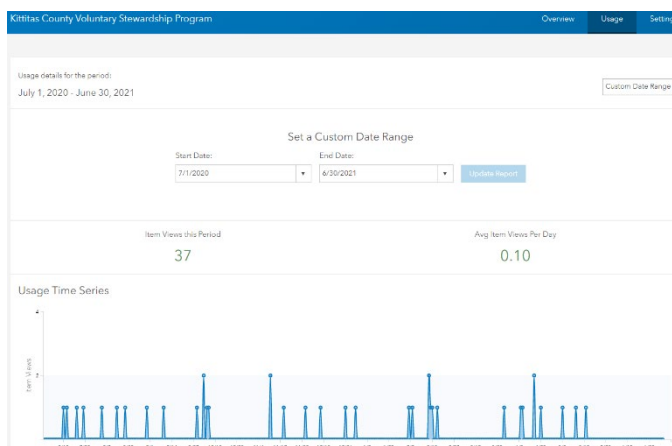
Anyone interested in learning more about participating in the VSP can contact the KCCD at 925-3352 or by visiting <https://www.kccd.net/kittitas-county-watershed-group>.

Story map explaining the Kittitas County VSP.

<https://kccd.maps.arcgis.com/apps/Cascade/index.html?appid=c08cb177b4004708bc2c563fcf14a225>



Usage data from ArcGIS on-line for the story map.



Flier for Soil Health Workshop February 2020



Join us for an opportunity to learn through the visual demonstration “How Soil Functions”, followed by a discussion of soil health principles from noted regional expert, Marlon Winger (USDA NRCS). Improving soil health on your farm is a process or journey and the more we emulate nature, we can start to decrease inputs. **Managing for soil health is one of the easiest and most effective ways for farmers to increase crop productivity and profitability while improving the environment.** Results are often realized immediately, and last well into the future.

February 20, 2020
10AM to 2PM

Kittitas Valley Event Center, Armory
901 E 7th Ave
Ellensburg WA 98926



Lunch is provided

Please RSVP to:
m-nash@conservewa.net
or 925-3352 ext. 201



The principles of soil health are universal. The challenge becomes how you will implement them on your own farm or ranch.

About Our Speaker

Marlon grew up on a family owned dairy farm in Dayton, Idaho, where he found his passion for life (Agriculture). He earned BS and MS degrees at Utah State University in Plant Science and worked as a County Agricultural Agent for Utah State University Extension service for 9 years. Marlon has worked for the USDA - Natural Resources Conservation Service (NRCS) for about 12 years. He was the Area agronomist in Northern Utah, the State Agronomist in Idaho, currently works as the Regional Soil Health Specialist for MT, WY, and Idaho. Marlon and his family live on a ranchette in Casper, WY.




This workshop is hosted by the Kittitas County Conservation District as part of the Voluntary Stewardship Program (VSP).



To learn more about VSP visit
www.kccd.net/voluntary-stewardship-program or contact
Anna Lael at 925-3352 ext 207 or
a-lael@conservewa.net




Example Facebook Posts July 2019 to 2020



Kittitas County Conservation District
October 17, 2019 ·

The Voluntary Stewardship Program (VSP) is an important effort to address critical areas and agricultural practices. If you own land in Kittitas County and are growing crops or livestock, please visit our online map to learn about critical areas on or near your land. You can also report the good practices you are already implementing to protect and enhance critical areas.



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1,221
People Reached

88
Engagements

Boost Post

Colleen Donovan
2 Shares

Like
Comment
Share

Performance for Your Post

1,221 People Reached

11 Reactions, Comments & Shares

8 Like	1 On Post	7 On Shares
1 Love	0 On Post	1 On Shares
0 Comments	0 On Post	0 On Shares
2 Shares	2 On Post	0 On Shares


77 Post Clicks

24 Photo Views	1 Link Clicks	52 Other Clicks
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Kittitas County Conservation District
January 17, 2020 ·


Preserving Kittitas County's natural habitat and resources is no easy feat. That's why the KCCD Voluntary Stewardship Program (VSP) offers an interactive online map for you to share your efforts in enhancing and protecting our communities' most critical areas. Every little effort counts! Visit www.kittitascountyvsp.mapseed.org/ today to get started.



WWW.KITTITASCOUNTYVSP.MAPSEED.ORG

SHARE YOUR STEWARDSHIP

Kittitas County Voluntary Stewardship Program



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127
People Reached

8
Engagements

Boost Post

Lisa Lester, Brian Corfese and 2 others

Like
Comment
Share

Performance for Your Post

127 People Reached

4 Likes, Comments & Shares

4 Likes	4 On Post	0 On Shares
0 Comments	0 On Post	0 On Shares
0 Shares	0 On Post	0 On Shares

4 Post Clicks

0 Photo Views	1 Link Clicks	3 Other Clicks
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NEGATIVE FEEDBACK

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