NRCS Umatilla County Local Work Group Meeting

2020 UMATILLA COUNTY LOCAL WORK GROUP MEETING MINUTES
Location: Pendleton Round-Up, Let 'er Buck Room
Date: January 28, 2020
Time: 10:00am – 12:00pm 12:00-1:00 Lunch

Nate James led the work group meeting, along with a slide presentation. He recapped previous years and Farm Bills expenditures leading to current objectives and resource concerns.

- All current programs received funding
- Funds available for RCPP
- Bill in evaluation, full distribution of funding still being decided

More detail was offered on the RCPP program; John Shafer County Commissioner spoke regarding their new contract to recharge the aquifer near the I-82/I-84 interchange.
This discussion concluded that further meetings will be scheduled within each major resource concern once all changes and funding pools have been finalized.
Resource Concerns

- Water Quantity
- Water Quality
- Noxious Weeds
- Soil Health
- Degraded Plant Condition (Forest)
- Overstocked stands
- "Pests & Disease" "wildfire" "noxious weeds"
- Degraded Plant Condition (Rangeland)
- "noxious weeds" "forage quantity/quality"
- Streambank Erosion

The goal was to identify the top two priority concerns and two areas of focus within each of the two priority concerns, for each land use category.
There were immediate requests to add Streambank Erosion to the county resource concerns. Umatilla County, McKay Cr. and Walla Walla Valley water districts as well as various producers added their vote.
Bob Levy introduced discussion on the elk depredation issue with Amanda (CTUIR) also contributing.
The possibility of EQIP and RCPP to address the accompanying increase in noxious weeds was discussed as well as some aspects of CRP. Tom (ODA) brought up a state water quality investigation tied to the elk issue with pilot programs in Baker and Zumwalt Prairie. Nate responded with intent to investigate what other types of resources NRCS can offer to help with this issue.
FORESTLAND
Last year's target area in Weston Mt/Langdon Lake area is projected to meet the goal of reduced biomass. This year will be targeting the Walla Walla Valley. Discussion of the next phase included the Ukiah/Dale areas, the possibility of reducing elk depredation in the lowlands by opening up forested areas with thinning.
ODF has some new grants to address Pine Beetle infestations, including thinning and masticating slash piles as appropriate burn days are becoming more of an issue.

ODA has some grants addressing water infiltration.

Priority concern 1: Degraded Plant condition Wildfire hazard/Excessive biomass

Priority area: Walla Walla/Mill Cr.

Priority concern 2: Degraded plant condition; insect and disease "Pine Beetle" post wildfire

Priority Area: Ukiah/Dale or Possibly Meacham

PASTURE/RANGELAND

Alternatives to re-enrolling expired CRP were discussed including water and fencing to return to pasture/grazing.

Invasive species, specifically Yellow star were discussed. County Weed control indicated a new biological control in the works for Yellow star as well as a treatment for Ventenata and Cheat grass. They are also available to treat small areas at no cost on Rush Skeleton Weed. Elk related issues were again mentioned including spread of weeds, protected hay storage and fencing.

Water concerns raised, possibility of pond development rather than spring development however inability to get permits still an issue.

Priority concern I: Degraded Plant conditions/Soil Health

Priority Area I- Expiring CRP

Priority Area II- county listed noxious weeds "yellow star thistle"

Priority concern II: Inadequate livestock/wildlife water

CROPLAND

Discussion of cover crops, specifically what is usable in low rainfall. Nick talked about a joint NRCS/OSU study on dryland cover crops going on now including the timing of planting, soil health, carbon and weed suppression. Rachel with UCSWCD is now a Soil Health Specialist and will also be investigating cover crop use, soil nutrients and will be reaching out to area producers for input. CTUIR brought an issue with RMA that cover crops can't be harvested/baled. A point was made that even beneficial technology installed with CSP/EQIP funds, some find it difficult to maintain. Is there a possibility of some type of management contract?

Priority concern: Soil Quality

Priority areas: Expiring CRP maintaining the beneficial effects while allowing commercial use

Priority concern:

IRRIGATED CROPLAND

Continuing with the same basic concerns as prior year. Aquifer recharge was discussed in relation to the Walla Walla valley.

Priority concern: Water quantity/quality

Priority Area 1: Umatilla Basin "LUBGWMA"

Priority Area 2: Walla Walla Basin unincorporated water users/basalt wells

Priority concern: Larger projects with multiple producer participation - RCPP

Misc. Discussion

Jennifer spoke about CTUIR and the First Foods CIS, including Russian Olive removal, NIPF thinning and other range management practices.

Small farms were mentioned as needing more outreach since there is no restriction on acreage for cost share programs.

LONG RANGE STRATEGIC PLAN

Sec I. Introduction

The present-day Umatilla County lies within the traditional homeland of the Weyíiletpuu (Cayuse), Imatalamláma (Umatilla), and Walúulapam (Walla Walla) peoples, who currently make up the Confederated Tribes of the Umatilla Reservation (CTUIR) (Walker 1998). The Walla Walla and Umatilla peoples lived mainly along the Columbia River and the confluence of the Yakama, Snake, and Walla Walla Rivers (Stern 1998). While the Cayuse people lived in the Blue Mountains along the tributary rivers, such as the Umatilla. The Walla Walla and Umatilla peoples spoke dialects of Sahaptin; however, the Cayuse had a distinct language called Waiilatpuan (Stern 1998). The Nez Perce also utilized some of the same territory for hunting, gathering, and fishing. These people inhabited this land from time immemorial interacting with the land through reciprocity, meaning First Foods promised to care for the people and the people are responsible for the care and protection of First Foods (CTUIR Ecology and society).

According to the ethnographic literature, the Cayuse, Umatilla, and Walla Walla peoples fished, gathered roots, berries, medicines, various plants, and hunted on a seasonal round (Ray 1938, Steinmetz 2000, and Stern 1998). Their winter villages were located along the Columbia and tributaries such as Butter Creek, McKay Creek, Umatilla River, Grande Ronde River, Imnaha River, Wallowa River, and Snake River (Ray 1938, Steinmetz 2000, and Stern 1998). According to Stern (1998), after the introduction of the horse the Cayuse joined with the Nez Perce who traveled seasonally with the Flathead and others to the Plains 'going to the buffalo.' Some of the Umatilla and Walla Walla also went on these journeys, but others maintained their riverine subsistence patterns.

The first European attempts at settlement within Umatilla County were a Roman Catholic mission on the Umatilla river above present-day Pendleton in 1847 and the other, an Indian Agency opposite the present-day town of Echo in 1851. Both settlements were unsuccessful because of the Indian wars. Following the end of the 2-year Indian wars, several settlers established homesites along the Umatilla river between Echo and Pendleton prior to the Creation of The Umatilla Indian Reservation (UIR) established by the Treaty of June 9, 1855. After Oregon became a state on Feb 14th, 1859 many settlers began establishing themselves in prime spots along the river bottoms providing boarding, livestock feed and essential goods to the miners traveling through the area to Idaho and present-day Baker County.

Umatilla County was created on Sept. 27, 1862, out of a portion of Wasco County. Umatilla is an Indian term meaning "rippling water" or "water rippling over sand" and has provided the name both for the county and its major river. Adjustments were made to the county's boundaries following the creation of Grant, Morrow, Union, and Wallowa Counties. The county contains 3,231 square miles and

is bounded by the Columbia River and Washington on the north, Morrow County on the west, Grant County on the south, and Union and Wallowa counties on the east.

The first census of the Umatilla County in 1870 counted 2,916 inhabitants. The county expanded after the coming of the railroad in 1881 and the area was open to the development of dry land wheat farming. The fertile land of Umatilla County gives a strong agricultural base to the county's economy.

Wheat, cattle, sheep and timber were the main agricultural crops supporting the county, but significant advances in irrigation systems and technology have added much more diversity to the agricultural crops of Umatilla County. Dryland wheat is still the crop grown on the largest number of acres, however, orchards, vineyards, corn, export alfalfa, potatoes, onions, and melons have become significant crops grown in Umatilla County.

The population has increased steadily with the 2016 census figure of 79,880 representing an increase of 5.3% over 2010. Much of the recent growth has come to the Hermiston area which has been spurred on through significant advances in irrigation technology and expansion of irrigated acres. Multiple food processing and other industries have expanded in the area helping the county grow and thrive economically. Umatilla County is the second largest agricultural producing county in the state.

Section II. Natural Resource Inventory

Umatilla County Inventory by Land Use
Public Lands 519,000 Acres
Private Lands 1,548,000 Acres

Land use	Acres
Cropland	**1,091,500**
Dryland	621,000
Irrigated	147,000
Orchard	3,500
Highly Erodible (HEL)	320,000
Rangeland and Pastureland	**545,000**
Forestland	**740,500**
	(231,500 NIPF)

Confederated Tribes of the Umatilla Reservation (CTUIR) Inventory by Land Use
Total acres within CTUIR 192,000

Land use	Acres
Cropland	53,000
Rangeland and Pastureland	86,000
Forestland	53,000

The land ownership pattern on the UIR is complicated and consists of a checkerboard of parcels falling into three main classes:

1. Deeded land held in fee simple estate by non-Indians or the CTUIR
2. Tribal Trust land with legal title held by the United States, and the beneficial or equitable title held by the CTUIR as a unit.
3. Allotted Trust land with legal title held by the United States and the beneficial or equitable title held by an individual Indian landowner or his or her heirs.

Acres by Land Ownership Class Acres

Land ownership class	Acres
Within reservation boundary	**159,545**
Allotment trust	64,979
Fee	63,714
Tribal trust	11,574
Tribal fee	19,278
Outside reservation boundary	**32,182**
Tribal trust	17,745
Tribal fee	14,437
Total	**191,727**

The CTUIR has a very active land buy back program and lands are changing status rapidly. These numbers are an estimate based on the most current data we have been able to obtain from DNR.

2012 Ag Census Demographics

Number of farms	1,603
Acres in farms	1,308,312
Average farm size (acres)	816
Government payments per year	$18,381,000
Average per farm	$28,106
Principal operator by primary occupation	785
Principal operator by sex	
Male	1,357
Female	246
Average operator age	59.5
Operators by race	
American Indian or Alaska Native	37
Asian	12
Black or African American	1
Native Hawaiian or Pacific Islander	2
Spanish, Hispanic or Latino origin	88
White	2,515
More than one race	23
Average net farm income	$58,520

Umatilla County statewide rankings

Crop	Acres
1st in grain production	250,645
1st in vegetable production	42,151
7th in hay production	39,027

Livestock inventory	Number
1st in pheasant production	12,000
4th in sheep and lambs	18,429
5th in bee colonies	8,508
6th in horses and ponies	3,459
7th in cattle and calves	58,818

Common resource areas

- 43C Blue Mountain Seven Devil Mountain
- 9 Palouse and Nez Perce Prairies
- 8 Columbia Plateau
- 7 Columbia Basin

Umatilla County Climate

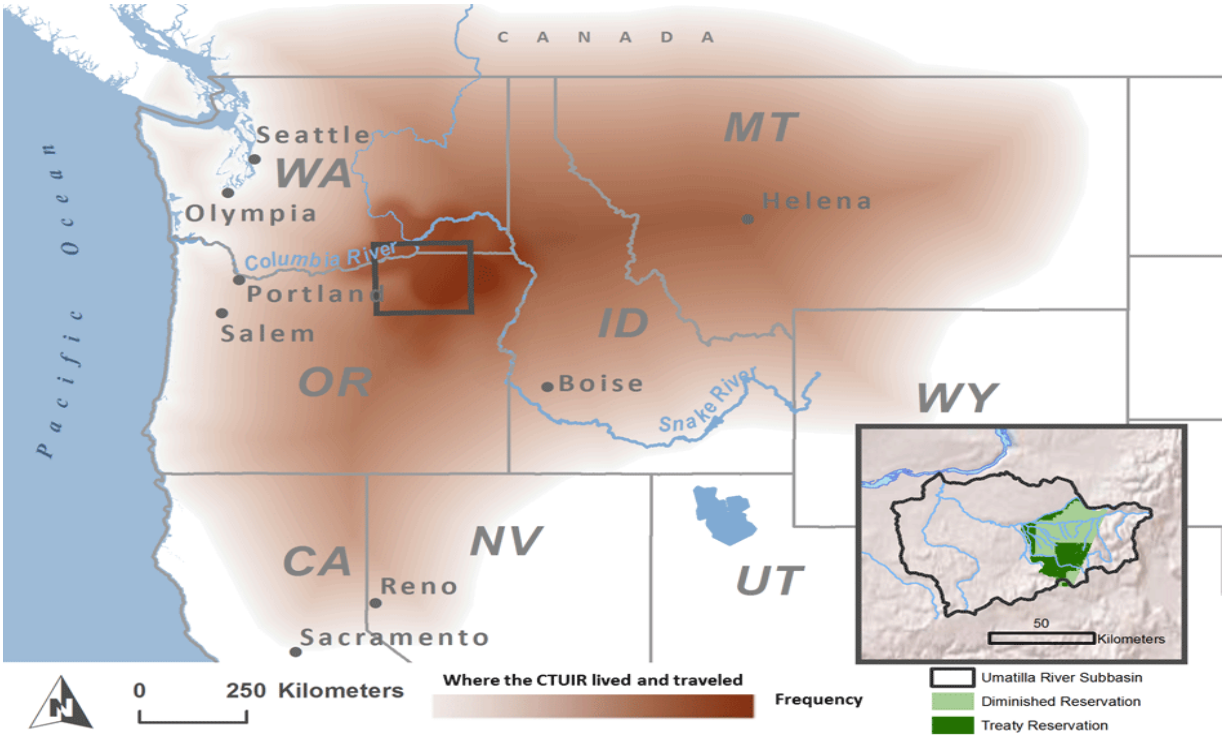
The climate varies significantly North to South and East to West. Average annual precipitation ranges from less than 9 inches in the North west corner to greater than 30 inches in the South East. The average snowfall ranges from 11 inches to 146 inches in the Blue Mountains. Frost free days range from 235 to 195 across the county. The summers are typically hot and dry with occasional summer thunderstorms with average daily maximum temperatures between 71-85 degrees Fahrenheit. Winters are cold but not too severe with average daily minimum temperatures between 23-29 degrees Fahrenheit.

ODFW Conservation opportunity areas

- Rock Cr. Butter Cr. Grasslands COA ID 155
- Cold Springs National Wildlife Refuge COA ID 156

Section III. Natural Resource Analysis

Confederated Tribes of The Umatilla Indian Reservation (CTUIR)

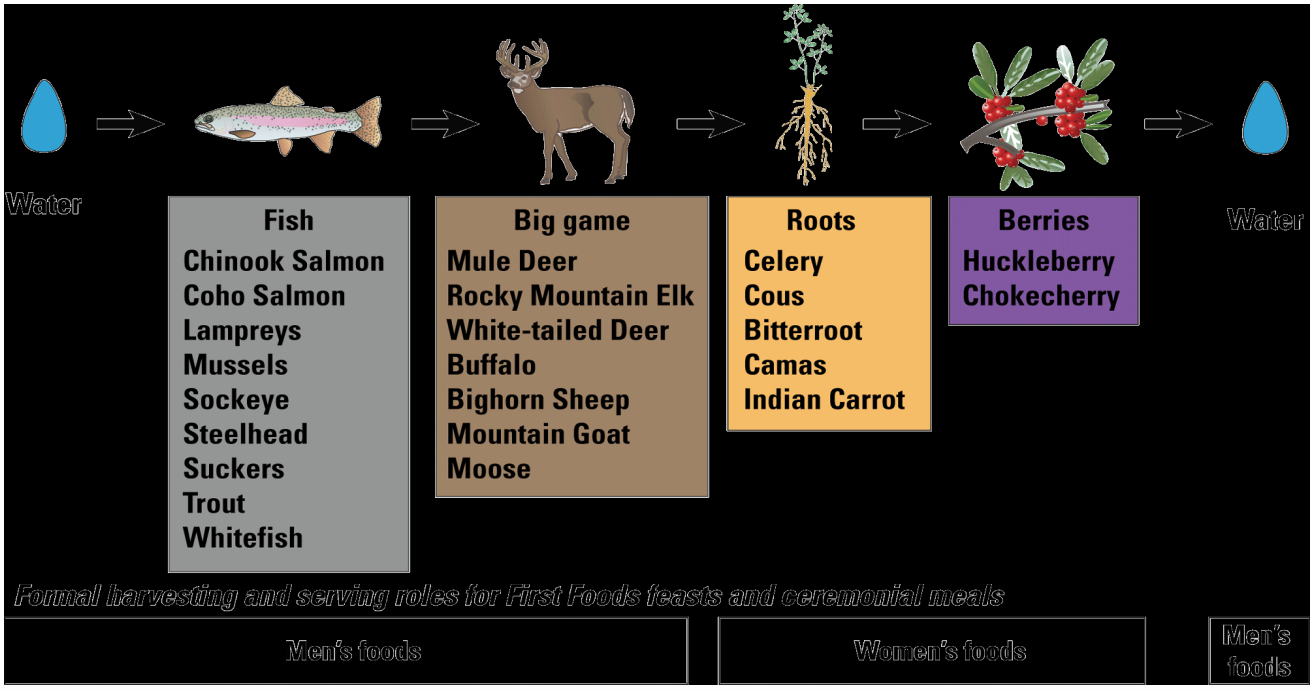


The Umatilla Indian Reservation (UIR) established by the Treaty of June 9, 1855, 12 Stat. 945, between the United States and the Cayuse, Umatilla, and Walla Walla Tribes lies along the foothills of the Blue Mountains in northeastern Oregon immediately east of Pendleton. The UIR covers a variety of terrain and land uses including rough, uneven forest and rangelands, gently sloping agricultural fields, and long narrow floodplains supporting riparian vegetation.

The First Foods are central to the CTUIR DNR mission statement:

“To protect, restore, and enhance the First Foods - water, salmon, deer, cous, and huckleberry - for the perpetual cultural, economic, and sovereign benefit of the CTUIR. We will accomplish this utilizing traditional ecological and cultural knowledge and science to Inform: 1) population and habitat management goals and actions; and 2) natural resource policies and regulatory mechanisms.”

The First Foods serving order includes representatives of “men’s foods”--water, salmon, deer; and “women’s foods”--cous and huckleberry. These gender categories reflect the harvest, preparation, and serving roles associated with First Foods. Much emphasis has deservedly been placed on water and salmon in response to water quality impacts and aquatic Endangered Species Act listings. The CTUIR has identified the need to call attention to ecological processes that sustain and produce First Foods in order to be responsible and responsive to the CTUIR community.



(Aligning environmental management with ecosystem resilience: a First Foods Example from the Confederated Tribes of the Umatilla Indian Reservation.)

The First Foods are considered by the CTUIR DNR to constitute the minimum ecological products necessary to sustain CTUIR culture. Management efforts need to incorporate ecological processes (for example, riparian function and high flows in floodplains) that relate to the sustained production of First Foods (CTUIR ag management plan).

The CTUIR first foods policy integrates very well with the larger county wide resource concerns including many overlapping concerns and priority areas. The Umatilla County Long Range Strategic Plan will work to identify and develop priorities and investment strategies to address these overlapping priority resource concerns and priority resource areas whenever possible.

See CTUIR Coordinated Resource Management Plan and the First Foods Guiding principles for detailed resource concern data.

Cropland

The majority of cropland in Umatilla County consists of a wheat summer fallow rotation. Past conventional tillage operations and limited residue created significant soil erosion resource concerns both through wind and water. This erosion led to multiple other resource concerns primarily water quality and habitat quality through sedimentation in streams.

The 1985 food security act implemented compliance regulations for highly erodible cropland to maintain certain residue levels to maintain eligibility for farm programs. At the same time the Conservation Reserve Program retired thousands of acres of annually cropped land to perennial grass. Since the inception of HEL standards and CRP, significant advances in farm equipment and farmers desire to reduce soil erosion has led to significant decreases in soil erosion.

Today, the majority of annually cropped land is managed under mulch till or direct seed management systems that both significantly reduced tillage and increased surface residue. Water Quality and stream habitat has improved as a result. However, soil quality is still a significant resource concern in these arid dryland wheat/fallow systems. Soil quality is now the highest priority resource concern on dryland crop in the county. Building soil health in this environment is a challenge and one we are still figuring out. Our largest hurdle is implementing the core soil health criteria and maintaining economic viability. The average annual precipitation in the dryland crop ranges from 6”to 25+” with the significant majority coming in the form of snow during the winter, with only a small portion coming during the active growing season. This is the reason for the fallow period in the crop rotation which is used to store moisture. There are some annual crops grown but most production systems still use either chemical fallow or conventional fallow.

Irrigated Cropland

During the late 1800’s Euro-American settlers first began to settle in the river bottoms of Umatilla County. They soon began diverting water to irrigate pasture, hay and grain crops. By 1859 Oregon became a state and more and more water was appropriated by the state to settlers. Umatilla County was created in 1862 and irrigation begins. Multiple ditches were developed by private landowners forming ditch companies; including The Allen, Wilson, Dillion, Courtney, Pioneer, Crane Lisle and two significantly larger ditches the Furnish and the Hinkle Ditch, which is now the Westland Irrigation district. By the early 1900’s it was evident that additional water was needed in the western U.S. In 1902 The Reclamation Act was approved by Congress to provide water storage and delivery facilities throughout the west. In 1908 the Feed Canal Dam was completed on the Umatilla River and was designed to carry water to Cold Springs Reservoir, east of Hermiston. The reservoir was completed in 1909 along with another dam at the head of the furnish ditch a few miles upstream of the feed canal. The Maxwell dam was built on the main stem Umatilla in 1912 and then another the three-mile dam serving the West Extension Irrigation District in 1914-1917. There was still a need for additional water in the Umatilla basin and from 1923-1927 The McKay Dam and Reservoir was built on McKay Cr. between Pendleton and Pilot Rock. This was to be supplemental irrigation for the Stanfield Irrigation District “Furnish Ditch” and Westland Irrigation District “Hinkle Ditch”. In 1926 ODFW reported there were no chinook or Coho salmon left in the Umatilla River. From 1940-2000’s the population

increased significantly due to multiple federal projects including McNary Dam construction, Umatilla Army Depot and the Umatilla Military Reservation. By the 1950's irrigation wells were being utilized. Over the next several decades the water table continued to decline, and wells were deepened until the 1970's when critical ground water areas were declared by Oregon Water Resources Department in the north western portion of the county and later in the Butter Creek area. Through the 1980's up to the early 1990's a combination of regulation, and local cooperation, coupled with congressional funding for the Umatilla Basin Project in 1988 work was being done to maintain both Umatilla river flows for Salmon and irrigation rights. This was being done by exchanging Umatilla River water with Columbia River water. Additional critical ground water management areas were designated including the Lower Umatilla GWMA and Stage Gulch GWMA. The planning efforts have continued on with the desire to "do no harm". Currently, there is significant progress on pumping Columbia River water to recharge depleted aquifers the original Umatilla Basin Project is now on phase III to exchange additional Umatilla water with Columbia River water and thousands of acres of land are being irrigated directly from the Columbia River. From the first salmon return to the Umatilla River in more than 70 years in 1994 to the present-day, tremendous strides of been made to improve the sub-basin watershed health and continue to expand economic growth in the irrigated agricultural sector. Umatilla County is now the second largest agricultural producer in the state largely because of the 147,000 acres of irrigated land.

Surface water irrigation using the Walla Walla River, its tributaries, and its distributaries (such as the Little Walla Walla River system) started in the Milton-Freewater area in the 1860s. By 1903, mid-summer irrigation rights were over-appropriated, meaning instantaneous demand exceeded supply. Hand dug wells in the early 1900s, and then drilled wells, both utilized groundwater for irrigation from the alluvial (gravel) aquifer. Deeper basalt wells became more prevalent after the 1930s. In recent decades, the state of Oregon has stopped issuing new irrigation water rights from surface streams and the alluvial aquifer. I believe the last surface water right issued was 1988. In 1998 and 1999, two Walla Walla Basin fish species, bull trout and steelhead were given federal protection status on the Endangered Species Act list. Due to observed impacts from irrigation withdrawals on these species, the Walla Walla River, Walla Walla River Irrigation District and Hudson Bay District Improvement Company were asked by USFWS to enter in to negotiations regarding reducing their impacts to the fish. The result was an out of court settlement agreement, first signed in 2000, leaving between ¼- to 1/3 of the Districts and individual farms surface water rights from the Walla Walla River instream to benefit the fish. Extensive irrigation efficiency projects on farm and piping of irrigation delivery canals followed, many of which were funded through state and federal grants. Most of the on-farm irrigation improvements occurred within the orchard district farms which are typically smaller than 10 acre blocks and involved converting rill irrigation to sprinkler and sprinkler to micro-sprinkler and micro-emitter systems. Some farms have even switched to drip, particularly with vineyards. Approximately 17 miles of canal and ditch piping has occurred. Another method to keep irrigated farms operational was increased use of groundwater from existing supplemental wells and newly drilled wells. A managed aquifer recharge program was initiated in 2004 to offset the increased declines in the alluvial aquifer. That recharge program puts around 5000-acre feet in to the ground each year. More recently, in 2017, Oregon Water Resources Department responded to concerns about declining groundwater levels in the Walla Walla sub basin basalt aquifers and declared the Walla Walla Basin basalt aquifer a Serious Water Management Problem Area (SWMPA). The SWMPA designation includes closing the basalt aquifers to new appropriation for irrigation water, requiring metering of water use by each irrigation

well to assist the state with an intensive monitoring and analysis of groundwater levels in the basalt aquifers, and is recommending that the community develop a plan to reduce the groundwater declines. Many of the basalt wells irrigate field crops such as alfalfa, wheat, grass hay, and pasture. Many have pivot circles, but many are also wheel line irrigation.

Forest

Forested land covers roughly 50% of the land in Umatilla County, which is slightly more area of forests than in the past. Timber production has always been an important part of the land management practices in the past and today and contributes to the county's economic base, with two saw mills currently operating. Many of these areas are also used for livestock grazing and are important habitat areas for deer, elk, bear, cougar and other species.

The forested land in the Umatilla County is composed of four main forest types: Ponderosa Pine, Lodgepole Pine, warm mixed-conifer and cool mixed-conifer. Ponderosa Pine stands are located primarily in the southern part of the county. Lodgepole stands are also located primarily in the southern end of the County but are also found in the middle portion of the County. Warm mixed-conifer stands are located throughout most of the county often servicing as a transition forest adjacent to both the Ponderosa and Lodgepole stands. Cool mixed-conifer stands are located at higher elevations, predominantly in the Tollgate and Government Mountains areas and the very southern end of the county, along the Union and Grant County lines. All four have played important part in the land uses of the county both today and in the past and should continue to do so in the future.

Historically, fire had a vital part in shaping each forest type and allowed for regeneration in these stands. The main species that were harvested were larger, older Ponderosa Pine and Western Larch. After World War II, harvest activities were increased and many of the Ponderosa and warm mixed-conifer stands were high graded for the Ponderosa Pine and Western Larch, leaving these stands to shift to more Douglas-fir, Grand Fir and younger Ponderosa Pine. Also, exclusion of fire in all of these stands caused shifts in stand dynamics and reduced the number of acres that were in the Ponderosa and Lodgepole Pine stands. Fire return intervals ranged from 5-20 years in the Ponderosa Pine stands to 20-100 years in the mixed-conifer stands. The exclusion of fire and the past harvesting methods caused many of these stands to become denser and began to favor shade tolerant species such and White fir and Spruce species that when combined with the increase in disease and insect outbreaks, caused stands that were historically Ponderosa and or Lodgepole pine stands to shift to warm mixed-conifer stands. Many of the species in the warm and cool mixed-conifer stands has less commercial value, causing more harvesting in the Ponderosa Pine stands, greatly reducing the number of seed trees and reducing the natural regeneration in these stands and allowing for other tree species to become established in these stands.

With the heavy fuel loading and over stocked stands, any fires that occur in most of these types become more of a stand replacing fire instead of the historic patchy or mosaic burns. Stands, especially the mixed-conifer types, burned much hotter and the species that came back after the fire were not necessarily the same ones that were present before the fire. Instead of a mix of species, White pine and Lodgepole pine regeneration would be more numerous and along with more brush and other plants, shaded out less shade tolerant tree species (Ponderosa Pine, Western Larch, Douglas-fir).

Currently, most of the forest stands (around 80%) in Umatilla County are in types that vary from what these stands were historically. Many of the Ponderosa and Lodgepole stands have been shifted to more mix-conifer stands, with large amounts of White Fir making up the understory of these stands. This is due to fire suppression in these stands and past harvest practices. Also, all four stand types present in the county are severely overstocked, which has led to disease and insect outbreaks. Bark Beetle attacks in the Ponderosa and Lodgepole pine stands have led to mortality in both young and mature stands and have allowed White Fir to take over in certain areas. Bark Beetles have also impacted the mix-conifer stands, hitting White Fir in the higher elevations hardest in the North end of the county. Root rot pockets have also impacted White Fir and Spruce in the cool mix-conifer stands, which has led to brush filling in holes that have been left due to tree mortality. All the forest types in the county have experienced increasing amount of drought stress over the last decade. This has led to an increase in the number and frequency of disease and insect attacks, which has contributed to an overall decrease in forest health in all forest types.

Riparian

Riparian areas are among the most productive and valuable natural resources within watersheds. Riparian vegetation provides three primary water quality functions: shade to lower stream temperatures, streambank stability, and filtration of pollutants. In the western United States, riparian areas cover less than 1 percent of the land, yet over 90 percent of the animals that live in this area use them for food, water, cover and nesting. Historically, the Umatilla basin was home to bunchgrass covered hills and wooded riparian areas along the river's banks. But over the last 100 years, most of the riparian areas in the basin have been altered or eliminated because of human development. Historically, humans used riparian areas for grazing livestock and irrigating crops, often clearing out entire riparian areas to maximize crop production acreage. In recent years the values associated with riparian areas have prompted local, regional, and national action to restore, preserve and maintain these areas for fish and wildlife.

The Umatilla River is an 89-mile tributary to the Columbia River. With its headwaters in the Blue Mountains, the river flows west and enters the Columbia River at the town of Umatilla. The Umatilla River and its tributaries form the major streams within the county's boundaries. Major tributaries to the Umatilla River include Butter Creek, Birch Creek, McKay Creek, Tutuila Creek, Wildhorse Creek and Meacham Creek. These waterways support fall and spring Chinook Salmon, Coho Salmon, Steelhead, Bull Trout, Red band Trout and Pacific Lamprey. Nearly 80 percent of the Umatilla basin is privately owned. The federal government owns about 9 percent and the Umatilla Indian Reservation includes about 11 percent of the basin. Due to human impact on the land, many of the rivers and streams in Umatilla County that have been 303(d) listed by Environmental Protection Agency for water quality impairment.

There are currently 139 miles of riparian buffers in the county that have been installed through the Conservation Reserve Enhancement Program. The Confederated Tribes of the Umatilla Indian Reservation, Oregon Department of Fish and wildlife, the United States Forest Service, Oregon Department of Agriculture, the Oregon Watershed Enhancement Board and the Soil and Water Conservation District (SWCD) have also provided technical and financial assistance in implementing fish habitat projects, riparian planting projects and fencing projects with off-stream livestock watering. The SWCD currently works with landowners to implement projects that benefit water quality within a

Strategic Implementation Area (SIA), including Birch, Stewart, and McKay Creeks. The SWCD also has one Focus Area in Couse Creek, where Oregon Department of Agriculture funds are utilized to perform water quality related projects throughout the riparian zone. The SWCD typically selects a new Focus Area every 3-5 years.

The long term goal within all of Umatilla County is to further increase riparian habitat strategically focused on high habitat potential streams with ready willing and able landowners. Prioritization alone will not help improve riparian habitat. Specific targeted outreach and education must be the primary tool to identify where areas of high interest overlap with areas of high habitat value. NRCS and its partners are developing a coordinated, strategic riparian habitat implementation plan.

Sec. IV Natural Resource Problems and Desired Future Outcomes

Water Quantity

Water issues are among the top and most pressing natural resource concerns in Umatilla County. The majority of irrigated lands in Umatilla County lie in the Umatilla Sub-basin and the Walla Walla Sub-basin. Each of these systems were over allocated and have required significant planning and implementation of upgraded and alternative irrigation methods, improved water management strategy, water buy back and leasing programs as well as aquifer recharge. Great effort and cooperation by all interested parties have significantly improved stream flows in both basins, while also minimizing impacts to irrigated agriculture. Both the Umatilla Sub-basin water management plans and Walla Walla Sub-basin water management plans identify stream flow and ground water are not meeting optimal targeted levels for fish, wildlife and human consumption.

The Lower Umatilla Ground Water Management Area is currently very active including new legislation to help prioritize and implement current priority ground water and surface water strategies. These strategies are linked to new Columbia River water rights and pipeline projects. The plan is to implement a water banking program to offset the costs of trading cheaper ground water irrigation for Columbia River surface water. The plan is to begin stabilizing below ground aquifers, without harming irrigated agriculture in the basin.

The Lower Umatilla is also currently working on phase III of a water rights settlement with the CTUIR. This would be the final phase of ongoing trades to Umatilla surface water irrigation rights with Columbia River water rights. The Umatilla strategy has been “do no harm” and has worked very well over the years advancing all stakeholders environmental and economic goals. The desired future out come in the Umatilla Sub basin is adequate mainstem Umatilla River stream flows to sustain salmon and other traditional aquatic CTUIR first foods. Maintaining a thriving irrigated agricultural based industry and secure adequate consumptive use needs for both the CTUIR and the growing population of Umatilla County residents.

The Walla Walla sub-basin is striving to accomplish the same outcomes as the Umatilla Sub Basin. Stream flows in the Walla Walla Basin that are adequate to sustain Salmon, meet the needs of irrigated agriculture and provide for consumptive uses for the growing population.

The Walla Walla system is more challenging to achieve a “do no harm” approach because there is a lack of reservoir storage that the Umatilla Sub-basin has and the basin crosses state boundaries. With multiple states tapping into the source and each state having different rules and policies it is just another layer of complexity. Despite the challenges facing the bi-state water users, significant progress in achieving the environmental and economic goals of the interested parties has been achieved. The progress made however; does not meet all the party’s goals and objectives. Many stake holders identified in the Walla Walla Basin Bi-State Water Management Planning effort have identified the need to continue to analyze larger scale projects and evaluate additional alternatives to meeting the long-term water needs of everyone in the basin. One area of particular interest is the Walla Walla Basin Serious Ground Water Management Area.

Water Quality

Many of the rivers and streams in Umatilla County are 303d listed due to man-made causes which show that there is a demand for resources and assistance. Some instances of water quality are directly related to improper irrigation management, inefficient systems or a combination of both. Significant improvement in water quality has been made in the last couple of decades through improved management practices on cropland and the Conservation Reserve Program (CRP) ultimately reducing sedimentation from soil erosion on annual cropland. Changes to grazing management practices both voluntarily and through regulation have reduced sedimentation and excess nutrients in streams with significant support from state and federal agencies technical assistance and financial assistance programs. The Conservation Reserve Enhancement Program (CREP) was instrumental in increasing stream buffers and providing alternate off stream watering facilities. The Conservation Security Program and Conservation Stewardship Program provided significant financial assistance to producers in utilizing precision technology to reduce pesticide and nutrient applications further improving water quality.

Another source of potential water quality concerns are the 27 Confined Animal Feeding Operations (CAFO) and Animal Feeding Operations (AFO) in the Umatilla/John Day Basin. Eighteen of these operations were identified by the State as having management plans that were outdated or inadequate for the State regulation requiring plans that address storage for a 25-year, 24 hour event. These plans address any degradation risk related to potential leakage to surface or ground water. A CIS was developed and implemented using NRCS EQIP program dollars from 2010 – 2013. 11 Comprehensive Nutrient Management plans were written and funded. Today there are 16 permitted CAFO's in Umatilla County and all of them are in compliance. Oregon Department of Agriculture has confirmed that there are no CAFO's contributing to water quality resource concerns in Umatilla County.

Our goal is to continue to utilize the state and federal cost share programs to further improve water quality throughout the basin. The long-term goal would be to get streams de-listed and have critical ground water management areas changed as a result of improving water quality standards to safe acceptable levels for fish, wildlife and humans. The Lower Umatilla Basin Critical Groundwater management area working group has reengaged and have developed a new implementation strategy.

Degraded Plant Condition

Forestland

Over the last decade, there has been an increase in the amount of pre-commercial thinning on private forested lands to try and combat the overstocking and declining forest health. These practices have been concentrated on several areas throughout the county, but still have only covered around 2,000 acres. This work is continuing to be done throughout the county. This work is also being done on Tribal and BIA managed forest lands. A large amount of the timbered acres in the county are within the Umatilla National Forest, which has not seen as much forest activity in the last decade compared to

other ownerships in the county. In all ownerships, there continues to be an overall risk to all forest types due to wildfire, insect, and disease outbreaks.

The goal of all forest types in Umatilla County is to reduce the 80% or so of stands that have been changed away from their historic condition on all ownerships to not only restore the dominant tree species in each forest type, but also to improve the overall health. An general increase in the amount of pre-commercial thinning projects to reduce the stocking levels in all forest types to a number closer to what the stocking was pre-European settlement (Pines stands <200 trees per acre, Mix-conifer stands between 200-400 trees per acre). Another area of focus is to conduct thinning projects in stands that have large amounts of dead and dying trees, to improve forest health and to encourage regeneration in these stands. In addition, thinning activities could also focus on removing tree species that historically have not been the main tree species (i.e. White Fir trees in Pine stands) to transition these stands back to what they were comprised of in the past.

Another area of focus would be to reintroduce fire into most of these stands to better mimic historic fire regimes. This is especially important in the Ponderosa and Lodgepole Pine stands that have had fire suppressed for the last 100+ years. Fire played an important role in both of these forest types. It helped to reduce the number of trees that were present in these stands and in the Lodgepole stands, play a pivotal role in getting the Lodgepole Pine trees to successively regenerate. It also played an important role in eliminating non-pine species, like White Fir, from building up in numbers within the forest type. Fire also played a role in the mix-conifer stands as it allowed for the more natural mosaic burn pattern to take place on the landscape, which led to several different aged stands and increased overall diversity within the stands. It also improved forest health by reducing the stocking level, decreasing the amount of dead and dying trees and promoted regeneration in these stands as well. Fire also aids in restoring native plants, grasses and flowers that play an important role for animals, birds and insect species.

Specific communities in Umatilla County with high wildfire risk are identified in the Umatilla County community wildfire protection plan. Threat assessments were completed, ranking was done, and priority levels assigned to specific areas. The long-term goal is to reduce the catastrophic wildfire risk around the highest risk communities.

Rangeland

Euro-American settlement had a profound effect on the local natural resources. Land ownership and boundaries established to control livestock fragmented and ultimately changed how the landscape was managed. For thousands of years the American Indians utilized the land holistically through reciprocity. Under the European style of management, the settlers had ownership of small parcels of land they had to manage to feed their families from. Many of these homesteads that were allotted by the government were based on natural resource production from the east and mid-west. Given the low productivity of the land in the area, families used the land hard and often overgrazed the native rangeland.

Fire was once an active part of the ecosystem in this region, but after settlement and parceling of land it was necessary for the settlers to suppress fires so they could sustain their crops and livestock to feed their families. The combination of overgrazing the delicate perennial bunchgrasses and 150 years of active fire suppression has contributed to changing the rangeland resource. There has been a significant shift in the climax communities to annual grass and shrub dominance. The shift in plant community has also allowed for the invasion of many

noxious weeds that further degrade the productivity and stability of the rangelands in Umatilla county.

Management practices have significantly evolved through the years. Many current grazing practices and management plans are improving the rangeland health. Many systems need additional infrastructure such as cross fencing and water development to facilitate improved distribution and utilization. With strategic placement and sizing of upland water developments they could have a multi-purpose and assist with fire management.

Prescribed burning and brush management are landscape management tools that will be necessary to reverse the grassland transition to woody dominated species in the foothills where down to the Columbia basin plateau where rabbitat brush and sage brush are expanding. Multi-flora rose has become a significant increaser in the transition zone between timber line and the valley bottom. This area also happens to be core big game winter range.

Noxious weeds are a significant issue throughout rangelands in Umatilla county. We are working with the county weed department, SWCD, CTUIR, ODA and OWEB to develop a strategy to treat a handful of threatening weeds that have been identified and prioritized in the CTUIR weed management plan as well as the Umatilla County weed management plan.

Old farm fields that were seeded to introduced and native grasses either from the grass bank program prior to the 80's or the CRP program since the 80's are sitting idle. Significant soil health benefits have been achieved from returning these lands to a perennial grass base. It is a high priority to maintain these lands in the perennial grass base and develop infrastructure to return these areas to productive grazing lands. The capital investment to return these lands to production is not feasible without some cost share assistance. The alternative to not investing in the infrastructure required to return these lands to production will ultimately result in increased noxious weeds which will lead to further degraded plant productivity, health and vigor and degraded wildlife habitat.

We are looking for partners interested in addressing the identified priority resource concerns on rangeland and pastureland in Umatilla County. We intend to develop a conservation implementation strategy to assist with developing a sound partnership and funding sources to address the priority concerns identified.

Soil Quality

The traditional crop management system for dryland farming in Umatilla County creates a scenario where residues produced on alternating years are inadequate for an improvement of soil quality as demonstrated by the decrease of organic matter (OM) levels in the soil. This decrease of OM also leads to a decrease in soil biological activity and therefore overall soil quality. The poor management of residues which are produced can lead to increased intensity erosion events; from both wind and water, which have been identified as public hazards when moving soil causes visibility issues along both Interstate 84 and Highway 11. Another result of soil erosion events is the relocation of pesticides and fertilizers attached to soil particles which are being moved by wind and water.

While much of the county has adopted reduced tillage or direct seed management systems, there are areas of the county where producers still utilize controlled burns as a residue management tool; quite often in high production areas. This leads to a decrease in air quality and provides another opening for erosion events to occur.

There are still many opportunities for producers to adopt conservation tillage practices, as well as increase the use precision farming tools; some regions of the county have chosen not to adopt conservation practices and it will take a generational shift of farmers to integrate these practices on

some farming operations.
Our long-term goal is to assist producers with the adoption of the core fundamental practices related to healthy soil. We will utilize both technical assistance and financial assistance to further adoption of farming practices that will facilitate increased soil health. Minimizing disturbance, increasing crop diversity, maintaining living roots, keeping soil covered with residue or living crops and incorporating livestock in crop systems are key fundamentals to improving soil health.

Riparian

We are currently working with our partner agencies to develop a strategic approach to riparian enhancement. We have a full time CREP technician that will be responsible for coordination, outreach and implementation of a robust riparian habitat improvement strategy. The staff have spent the last 12 months improving the existing CREP contract management processes in coordination with FSA. We have developed some streamlined approaches to assist with better customer service and program delivery.

The CTUIR has identified priority stream reaches for riparian enhancement in their Ag management plan. We are using input from their plans and input from their staff about priorities for Beaver Dam Analogs and actual reintroduction of beaver. Targeted outreach and education will be done as phase I of the Umatilla County Riparian Enhancement Strategy. Phase II will be defining key opportunity areas with groups of adjoining landowners ready, willing and able to address riparian habitat concerns and securing funding sources. Phase III will be implementing these strategic projects and monitoring and enhancing the existing CREP contracts.

Energy Inefficient use

There has been tremendous technological advances in everything from lighting, engines, fuels, pumps, GPS guidance and variable rate application. Increasing energy efficiency is an important part of our conservation portfolio in Umatilla County. Addressing inefficient use of energy has a direct correlation to economics and improving on farm profitability. Many of the potential upgrades, like Variable Speed Drives and new turbine pumps for irrigation are costly investments. The cost savings is obvious, the challenge is for smaller operations to come up with the capital to invest in these upgrades. The same is true of new more efficient equipment that is equipped with guidance and variable rate capabilities. The Farm bill programs will be utilized to provide a means of reducing the capital burden on producers with the intent of accelerating the adoption on new more energy efficient technologies.

Partners:

Umatilla Soil and Water Conservation District, Environmental Protection Agency (EPA), Irrigation Districts, Oregon State University (OSU) Extension, Washington State University (WSU) Irrigation Extension, Agricultural Research Services (ARS), IRZ Hermiston, Electric Co-ops, Oregon Department of Agriculture (ODA), Umatilla Basin Watershed Council (UBWC), Oregon Department of Fish and Wildlife (ODFW), Oregon Water Resources Department (OWRD), Oregon Department of State Lands (ODSL), Army Corps of Engineers (COE), The Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Fruitvale Water Users Association (FWUA), Walla Walla Basin Watershed Council (WWBWC), Oregon Water Enhancement Board (OWEB), Bonneville Power Administration (BPA).

References:

Umatilla Sub-Basin 2050 Water Management Plan

Aligning environmental management with ecosystem resilience: a First Foods example from the Confederated Tribes of the Umatilla Indian Reservation, Oregon, USA
Eric J. Quaempts 1, Krista L. Jones 2, Scott J. O'Daniel 1, Timothy J. Beechie 3 and Geoffrey C. Poole 4,5

Umatilla County Community Wildfire Protection Plan (Blue Mountains and Foothills Region)

CTUIR- Integrated Natural Resource Management Plan

2012 NASS Ag Census

Hans Rudolf: Oregon Department Forestry Stewardship Forester

Nick Sirovatka: NRCS Basin Agronomist

Sarah Silbernagel: NRCS Basin Archaeologist

Umatilla SWCD Staff: Shiloh Simrell, Rachel Nash

Section V. Prioritization of Natural Resource Problems and Desired Outcomes
These are the Umatilla County Priorities identified by the Local Work Group.

Cropland

Top priority resource concern- Soil Quality

Priority area

1. Expired CRP
2. County wide

Secondary priority concern- Economics using new technology to reduce inputs

1. Variable rate fertility "using full capability of the technology"
2. Advanced herbicide application "weed it" or other chlorophyll sensing application technologies

Irrigated cropland

Top priority resource concern- Water quantity

Priority area

1. Lower Umatilla Basin
2. Walla Walla Basin

Secondary priority resource concern- Water Quality

Priority area

1. Lower Umatilla Basin Groundwater Management Area
2. Walla Walla Basin basalt wells, unincorporated irrigators and group projects

Forestland

Top priority resource concern- Degraded Plant Condition wildfire hazard excessive biomass accumulation

Priority area

1. Walla Walla/Mill Cr. (WUI) Langdon lake/Weston mtn (WUI) **Final year**
2. ?? Possibly Ukiah/Dale

Secondary priority resource concern- Degraded Plant Condition Pest & Disease

Priority Area-

1. Pine beetle infestations post wildfire

Range/Pasture

Top priority resource concern- Soil Health/Degraded plant condition
Priority areas

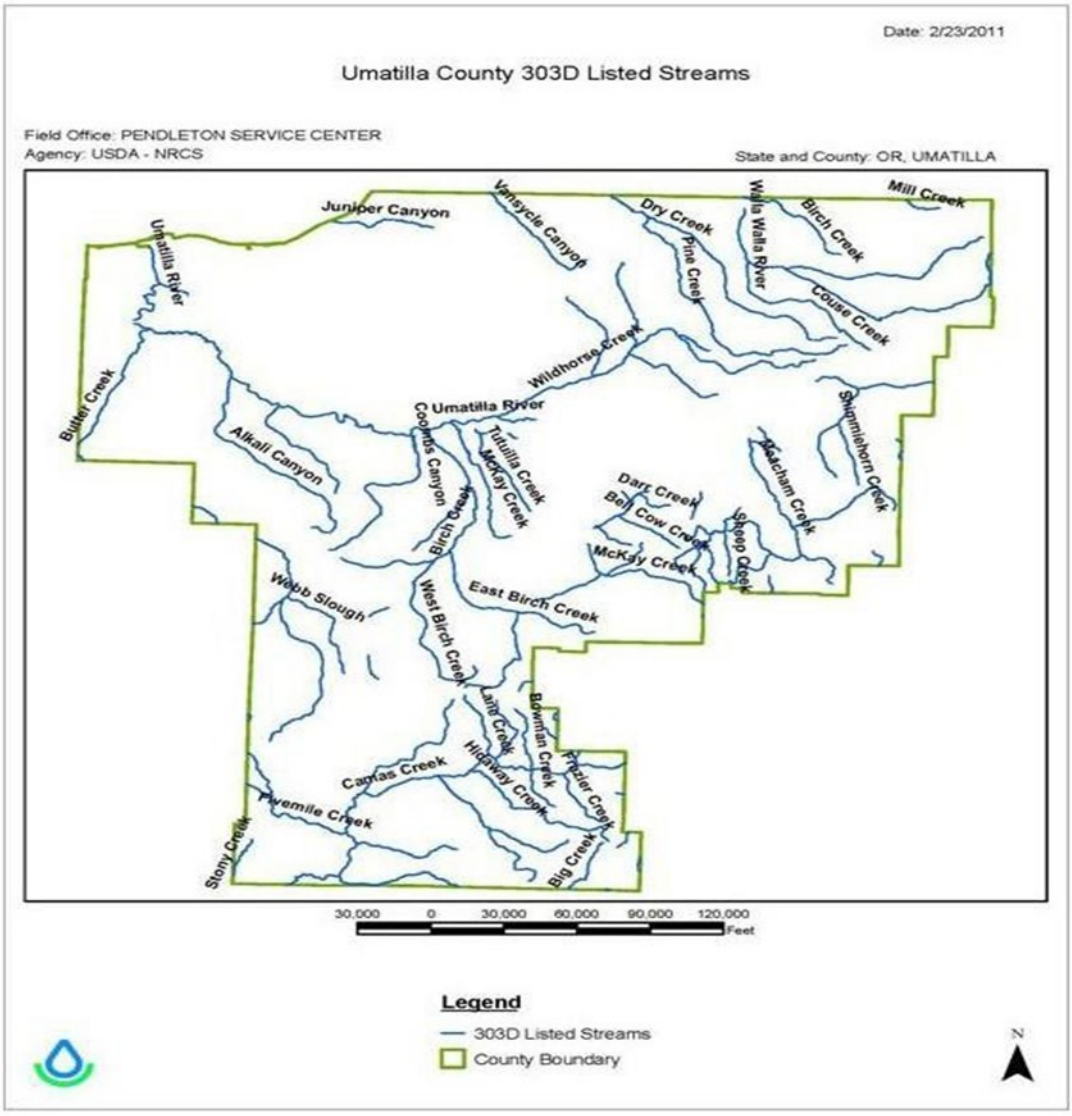
1. Expiring CRP
2. Invasive species "County A List species"

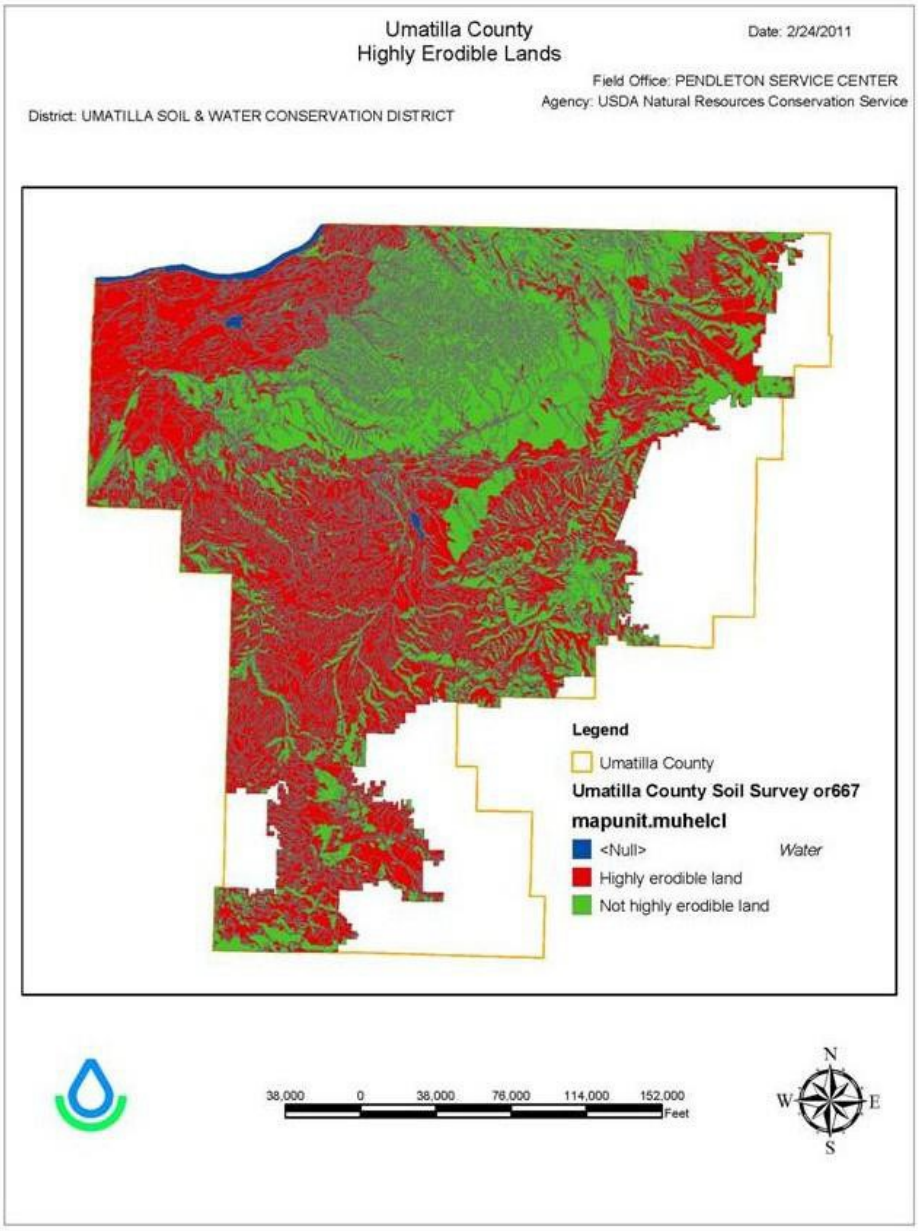
Secondary priority resource concern- Inadequate livestock/wildlife water

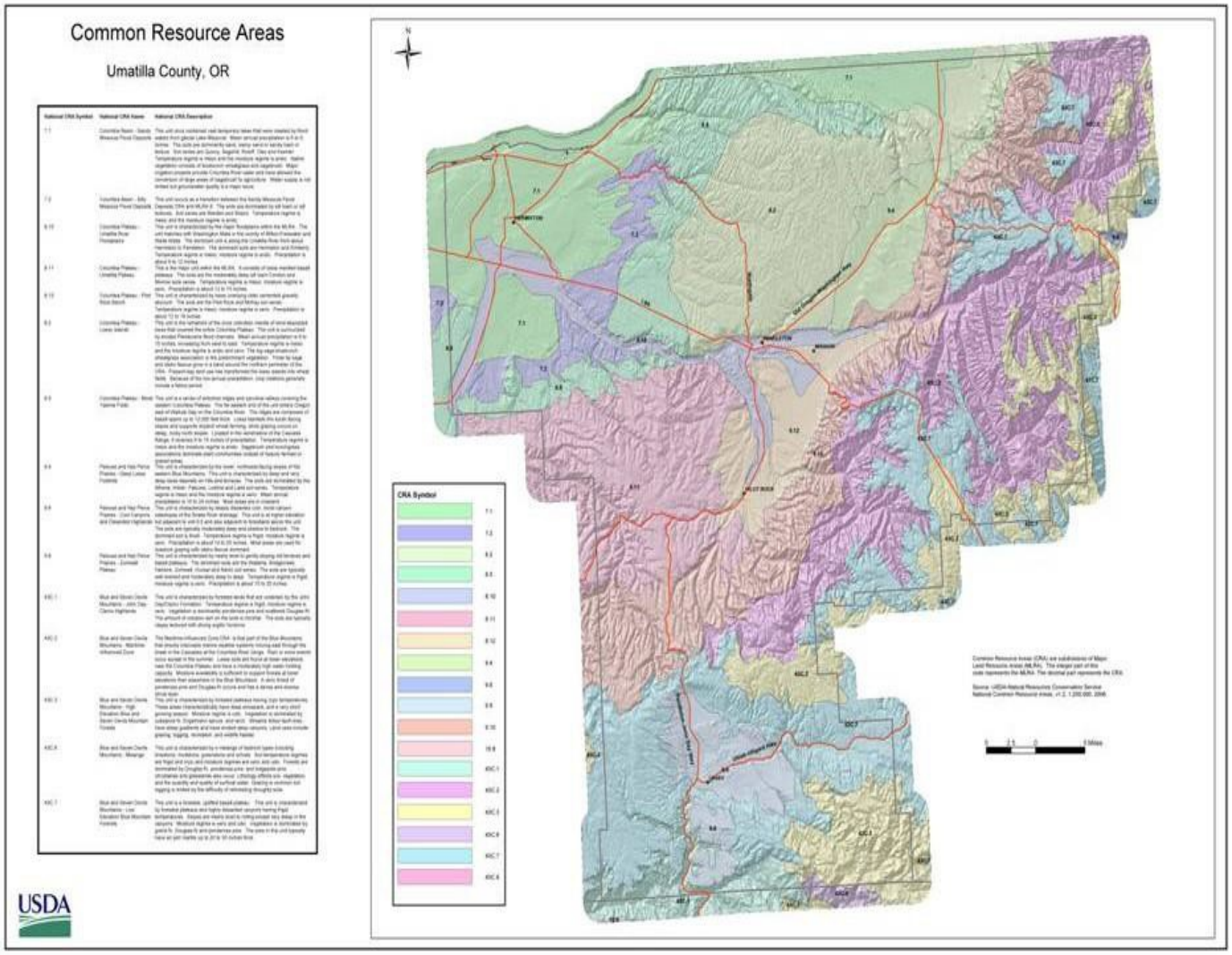
Further discussion needed on developing priority areas for multi-use; including firefighting

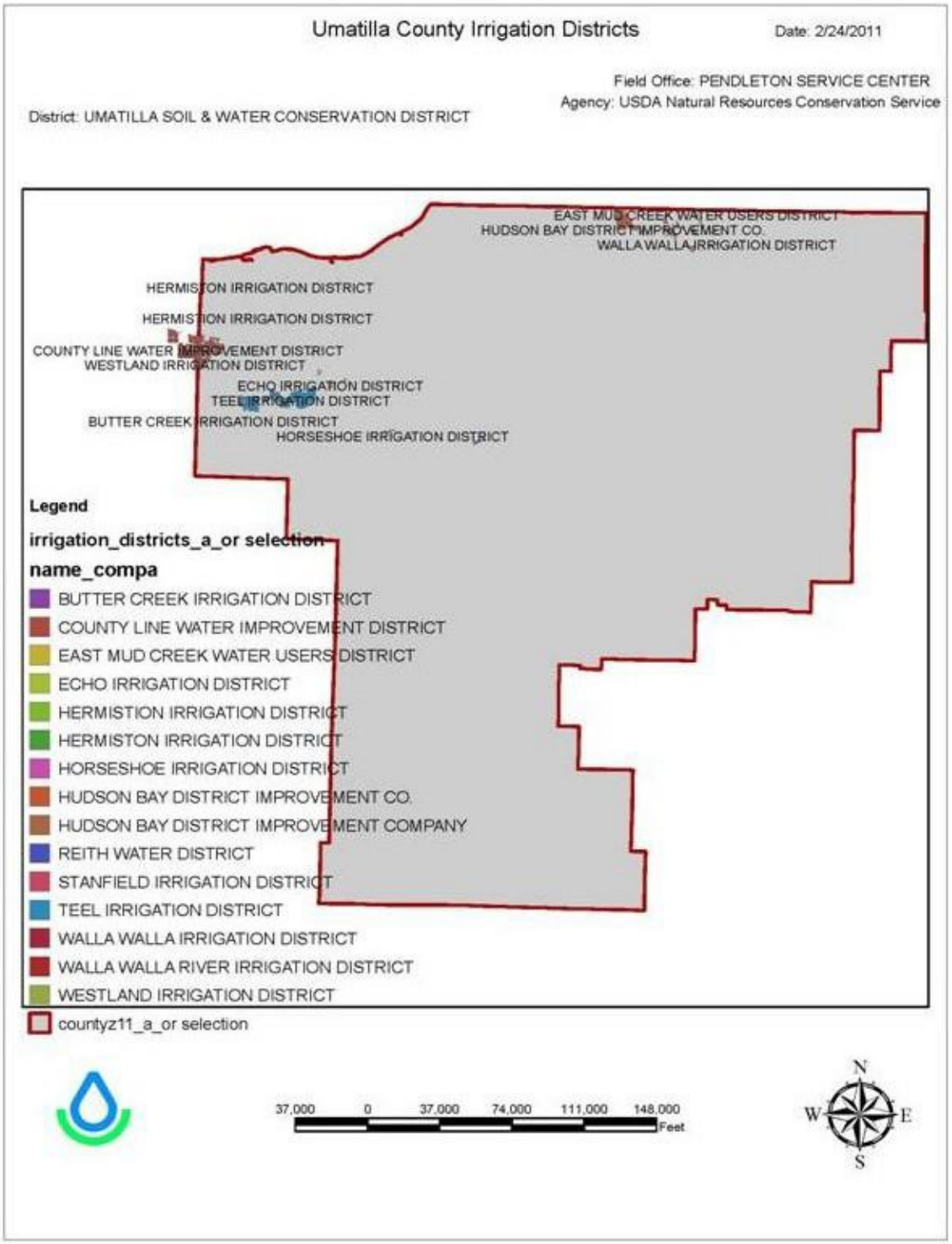
Past CIS'

Hudson Bay Irrigation efficiency
Hermiston Irrigation efficiency
Fruitvale Water Users Irrigation Efficiency
JDU Basin Forestry- Zone 1, Zone 2 Weston Mtn. Langdon Lake
Walla Walla Basin Serious Ground Water Management Area


Date: 2/23/2011
Umatilla County 303D Listed Streams
Field Office: PENDLETON SERVICE CENTER
Agency: USDA - NRCS
State and County: OR, UMATILLA
Juniper Canyon
Vansycle Canyon
Dry Creek
Mill Creek
Birch Creek
Umatilla River
Pine Creek
Walla Walla River
Couse Creek
Wildhorse Creek
Butter Creek
Umatilla River
Alkali Canyon
Coombs Canyon
Tutuilla Creek
McKay Creek
Birch Creek
Dart Creek
Beli Cow Creek
McKay Creek
Meacham Creek
Shumlehorn Creek
Sheep Creek
Webb Slough
West Birch Creek
East Birch Creek
Lane Creek
Bowman Creek
Frazier Creek
Camas Creek
Highway Creek
Pyemile Creek
Stony Creek
Big Creek
30,000 0 30,000 60,000 90,000 120,000
Feet
Legend
303D Listed Streams
County Boundary
N


Umatilla County
Highly Erodible Lands
Date: 2/24/2011
Field Office: PENDLETON SERVICE CENTER
Agency: USDA Natural Resources Conservation Service
District: UMATILLA SOIL & WATER CONSERVATION DISTRICT
Legend
Umatilla County
Umatilla County Soil Survey or667
mapunit.muhelcl
<Null>
Water
Highly erodible land
Not highly erodible land
38,000 0 38,000 76,000 114,000 152,000
Feet
N
W
E
S


Common Resource Areas
Umatilla County, OR
CRA Symbol
USDA


Umatilla County Irrigation Districts
Date: 2/24/2011
Field Office: PENDLETON SERVICE CENTER
Agency: USDA Natural Resources Conservation Service
District: UMATILLA SOIL & WATER CONSERVATION DISTRICT
EAST MUD CREEK WATER USERS DISTRICT
HUDSON BAY DISTRICT IMPROVEMENT CO.
WALLA WALLA IRRIGATION DISTRICT
HERMISTON IRRIGATION DISTRICT
HERMISTON IRRIGATION DISTRICT
COUNTY LINE WATER IMPROVEMENT DISTRICT
WESTLAND IRRIGATION DISTRICT
ECHO IRRIGATION DISTRICT
TEEL IRRIGATION DISTRICT
BUTTER CREEK IRRIGATION DISTRICT
HORSESHOE IRRIGATION DISTRICT
Legend
irrigation_districts_a_or selection
name_compa
BUTTER CREEK IRRIGATION DISTRICT
COUNTY LINE WATER IMPROVEMENT DISTRICT
EAST MUD CREEK WATER USERS DISTRICT
ECHO IRRIGATION DISTRICT
HERMISTION IRRIGATION DISTRICT
HERMISTON IRRIGATION DISTRICT
HORSESHOE IRRIGATION DISTRICT
HUDSON BAY DISTRICT IMPROVEMENT CO.
HUDSON BAY DISTRICT IMPROVEMENT COMPANY
REITH WATER DISTRICT
STANFIELD IRRIGATION DISTRICT
TEEL IRRIGATION DISTRICT
WALLA WALLA IRRIGATION DISTRICT
WALLA WALLA RIVER IRRIGATION DISTRICT
WESTLAND IRRIGATION DISTRICT
countyz11_a_or selection
37,000 0 37,000 74,000 111,000 148,000
Feet
N
W
E
S