



NATURAL RESOURCES LONG RANGE STRATEGY

Grant County

Oregon NRCS
Updated 2018

Section I. Introduction

Purpose

The purpose of this plan is to create a working document that describes the natural resources of Grant County, inventories resource problems as they exist currently, and prioritizes projects for NRCS incentive programs.

There are many conservation partners in Grant County include the two SWCD's (Monument & Grant), Farm Service Agency, North Fork John Day Watershed Council (NFJDWC), South Fork John Day Watershed Council (SFJDWC), Confederated Tribes of Warm Springs Rerervation of Oregon (CTWSRO), Confederated Tribes of Umatilla Indian Reservation (CTUIR), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Forestry (ODF), Oregon Department of Agriculture (ODA), Grant Weed Control, Grant Cooperative Weed Management Area (GCWMA), Oregon State University Extension Service, Oregon Watershed Enhancement Board, Oregon Water Resources Department, USDA Forest Service, USDI Bureau of Land Management.

This plan will look at priorities for conservation work in Grant County over the next 5-10 years. However the plan should be reviewed annually and adjusted as necessary based on current events and changing resource concerns.

Section II. County Profile and Natural Resource Inventory

Grant County is located in Eastern Oregon and has an area of 4,528 square miles. Grant County is the seventh largest county in the state and shares boundaries with eight counties: Morrow, Umatilla, and Union to the north; Harney to the south; Malheur and Baker to the east; and Crook and Wheeler to the west. The county has a population of 7,185 (2015 estimate, US Census Bureau), with John Day being the largest town.

Over 60 percent of Grant County is publicly owned. Four national forests including the Malheur, Umatilla, Ochoco, and Wallowa-Whitman comprise approximately 54 percent of the county. The Bureau of Land Management own nearly 6 percent. Private Lands make up about 38 percent. The private

land is made up of about 70% rangeland, 24% forest, 4% irrigated, and 3% dryland crop. (See Ownership and Land Use Table for more details).

There are 398 farms in Grant County, covering 656,410 acres (2012 NASS Census). Over \$25 million of agricultural products were sold in 2012, with the predominant products being beef cattle and hay. Average age of the principle operators is 58.6 years old. About 54% of the principal operators list farming as their primary occupation.

Columbia Power Cooperative and Oregon Trail Electric Cooperative service Grant County. Columbia Power covers the Northwest part of the county and Oregon Trail covers the remainder of the county. Some homes utilize solar energy, with some completely 'off grid'.

Soils/Geology

Grant County is currently having its soil survey completed. The original survey only covered the main river valley between Prairie City and Dayville. The soil survey was published in 1981, and hard copies are available at the field office. The published soil survey is not available on Web Soil Survey. The new survey will cover all private lands in the county, including remapping the acres covered in the published soil survey. The Malheur and Umatilla National Forests have recent soil mapping on the northern part of Grant County and the new soil survey on private land matches the Forest Service mapping.

The survey is about 95% complete, with most field mapping to be completed by 2018. Some preliminary information is available upon request, but is subject to change until it has been correlated. Once complete it will be available for public access on the online Web Soil Survey.

There is some prime farmland (if irrigated) in the county. Most of the prime farmland occurs along the main rivers in the historic flood plains and alluvial fans of the upper main stem of the John Day.

The counties geology and therefore its soils are very diverse. The geology of a large portion of northern Grant County is Picture Gorge Basalt that is about 12 million years old. This geology forms large basalt plateaus dissected by river valleys. Other geologies include the John Day Formation which is about 25 million years old and which form very clayey soils and is rich in fossils; Serpentine rocks which are about 200 million years old and have very unique soil chemistry; shale and sandstone that is about 250 million years old and forms generally loamy soils; and various rock types from the Rattlesnake Formation which is about 12 million years old. All the stable landscapes in Grant County have a layer of 7,700 year old Mazama ash (from Crater Lake) on the surface which increases the soil water holding capacity.

Thick layers of Mazama ash favors forest vegetation versus nearby range vegetation with little remaining surface ash. The highest point in Grant County is located in the Strawberry Mountain Range at over 9,000 ft high and the lowest point in the Northwest part of the county, in Kimberly, where the John Day River flows into Wheeler County at an approximate elevation of 1800 ft.

Water

The majority of the private rangeland has a 12-16 inch precipitation with a small portion of land in the Dayville/Picture Gorge area receiving 10-12 inches of precipitation. Private forest land has an average precipitation range of 16-20 inches. Higher elevation mountainous areas have precipitation above 20 inches, however the majority of these lands are national forests. Data from long term weather records indicate that any single year may vary up to 5 inches from the long term average precipitation.

The county has portions of seven sub-basins including four that are part of the John Day Basin, and some that are part of the Malheur, Silvies, and Crooked River Basins. The John Day Basin in Grant County is comprised of the Upper Mainstem (1,079,666ac) which includes the South Fork, the Middle Fork (500,438ac), North Fork (719,127ac) and a small area of the Lower John Day (17,809ac) as it drains out of the county. The John Day is unobstructed by any major dam, but there are small private pushup dams throughout the basin that are used for irrigation diversions. Ongoing conservation projects in the basin are focused on replacing pushup dams with fish friendly permanent structures.

The John Day River is a snowmelt-driven hydrologic system that peaks in spring and reaches base flow through summer and fall. The tributaries originate in the mountains and provide cold water that drains in to the main rivers which wind through the valley bottoms. The Upper John Day River, Lower North Fork, and portions of the Middle Fork flow through broad, unconfined valleys filled with gravel. This complex river system supports abundant vegetation consisting of a willow, alder and dogwood thicket understory, shadowed by an over story of black cottonwood due to a floodplain that receives frequent inundation. These features result in a corridor rich in diversity that functions as a biological highway and production stronghold for salmon and steelhead.

There are just over 40,000 acres of irrigated land in Grant County. Most irrigated land is adjacent to creeks and rivers throughout the county. The majority of the irrigated land is supplied by surface water diverted from perennial and seasonal streams, with very few groundwater irrigation wells in the county. Irrigation water rights vary in age from mid to late 1800's to

1990's. The Upper Mainstem of the John Day is unique in that the in-stream water rights are newer than many of the irrigation rights and therefore there are no minimum flow requirements above Dayville. The North Fork John Day does have minimum flow requirements of 32 cfs at Monument.

The John Day River TMDL was published in November 2010. The TMDL identifies much of the John Day Basin as having temperature issues. The Mainstem from above Prairie City to Kimberly and the North Fork from Monument to Kimberly is listed for dissolved oxygen. The Upper Mainstem from Prairie City to Kimberly has E. coli bacteria issues. Sediment is also indicated as an issue, but DEQ is still in the process of creating standards and will not be addressed in the current TMDL standard. There are also streams that are listed for biological criteria within the county.

There are no major groundwater or drinking water issues in Grant County at this time.

Plants and Animals

The counties rangeland, which makes up approximately 70% of the private lands, is characterized by high desert sagebrush communities and a few areas of shrubless grasslands. The majority of rangelands historically had bluegrass species, bluebunch wheatgrass, Idaho fescue, needlegrass species. The rangelands are becoming invaded by annual grasses such as medusahead rye, cheatgrass, and ventenata. Western Juniper, although native to rocky outcrops, have expanded outside their original area and are now considered invasive.

The majority of the forested areas are Ponderosa Pine and Douglas fir communities with limited higher elevation forests that have lodgepole pine, western larch (known as tamarack locally), Grand fir, white fir, Engelmann spruce, and many other species. Most forestlands are utilized as summer grazing for cattle.

Irrigated or wet meadow pastures are dominated by meadow foxtail, especially those that are flood irrigated, with few having timothy or native wet meadow grasses such as bluegrass, tufted hairgrass, and sedge and rush species. Alfalfa hay is predominately grown between John Day and Dayville, and Monument and Kimberly.

There are portions of six wildlife Conservation Opportunity Areas (COA) in Grant County that have been identified in ODFW's Oregon Conservation Strategy. These include in their entirety the Bear Valley COA, Logan Valley COA, Middle Fork John Day River COA, and large portions of the North Fork

John Day River COA, North Fork Malheur- Monument Rock area COA, and Picture Gorge- John Day River COA.

There is one permitted CAFO's in Grant County. A mid size cattle feedlot near John Day.

Upland Species

Overall populations of upland species within Grant County have been stable. Pronghorn continue to slowly expand into suitable unoccupied habitat but overall have shown no significant population increase. The McClellan and Aldrich bighorn sheep herds have not experienced any die off or expansion events, but in 2015 a small band of bighorn sheep colonized habitat along the Middle Fork near the confluence of the North Fork. It is believed that this small band originated from a group that was released on Potamus Creek in 2014. Elk populations have shown a slight increase while mule deer and mountain goat populations have remained stable in the last 5 years. Mule deer population were at historic highs from the mid 1950's to the late 1970's. They started to decline in the early 1980's and have continued to decline at varying rates. In the Murderers Creek unit for example; it is estimated that 29,000 were in the unit in 1979 and by 1990 there was 10,000. Our most current estimate is 5800. Turkeys continue to increase in numbers and quail, chucker, and grouse populations continue to experience typical fluctuations based on yearly environmental conditions. Currently within the county, wolves are sparse with only one Area of Known Wolf Activity delineated in the Desolation Wildlife Management Unit. However, dispersing wolves continue to pass through the county and it is expected that over time the resident wolf population will increase. Cougars are most likely increasing slightly over the past 10 years and bear have remained relatively stable.

ODFW created the Mule Deer Initiative program in 2010 to develop and implement strategies that will improve mule deer populations. Plans were drafted for six of the management units in Eastern Oregon, including two units within Grant County. The Murderers Creek Unit which lies entirely in Grant County and the Heppner Unit which is partly in Grant County, but also extends into Morrow and Wheeler County.

Rocky Mountain Elk are increasing in numbers throughout the county. Large herds of 100-200+ have been witnessed in the valley bottoms. Elk inhabit the forests, the open rangelands, and the irrigated grounds of the county. Elk often venture into the irrigated hayfields and pastures in late summer to forage. The elk also consume ranchers hay stacks in the winter time.

Upland Species information contributions from email communication with District Biologist Ryan Torland (ODFW), 2017.

Fish

The John Day River supports wild fish populations of summer steelhead, spring Chinook, bull trout, westslope cutthroat, and interior redband trout. Steelhead were listed in 1999 and bull trout in 1998 both under the Endangered Species Act (ESA) and the upper John Day subbasin is a stronghold for all salmonids in the basin.

North Fork

From its confluence with Camas Creek to the headwaters in the North Fork John Day Wilderness, the North Fork of the John Day River is one of the most important rivers in northeast Oregon for the production of anadromous fish. Compared to other subbasins in the John Day Basin, the relatively high level of production in the North Fork is attributed to the availability of cool water refugia, resulting in higher survival and growth rates. While spawning habitat is not considered to be fully seeded, some research indicates that juvenile rearing habitat is close to capacity.

Spring Chinook spawn and rear in the North Fork above Camas Creek and most major tributaries, including Camas Creek, Desolation Creek and Granite Creek. The population occupying the wilderness reach supports more than twice as many Chinook per kilometer as the Middle Fork. Steelhead spawning and rearing areas are widely distributed across North Fork and tributary habitats. Protection and restoration efforts throughout the subbasin are considered to be a top priority because there is relatively high potential to increase productivity and population abundance. Seven populations of bull trout have been identified in the North Fork subbasin. All of those populations exist and are generally located in the mainstem and upper tributaries, including Desolation Creek. Migration patterns likely extend downstream seasonally to the extent that habitat and suitable water quality conditions are available.

Middle Fork

Currently, spring Chinook use approximately 40 percent of the subbasin and are generally known to spawn in mainstem from Mosquito Creek to the headwaters at Phipps Meadow. Chinook also spawn in larger tributaries such as Clear Creek. After emergence, juveniles distribute downstream then move to cooler tributaries for rearing as water temperature increases and flow decreases.

Steelhead spawning and rearing is distributed throughout the Middle Fork and tributaries, including mainstem areas in the lower and upper Middle Fork and Long Creek. There are numerous tributary spawning streams distributed from the lower end of the population boundary to the uppermost reaches. Nine populations of bull trout have been identified in the Middle Fork John Day subbasin, six of which are classified as extinct. The remaining three include the Clear Creek (resident), Granite Boulder Creek (resident/migratory), and Big/Deadwood creeks (resident/migratory) populations.

One of the most significant threats to native salmonids in the Middle Fork John Day subbasin is the invasion of nonnative smallmouth bass. Smallmouth bass are responding to warmer water conditions in the subbasin by expanding their range. Juvenile salmonids did not evolve in the presence of smallmouth bass, which makes them highly susceptible to bass predation. Models suggest that if the current trend continues, and significant riparian restoration does not occur, bass are likely to occupy the entire Middle Fork by 2080. The combination of thermal stress and increased predation could result in the extirpation of spring Chinook in the Middle Fork John Day subbasin.

Mainstem

The mainstem is a migratory corridor for all species and also provides the primary spawning habitat for spring Chinook upstream of Prairie City. Spring Chinook also spawn in the lower reaches of several headwater tributaries. Rearing occurs throughout the headwaters in both the mainstem and tributary habitats. Seasonal flow fluctuations and suitable water temperatures allow for rearing to occur downstream of John Day in the spring and early summer, and in accessible cool tributaries throughout the subbasin.

Winter conditions concentrate fish in ice-free areas associated with springs and seeps. High winter flows distribute fish onto downstream floodplain habitats. Emigration timing by juveniles is bimodal with pronounced peaks in fall and spring. Complex habitats with abundant cover are required throughout the entirety of their freshwater journey to ensure optimum growth and high survival rates. Steelhead are widely distributed in the subbasin. Spawning and rearing occurs in almost all significant tributaries upstream of Picture Gorge. Some spawning may occur in the upper mainstem during years when spring flows allow. Rearing occurs throughout the mainstem as water temperature allows, and becomes more concentrated toward upstream headwater and tributary habitats as water temperatures increase and flows drop during summer.

Bull Trout life history requirements relegate their use to mainly the headwaters and the upper basin tributaries where the coldest water exists. Seasonal rearing and migration occurs in the mainstem when water quality is favorable, along with some foraging and exploratory movements.

John Day River Spring Chinook Salmon

Through the past sixteen years, redd counts have ranged from 746 to 2,195 (1,817 to 7,808 estimated spawners). We have observed similar trends of a decline followed by an increase in the Mainstem, Middle Fork, and North Fork populations; however, the Mainstem redd count is beginning to exceed the North Fork as the more abundant population.

John Day River Summer Steelhead

From 2006 to present, ODFW has estimated adult steelhead abundance in the South Fork John Day River upstream from rkm 10. The total South Fork steelhead escapement for 2016 was estimated at 849. The NOAA recovery goal for abundance of the South Fork steelhead population is an escapement of 500 adults. Our results indicate escapement has exceeded this goal in 9 of the 11 years that we have estimated spawning abundance in the South Fork. Spawner abundance increased from 2006 to 2012, and has been decreasing since 2012.

High quality water and riparian habitat are essential for the John Day fish populations and their recovery. The majority of the spawning and rearing habitat for John Day fish species are located in Grant County and habitat restoration actions to address limiting factors have also been focused in the County.

Fish information from contributions by Brent Smith (ODFW), 2017, Ian Tattam (ODFW), 2017, and Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO). 2014. John Day River Basin Watershed Restoration Strategy. John Day, Oregon.

Section III. Natural Resources Analysis

In the past 20 years, NRCS has made over \$15 million in incentive payments through the CSP, EQIP and WHIP programs. These payments have resulted in the substantial conservation benefits. Including; 21,400 acres of juniper removal, 73 miles of cross fencing, 9,200 acres of rangeland seeded, 2,000 acres of forestland thinned, 19 miles of irrigation pipeline installed, and 144

off stream water developments. Less than 25% (138,000 acres) of the grazed land in the county has had a prescribed grazing plan written.

Since 2001 our partners have also made major contributions that include, but are not limited to, the following conservation efforts:

- 86 in stream barriers removed
- 493 miles of riparian fencing
- 27,000 acres of weeds treated
- 13,300 acres of rangeland seeded
- 13,500 acres of juniper removed
- 151 spring developments
- 810 acres of forest thinning

Results from conservation Activities

Fish now have access to miles of additional habitat. This stream habitat is being improved by the riparian improvement projects. Rangelands are being improved through the weed control, juniper removal, and rangeland seeding. Livestock distribution and grazing management has been improved through the additional spring developments and cross fences. Forests have been thinned and are now more resilient to fires and drought. However, there are still innumerable projects still remaining.

Remaining treatment needs:

- Rangeland needs: noxious weed control, juniper control, proper grazing use.
 - The resource issues on rangeland include noxious weed invasion, juniper encroachment, and poor grazing practice. These issues result in degraded wildlife habitat, increased wildfire hazard, reduced livestock forage availability, and impaired hydrologic cycle.
- Pasture and Crop needs: irrigation system improvements.
 - The resource issues on irrigated ground result in inefficient use of water on irrigated land.
- Forestland: thinning and fuels reduction, insect and disease prevention & control.
 - The resource issues on forestland result in reduced forest resistance and resilience, risk of disease and insect susceptibility, heavy fuel loads increase the risk of catastrophic wildfires. Fire return intervals on dry-pine forests are suggested to be less than 25 years, average 3,000 acres and the fuels driving the fire spread were surface fuels. The Canyon

Creek fire in 2015, burned over 100,000 acres and the major fuel driving the fire was tree canopies.

- Wildlife: upland species need habitat improvements (see Rangeland needs), aquatic species need better quality habitat including riparian area improvements and access to habitat that is inaccessible due to manmade barriers.
- Land protection: preserving and protecting the high value properties from subdivision, or general degradation is imperative. There are ecologically high value or near pristine private lands in Grant County that should be protected. There are large ranches at risk of subdivision by the next generation, or future landowners.

Section IV. Natural Resource Problems and Desired Future Outcomes

Invasive Species and Proper Grazing Use

What is the severity of the problem?

Nearly every rangeland owner in Grant County has varying levels of sustainability issues. Noxious weed invasion (including annual grasses), juniper encroachment, and upland and aquatic species in need of habitat improvements are just a few of the contributing factors associated with the declining rangeland health. This resource concern is detrimental to the watershed as sedimentation and depleting near-stream vegetation increase water temperatures and bacteria levels, decreasing stream and riparian health and vigor.

Who is willing to help with this resource concern?

Consistent partners in cooperation with the NRCS on the rangeland health concern are the Grant and Monument Soil and Water Conservation Districts, the Watershed Councils, the Confederated Tribe of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Oregon Department of Fish and Wildlife. This is an issue that is a high priority because the consequences of taking no action include, wildlife habitat degradation, continued loss of native plant diversity, forage loss for livestock, increased soil erosion and sedimentation into anadromous fish bearing streams, interrupted hydrologic cycle, reduced stream flows, and reduced economic viability of agricultural operations.

Resource Trends

This problem has still continued despite practices used to enhance the rangeland that include: brush management (juniper removal), fencing in riparian areas, cross fences, stock water improvements and prescribed grazing. Although many of the invasive species have been in the area for decades, there has been an exponential increase over the past few decades, according to local residents. The recent increases may be due to fire suppression, improper grazing on private land, climate change, and increased pathways for dispersal and conveyance of plant seed. Pressure in the form of increased utilization of private lands for grazing operations has increased over the past several decades. Public lands grazing has declined over the past several decades. Public land managers require stricter standards to be followed, resulting in shorter grazing seasons on allotments. Which in turn has caused private lands to be utilized more in order for operations to stay viable. This overgrazing is in part responsible for the declining resource trends.

What are the goals?

- Stop expansion of declining rangeland health
- Reduce the extent of the rangeland sustainability problem

To make a demonstrable impact on rangeland in the county between 10-30 percent of the acreage needs to be treated. This would mean 80,000 to 240,000 acres would need to be treated for weeds, juniper and grazing management. To accomplish this we would need to do outreach, brush management, herbaceous weed control, along with facilitating practices such as cross fencing and water developments.

How much funding is required?

To fund the management of 80,000 to 240,000 acres approximately \$8 to \$24 million will be needed to cover the cost of outreach, cost-share assistance programs, and technical assistance.

Forest Health

What is the severity of the problem?

Insects, disease, and overstocking has contributed to a deteriorating forest health in thousands of forestland acres in Grant County. Catastrophic wildfire risk has increased, Douglas fir trees have invaded into ponderosa pine areas, and fuels need reduced. Forest landowners, bordering landowners, and towns within forests are all greatly affected by the increased risk of wildfire. The wildlife habitat health also declines when the forest health deteriorates as well as the increased probability of a catastrophic wildfire.

Who is willing to help with this resource concern?

The Grant and Monument Soil and Water Conservation Districts, the Watershed Council's, and the Oregon Department of Forestry are all partners with the NRCS to improve forest health. This group will help identify means to eliminate wildlife habitat degradation, increase timber products, and increase economic viability.

Resource Trends

In recent years, timber harvest has declined dramatically; market prices have reduced the incentive for landowners to do any pre-commercial logging, which is necessary to maintain a healthy density and remove invasive species. Invasive species overrunning forests has lead to decreased livestock and wildlife forage.

What are the goals?

- Create a buffer between the private and public forestland interface
- Reduce invasive trees
- Reduce overall fuels to decrease wildfire risk

The NRCS will be able to treat about 1000 acres per year in the basin. Progress will not be visibly evident for quite some time, but outreach will be in place and pretreatment inventories will be carried out to identify current and appropriate stocking levels and existing insect, disease, and other site specific issues that need to be addressed. Focusing on removing the small overstocked, dying, diseased, deformed, and invading species to leave trees the best chance to return to a state of health and productivity.

How much funding is required?

The 1000 acres a year that get treated, at \$450 per acre, will require \$450,000/year. Treating only 20 percent, or 53,480 acres, of the total 267,400 acres of private forestland in the county will take many years unless additional funding and assistance is given that

could increase the acres treated per year. We are prioritizing the public-private interface, hoping to make an impact that way.

Water Quality & Quantity

What is the severity of the problem?

The John Day River offers a valuable spawning and rearing habitat for fish and is important for wildlife; thus, the declining stream quality is of significant concern. Steelhead and salmon are affected as movement up and down stream requires more fish-friendly passages. As mentioned earlier, several streams are listed in DEQ's TMDL plan as having temperature, E coli, bacteria and sediment issues. These issues result in degraded water quality for steelhead, salmon and trout.

Crops also rely on steady flows on the John Day River and its tributaries. With low rainfall in the region, irrigation is needed to support hay production. Grant County has approximately 40,000 irrigated acres, located mostly along the main stem of the John Day River between Prairie City and Dayville, and the North Fork of the John Day River between Monument and Kimberly. Nearly all the irrigated land is adjacent to the rivers and is supplied by surface water diverted from perennial and seasonal streams. There are very few groundwater wells.

With no major dams in the John Day Basin, the only feasible opportunity for increasing summer stream flows is to improve and maintain upland health, or create irrigation storage reservoirs. Upland health can increase stream flows by increasing effective precipitation, increasing infiltration rates, and improving soil water holding capacity, including activities such as juniper removal and forest thinning, which have shown to increase effective precipitation and improve stream flows. Adding organic matter to the soil will improve soil water holding capacity. Soil health is key to retaining water in the John Day Basin. Small irrigation storage reservoirs have been discussed for decades. Some properties have irrigation storage reservoirs throughout the county. Other options are smaller water and sediment control basins (WaSCB's), to help slow the runoff of large storm events.

Off-stream livestock water is also a need. The recent drought years have resulted in land managers with pastures they can't use or can only use in the spring and early summer months when there is water. The lack of off stream late season reliable water is a significant concern, leaving land managers to rely on streams or move cattle to pastures with reliable water. Fields that only have water in streams are more prone to riparian area degradation from livestock. CREP and ODFW's riparian program have fenced hundreds of miles of streams in the county, but there are thousands more unfenced.

Who is willing to help with this resource concern?

The main agencies the NRCS is partnering with on this resource concern are the Grant and Monument Soil and Water Conservation Districts, the North Fork John Day Watershed Council, the Confederated Tribes of the Umatilla Indian Reservation, the

Confederated Tribes of Warm Springs, Oregon Department of Fish and Wildlife, and the Department of Water Resources.

Resource trends

The number of systems needing improvements has decreased as more systems get upgraded; however, the problem still persists as less water is available, and funders have moved to prioritizing more habitat projects than water quantity projects. Upland improvements continue to be completed adding to the effective precipitation. Riparian areas continue to be a concern. Although there are several miles of riparian fence constructed each year, riparian vegetation is much slower to respond. It is likely due to herbivory by ungulates and beaver. Off-stream water developments continue to be funded, but there is still a substantial need in the county.

What is the goal?

- Improve upland water retention through juniper removal, forest thinning and practices needed to improve soil health and help retain water in the uplands.
- Upgrade and improve irrigation efficiency on the 10,000 irrigated acres in Grant County that are inefficient.
- Identify watersheds where CREP, WaSCB's, off-stream water sources would be beneficial.

This will take cooperation from the partners involved and the landowners. Outreach needs to occur to educate the landowners on the cost-share assistance programs and determine the landowners willing to participate.

How much funding is required?

Approximately \$5,000,000 is needed to cover the financial assistance to upgrade irrigation systems on a quarter of the irrigated acres in Grant County.

Upland improvements will continue to be addressed through the other resource priorities in the county.

Land Protection

What is the severity of the problem?

High value lands can be defined as lands with large contiguous acres with few developments, lands with unique or high value habitat for endangered species or species of concern, or lands in pristine condition. Several of the lands in the county that fall into this category are at risk of conversion by subdivision, implementing practices that would facilitate the loss of habitat, or invasion by undesirable species.

Who is willing to help with this resource concern?

The tribes, Bonneville Power Administration, Oregon Watershed Enhancement Board, have interest and finances to apply toward easements. The partners named above have invested significant funds in the basin, and they want to see their investments protected, as well as protect the pristine or unique properties in the basin. Other local natural resource entities have shown interest by sponsoring workshops and landowner

information. Blue Mountain Land Trust, an entity that holds and manages easements, plans on putting an office in John Day as early as fall of 2017.

Resource trends

Although the trend is not very apparent, there are conversions from high value lands to less desirable lands. Millions of dollars every year are invested in the basin for restoration and it is imperative that these investments are protected. Properties are bought and divided and resold, reducing the economic independence of the property, and increasing the number of developments. As the next generation inherits these ranches they often consider dividing and selling all or portions of the property for inheritors that have no interest in the operation.

What is the goal?

Protect high value properties as necessary to prevent conversion and preserve investments by natural resource agencies.

Section V. Prioritization of Natural Resource Problems and Desired Outcomes

The Local Work Group identified and prioritized the natural resource problems in Grant County. The following five natural resource concerns were identified as the top priorities in the county.

- 1) **Rangeland Invasive Species.** The local work group continues to identify invasives as the top priority due to the rate at which the problem grows the negative economic impact, degradation of ecosystem function and wildlife habitats, and the risk of crossing thresholds. Invasive species will continue to grow rapidly if nothing is done to stop them, and at this point they are in most areas of the county. The local work group identified its 5 year goal as just being able to contain the weeds. This means that acres of weeds may not be reduced, but the expectation to simply stop increasing acres of weeds was felt to be a significant goal.

The group would like to have more landowner participation in weed control. Many landowners either don't treat weeds at all and others only do if they receive significant cost share. Juniper and herbaceous weeds were included in this category, however it was not identified which was thought to be more important.

- 2) **Forest Health.** This concern included all forestland in the county. Although nearly 64% of the county is forestland, only 10% of it is privately owned. NRCS has the ability to work on the private forestland in the county, but does not have the ability to do anything on the public land forest.

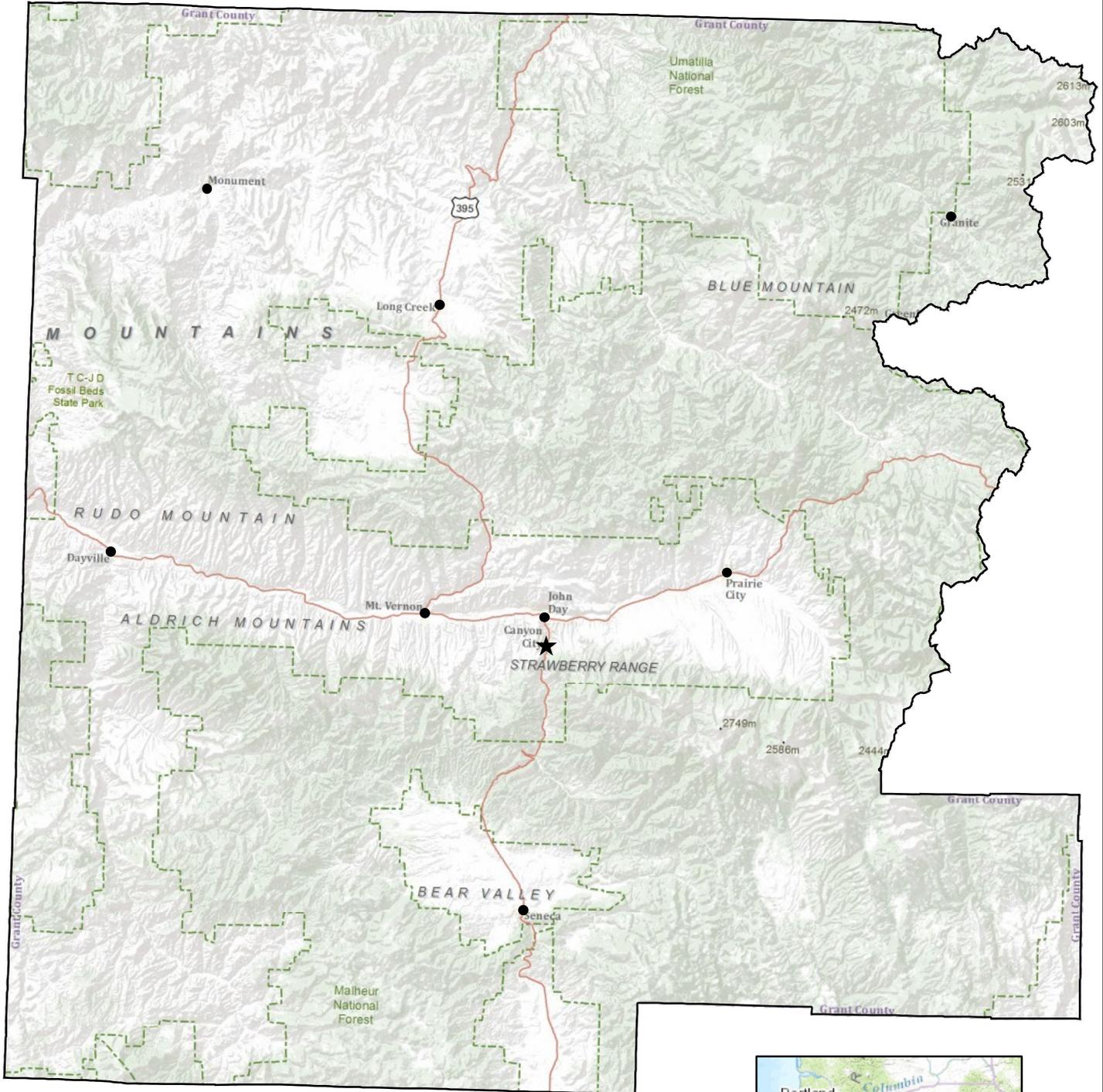
The local work group identified forest health as a concern due to its impact on overall watershed health, negative economic impacts, increased fire hazard, increased disease and pest susceptibility. The highest priority areas on the private land would be those that are adjacent to federal lands. The goal within the next 5 years would be to increase healthy forests and reduce fuels.

- 3) **Proper Grazing Use.** This was identified as a top priority by the local work group due to the loss of grazing for livestock, loss of income to landowner, and loss of habitat for wildlife. Improper grazing use was noted as also contributing to the increase in invasive species. It is almost as important to promote proper grazing use as it is to help treat the invasive species. Education and cost share for facilitating practices is needed to address the concern.

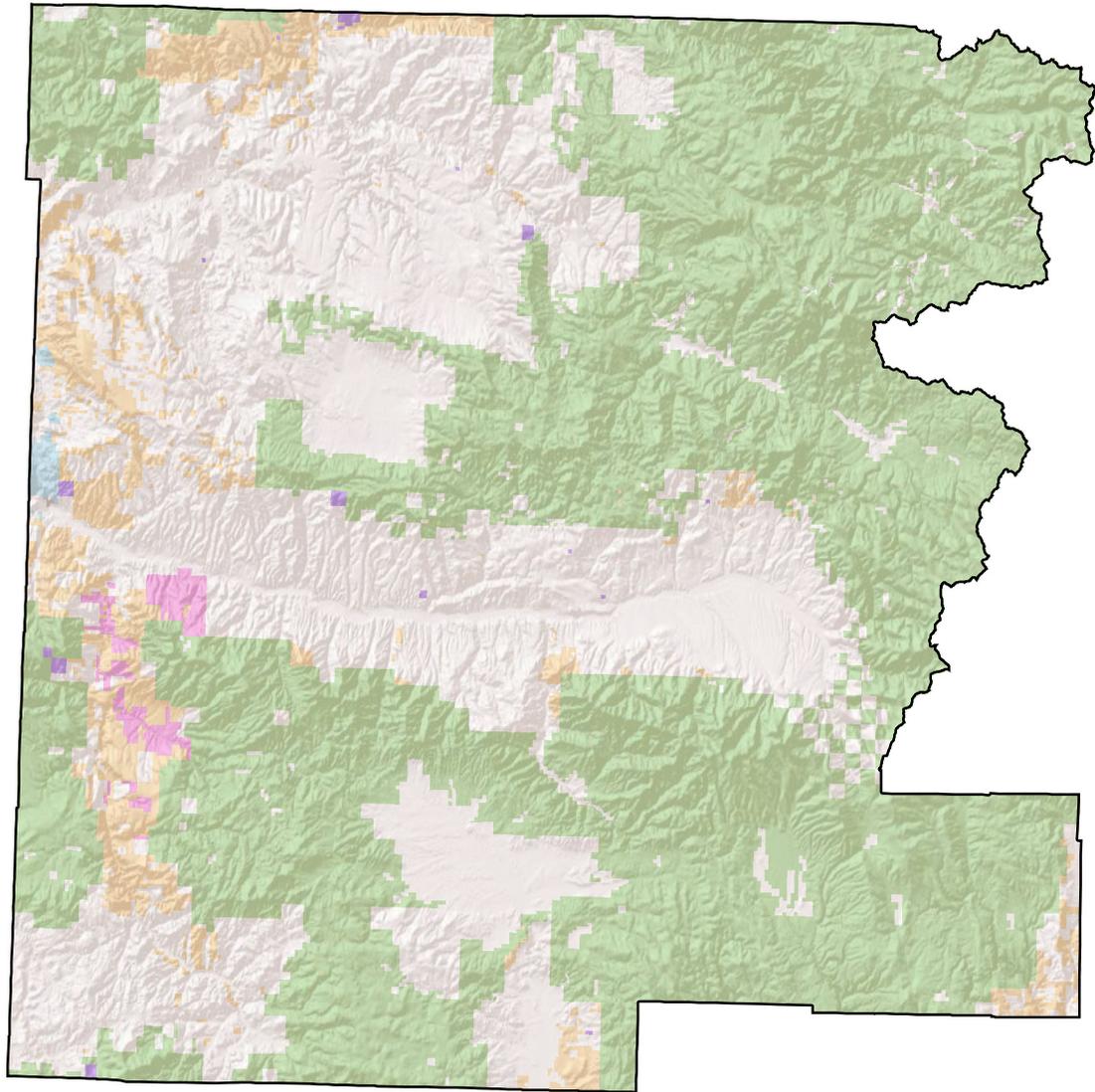
- 4) Water Quality & Quantity. Nearly every year the group considered raising the priority for this resource concern. The LWG further clarified this as riparian health, off stream water facilities, irrigation efficiencies.
 1. Riparian Health
 - a. Grazing Management Plan
 - b. Tree/shrub planting
 - c. Fencing
 - d. CREP
 2. Off-stream watering facility
 - a. Spring Developments
 - b. Wells
 3. Irrigation
 - a. Diversion Upgrade/replacement
 - b. Open ditch to Pipe
 - c. Upgrading Irrigation systems

- 5) Protection of high value land. Preserving and protecting the high value properties from subdivision, or general degradation. NRCS's interest in this is to protect high value working lands from subdivision or other threats of conversion.

Grant County Oregon



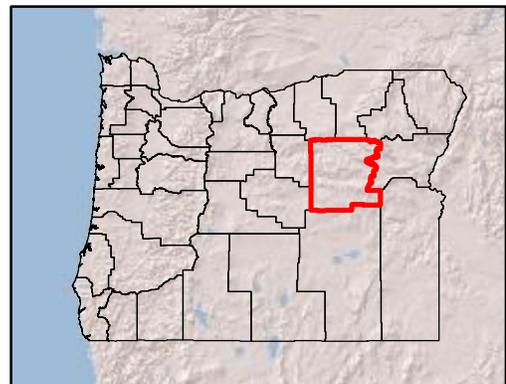
Land Ownership Grant County, Oregon



Legend



Ownership	Acres	Percentage
Private Lands	1,125,348	38.6%
Bureau of Land Management	171,481	5.9%
National Park Service	6,688	0.2%
Forest Service	1,578,714	54.2%
Malheur NF	1,128,931	38.8%
Ochoco NF	57,805	2.0%
Umatilla NF	309,144	10.6%
Wallowa-Whitman NF	82,834	2.8%
Grant Co	800	0.0%
ODFW	29,076	1.0%
Total	2,912,107	

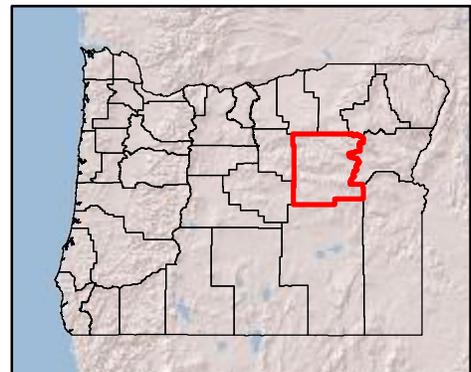


Private Land Use Grant County, Oregon

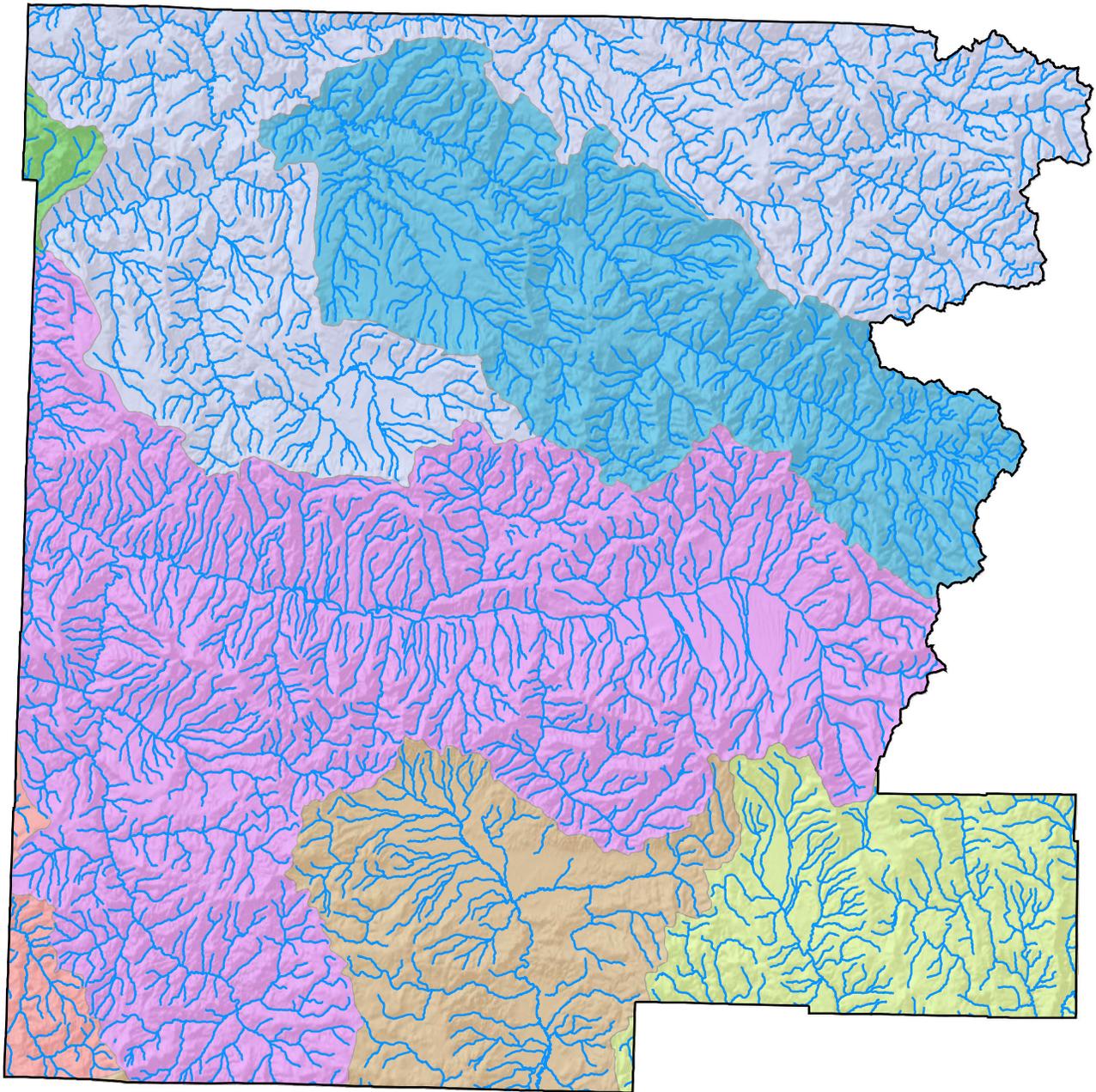
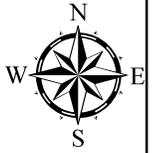


Legend

-  Irrigated land, 40,600 acres, 4%
-  Forest land, 267,400 acres, 24%
-  Range & Dryland Crop, 803,300 acres, 72%

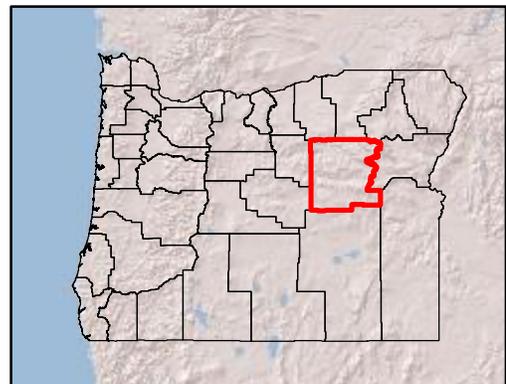


Subbasin Boundaries Grant County, Oregon

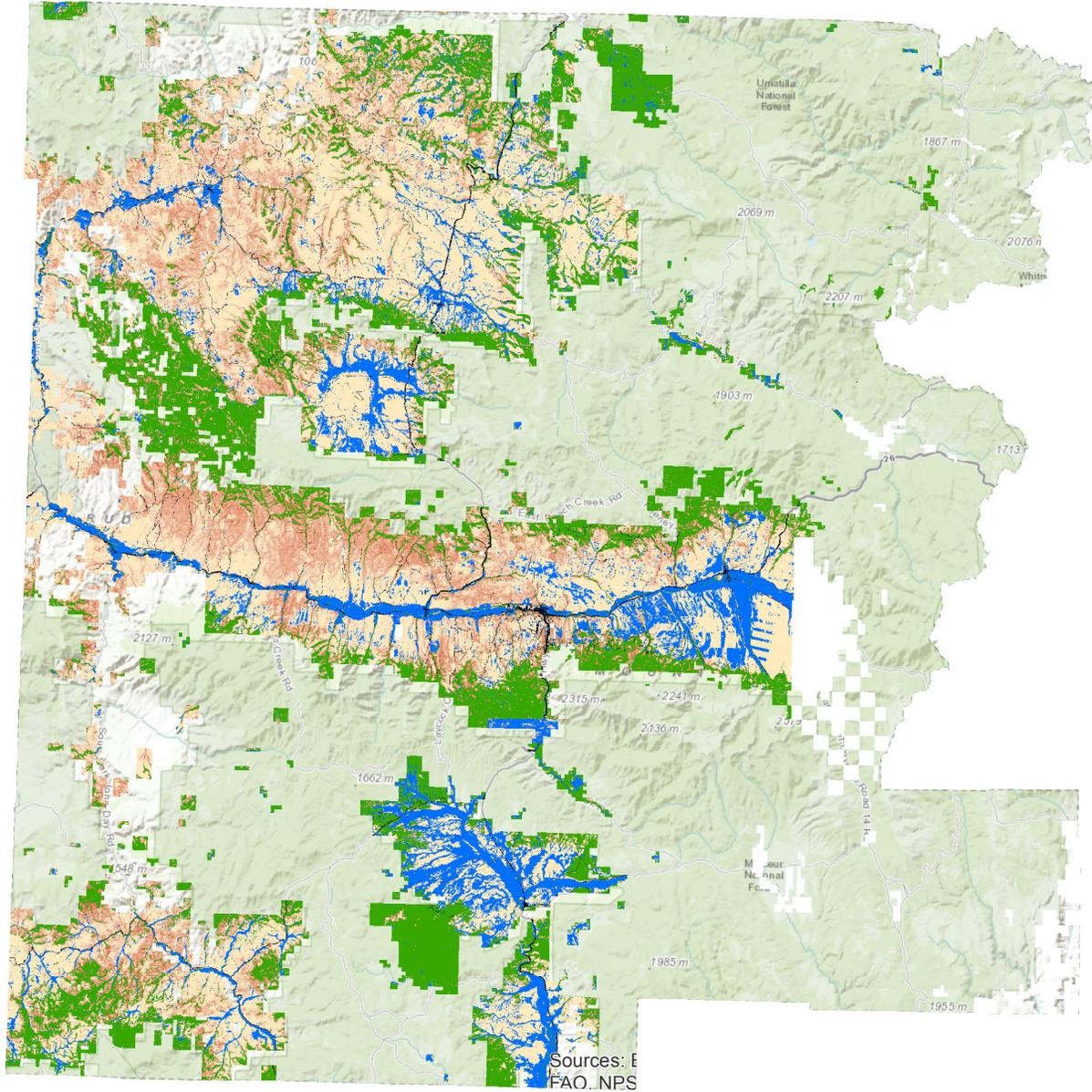


Legend

- | | |
|--|---|
|  Streams & Rivers |  North Fork John Day |
|  Beaver-South Fork |  Silvies |
|  Lower John Day |  Upper John Day |
|  Middle Fork John Day |  Upper Malheur |

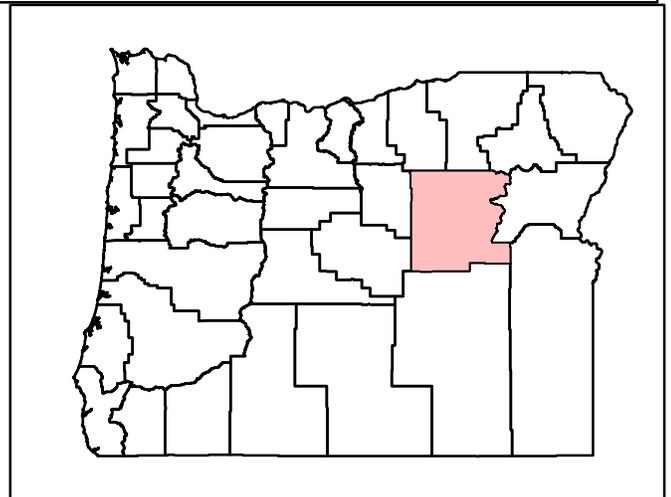


Juniper Map Grant County, Oregon



Legend

Juniper Thematic Map			
	05-10% Juniper Cover		45-50% Juniper Cover
	10-15% Juniper Cover		50% and Grater Juniper Cover
	15-20% Juniper Cover		Agriculture & Wetlands or Lush Herbaceous & Cliffs
	20-25% Juniper Cover		Developed (source: NLCD)
	25-30% Juniper Cover		Forest
	30-35% Juniper Cover		Not completed
	35-40% Juniper Cover		Sagebrush, Bunch Grasses
	40-45% Juniper Cover		Water (source: NLCD)



Grant County Local Work Group Meeting

MEETING AGENDA NOTES

Tuesday, January 30, 2018

Oregon Department of Forestry (Conference Room)

1:00pm-3:00pm

PURPOSE OF THE DISCUSSION:

Provide a forum for NRCS to work collaboratively with our partners so we can develop a plan that strategically utilizes limited resources in a way that benefits all of us.

OBJECTIVES

Confirm resource concerns identified from past local work group meetings and prioritize projects for Conservation Implementation Strategies (CIS) developments.

- **Introductions (Zola Ryan- facilitator)**
 - a. Each attendee was asked to provide name, organization/or affiliation, and the best thing they had heard or seen that day.
 - i. Kirk Ausland- OFD state that they had 70,000 tree seedling available for sale.
- **New Employee: Emma Anspach introduced herself**
- **2017 LWG Meeting summary (Lorraine Vogt- District Conservationist)**
 - a. Northside Juniper and Aspen, Upper John Day forest thinning, drought stock water.
 - b. New forestry area in Izee, working on Ritter group juniper and forestry, working with Tribes on irrigation project in upper John Day valley.
- **2017 Farm Bill update (Lorraine)**
 - a. Northside Juniper and Aspen -1,800 ac left on Northside unit hope to be done in 2018
 - b. Kahler CIS - \$152,000 mostly forest thinning and juniper, year one of CIS
 - c. Forestry – 7 contract \$234,000
 - d. 1 Energy audit contract
 - e. 2 season High Tunnel contacts
 - f. 1 RCPP- sage grouse contract

2017 EQIP Summary			
Funding Pool	No. of Contracts	Dollars Obligated	Acres
Northside Juniper	15	\$ 625,118.16	2822.4
Northside Aspen	1	\$ 4,788.00	0.7
<u>Kahler Upland Improvements</u>	5	\$ 154,887.00	463.7
JDU Basin Forestry	7	\$ 234,592.00	484.5
On-Farm Energy	1	\$ 2,496.00	84
Seasonal High Tunnel	2	\$ 16,915.00	0.1
RCP- Oregon Model to Protect Sage Grouse	1	\$ 45,175.00	497.4
Totals	32	\$ 1,083,971.16	4352.781

- **CREP tech update (Tereasa Perkins- CREP tech)**

The CREP program is a continuous signup.

- Meaning that you can sign up any time of year.
- This is an FSA program.
- Interested landowners should contact Trent Luschen from the FSA, (541)523-7121 ext. 2.
- NRCS provides technical services to FSA for CREP and I will be assisting NRCS in conservation plan development and certification

	Grant County	Baker County
Active Contracts	47	80
Expiring Contracts	10	6
New Applications	7	7
Mid-Management Due	6	13

- **2018 Drought Outlook (Lorraine)**

- Lorraine presented 2018 Drought Monitor maps as of January 23
- If drought designation occurs then only fund available would have to come from existing EQIP allocation.
- Current estimates of 2018 EQIP allocation could be between \$400,000 - \$500,000

- **Conservation Stewardship Program (Lorraine)**
 - 2017 Summary
 - 1 contract, 13,370 acres, \$172,457 total
 - 12 applications, only 4 went through ranking process
 - 2018 Renewals
 - 10 contracts, 20,563 acres, \$119,116 for 2018
 - 2018 New applications
 - 6 applications
 - New evaluation tool, new enhancement lists
 - Deadline for applications is 3/2/2018

- **2018 Conservation Implementation Strategies (Lorraine)**
 - Northside Mule Deer Winter Habitat
 - Kahler Basin
 - Forestry
 - Blue Mountain Vegetative Health Initiative (Grant SWCD RCPP)
 - 1.2 million awarded, \$900,000 on the ground, juniper and pre commercial thinning.
 - Trying to build on forest service work with a goal to improve last season flows for salmon and steelhead.
 - Still working on ranking question using GIS tools with an aim to prioritize the most productive ground
 - 1,700 ac juniper acres, and 3,500 ac targeted. This should be more than money available
 - State (High tunnel, Organic, Energy)
 - EQIP Program update: Deadlines is March 16th, 2018

CIG Grant Proposal

- Looking for projects that have proven science that NRCS can expand and use with landowners in the future.
 - National is for more than \$75,000 Deadline: February 26, 2018
 - Less than \$75,000 can apply of the state level. Deadline: TBD
 - How much monitoring would be included in this proposal? Would have to find out.
 - Would biocontrol for yellow star thistle, stand set up and monitoring be possible?
 - Match need to be secured at the time of the proposal?
 - Is it a 50% match? Yes, can be cash or in-kind.

- **Review of County Priority Resource Issues (10 minutes, Lorraine)**
 County Priority Resource Issues
 1. Invasive Species (including juniper, annual grasses & herbaceous weeds)
 2. Forest Health (including aspen restoration)
 3. Grazing Management (including stock water developments and border/cross-fencing for private lands bordering federal ground)
 4. Water Quality/Quantity (including irrigation improvements, stock water)

5. Easements (to protect investments of conservation funds and mitigate threat of subdivision)
 - a. List has not changed much since 2010. Recently added, water quality and quantity, and easements.
 - b. Upland storage falls into added water quality and quantity.
 - c. Could forest funding be used to address other forest health issues besides stocking level, new diseases (diploodium, black scale)
 - i. Treatment would not change, still based on working with stocking rates.
 - ii. Diploodium is affecting riparian vegetation in middle fork and riparian zones
 - iii. Appear to be health, not overstocked timber, maybe an air movement areas
 - iv. Western gall rust also an issue, lost 50% of large seed trees.
- Zola confirmed that the resource concerns are the high level priorities for the county. Within each of the resource concern categories different CIS can be developed to address them.
 - a. A question was asked from last year's meeting what invasive grasses funding has been done. Most of the funding was focused on juniper removal.
 - b. Annual grass treatment is a facilitative practice and requires additional practices to address the resource concerns.
 - c. ODFW murders creek work has been successful. But ODFW has said that medusahead treatments have been multiple treatments post fire.
 - d. Zola – last year's meeting small group could not identify which species was most important.
 - e. A question was asked if soil health is applicable to any of the counties project. Lorraine stated most of the focus for soil health has been on cropland, efforts continue to be developed on range, pasture, and forestry.
- Is everyone okay with the current Local work Group Priorities
 - a. Someone asked if easements should still be on the list.
 - b. It seems everyone is okay with this list.
- **Future Direction (50 minutes)**
 - Upper John Day River Flow and Protection Project (CTWSRO RCPP)
 - o \$1.4 million EQIP
 - o 3.2 million ALE
 - o Just in the contracting phase
 - Looking at first sign up in fall 2018, or spring 2019
 - 2 land trust willing to help with this, Blue Mountain Land Trust
 - o
 - 2019-2020 funding

Current Proposed Timeline of EQIP funding

2018 EQIP

- Northside Mule Deer – Final Year
- Kahler Basin - 2019
- Izee Forestry – Last Year
- GSWCD-RCPP – First Year

2019 EQIP

- GSWCD-RCPP – 2nd Year- Blue Mountains Vegetative Health Initiative
- Tribes – RCPP – Upper John Day River Flow and Protection Project
- Kahler Basin Upland Improvement
- JDU Basin Forestry- SW Grant County

2020 EQIP

- GSWCD-RCPP – 3rd Year
- Tribes – RCPP – 2 Year
- New CIS – EQIP – Ritter proposed CIS Year 1 of 3 or 4
 - Ritter Group put in a zero funding CIS this last year. Could possibly start this in 2020
- New CIS – JD Partnership coordinated concept

2021 EQIP

- Tribes – RCPP – 3rd Year
- Ritter CIS – 2nd year
- New CIS- 2nd year

Group Discussion

Zola – What is the next Local Priority to work on?

- Concept of coming back in to old juniper cut to control past investments.
 - 10 year practice life span
 - Would OWEB be willing to pay for retreatment?
 - Could fire be used?
 - EQIP funding to control with fire was very beneficial in Izee.
 - Liability
 - Fear of Fire
- Just finished stock water assessment on area south of highway 26. This is a high priority.

Zola – divide the group into the two for 10 minutes

- Stock water
 - Juniper, forest thinning, and stock water in the southern part of the county.
 - Addressing country priority 1,2,3 at more of a holistic approach
- Juniper retreat
 - a. Important to follow up with fire, herbicides, cutting