



August 2021  
Whitman County Voluntary Stewardship Program

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## **2-Year Status Report – 2<sup>nd</sup> Report to the WSCC**





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Prepared for Washington State Conservation Commission and Whitman County

Prepared by Palouse Conservation District and Whitman County VSP Work Group

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## ABBREVIATIONS

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BDA	Beaver Dam Analogs
CARA	Critical Aquifer Recharge Areas
CDs	Whitman County CDs (Palouse, Palouse Rock-Lake, Whitman & Pine Creek)
FFA	Frequently Flooded Areas
FSA	Farm Service Agency
FWH	Fish and Wildlife Habitat
GHA	Geologically Hazardous Areas
HRCD	High resolution change detection
NRCS	Natural Resources Conservation Service
PALS	Post Assisted Log Structures
PCD	Palouse Conservation District
RCW	Revised Code of Washington
SRFB	Salmon Recovery Funding Board
USDA	US Department of Agriculture
VSP	Voluntary Stewardship Program
WAU	Watershed Analysis Unit
WDFW	Washington Department of Fish and Wildlife
WET	Wetlands
Work Group	Whitman County Voluntary Stewardship Work Group
Work Plan	Whitman County Voluntary Stewardship Work Plan
WSCC	Washington State Conservation Commission
WSDA	Washington State Department of Agriculture
WSU	Washington State University
Priority Habitat Species	Pheasant and Quail, Mule Deer, Bald Eagle, Chinook Salmon, Steelhead, Resident Rainbow Trout
Fish & Wildlife Habitats	Cliffs and Talus, Shrub-Steppe, Ponderosa Pine Forests, Wetlands and Streams Farming practices provide a variety of habitat functions - cover & food sources

# 1 Introduction

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The 2-Year Status Report for fiscal years (FY) 2019 -2021 is a written report on the status and accomplishments of the Whitman County Voluntary Stewardship Program (VSP) Work Plan; which was approved August 2017. The Whitman County VSP Work Group (Work Group) believes that implementation of the Work Plan is **on task** and **on track** to accomplish goals and objectives that were identified to protect and restore critical areas while maintaining and enhancing the viability of agriculture in Whitman County. Three of the Statewide Technical Panel members **agreed** that Whitman County VSP is meeting its county VSP Work Plan goals and benchmarks, while one member **Partially agrees** Whitman County is meeting the VSP Work Plan Goals and Benchmarks listed in the 5 Year Status Report that was submitted January of 2021. The Whitman County VSP Work Group believes that all Statewide Technical Panel members will be in agreement in 2026.

## 1.1 2-Year Status Report Development

This 2-Year Status Report was developed by the Conservation Districts (CDs) in Whitman County under direction of the Whitman County VSP Work Group. There are stewardship strategies and actions identified in the VSP Work Plan that have not been fully realized. We have identified actions that have been implemented with cost-share funding and not double count acres that are in multiple funding programs. With that being said; there has been voluntary participation by producers to protect and/or restore critical areas while maintaining and enhancing the viability of agriculture. This 2-Year Status Report will capture stewardship actions identified in Work Plan that were either self-funded or completed with cost-share funding and show their benefits not only to critical areas but also maintaining agriculture viability.

## 1.2 Requirements

This 2-Year Status Report includes detailed information intended to fulfill the state requirements outlined under the Revised Code of Washington (RCW) 36.70A.720(1)(j) and to provide a periodic evaluation of the effectiveness and accomplishments of Whitman County's VSP Work Plan in meeting the purpose and intent of VSP (RCW 36.70A700(2)). This report is being prepared for the shared benefit of Whitman County, the Washington State Conservation Commission (WSCC), partnering agencies, and the public. This report addresses the following VSP requirements:

- Provide a summary of actions and accomplishments made by the Work Group in meeting the VSP goals
- Report on the progress towards meeting the goals identified in the Work Plan as measured in accordance with the plan
- Institute adaptive management including assessment of monitoring data and proposed plan updates
- Provide a written report of the status of the Work Plan including a statement on achievement of the Protection and Enhancement Benchmarks specifically

## **2 Summary of Actions and Accomplishments**

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This is a summary of outreach, implementing stewardship activities occurring on private lands with cost-share or self-funding from producers, monitoring and reporting. Currently, no new county regulations, plans or programs will be addressed in the 2-Year Status Report.

### **2.1 Outreach**

COVID restrictions had an impact from March 2020 and throughout 2021 resulting in less outreach. Whitman County's outreach has consisted of a website at [www.WhitmanCountyVSP.com](http://www.WhitmanCountyVSP.com) that hosts an Action Map which provides an interactive platform for landowners to showcase their stewardship on a farm scale. Brochures were handed out, annual meetings attended and presentations on Whitman VSP were given to the following: McGregor Growers Meetings (3), CD's annual meetings, Soil Health Workshop, Whitman County Cattlemen's and Wheat Growers meetings with a total of 250 landowners attending. Individual landowner meetings were conducted, and the Action Map was filled out. Quarterly VSP post-card mailings went out to over 2,700 rural addresses in Whitman County, four months of VSP radio ads on 4 radio stations in Whitman County talking about VSP and the Action Map. Continued outreach is important, and the Work Group supports on-going outreach efforts including attending local annual meetings and giving presentations on VSP, conducting individual landowner meetings and writing individual stewardship plans for whole farm stewardship strategies and actions consistent with Work Plan. Additionally, both NRCS and FSA have outreach and cost-share programs which can aid in implementation of stewardship practices listed in the County VSP plan. Projects that are consistent with goals and objectives of VSP will be documented and reported. WDFW has a private working lands and habitat program with outreach and projects designed to improve habitat for upland game birds and wildlife. NRCS, WDFW and CD funded and completed projects on private lands are included in this report.

### **2.2 Implementation**

Stewardship actions identified in the Work Plan were voluntarily implemented with 152 Whitman CDs, 127 Natural Resource Conservation Service (NRCS) and 6 Washington Department of Fish and Wildlife (WDFW) stewardship projects. Whitman County Conservation District's (CD) actions were completed with cost share programs and funding from Ecology, WSCC, and SRFB. NRCS program funding came from the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). Stewardship Actions consisted of upland best management practices and wildlife projects in Whitman County watersheds. Actions implemented in uplands to reduce sedimentation and restore upland grass stands included direct seed, precision agriculture, mulching, rangeland weed spraying and water systems for wildlife and domestic animals. Riparian streambank protection projects to reduce active streambank erosion and protect sensitive floodplain habitats were also completed. Voluntary incentive programs with diverse funding sources have been used for upland and riparian habitat restoration and protection, resulting in improved stewardship and better critical area protections and enhancements.

## **2.3 Monitoring**

The monitoring of diverse critical areas within Whitman County is ongoing. Most of the monitoring completed by CDs consists of before and after pictures and final reports for funding sources for implementation projects. NRCS and FSA have spot checks for practices implemented with conservation funding. Whitman County VSP developed an Action Map which captures voluntary stewardship activities that protect and restore critical areas identified in the Work Plan. Most of the critical areas are easily seen from county or state roads, allowing for spot checks and documentation of critical habitat, especially wetlands. This keeps monitoring costs low and allows funding to be used for project implementation actions, resulting in more acres voluntarily protected. The Regional Conservation Partnership Program (RCPP) has intense monitoring that is occurring in “a paired” watershed setting. Kamiache (80% mulch till) and Thorn (80% conventional farmed) Creek watersheds are being assessed on the effect of mulch tillage versus conventional tillage and landowners are engaged and interested in results of this paired watershed study. Currently we are following WSU’s methodology for monitoring the protection and enhancement of critical area functions and values on agriculture lands using remote sensing technologies. Voluntary stewardship actions are being collected both from farms/ranches and also through cost-share programs with CDs, NRCS/FSA and WDFW. Participation monitoring (producers, stewardship activities of BMP’s identified in Work Plan, education and outreach with tours and individual stewardship checklists – Action Map) and effectiveness monitoring were identified to help gauge VSP success. Tracking of previous and on-going stewardship actions will be discussed with an analysis of critical area functions and values in the 5-Year Review.

## **2.4 Adaptive Management**

Currently no updates to the Work Plan are being considered or recommended by the Work Group.

## **2.5 Reporting**

Telling “The Story of Voluntary Stewardship Activities” is important for agriculture and protection of critical areas on private land while maintaining the viability of agriculture because Whitman County’s family-owned farms and ranches are a deeply rooted tradition and way-of-life. Balancing Ag economics alongside protection of critical environments is imperative for the continued viability of farms and ranches. Private property rights are very important to producers and VSP allows for confidential reporting and monitoring of voluntary stewardship actions that maintain agricultural activities and critical areas. Voluntary stewardship activities are providing both protection and restoration for critical areas within Whitman County by having the ability to track, report and monitor which shows overall trends are improving with cost-share funded or self-funding for stewardship actions.

### 3 Progress Toward the Goals and Objectives

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Identifying Stewardship Actions implemented since 2015, and currently being promoted, allows us to track benefits to specific critical area objectives in the Work Plan. Partnerships (CDs, NRCS, FSA, WDFW, & landowners) that are important for Whitman County in funding, implementing, tracking, or monitoring stewardship all provided valuable stewardship implementation information.

Table 1 provides a summary of Management Actions with associated stewardship that is either a Direct (D) or Indirect (I) benefit to the associated Critical Areas. The five Critical Areas are: Wetlands (WET), Fish & Wildlife Habitat (FWH), Critical Aquifer Recharge Area (CARA), Geologically Hazardous Area (GHA) and Frequently Flooded Area (FFA). Whitman County CDs, NRCS and WDFW stewardship projects were used to document whether or not **2021 Objectives from the Work Plan** are being met with Voluntary Stewardship Actions.

Table 1 is actual acreages that are enrolled in voluntary conservation programs and does not capture the acreages or units that are being self-funded. We are using the acres that are enrolled in programs, because these acres are verified through a cost-share payment associated with completion. Whole farm/ranch information is being gathered that we will be presenting during the next 5-Year Report and showcased below in Section 6, Voluntary Stewardship Program Success with our Whitman County VSP Action Mapping process. With the VSP Action Map we are documenting the total amount of each of the Stewardship Actions listed below on a whole farm/ranch and then cross checking to ensure we are not double reporting acres. The Action Map will be used to show the full extent of voluntary stewardship occurring throughout Whitman County in the 5-Year Report. Table 1 shows that in almost all areas, Whitman County is **Exceeding Goals** and/or is **On Target** for Management Objectives **for 2021** as listed in the Whitman County VSP Work Plan. Since 2015, the CD's have worked with 83 different landowners on 152 projects identified in the Work Plan. During the same time the NRCS has worked with approximately 127 similar projects and WDFW 6 projects. For the 2-Year Status Report we are not double reporting acres, since some projects received funding from multiple entities on the same acreage. Table 1 is a *conservative estimate* with acres/feet/number of management actions to ensure that we are reporting projects that meet definitions of management actions and not double reporting metrics that have multiple funding sources. With that being said, *monitoring is showing that critical areas within Whitman County are protected with voluntary stewardship by landowners*. Having the ability to work with more landowners after the 2021 harvest will allow us to gather more stewardship information with the Action Map. Local landowners are understanding the value of reporting on a whole farm, the stewardship that is occurring to protect critical areas...while maintaining the viability of agriculture. Landowners have commented on the importance of informing the public of the stewardship occurring on a voluntary basis. VSP is well received within Whitman County and participation is increasing with the Action Map. We will continue to build on this momentum to gain trust and credibility within the VSP program.

**Table 1**

**Stewardship actions and progress towards goals and objectives (Cost-Share).**

Management Action	Stewardship Actions	Critical Areas Effected (D) = Direct (I) = Indirect	Num. of Proj.	Acres/Feet Number	2021 Objectives from Work Plan	Progress
Residue and Tillage	No-Till/Direct Seed/2-Pass Systems	(I) – WET, FWH, GHA	70	28,018.00 ac	7,004 ac (protected) 20,018 ac (enhanced)	Exceeded Goals
Pest	Pest Management	(I) – WET, FWH, CARA, GHA	58	15,958.6 ac	3,492 ac (protected) 13,968 ac (enhanced)	Exceeded Goals
Nutrient	Nutrient Management	(I) – WET, FWH, CARA	68	27,728.5 ac	6,519 ac (protected) 26,075 ac (enhance)	Exceeded Goals
Range	Prescribed Grazing	(I) – WET, FWH, GHA, FFA	7	9,033 ac	750 ac (protected) 4,150 ac (enhanced)	Exceeded Goals
	Range Planting	(I) – WET, FWH, GHA, FFA	3	755.1 ac	100 ac (protected) 2,000 ac (enhanced)	On Target
	Watering Facilities	(I) – WET, FWH, GHA, FFA	15	75	1 facility (protected) 9 facility (enhanced)	Exceeded Goals
	Water Well	(I) – WET, FWH, GHA, FFA	6	6	1 facility (protected) 9 facility (enhanced)	On Target
Soil	Conservation Crop Rotate	(I) – WET, FWH, GHA	4	3,472.14 ac	204 ac (protected) 815 ac (enhanced)	Exceeded Goals
	Cover Crop	(I) – WET, FWH, GHA	6	3,969.1 ac	204 ac (protected) 815 ac (enhanced)	Exceeded Goals
Habitat	Conservation Cover	(D) – WET, FWH, GHA, FFA	9	1,296.11 ac	447 ac (protected) 1,786 ac (enhanced)	Exceeded Goals
	Critical Area Planting	(D) – WET, FWH, GHA, FFA	2	9.9 ac	447 ac (protected) 1,786 ac (enhanced)	On Target
	Grassed Waterway	(D) – WET, FWH, GHA, FFA	14	103,800 ft	5,280 ft (protected) 15,249 ft (enhanced)	Exceeded Goals
	Herbaceous Weed Control	(D) – WET, FWH, GHA, FFA	4	321.94 ac	800 ac (protected) 3,400 ac (enhanced)	Exceeded Goals
	Tree & Shrub Establishment	(D) – WET, FWH, GHA, FFA	17	318.36 ac	100 ac (protected) 600 ac (enhanced)	Exceeded Goals
	Wetland Wildlife Habitat	(D) - WET, FWH, GHA, FFA	2	5	2 ac (protected) 4 ac (enhanced)	Exceeded Goals
	Upland Wildlife	(D) - WET, FWH, GHA, FFA	5	1,10.83 ac	200 ac (protected) 800 ac (enhanced)	Exceeded Goals
	Hedgerow Planting	(D) - WET, FWH, GHA, FFA	1	903 ft	1,500 ft (protected) 4,000 ft (enhanced)	On Target
	Open Channel	(D) – WET, FWH, GHA, FFA	8	28,270 ft	5,280 ft (protected) 15,249 (enhanced)	Exceeded Goals
	Fence	(D) – WET, FWH, GHA, FFA	35	118,453.1 ft	5,280 ft (protected) 15,249 (enhanced)	Exceeded Goals
Streambank Protection	(D) – WET, FWH, GHA, FFA	17	50,861 ft	2,500 ft (protected) 6,600 ft (enhanced)	Exceeded Goals	

Cost-Share programs are an important part of agriculture viability and you can see that programs resulted in many of the stewardship actions being implemented throughout the county to meet protection and enhancement goals. We are using the Action Map that gets all stewardship occurring on farm or ranch not just cost-share projects.

### 3.1 Agricultural Viability

Agricultural viability in the county includes regional and individual farm goals. These are defined, respectively, as the county’s ability to sustain agricultural production over time and an individual farm’s ability to meet financial obligations and make a profit. Agricultural viability at the regional level is the support system that helps individual farms succeed. This system also helps to mitigate potential threats and supports local producers in their operations and ability to take advantage of business opportunities. As shown below, Table 2 includes specific goals and accomplishments toward maintaining agricultural viability at the country level.

**Table 2**  
***Agricultural Viability – County Level***

County Goals	Accomplishments
<b>Maintain stable and secure agricultural land base</b>	On-going and dependent on local conditions and environment
	Alternative energy has become a secondary source of income within county
<b>Maintain infrastructure and services</b>	CD’s, NRCS, FSA, Wheat Grower’s and Cattlemen’s Associations, etc. are identifying funding for best management projects or supporting self-funded actions
	Providing infrastructure and services is important and continued funding is key
<b>Provide support for best farm management practices</b>	CD’s worked voluntarily with at least 80 landowners on at least 152 Stewardship actions listed in Work Plan
<b>Provide education, training, and succession planning</b>	Hosted annual meetings (4), Presented at grower meetings (6)
	VSP presentation to ~250 landowners, website, newsletters, radio and paper ads
<b>Provide a welcoming business environment</b>	Support and partnerships on meetings, tours and projects
	Local producers support businesses
<b>Track market trends/viability</b>	Occurring at both local universities. Information shared with local producers

At the farm level, agricultural viability rests mostly on the productivity of the land and the ability of the operator to balance input costs with sales and market pressures. The Work Plan emphasizes implementing stewardship and conservation measures through a systematic approach that maximizes the dual benefits of protecting and enhancing critical areas while enhancing agricultural viability. These systems include a suite of farming practices applied by crop type, that target multiple agricultural viability concerns; including water, soil health, nutrient, and pest management. In combination, practices that maximize benefits and synergies through a systematic approach are expected to have the most benefit for critical areas and agricultural viability. Currently severe drought is the only immediate threat to agriculture viability at the County level. In the future wind farms and potential solar farms may compete with agriculture. Table 3 includes specific goals and accomplishments toward maintaining agricultural viability at the farm level.

**Table 3**  
**Agricultural Viability – Farm Goals**

Concept	Detail	Accomplishments and Commonly Implemented Strategies
Reduce inputs	Energy (power, fuels)	Precision Ag with GPS guidance system for No-Till/Direct Seed
	Chemicals	cost-share or self-funding to reduce all 3 input costs
	Labor	Variable rates for seed and chemical with less overlap and trips
Maintain or enhance land production capacity	Soil health	Precision Ag, Mulching & Rangeland weed control
	Water systems and moisture management	Cover crops are used with some irrigation and switching from wheel roll/handlines to pivots
	Nutrient Management	Precision Ag, Soil Testing and Tissue Samples
	New technologies	Presentations at PCD Annual and Grower Group Meetings
Maintain flexibility to respond to market conditions	Changing land in production	Continued information and education, Universities have info on this Topic and there are sub-developments and windmill farms in rural areas
	Individual schedule for implementing farming practices	VSP Action Map works with producers on whole farm scale and stewardship strategies for protecting and/or restoring critical areas.
	Cropping choices	Alternative crops and markets are challenges, on-going
Provide incentives	Payment for measures	Strong support with CD's, NRCS, FSA and funding sources
	Tax breaks	On-going
Farmland conversion	Urban development	On-going information and education, not much urban development
	Maintaining resource lands	Federal and state landownership is low within Whitman County Ensure that they are good neighbors and protecting critical areas
Provide a "no surprises" regulatory environment	Clean Water Act, Clean Air Act, Endangered Species Act, and others	Gaining better understanding of regulatory requirements and have partnerships that are gaining trust and credibility, but more work needed to help maintain agriculture while protecting resources
	County permitting (drainage and other requirements)	On-going, working with Whitman County and hope to streamline agriculture permitting processes where we can
Protect private property rights	Recognizing and respecting rights	On-going with information and education needed to gain trust
Provide resiliency to environmental variation	Rainfall, temperature, and other environmental factors can affect agricultural production and activities	Environmental data is important for trends and understanding weather
Maintain lifestyle	Maintain agricultural way of life	Priority in Whitman County, providing for opportunity for farms to be passed to next generation is important.

Another important aspect of agricultural viability is the importance of operating and maintaining viable existing stewardship practices and systems to achieve long-term benefits and minimize the number of practices that are discontinued over time. The continued operation of existing stewardship practices and systems will be a key component of VSP implementation. Having secured and stable funding sources (esp. VSP) will allow for continued participation in voluntary cost-share programs. New technology is another area that can be explored by agricultural producers to improve the operation of existing conservation practices and systems or establish

new ones. As described in the Work Plan, stewardship practices have the potential to benefit multiple resources, including agricultural viability and critical areas. Having the ability to monitor and report on the function and value associated with critical area enhancement will allow for continued support from funding sources and also private landowners who are implementing stewardship actions.

## **4 Assessment, Monitoring and Adaptive Management**

The Whitman County Work Group manages the Implementation Phase for stewardship actions identified in the Work Plan. Participation and investment in the VSP program, resulted in increased reporting through the Action Map, demonstrating stewardship actions that protect or enhance critical areas while maintaining the viability of agriculture.

### **4.1 Assessment**

The Work Plan is **on track** to meet producer participation goals and benchmarks. In terms of specific stewardship action, the Work Plan is **on track** to meet performance objectives for dryland farming in Whitman County. Stewardship actions are being implemented across all watersheds and for most critical areas. We are working with an interactive map to gain valuable information on the farm scale for stewardship actions identified in the Work Plan and critical area protection that will be reported at the watershed scale with no landowner personal information shared.

### **4.2 Monitoring Participation**

Private landowner participation within Whitman County has always been very high with Federal and State funding sources. FSA and NRCS estimate that over 40% of the farms within Whitman County participate in farm programs. The number of practices implemented since 2015 (152 CDs, 127 NRCS and 6 WDFW) that are identified in the Work Plan support this participation information. There is some discontinuation of CRP, due to changes in payments and lower rental rates and competitive sign-ups statewide. Individual cost-share programs for residue and tillage management and other stewardship actions have little to no discontinuation of practices to date. The Work Group prioritized outreach and education which has resulted in VSP being on the radio, fairs and grower meetings throughout Whitman County. Individual landowner meetings and the outreach listed above has helped with landowner participation not only in stewardship activities, but also VSP reporting.

**Table 4****Producer Participation Status**

Participation Benchmark	Performance Metric	2-Year Status
Active Participation	VSP Action Map & Program Cost Share	80 Action Map entries, 285 C-S signups
Meetings, Tours and Social Media	3 or more tours, 8 or more meetings, 8 or more articles	3 watershed tours with landowners, 7 grower meetings, 5 articles, radio ads
Technical Assistance and Outreach Provided	On-Going	CD's – 83 landowners with 152 projects, NRCS – 127 projects, WDFW 6 projects

**4.3 Monitoring Indicators**

Specific environmental variables regarding VSP goals and benchmarks that were identified in the Work Plan that have been documented during the 2-Year Status Report include Soil Health and Fish and Wildlife Habitat. Soil Health conservation within the county has been promoted with development of stewardship plans and tracking of acres of stewardship completed to ensure no net loss of suitable agriculture soil occurs. Table 1 demonstrates stewardship actions and acres completed with a comparison to protection and enhancement benchmarks for soil health and fish & wildlife habitat.

Preserving and enhancing native habitat areas and increasing habitat areas for Fish and Wildlife was identified as an important goal for VSP. Data on upland wildlife habitat and feet of streambank protected was included in Table 1.

Table 5 gives an update on the current status of Indicators for Whitman County. Full evaluation of all monitoring indicators will be completed for the 5-Year Report with functions and values associated with critical areas. We are confident with current participation and with stewardship actions continuing that we can show soil and habitat functions and values are improving. Future reports will include information that will track improvements in water quality and hydrology.

**Table 5****Indicator Source Summary**

Critical Area Function	Indicator Source (examples)	Data Period	Findings
Water Quality	Category 2 through 5 303(d) listings; well monitoring data	2017-2019	On Target
Hydrology	Ecology stream flow gauge monitoring	2017-2019	On Target
Soil	U.S. Department of Agriculture Natural Resources Inventory monitoring	2017-2019	On Target
Habitat	Aerial imagery; WDFW Priority Habitats and Species data; GIS evaluation; ground truthing	2017-2019	On Target

## 4.4 Adaptive Management

Whitman VSP has increased landowners' interest and investment in voluntary stewardship. "Telling the Story" of how voluntary stewardship can and has been protecting and restoring critical areas is exciting. There are no new challenges to implement stewardship strategies (*except* for continued VSP funding) as interest and enthusiasm remains high.

Stewardship strategies and actions identified in the Work Plan are being implemented and there is no need to add additional practices. Cost-share programs are very successful with 50% of project costs paid, which helps with the farm economics component of agriculture viability. Currently no adaptive management measures with assessment or monitoring are identified.

## 4.5 Spirit of Cooperation

VSP implementation within Whitman County has brought new funding for outreach, education and monitoring programs that are identified in the Work Plan. With increased funding the Whitman CDs and Work Group have fostered cooperation and partnerships with Whitman County, landowners, and WDFW. VSP has helped develop relations with the WA Department of Agriculture and has benefited from some of the programs that they oversee. With the Resource Conservation Partnership Program (RCPP) there are 17 different partnerships working on stewardship strategies and actions for the Palouse watershed. Since the headwaters of the Palouse originate in Idaho they are working with Idaho and Washington landowners and agencies to protect and enhance habitat with cost-share funding from federal and state entities. The stewardship projects that are a result of the RCPP program are documented in Table 1, especially "Residue and Tillage Management" and "Pest and Nutrient Management" acres. The RCPP is also conducting monitoring in two watersheds with private landowner participation to: quantify changes to water quality, soil health and habitat associated with voluntary incentive-based conservation practices.

## 5 Status of the Whitman County VSP Work Plan

The Whitman County VSP Work Plan is **on target** to meet the identified measurable benchmarks in 2021. The 5 Year Report will showcase the outcomes of an intensive effort to reach landowners and report on whole farm/ranch activities as they related to the Work Plan. Support for voluntarily reporting and VSP is gaining momentum in Whitman County. We look forward to continue to showcase all the great stewardship strategies and actions that are occurring. Since voluntary stewardship actions are occurring both with cost-share funding and self-funded stewardship strategies, no immediate threats to agricultural viability have been documented.

## 5.1 Measurable Benchmarks

Using NRCS and Whitman County CD's stewardship implementation, table 6 captures data from 2016/2019 acres with an emphasis on progress towards benchmark and restoration goals identified in Table 1. We will put together information prior to 2011 for the 5-Year Report.

Stewardship practices with specific benchmark goals based on the Conservation Practice Physical Effect (CPPE) Scores for each practice developed by USDA. Stewardship strategies and actions identified in the Work Plan have been identified to benefit specific goals for protecting and/or enhancing critical areas values and functions. This will be evaluated in the 5-Year Review; measuring historic enrollment data for stewardship practice for average annual enrollment, continued Action Map entries of whole farm/ranch stewardship for goals and objectives identified in the Work Plan. The Action Map has both a private and public setting and gaining trust and credibility with participants that only stewardship actions will be shared at the WRIA level and personal information remains private.

**Table 6**  
***NRCS and CD's Stewardship Actions Prior to 2011 and 2016 and 2019 Implementation***

Stewardship	2011	2016	2019
<b>NRCS Direct Seeding</b>	Not in Work Plan	14,069 acres	18,292.6 ac
<b>NRCS Nutrient Management</b>	Will Get Info	37,326 acres	39,728.5 acres
<b>NRCS Pest Management</b>	For the 5 Year	34,921 acres	35,958.6 ac
<b>NRCS Fence</b>	Report for all	1,972 ft	12,504.1 ac
<b>NRCS Prescribed Grazing</b>	These Stewardship	9,033 acres	9,033 ac
<b>NRCS Cover Crop</b>	Actions to show	755 acres	2,962.6 ac
<b>CD's Direct Seeding</b>	Progress from	33,419 acres	47,719 ac
<b>CD's Nutrient Management</b>	2011 - 2019	27,860 acres	29,604 ac
<b>CD's Fencing</b>		22,860 ft	105,949 ft
<b>CD's Riparian Forest Buffer</b>		3,644 acres	

With stewardship actions completed in Table 1 and highlighted actions in Table 6, protection and enhancement of critical areas is occurring, except Critical Aquifer Recharge Areas (CARA) within Whitman County. In the 5 Year Report we will document critical area functions and values. Currently VSP seems to balance protection and enhancement goals while maintaining the viability of agriculture. New outreach tools developed during the biennium included radio ads on VSP and interactive Action Map that allows landowners to see the critical area layers on a map and answer questions on which stewardship strategies and actions be utilizing on private property. This helps VSP succeed in meeting benchmarks and reporting progress, highlighted below in section 6, Voluntary Stewardship Program Success.

## 5.2 Highlights

Landowners in Whitman County mainly have implemented stewardship strategies identified in Work Plan that protect or restore critical areas while maintaining the viability of agriculture, as identified in Table 7. Cost-share with funding source paying at least 50% of the cost associated with the practice, has encouraged increased adoption of actions. There are numerous landowners who self-fund similar stewardship and this will be captured in the 5 Year Report using information gathered using the Action Map.

**Table 7**  
**Stewardship Implementation**

Conservation Practices	Number of Projects	2011 - 2019 Actions
No-Till/Direct Seed/2-Pass	70	28,018 acres
Nutrient Management	54	27,728 acres
Riparian Fencing	35	118,453 feet
Tree & Shrub Establishment	17	318 acres
Streambank Protection	17	50,816 ft of bank protection

- Continue implementing Work Plan as approved in 2017
- No suggested adaptive management measures through the next biennium

## 6 Voluntary Stewardship Program Successes

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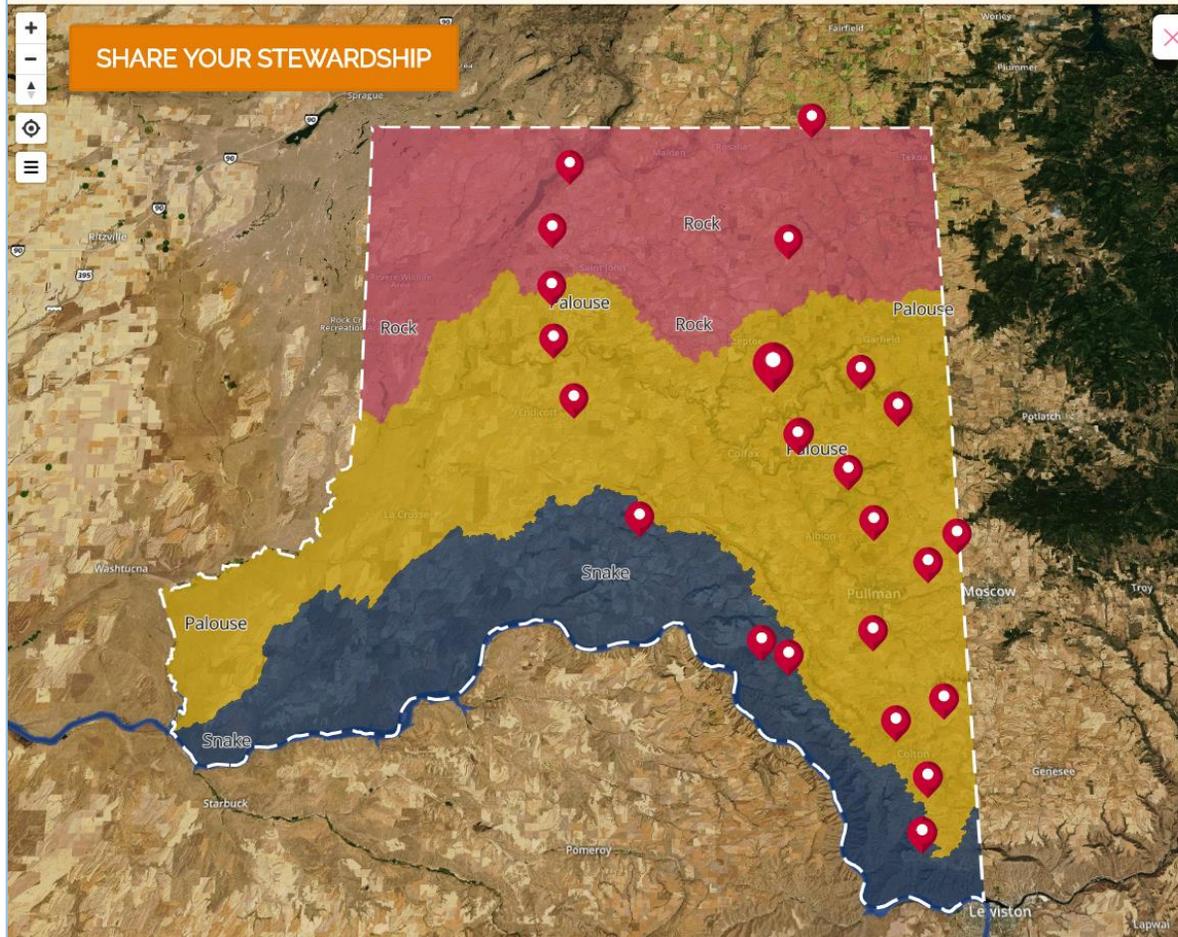
Whitman County VSP developed the Action Map to help gather more stewardship information and be more interactive than the Stewardship Checklist, the initial step for on-farm planning and protecting any critical area intersects. We are using the interactive map to gather stewardship strategies and actions from landowners who are interested in filling out the online form. Stewardship action questions in the Action Map are directly from the Work Plan page 57, Table 5-7 Protection and Enhancement Benchmarks.

The Action Map allows landowners to either make their information private or public, designates a place to describe stewardship strategies, lets landowners upload pictures of their projects, as well as let the Work Group know if they are interested in information on actions currently not occurring on their farm or ranch. As of August 9, 2021, 49 pins have been placed with 390 stewardship actions from the Work Plan documented, but only a few actions are feeding into the 2-Year Status Report at this time. Landowner support for “Telling the Story” of how agriculture can voluntarily protect critical areas is important and gaining traction. See pictures and descriptions below on the Whitman VSP Action Map photos or go to:

<https://Whitmancountyvsp.mapseed.org/8.30/46.38856/-117.55455>

The screenshot displays the Whitman County VSP Action Map interface. At the top, the navigation bar includes the Whitman County logo, 'Voluntary Stewardship Program', and links for 'ABOUT', 'VSP ASSISTANCE', and 'DASHBOARD'. A 'SIGN IN' button is located in the top right corner. The main map area shows the county boundary with a semi-transparent blue overlay and numerous red pins representing landowner stewardship actions. A 'SHARE YOUR STEWARDSHIP' button is visible in the upper left of the map area. On the left side, a 'Map Layers' sidebar is open, showing a list of map features with checkboxes and status indicators (green checkmarks). The 'Water Features' section includes 'Columbia River', 'Snake River', 'Palouse Watershed Basin', 'Palouse Watershed Basin Streams', 'Critical Aquifers', 'Fish & Wildlife Conservation Areas', 'Frequently Flooded Areas', 'Subbasins', and 'Watershed Analysis Units'. The 'WRIAs' section is also checked. On the right side, a 'Welcome Whitman County Voluntary Stewards!' pop-up window is displayed, featuring a photograph of a yellow field under a blue sky. The text in the pop-up reads: 'Whitman County Voluntary Stewardship Program (VSP) provides an innovative approach for reporting the protection of critical areas on agriculture lands that enhance our environment through voluntary measures, while promoting agriculture viability. VSP voluntarily collects previous and on-going stewardship data from all interested landowners, which helps document VSP participation and the importance of agriculture viability. Visit [www.whitmancountyvsp.com](http://www.whitmancountyvsp.com) for more information. Help promote Whitman County agriculture by sharing stewardship strategies! VSP success relies on voluntary participation by landowners! Whitman County VSP appreciates your time sharing stewardship

Whitman VSP Action Map (above). Landowners click on SHARE YOUR STEWARDSHIP in the upper left-hand corner. Each Red Pin is an individual landowner form that was filled out voluntarily. From the Work Plan we have identified the Stewardship Actions that protect or enhance critical areas and when a landowner survey is completed pins that landowners make public are displayed on the Action Map. Below is the only information that is displayed when someone clicks on a Red Pin.



Someone added  
0 COMMENTS  
6 MONTHS AGO

SUPPORT  
Twitter Facebook

### 14 Stewardship Actions

High priority to maintain critical areas on farm and ranch. Direct Seeding is applied on all farmed acres to protect resources for future generations.

No till/direct seed	1800 acres
Pest management	1800 acres
Nutrient management	500 acres
Managed grazing	150 acres
Watering facilities	3 stock tanks
Cover crops	100 acres
Mulching	5 acres
Conservation cover	35 acres
Critical area planting	3 acres
Grassed waterways	7920 feet
Weed control on rangeland	50 acres
Tree/shrub establishment	15 acres
Upland habitat management	15 acres
Fencing	800 feet

### 0 comments

Comment

Clicking on a Red Pin gives you the list of stewardship actions that are occurring on that operation. The larger Red Pin in the upper middle of the picture and the associated 14 Stewardship Actions that are listed to the right are the only information that shows, no personal landowner information. The Action Map is being used to roll-up actions occurring on the farm/ranch scale to appropriate WRAI, Rock WAU in Pink, Palouse WAU in Yellow and Snake WAU in Blue for the 5 Year Report of Actions and current function and values for critical areas. The landowner responses then go to the Dashboard which summarizes all the stewardship action information received by action, watershed, countywide and status for both the protection and enhancement goals. See the Dashboard below for Whitman County.

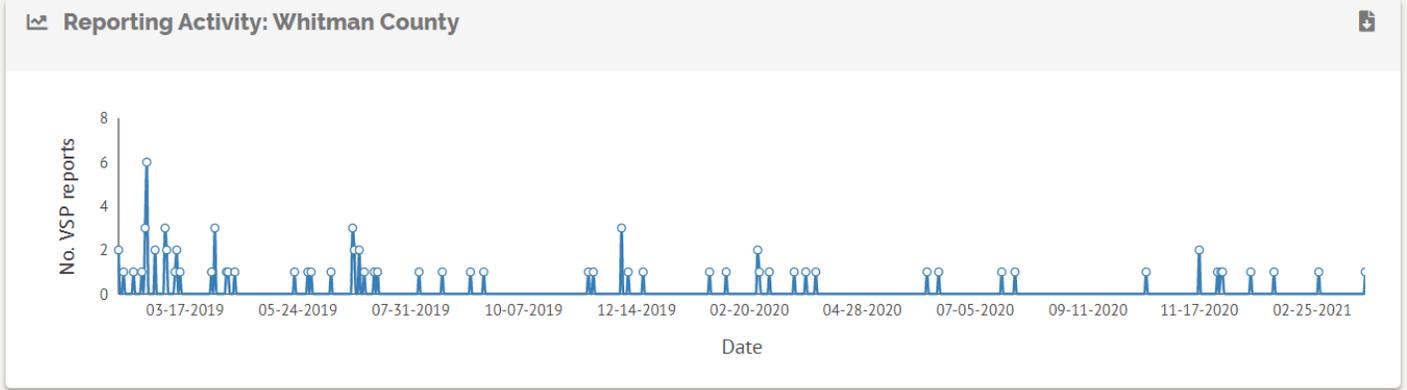
## VSP Reports - Whitman County

EXPORT RAW CSV DATA >

**Overview**

TOTAL VSP REPORTS **80**

TOTAL STEWARDSHIP ACTIONS **608**



**Stewardship Practices Detail: Whitman County**

Date range:  All dates  Pre-2011  2011 and later

Stewardship Category	Middle Snake WRIA	Hangman WRIA	Palouse WRIA	Countywide	2021 BENCHMARK OBJECTIVE	2021 BENCHMARK STATUS	2021 ENHANCED OBJECTIVE	2021 ENHANCED STATUS
Total reports by area (all dates)	22 REPORTS	0 REPORTS	58 REPORTS	80 REPORTS	0	N/A	0	N/A

The Dashboard shows 80 pins with a total of 608 Stewardship Actions. Whether or not a landowner makes their pin public or not, stewardship actions go to the VSP Dashboard for staff reporting stewardship by watershed and countywide totals. The cumulative total by each action is compared to the Protection Benchmarks and Enhancement Objective and Current Status for 2021 to demonstrate progress. For Residue and Tillage Management, the Action Map total above (51,950) is more than the 28,018 acres reported in cost-share programs (Table 1). The 2-Year Status Report used watering facilities, water wells and pasture plantings from the Action Map, other actions were not used until quality checks occur. Cost-share programs from Whitman CDs, NRCS, FSA or WDFW have quality control prior to incentive payments being completed. Action Map info will be used for 5 Year Report after we complete quality controls. Below is the full list of Actions in the Stewardship Practice Detail, which come directly out of the Whitman County VSP Work Plan. The 2021 Benchmarks and Enhancement Goals are in columns below and we have met all targets from the VSP Work Plan.

### Action Map Stewardship Practices Detail: Whitman County

Stewardship Category	Snake WRIA	Hangman WRIA	Palouse WRIA	Countywide	2021 Benchmark Objective	2021 Benchmark Status	2021 Enhanced Objective	2021 Enhanced Status
Conventional Farming	9,880 acres	0 acres	7,486 acres	17,366 acres	0 acres	n/a	0 acres	n/a
Residue & Tillage Management (No-till/Direct Seed/2-Pass)	16,738 acres	0 acres	65,421 acres	82,159 acres	7,004 ac	Target Met	20,018 ac	Target Met
Pest Management	22,928 acres	0 acres	61,034 acres	83,962.71 acres	3,492 ac	Target Met	13,968 ac	Target Met
Nutrient Management	18,988 acres	0 acres	67,511 acres	86,499 acres	6,519 ac	Target Met	26,075 ac	Target Met
Range Management (Managed Grazing)	5,602 acres	0 acres	6,120 acres	11,722 acres	903 ac	Target Met	3,613 ac	Target Met
Range Management (Range Planting)	1,190 acres	0 acres	122 acres	1,312.5 acres	450 ac	Target Met	1,806.5 ac	Target Met
Range Management (Watering Facilities)	46 facils	0 facils	64 facils	110 facils	1 facils	Target Met	9 facils	Target Met
Range Management (Water Wells)	8 wells	0 well	5 well	13 wells	1 well	Target Met	9 wells	Target Met
Soil Management (Conservation Crop Rotation)	4,702 acres	0 acres	20,092 acres	24,794 acres	204 ac	Target Met	815 acres	Target Met
Soil Management (Cover Crops)	653 acres	0 acres	796 acres	1,449 acres	204 ac	Target Met	815 acres	Target Met
Soil Management (Mulching)	1,330 acres	0 acres	8,349 acres	9,679 acres	204 ac	Target Met	815 acres	Target Met
Habitat Management (Conservation Cover)	3,645 acres	0 acres	2,938 acres	6,583.14 acres	447 ac	Target Met	1,786	Target Met
Habitat Management (Critical Area Planting)	2,407 acres	0 acres	1,570 acres	3,977.43 acres	447 ac	Target Met	1,786 acres	Target Met
Habitat Management (Grassed Waterways)	35,730 ft	0 ft	153,010 ft	188,740 ft	5,280 ft	Target Met	15,249 ft	Target Met
Habitat Management (Herbaceous Weed)	6,059 acres	0 acres	7,310 acres	13,369 acres	200 ac	Target Met	800 acres	Target Met
Habitat Management (Tree/Shrub Planting)	98 acres	0 acres	970 acres	88.14 acres	100 ac	Target Met	600 acres	Target Met
Habitat Management (Wetland Wildlife Mgmt)	0 acres	0 acres	37.96 acres	37.96 acres	2 ac	Target Met	4 acres	Target Met
Habitat Management (Upland Habitat)	504 acres	0 acres	676 acres	1,180.43 acres	200 ac	Target Met	800 acres	Target Met
Habitat Management (Hedgerow Planting)	100 ft	0 ft	5,225 ft	5,325 ft	1,500 ft	Target Met	5,280 ft	Target Met
Habitat Management (Open Channel)	11,000 ft	0 ft	57,481 ft	68,481 ft	5,820 ft	Target Met	15,249 ft	Target Met
Habitat Management (Fencing)	38,900 ft	0 ft	100,99 ft	139,899 ft	5,280 ft	Target Met	15,249 ft	Target Met
Habitat Management (Streambank Protection)	1,000 ft	0 ft	24,650 ft	25,650 ft	1,500 ft	Target Met	5,280 ft	Target Met

List of all Stewardship Actions that have been reported by landowners in Action Map for Whitman County. **Green** – Targets Met; **Yellow** – In progress, which shows most stewardship categories are on target with landowners still to be contacted for Action Map interest. Slight difference between what is self-reported by landowners and what projects have been completed with cost share funding in Table 1 in report. Bottom line with both tables – Voluntary Stewardship Actions can protect and enhance critical areas. This Action Map table will be used for 5 Year Review after ground truthing to ensure that Actions are occurring at rates reported by interested landowners.

# Monitoring

The Whitman County VSP Work Group coordinated with the Research and Monitoring staff from the Palouse Conservation District (PCD) to review and report on water quality monitoring that is being conducted both by PCD staff and the Department of Ecology.

Water quality monitoring was collected in one watershed at three locations (Palouse River at Hooper, South Fork of Palouse River at Pullman and Palouse River at Potlach, ID) and the results are in the table below for parameters listed in the Work Plan. Dissolved Oxygen, Fecal Coliforms, Total Suspended Solids, Total Per Sulfate Nitrogen, Total Phosphorus, Summer Low Flows and Stream Temperatures.

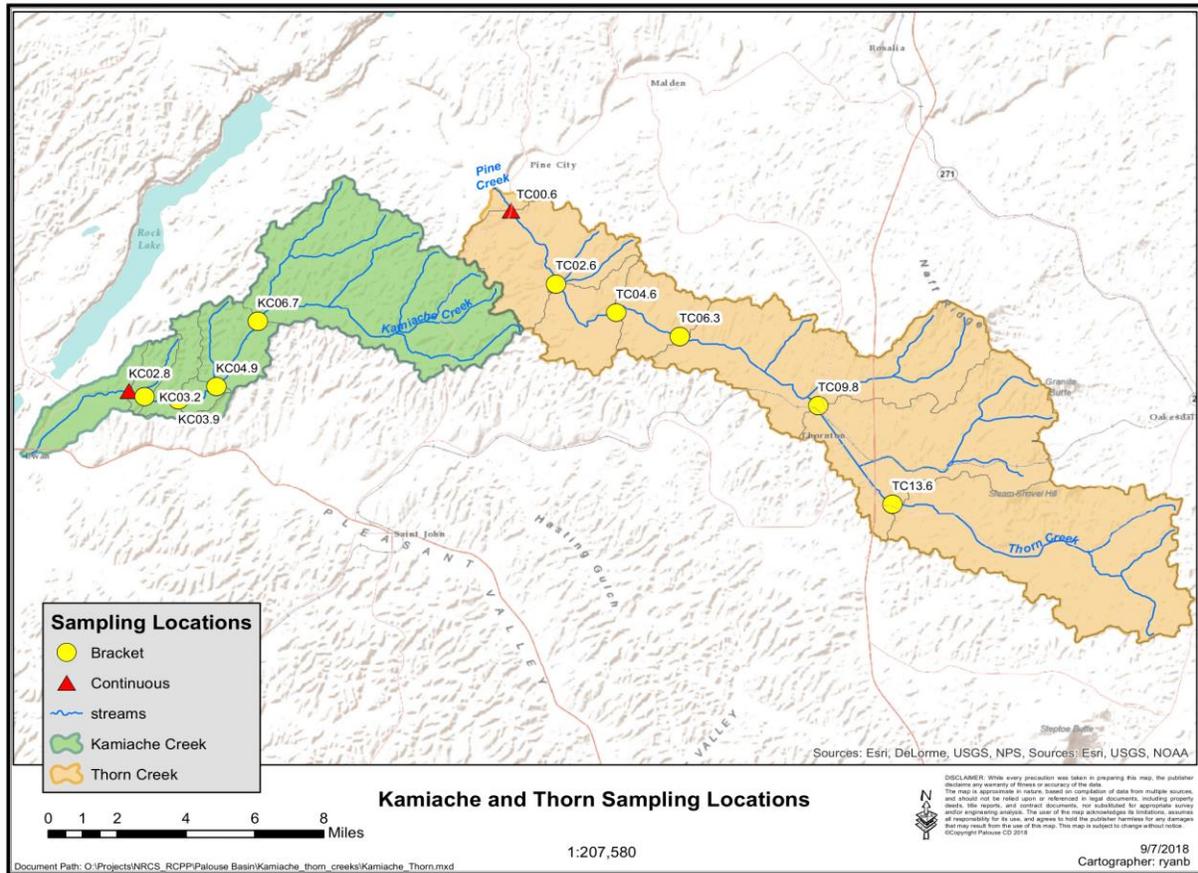
Stream	DO	Fecal	TSS	TPN	TP	Flow	Temp
	Pre 2011/Post						
Hooper	9.7 – 11.3	140 - 99	46.8 – 46.2	1.6 – 2.2	.14 - .13	116 - 95	11.6 – 14.4
Potlach R. ID						41.6 – 23.4	
SF @ Pullman	8.62 – 9.91	556 - 202	20.3 – 33.3		.27 – 1.3	6.7 – 5.9	

The Green in the table above shows where there were improvements from the 2011 baseline to the implementation of stewardship action with water quality monitoring information from the Department of Ecology stream gauges. DO increase is good for fish and Fecal Coliform, TSS, and TP decrease is what we hope to achieve with increase stewardship that are occurring. Flow and temperature increases from baseline will be monitored, but for summer low flows you can see that just over the border in Idaho we are seeing decreased flow from areas we don't have any jurisdiction over. Stream temperatures show slight increase from the 2011 baseline, but overall, the monitoring efforts by Whitman VSP show improvements to water quality within Whitman County watersheds. It is unfortunate that there is not a lot of water quality data, but we are using the best available information in the graph above.

Aerial imagery for Ag Area, Ag-Riparian, Ag-Wetlands Intersect, Ag Intersect with PHS were evaluated by Amanda Stahl from WSU. The spatial resolution was 10 meter and the information came from WSDA Crop Types 2011, 2019, Wetland-USFWS-NWI, Sentinel-2 Imagery (2016 – 2019) and NAIP imagery 2011, 2017. Information is summarized in table below for aerial imagery monitoring in Whitman County.

Metric	% Change	Overall Accuracy	Notes
Ag Area (minus pasture)	0%	2011 WSDA Crop Type = 95.7% 2019 WSDA Crop Type = 90.8%	Removed pasture because it was not equally complete between 2011 and 2019
Ag - Riparian	0.24%	2011 WSDA Crop Type = 95.7% 2019 WSDA Crop Type = 90.8%	Spatial analysis completed at 10m, Crop type classification has ~5m spatial accuracy
Ag - Wetland	0%	2011 WSDA Crop Type = 95.7% 2019 WSDA Crop Type = 90.8%	Intersect by wetland type ranged from -2.5% to 2.0% change by area = 0% change overall
Ag - PHS	0.3%	92%	
NDVI	No Net Change	Overall = 95.7 Kappa = 0.999 Omission = 77.6% Commission = 88.8%	Change in NDVI is less than standard deviation for both veg cover classes (green and senesced in late season) on Ag lands

Kamiache and Thorn Creeks Water Quality Data (paired watershed study that began in 11/14/2016)



Kamiache Creek is 80% mulch tilled and Thorn Creek is 20% mulch tilled. A paired watershed study was set up to document sediment entering surface water from agricultural land use practices. Dissolved Oxygen, Suspended Sediment Concentration, Nitrate-Nitrite as N, Total Phosphorus, Summer Low Flows and Stream Temperatures were identified in the Work Plan and are documented below since 2017 near the mouths of both Kamiache and Thorn Creeks (red triangles on map above).

Stream	Year	DO (mg/l)	SSC (mg/l)	Nitrate-Nitrite as N (mg/l)	TP (mg/l)	Flow (cfs) (median)	Temp (c) (median)
<b>Kamiache</b>	2017	11.45	328.06	6.96	0.24	0.65	12.77
	2018	11.21	145.41	7.76	0.12	0.65	12.79
	2019	11.14	442.56	7.48	0.15	0.97	12.95
	2020	11.47	286.13	7.08	0.13	0.50	13.53
	2021	12.52*	74.60*	7.02*	0.09*	NA	NA
<b>Thorn</b>	2017	11.34	119.30	8.77	0.38	4.94	14.03
	2018	11.53	228.72	9.75	0.21	2.01	13.00
	2019	11.60	363.46	9.21	0.18	2.44	13.58
	2020	12.52	107.45	7.88	0.15	0.93	14.63
	2021	12.94*	9.00*	7.88*	0.12*	NA	NA

\*Data for 2021 is not complete, Mean represents data collected thru May 2021. Green show improvements.

# Conclusions

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The Whitman County VSP Work Group believes that Implementation of the Work Plan has been successful, and if Stewardship Strategies and Actions continue along the current trajectory the Work Plan's goals and objectives will be implemented throughout the County. With continued progress the Work Group believes the Work Plans stewardship action goals and objectives **will all exceed 2026 Enhancement Objectives** identified in the Work Plan.

Continued participation in the Action Map, gathering stewardship actions on the farm or ranch scale and ground truthing the data for inclusion in the 5 Year Report will show that Voluntary Stewardship can and has been protecting and enhancing critical areas within private landownership throughout Whitman County watersheds. Page 16 shows the voluntary stewardship that is occurring and the 2021 *Benchmark and Enhancement Goals* that are in the **Approved Whitman VSP Work Plan**. Voluntary reporting of stewardship actions at the farm and ranch scale document that all benchmarks and enhancement goals **are being exceeded for 2021**. Additionally, in Whitman County there is the Farmed Smart Program that certifies farms are implementing precision nutrient management, integrated pest management and preserving wildlife habitat. Ten different farming operations are Farmed Smart Certified resulting in a total 21,800 acres of No-Till and 15.7 miles of buffered streams.

Monitoring results on pages 17 and 18 shows information that is being used to evaluate whether or not stewardship actions are protecting or restoration critical area functions and values. The Palouse Conservation District's Research and Monitoring program used Ecology's long-term data and also is conducting edge of field monitoring and has two paired watershed studies but most of that work started in 2016. Water quality data shows minimal improvements and streamflow and temperature show more data and stewardship actions are needed to improve those parameters. Interestingly streamflow just across the Washington State border in Idaho show a substantial reduction in summer low flows, which VSP or Washington State programs will not solve. Having the headwaters of the Palouse Watershed – WRIA 34 in Idaho will provide challenges in how well programs within Whitman County are able to affect water quality parameters that are at or near state standards when water enters Washington State.

Outreach, Implementation, Monitoring, Adaptive Management, Agriculture Viability, Participation/Coordination and Reporting Measurable Benchmarks is occurring at different levels and was pulled together for the 5 Year Report due January of 2021 to show status related to what is identified in the Work Plan. Page 15 above shows that we have had 80 pins put on the Action Map, which is about 11% of the larger producers within Whitman County. More work will be done to document stewardship actions at the farm and ranch scale, but for the first 5 Year Review this was great participation. Using radio ads, VSP post card mailings, newsletter articles and participating in grower meetings has resulted in landowner understanding of the VSP program. COVID-19 had an impact on one-on-one meetings with producers, but we believe that future participation will continue to grow with our diverse outreach program. The Conservation Districts within Whitman County, Whitman County Cattlemen's and other grower groups have been informing interested landowners and there are numerous cost-share programs through NRCS, FSA and the Conservation Districts if landowners are interested in participating, which will help maintain the viability of agriculture.