

# NORTHEAST ELKO CONSERVATION DISTRICT 2019 RESOURCE NEEDS ASSESSMENT



*Photo collage courtesy of Cottonwood Ranch, KUNR.org, Lands of America.com, and Wallace Keck NPS.*

Developed in cooperation with the Northeast Elko Conservation District, partnering local governing entities, non-governmental organizations, and individuals supporting sustained multiple-use resource management initiatives on private and public lands.

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## **FORWARD - LOCALLY LED CONSERVATION**

### **From The Nevada Association of Conservation District's 'Resource Needs Assessments, A Template for Conservation Districts', 2017.**

The need for local leadership in natural resources management was one of the most important factors leading to the establishment of conservation districts nearly 80 years ago, founded on the philosophy that conservation decisions should be made at the local level. Conservation districts can (and should) have positive influence and involvement in natural resource issues by significantly leveraging local, state, and national funding sources to deliver “on-the-ground” conservation projects and management that is beneficial to both the local community and natural resources.

Following the creation of the federal Soil Conservation Service, conservation districts were created as a local focal point for coordinating and delivering technical assistance and funding to private land managers. Over the years, federal, state and local governments have channeled assistance through conservation districts to address virtually every aspect of natural resource conservation, focused on setting priorities and carrying out programs based on local conditions and needs. However, legislation such as the 1985 and 1990 Farm Bills, the 1987 Clean Water Act amendments, National Environmental Policy Act (NEPA), and the 1990 Coastal Zone Act have significantly changed the way we address conservation and natural resource management needs. These and other programs, driven largely by national priorities, focused federal conservation efforts on a broader scale of natural resource concerns. State and local conservation leaders were often left on their own without adequate technical assistance to balance limited program resources against growing conservation needs and so conservation became driven by program funding rather than resource needs.

The enactment of the Federal Agricultural Improvement and Reform Act of 1996 and the 1996 Farm Bill signaled a shift back to the original district philosophy of locally led conservation. Elected officials and policy makers reaffirmed that local leadership and grassroots decision making are the keys to successfully managing and protecting our natural resources. As a result, conservation districts now have the opportunity to return to their roots and lead their communities in determining local conservation needs and priorities.

For Nevada’s Northeast Elko Conservation District, the first and fundamental requirement for locally led “resource based” conservation is the development of current resource needs through a needs assessment and analysis. The process utilizes the Natural Resources Conservation Services’ (NRCS) Resource Concerns Inventory approach, an approach that is driven by resource concerns rather than program requirements. The process generates a range of local resource concerns for Local Work Groups to review and use to provide recommendations to the NRCS State Technical Advisory Committee, ultimately assisting with planning and implementation initiatives in the conservation district.

## **EXECUTIVE SUMMARY**

Throughout the northern Nevada Great Basin the demand placed upon the renewable and non-renewable resource base is continually increasing. We strive to manage our resources for the ecological sustainability required to preserve them for future generations, all amid increased growth in the region and the diversified marketability for local resource products. Soil, water, air, plant, animal, and human resources comprise the primary building blocks that support the holistic and dynamic ecosystems that allow the habitat to sustain a high quality of life for all inhabitants. Managing these habitats requires a collaborative initiative and partnership comprised of local citizenry, local government, land management regulatory agencies, and nongovernmental organizations and interest groups. As the driest state in the nation, Nevada is challenged to safely manage its precious ground and surface water resources to sustain the demand from an increasing population and growing commercial/industrial infrastructure, while providing a stable agricultural base. The Northeast Elko Conservation District (NEECD) supports an integral agricultural economy of livestock-based enterprises. The visual landscape, cultural resources, and recreational opportunity in the mountainous zones that support big game, upland fowl, and fisheries are important components of the natural resource base and local economy. Specifically, recreational use is integral relative to multiple-use management directives and prioritization in the NEECD given the Jarbidge Wilderness and surrounding mountainous zones to the east and south, comprised of vast expanses of privately and publicly administered lands.

Cattle and sheep operations rely almost exclusively on the public lands grazing allotments managed by the Bureau of Land Management (BLM) and the United States Forest Service (USFS) whom have regulatory authority over nearly 86% of the land base in the state of Nevada. Public lands are managed to provide sustained multiple-use by all groups including (but not limited to) grazing, recreation, and commercial-industrial mining while preserving habitat integrity for the multitude of species that occupy these ecosystems. Soil, water, and vegetative resource stabilization and enhancement are required to provide and sustain the integrity of optimal habitat conditions now and into the foreseeable future. Preservation of these viable resources through the implementation of sound grazing systems and the enhancement of water availability to promote optimal livestock distribution can result in the improved and stabilized habitats needed to sustain these ecosystems.

There are many resource concerns that need to be considered in promoting sustained multiple-use in the NEECD. Pinion Juniper invasion throughout the sagebrush-steppe has altered what were at one time optimal habitat zones, requiring multi-disciplinary planning when evaluating and prioritizing treatment sites for thinning. Many of these areas serve as thermal protection zones and migratory corridors for big game and a variety of nesting/roosting avian species that utilize woody canopy. The distribution of sage-grouse and their upland sagebrush and riparian habitats throughout Elko County requires integration of grazing systems and land treatment conducive to habitat stabilization and enhancement. The fire cycle significantly

impacts eco-types throughout the northern Nevada watersheds that have sustained decades of reoccurring large-scale fire resulting in vegetative type conversions to monotypic cheat-grass plant communities. In order to buffer against the impact of large-scale burns, land management agencies need to evaluate the opportunity to develop buffering zones and fuel break corridors to inhibit and/or slow down the spread of these devastating events. Critical area stabilization and rangeland plantings are essential practices required to address vegetative reestablishment within hot fire zones where the native species cannot regrow or germinate post-fire. Invasive species and weed invasion must remain a primary consideration relative to post-fire treatment and should be an integral component of the BLM Elko District Resource Management Plan, the USFS Forest Plan, the Jarbidge Wilderness Area Plan, and the Northeast Elko Conservation District prioritizations in their annual work plan. Among these resource concerns are issues relating to soil health and erosion, agricultural land conversion, and increasing wild horse populations that risk straining the ecosystems water resources (e.g. springs, seeps, riparian zones) to such an extent that rehabilitation may require decades of intensified management to achieve stabilization.

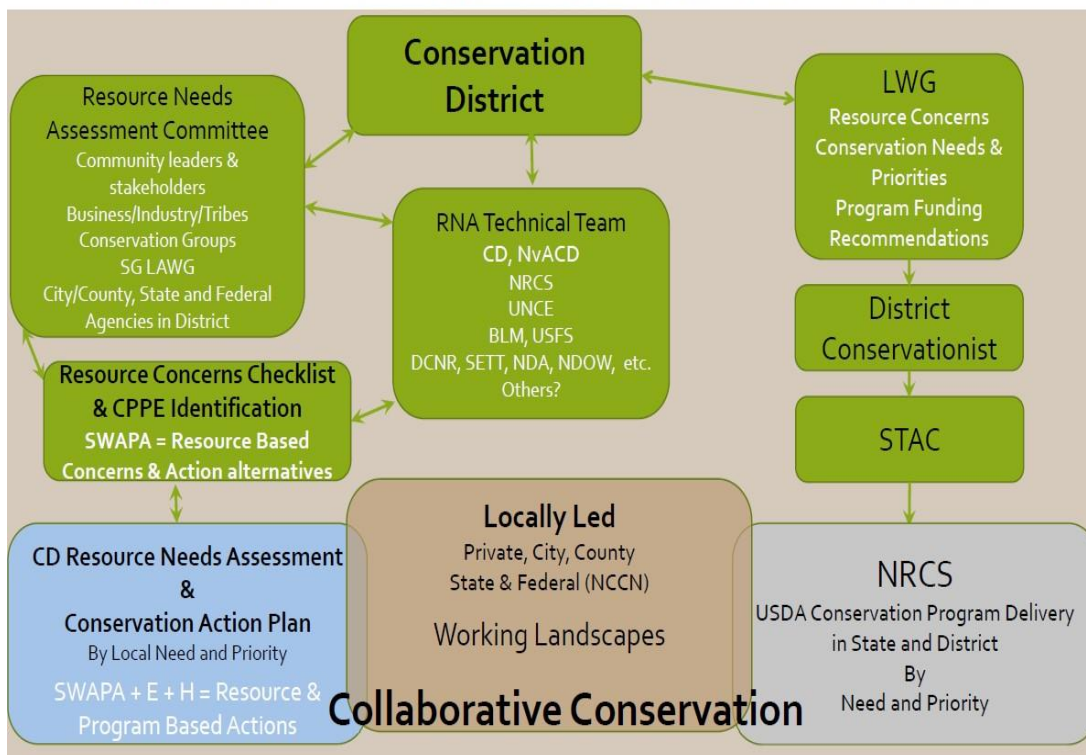
Water conservation initiatives throughout all basins in Elko County remains a top priority. These initiatives require adoption of state-of-the art irrigation system technology to minimize water loss and maximize application efficiencies. Floodplain management on native/improved pasture and hayland requires emphasis on soil stabilization with both native and improved cultivar herbaceous cover, ground water recharge through water spreading, riparian zone stabilization practices, and managing to enhance proper functioning condition of perennial stream water supplying sources. Conservation cropping systems that reduce the annual gross water application requirement play a vital role in achieving optimal hydrologic basin balances. These conservation cropping systems may include the adoption of drought resistant grass/grasslegume forages for hay production and/or irrigated pasture, the production of native seed for reclamation, and converting abandoned cropland to improved rangeland for grazing. Of primary consideration now and into the future is the abandonment of agricultural lands as their potential for invasive species and soil erosion are significant. Relative to resource degradation, this will present a measurable problem as water rights are adjudicated and large tracts of agricultural lands dry up if their water rights are transferred from agriculture to other uses. Out-of-basin water transfers should be avoided without a thorough evaluation of environmental impact including, for example, mapping (cone of depression) mine development de-watering to the extent that both short and long term effects can be identified accurately during the scoping process. The long term implications relative to impact on ground water quality have yet to be realized throughout many northeastern Nevada basins as earlier water developments were not required, at the time, to compile accurate assessments of depressional zones that had significant detrimental effect on both ground and surface water resources.

The adoption of a holistic framework that allows and requires key partners to participate in localized conservation planning is integral to successful collaboration. Jurisdictional and regulatory boundaries have to be recognized as a component of the ecological process relative to system health but not a barrier to the deployment of sound resource planning and management

initiatives. The window of opportunity to work with our primary constituents – the Northeast Elko Conservation District, Nevada's Association of Conservation Districts, Elko County, Nevada's Division of Water Resources, University of Nevada's Cooperative Extension, Elko District BLM, Humboldt-Toiyabe Jarbidge USFS Ranger District, Nevada Division of Wildlife, US Fish and Wildlife Service, and USDA's Natural Resource Conservation Service – has been widened through outreach and a commitment to deploy prioritized conservation efforts for our localized community now and into the future. The NEECD is poised to answer the call for locally led resource conservation and through completing the NRCS's Resource Needs Assessment (RNA) has generated a range of local resource concerns for Local Work Groups to review and use to assist with planning and implementation initiatives in the conservation district. Detailed information about the RNA process can be found on the Nevada Association of Conservation Districts Website at <http://www.nvacd.org/> under the Resource Needs Assessments Tab. Resource Concerns Descriptions can be found at <http://nvacd.org/wpcontent/uploads/2018/09/Resource-Concerns-descriptions-by-NRCS.pdf>.

A special thanks for major contributors Agee Smith (Northeast Elko CD Chairman), Bettina Scherer (NDCNR-Conservation Districts), Gerald Miller (NDCNR-Conservation Districts), Connie Lee (NVACD Executive Director), Gary McCuin (UNRCES), Jake Tibbitts (Eureka County Natural Resource Manager), Maggie Orr (NVACD), and all FOCUS Group participants for their due diligence in establishing the primary partners network and providing technical and administrative assistance throughout the RNA development process.

## Resource Needs Assessment Process





# NORTHEAST ELKO CONSERVATION DISTRICT FOCUS GROUP RESOURCE CONCERNS ASSESSMENT PRIORITIZATION

The following table summarizes the primary resource concerns inventory, evaluations, and discussion commentary developed by the NEECD focus group relative to the resource concerns checklist protocol provided by the Natural Resource Conservation Service.

Main priority issues/concerns and thoughts from attendees at 1/29 workshop:

- To ensure capacity to implement and follow through with action plans including legal defense of plans and projects; don't just plan.
- Hard to get local issues implemented or even recognized at higher levels; navigating the bureaucratic, regulatory process.
- More progress needs to be made on combating annual invasive grasses and associated wildfires.
- Focus on soils as the foundation to most resource concerns/issues.
- More holistic management across jurisdictional boundaries – landscape ecological processes and system health
- Educate and empower entities to actively participate and fund conservation; especially entities that are affected by natural resource use and conservation. It's not that they don't care, they just don't understand or know.

**Table 1-1. Northeast Elko Conservation District Resource Concerns and Management Considerations Summary.**

RESOURCE CONCERN	RESOURCE CONSERVATION AND MANAGEMENT CONSIDERATIONS
<b>WATER:</b>	
<u>Water Quantity:</u>  -Insufficient Water - Moisture Management  -Inefficient Use of Domestic, Commercial/Industrial/Agricultural Water Supply  -Flooding	<p><i>Improve irrigation efficiency and utilize adaptive management on range/uplands in order to sustain/balance ground water basin aquifer and stabilize producer economic viability. Restrict out-of-basin water transfer in order to sustain balanced water basins (re-charge versus discharge).</i></p> <p><u>Beneficial Use and Surplus:</u> Review existing definitions to define <i>beneficial use</i> and <i>surplus</i> relative to conservation practice objectives. NVACD could develop a policy statement connecting these terms to conservation practices. E.g., allocate a percentage of water adjudication for conservation.</p>

<p><u>Water Quality:</u></p> <p>-Degradation - Excess Sediments in Surface Waters</p>	<p><u>NRCS Program Delivery:</u> Program design should be modified to address ecosystem service programs and not limited to CSP. For example, the Boies Vineyard Ranch meadow pasture and haylands could be leveled to improve application efficiencies, indirectly benefitting downstream users. EQIP programs reward points to producers for water conservation, but this is not recognized in current Nevada water law. Antiquated water law does not address current resource management needs and prioritizations. With changing agricultural needs due to an increasing population and a greater emphasis on soil health and habitat, adopting cutting edge technologies and modifying legal/policy frameworks is required to deploy sustainable resource conservation (i.e., adaptive management). Apply emerging technologies to SWAPA+H.</p> <p><u>Rangelands/Uplands:</u> Stabilize instream flow by restoring sinuosity, increasing bank stabilizers, slowing the flow of energy, and increasing water holding capacity of the soil. Stabilized riparian ecosystems need to be recognized through a point/rewards system to promote instream flow with optimal water quality; water law should be modified to include conservation versus consumptive use. Non-riparian woody vegetation (e.g., Rocky Mountain Juniper, Utah Juniper, Basin Big Sagebrush, and Rubber Rabbitbrush) are invading upland stringer meadows and watered draws, impairing surface flows, springs, and ground water recharge. A lack of well distributed stock water sources concentrates animal use and inhibits proper grazing management and utilization, impacting animal health, forage quantity/quality, and over-utilization of watering sites. Adequate water developments, stabilized instream flows, and restored upland stringer meadows help with the distribution of livestock (preventing over-utilization) and provides stable wildlife habitat. Some grazing practices can be done without NEPA, although regulatory agency policy generally hampers water development and management on public lands.</p> <p><u>Sediment Loading:</u> The major river systems within the NEECD – Jarbidge and Little Salmon – are influenced by sediment loading within the lower reaches of these extensive watersheds. The loading is both a natural process (hydro-geomorphic dynamics) and induced by</p>
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channel instability from channelization. Watershed stability and range/riparian health can be promoted with sustained grazing management practices to achieve optimal rangeland health conditions and proper functioning condition of both perennial and ephemeral riparian reaches. Adaptive grazing management systems designed to stabilize and enhance watersheds while promoting viable grazing operations is a must on both private and public lands, but this requires grazing licensing modifications and re-structuring public lands policy and administration in order to deploy a holistic approach to ecosystem management.

Flood Water: Emergency watershed protection programs must be maintained to assist private landowners and municipalities with technical assistance and grant assistance to address major flood related damages. E.g., NRCS (through EQIP) can help with system rehabilitations at a reduced cost as compared to buying/installing a new system.

Water Transfer: Out of basin water transfers should not be considered or permitted without addressing the supply needs within the basin, including residential, commercial, agricultural, ecosystem, and conservation needs. Currently the protocols to evaluate local and regional drought designations are inaccurate and can be misleading relative to county wide and or regional classifications.

Irrigation: Adoption of cutting-edge irrigation systems is generally low or a slow transition (e.g., nozzle technology advancements and soil moisture management through monitoring systems). Farm Programs ranking does not always prioritize the best suited and or optimal conservation practices for conservation program participation. Need to extend projected benefits (as relative to EQIP) to water law – e.g., water law needs to be modified to be looking forward to desired conditions rather than responsive only to past conditions. Emerging technologies should be matched to desired future conditions and incorporated within program implementation. Additionally, NEECD sees a need to evaluate adapting to natural water availability and infrastructure, such as local precipitation patterns and achieving better water quality and quantity through the restoration of beaver

	<p>habitat. As much of current irrigation is dependent on snowpack and snowpack is becoming increasingly variable, there is a need to balance historic irrigation technology (requiring snowpack) with emerging technologies, bioengineering, and management adaptation to natural water availability. There is a need to slow the water down to reconnect surface water and groundwater through recharge. The goal is to go back to more natural states without sacrificing agricultural production and, in doing so, enabling the human/natural systems to become more resilient to variable snowpack and water quantities.</p>
<p><b>SOIL:</b></p>	
<p><u>Soil Quantity and Quality:</u></p> <ul style="list-style-type: none"> <li>-Soil Erosion – Sheet, Rill, and Wind</li> <li>-Degradation – Crop, Pasture, and Rangeland</li> <li>-Soil Health – Microbial Management, Pest Management, and Soil Fertility</li> </ul>	<p><b><i>Improve upland ecological condition to enhance watershed dynamics for multiple uses (livestock, wildlife and recreation). Increase primary focus on soils as the foundation to address and resolve, holistically, many resource concerns/issues.</i></b></p> <p><u>Sheet/Rill/Gully Erosion:</u> Areas where cover has been reduced due to fire or other disturbances and higher slopes have higher risk of erosion. Critical soil loss impairs both native plant succession and germination and production of introduced species for stabilization. Proper function and condition of riparian areas and drainages cannot be achieved when impacted by destabilized soil horizons. In the NEECD, sheet rill and gully erosion on agricultural land are not a major concern as many operators are not tilling or tearing up ground, although irrigation type (flood versus pivot), timing, and water crossing need to be considered. Much of the erosion issues in the NEECD stem from road design, maintenance, how they are built, and where they go. Sheet flow, rill development, and gully development has been observed bordering roads of all types, county, city, mine, two-track.</p> <p><u>Immediate Post-Fire:</u> Immediate post-fire conditions have the greatest potential for erosion concerns to develop and need to be focused on. The magnitude of events relative to climate change and how it affects flood events, fire cycles, and precipitation is a major consideration and other considerations (agriculture, roads) need to be considered in light of these large disturbances.</p>

Recreation: Intensified recreational use (mainly hunting) has impacted overall road conditions and the bordering public and private lands. Recreation has been assessed as #4 within the threat assessment conducted by SANE. While the socioeconomic benefits of recreation/hunting related revenue is important, the significant detrimental impacts associated with road use, inadequate maintenance, and design must be considered.

Wind Erosion: Wind erosion is a significant concern relative to human health impacts and potential effects on infrastructure and habitats. Vegetative cover rehabilitation and restoration practices are essential management considerations to stabilize topsoil and remain a priority concern throughout the NEECD. Although there is not much wind erosion on croplands, post-burn considerations related to bare ground, dust, and the transportation of materials are of high importance.

Abandoned Agricultural Lands and Urban Lands: Change in land use type (either abandonment, nonuse, or development) present an opportunity to initiate processes that benefit their soils. There should be some obligation (e.g., ordinance incorporated into Elko County Master Plan) by landowners and those responsible for abandoned agricultural lands to stabilize topsoil with site and climate adapted species that can inhibit weed invasion. Additionally, the surrounding lands are generally impacted and should be considered during land transition. This is an important issue as many previously irrigated agricultural lands are being converted and are no longer irrigated, therefore the potential for invasive species and soil erosion are significant. This will present a measurable problem relative to resource degradation as water rights are adjudicated and large tracts of agricultural lands are dried up and or water rights are transferred from agriculture to other uses. Native plant production on agricultural lands with limited water supplies provides an opportunity to sustain a viable market cropping system while stabilizing the integral soil resource base. Technical support and cost share assistance is needed to catalyze this technology. Conservation districts have the opportunity to modify best management practices for both rural and urban environments and empower

agricultural producers and municipalities/residents to approach NRCS for technical assistance to address these concerns. Incentivizing other land uses should also be considered in addition to using best management practices in order to minimize negative impacts. Supporting this initiative may require adoption of innovative conservation programs in addition to advanced master planning concepts as establishing vegetation and cover is difficult after water has been removed.

Soil Health: Many marginal soils exist within NEECD and thus soil health is viewed as a major resource concern. Creating and building healthy functioning soils may require weaning operations off of commercial fertilizer by finding more natural ways to build soils. Soil stabilization through vegetative and pest management is integral to minimizing critical top-soil loss on both crop land and rangelands, such as planting adapted species, thinning/controlling invasive species, and monitoring/treating pests. There is a significant desire to improve soil by organic means within a cropland setting as well as on rangeland and meadow environments, with primary interest in programs that prioritize soil health within watershed rangelands/riparian zones. Need to consider soil biota, site-specific amendments, and incorporating organic materials into the 'A' horizon to promote organic crusting on the soil which enhances resistance to invasive species and contributes to soil biota and function. Consider creating and restoring habitat buffers, cover, and bordering zones with grass/legume mixes adjacent to agricultural lands. Incentivize soil health and habitat stabilization as a preferred alternative to clean farming and, generally, incentivize holistic approaches to rangeland soil health that enhances microbial function, increases water infiltration, and inhibits soil compaction. Grass fed livestock production is now a strong and viable market and has the desirable by-product/effect of reducing residual bio-chemicals. There is an interest in incorporating SARE grants and emerging technologies to improve soil health, as well as implementing NRCS programs on private agricultural lands as well as public lands.

<b>AIR:</b>	
<p><u>Air Quality:</u></p> <p><u>Carbon Sequestration:</u></p>	<p><u>Wind Erosion:</u> Integral to sustaining air quality standards is using vegetative cover to inhibit cropland, rangeland, and municipal land wind erosion. Rehabilitating critical areas (range and municipal) and using cover crops/permanent vegetative cover are essential practices to protect and stabilize the soil resource base and prevent wind erosion.</p> <p><u>Carbon Sequestration:</u> Croplands and rangelands are carbon sinks able to sequester carbon from the atmosphere. Rehabilitating vegetative communities, promoting permanent cover, and developing healthy soils add to the ability of lands to sequester carbon. Need to evaluate and incorporate carbon markets to incentivize carbon sequestration.</p>
<b>PLANTS:</b>	
<p><u>Plant Condition:</u></p> <p>-Rangeland/Riparian Condition – State and Transition</p> <p>-Cropland Productivity and Sustainability</p> <p>-Noxious/Invasive Species – Cheat Grass, Pinion Juniper, Weeds</p>	<p><b><i>Increase efforts and efficiency in combating annual noxious/invasive species resulting from wildfire. Identify areas to create critical vegetative treatment buffer zones in order to retard fire spread and protect habitat.</i></b></p> <p><u>Rangeland/Riparian Condition:</u> A primary concern is the loss of herbaceous components such as native grass and forb communities due to woody plant expansion, infill, and dominance associated with Utah Juniper invasion. Fire impacts in multiple ways, including post-fire annual grass expansion and Pinion Juniper dominance. Fire suppression has catalyzed expansion of woody plants throughout northern Nevada. Current management practices associated with grazing plans and post-fire management may not recognize ecological site potential and modeling relative to the life cycle of the ecological site or vegetative community. Need to develop best management practices to reduce fuels (implementation on public lands) and integrated management systems between private and public lands. Grazing management, such as rest/rotation cycles, can be used to meet desired conditions and promote highly resilient lands.</p>

	<p><u>Productivity and Sustainability:</u> Limited alternative crops are adapted to Nevada’s arid climate. At this point there is very little research and development support for testing new and alternative crops/cropping systems (e.g., hemp, oil crops, hoop house production) including the necessary infrastructure such as grain/cereal processing facilities. NRCS support for harvesting native plant has potential as an economic support system. Technical support, harvesting equipment, and cost share assistance is needed</p> <p><u>Noxious and Invasive Species:</u> Right-Of-Way pest management is integral to controlling the spread of noxious/invasive weeds on private and public lands. Post fire treatment needs to prioritize control of noxious/invasive weeds in addition to evaluating options for cheat grass control on sites targeted for re-seeding. Grazing management can help with invasive spreading through early spring, fall, and winter grazing.</p>
<p><b>ANIMALS:</b></p>	
<p><u>Sensitive Species:</u></p> <p>-Threatened, Endangered, Candidate, and Species of Concern</p> <p><u>Habitat:</u></p> <p>-Upland Wildlife Habitat Condition</p> <p>-Fisheries, Wetlands, and Riparian Habitat Condition</p> <p><u>Livestock Feed and Forage:</u></p> <p>-Forage Quality and Quantity</p>	<p><u>Sensitive Species:</u> Although there is a relatively low incidence of sensitive species in the NEECD, they do require site specific protection initiatives relating to land use and management practices on public lands. Specifically, Sage Grouse is described as the “canary in the coal mine” for general sagebrush ecosystem health and function and needs to be considered in conservation practices. The management of Lahontan Cutthroat Trout imposes constraints relative to land uses, primarily grazing, and innovative state of the art grazing management initiatives to protect habitat while providing sustainable agricultural practices are integral to rangeland/habitat management protocols.</p> <p><u>Upland Wildlife Habitat:</u> Habitat for upland wildlife is dependent upon vegetative health for thermal protection and optimal forage. Wildland fire leading to annual grassland conversion is a priority issue as described above. Optimal habitat conditions relative to the life cycle of the desirable plant community may not be achieved for decades post-fire. In addition, land use can negatively affect wildlife migration corridors and needs to be considered in upland management decisions.</p>



	<p><u>Fisheries/Wetlands/Riparian Habitat</u>: Proper function and condition of riparian zones, perennial streams and drainages becomes extremely difficult in unstable watersheds impacted by degraded soil and plant community conditions (e.g., incised channels). There is a need to an updated ESI, specifically the addition of riparian areas, and easier accessibility to education regarding management. For example, Order 2 soil mapping technical assistance is needed on private lands. Encourage all practices that contribute to attaining and maintaining proper function conditions (PFC) where possible as attaining/maintaining PFC is an integral component of land management systems.</p> <p><u>Livestock Feed and Forage</u>: Forage quantity and quality on public lands is directly associated with rangeland/riparian condition. Rangelands are not managed, in many cases, based on ecological site descriptions (site potential and current state relative to the plant community life cycle). Incentivize the use of the latest research, technology, and practices to supplement low quality feed that encourages desired distribution across the rangeland on private and public land. Increase distribution of water sources and promote grazing management flexibility on public lands (AMP's/Permit Renewals). Manage wild horse populations at AML to promote multiple use and management on public lands.</p>
<b>HUMANS:</b>	
<p><u>Capacity</u></p> <p><u>Cultural Resources</u></p> <p><u>Land Use</u></p>	<p><u>Human Capacity</u>: There is a lack of human capacity and financial capacity to implement plans and projects to address conservation issues, including the lack of capacity to search for funding for both existing and new planning initiatives. There is a need to educate and empower communities to actively participate in and fund conservation programs, especially those communities impacted by natural resource management on both private and public lands. Building leadership capacity to enhance engagement capacity is needed. Increasing this capacity ensures the implementation, monitoring, and evaluation of action plans and the promotion of management across jurisdictional, landscape, and social boundaries.</p>

Cultural Resources: Management initiatives of the Oregon-California Trails byway include no new fences and no updated structures within the viewshed. BLM needs to address these concerns to evaluate effects on multiple land use policy within the NEECD. Additionally, future consideration must be given to limit the size and scope of national monument areas and what can be designated and or qualify for national monument designation.

Land Use: The desire for economic and community expansion are sometimes not based on the available resources for growth (e.g., water). Also, some special interests (e.g., NGOs) have ideals that are contrary to local conservation and sustainability (e.g. preservation versus conservation). Need to recognize and consider the impact of these in public land decision-making and management. Mining infrastructure in north eastern Nevada is often permitted and managed with reclamation bonds (BLM RMPs) which may create additional land disturbance for new industrial sites that could have been located on abandoned sites. Public education on environmental impacts to areas surrounding roads and trails is crucial. Recreation planning is encouraged but need to limit pioneering roads.

## **Local Partners and Focus Group Initiative, 2018 and 2019 Meeting and Group Sessions**

Northeast Elko Conservation District RNA Meeting Overview/Highlights - 2018/2019:

RNA meetings were held in conjunction with the Northeast Elko Conservation District representatives and partnering entities on 9/26/2018 (CD Secretary), 9/27/2018 (CD Teleconference), 1/18/2019 (CD), 2/13/2019 (CD Teleconference), 3/25/2019 (CD/SANE) and 5/21/2019 (CD/SANE).

- 9/26/2018; The 9/26 meeting with CD Secretary Rainy Lawson was attended by Gary McCuin (CES), and Jim Evans. The introductory meeting was held to provide the CD Secretary an overview of the RNA process and assist in developing a list of partnering entities that may become involved in the planning initiative in addition to evaluating current resource concerns for the CD members to review during their initial meeting.
- 9/27/2018; The 9/27 CD teleconference provided an opportunity for the CD board members to be introduced to the RNA planning team and learn about the RNA process and how the SANE group initiative could be integrated into the planning process.
- 1/18/2019; The 1/18 meeting was held in Wells, Nevada and was a formal gathering of many of the CD partnering representatives. During this CD meeting the RNA process was reviewed by the attendees and several natural resource concerns were discussed relative to both private and public land management issues within the district. The SANE group plan was reviewed to determine how this particular planning initiative could be utilized as a tool to support the RNA initiative. The group was introduced to the SWAPA+H protocol in order to provide a template to identify and prioritize both short- and long-term resource issues.
- 2/13/2019; During the 2/13 meeting, established RNA agenda items for the future and planned meetings with the SANE group and additional partnering entities including Elko County.
- 3/25/2019; The 3/25 meeting in Wells, NV comprised members from the CD, the SANE group, and partnering regulatory entities. During this meeting the SWAPA+H process/protocol was again reviewed and evaluated to prioritize resource concerns affecting the Northeast Elko CD. Upon developing a general category list relative to SWAPA, the group determined that more time would be required to analyze a prioritized summary that addressed the needs for both private and public lands (BLM/USFS). The group set a planning meeting window for April/May.
- 5/21/2019; During the 5/21 meeting the CD and partnering entities developed a prioritized listing of resource concerns. At this meeting it was determined that a focus group would have to be established to work directly with NVACD, STAC, and NRCS in developing an Action Plan. Upon completion of the resource concerns component of the RNA report the CD focus

group plans to meet and review the report format and provide input for modifications if needed. Additionally, the CD would like the focus group to work directly with UNR/CES Ag Economics representative Alec Bowman on the design format for the RNA survey questionnaire.

**Table 1-2. Northeast Elko CD RNA FOCUS Group Participants**

CD	AFFILIATION	CONTACT	POSITION	PHONE	E-MAIL	MAILING ADDRESS
Northeast	Cottonwood Ranch	Agee Smith	CD Chair	775-752-0605 (C) 775-472-0817 (O)	Ageesmith51@gmail.com	Northeast Elko CD HC 62 Box 1300 Wells, NV 89835
Northeast	Cottonwood Ranch	Vicki Smith	CD Supervisor	775-472-0222	vckasmith@gmail.com	Northeast Elko CD HC 62 Box 1300 Wells, NV 89835
Northeast	Gibbs Ranch	Wyatt Messna	CD Secretary	775-472-0817 (O)	wyattmessna@gmail.com	Northeast Elko CD HC 62 Box 1300 Wells, NV 89835
Northeast	Boies Ranch	Robin Boies	CD Supervisor	775-752-0812 (C)	vineyardboies@gmail.com	Northeast Elko CD HC 62 Box 1300 Wells, NV 89835
Northeast	Boies Ranch	Steve Boies	CD Supervisor		osboies@yahoo.org	Northeast Elko CD HC 62 Box 1300 Wells, NV 89835
Northeast	NVACD	Connie Lee	Executive Director	775-934-5376 (C)	execdir@nvacd.org	
Northeast	DCNR	Gerald Miller	Conservation Districts		gerald.miller@dcnr.nv.gov	
Northeast	DCNR	Bettina Scherer	Conservation Districts	775-654-2717	bscherer@dcnr.nv.gov	
Northeast	BLM	Jeff Moore	Range Conservationist	775-753-0359 (O)	2moore@blm.gov	BLM Elko District Office 3900 Idaho St. Elko, NV 89801
Northeast	NDOW	Caleb McAdoo	NDOW NE Region Biologist	775-777-2300 (O)	cmcadoo@ndow.org	NDOW 60 Youth Center Elko, NV 89801
Northeast	NDOW	Kari Huebner	NDOW NE Region Biologist	775-777-2300 (O)	khuebner@ndow.org	NDOW 60 Youth Center Elko, NV 89801

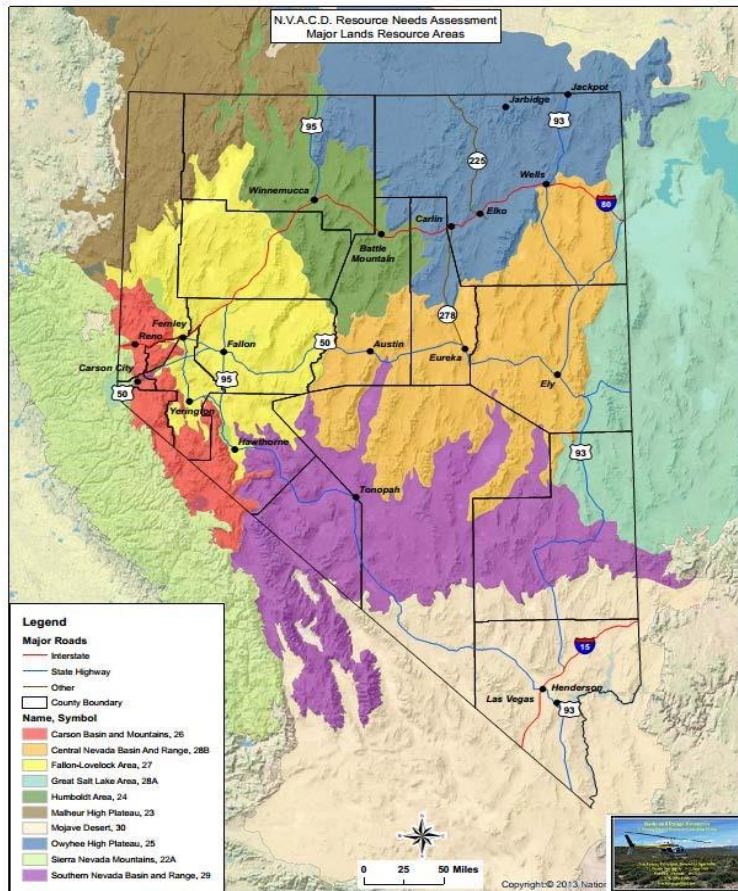
CD	AFFILIATION	CONTACT	POSITION	PHONE	E-MAIL	MAILING ADDRESS
Northeast	NDOW	Madi Stout	NDOW/NRCS Res Specialist	775-426-9024	mstout@ndow.org	NDOW 60 Youth Center Elko, NV 89801
Northeast	USFWS	William Kutosky	Partners for Fish and Wildlife Program	775-777-2370 (O)	william_kutosky@fws.gov	U.S. Fish and Wildlife Service 60 Youth Center Road Elko NV 89801
Northeast	NRCS	Jaime Jasmine	District Conservationist	775-738-8431 (O)	Jaime.Jasmine@nv.usda.gov	NRCS 555 West Silver Street Elko, NV 89801
Northeast	NV Dept. of Ag	David Voth	Rangeland Health Coordinator	775-738-8076 (O)	dvoth@agri.nv.gov	Nevada Department of Agriculture 4780 East Idaho Street Elko, NV 89801
Northeast	Elko County	Curtis Moore	Elko County Natural Resources Dept. Manager	775-738-6816 (O)	cmoore@elkocountynv.net	
Northeast	US Forest Service	Kyra Reid			kireid@fs.fed.us	
Northeast	US Forest Service	Annie Dixon			adixon@fs.fed.us	
Northeast	Nevada Division of Forestry	Gary Reese		775-299-2821	greese@forestry.nv.gov	
Northeast	Rangeland IPM	Wayne Juntunen	IPM Specialist	775-385-8318	rangelandIPM@yahoo.org	
Northeast	Rangeland IPM	Matthew Patrick	IPM Specialist	775-340-2601	rangelandIPM@yahoo.org	

## **RESOURCE DISCUSSION INITIATIVE, PROTOCOLS AND RESOURCE AREAS OF CONCERN**

The group facilitation process was an integral tool in providing the discussion leaders an orderly and effective presentation mechanism to explain the resource needs assessment process, goals and objectives, and reporting protocols. Many of the participants, other than agency resource professionals, were not familiar with the NRCS Resource Concerns Checklist protocol which compartmentalizes environmental considerations into seven primary categories: soil, water, animals, plants, air, energy and the human factor. As the varied discussions relative to local issues progressed, the groups became more comfortable with pinpointing and identifying specific impacts/effects relative to the categorical delimiters, SWAPA+H (NHCP, 2019). The groups readily recognized the similarity of localized resource concerns/land use throughout the Northern Great Basin encompassing major land resource area 25 in Elko County. A brief summary of the climatic and physiographic characteristics for Major Land Resource Area 25 is described in 'Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean and the Pacific Basin.' (Ag Handbook 296, 2006; web address [here](#)).

This area is in Nevada (52 percent), Idaho (29 percent), Oregon (16 percent), and Utah (3 percent). It makes up about 28,930 square miles (74,960 square kilometers). The city of Elko, Nevada, which is along Interstate 80, is in this MLRA. The Humboldt-Toiyabe and Sawtooth National Forests and numerous wilderness study areas also occur in this MLRA. Most of the wilderness study areas are in the high desert canyon lands of southern Idaho. The Duck Valley, South Fork, Ruby Valley, and Te-Moak Indian Reservations are in this area. All of this area lies within the Intermontane Plateaus. The southern half is in the Great Basin Section of the Basin and Range Province. This part of the MLRA is characterized by isolated, uplifted fault-block mountain ranges separated by narrow, aggraded desert plains. This geologically older terrain has been dissected by numerous streams draining to the Humboldt River. The northern half of the area lies within the Columbia Plateaus Province. This part of the MLRA forms the southern boundary of the extensive Columbia Plateau basalt flows. Most of the northern half is in the Payette Section, but the northeast corner is in the Snake River Plain Section. Deep, narrow canyons draining into the Snake River have been incised into this broad basalt plain. Elevation ranges from 3,000 to 7,550 feet (915 to 2,300 meters) on rolling plateaus and in gently sloping basins. It is more than 9,840 feet (3,000 meters) on some steep mountains. The extent of the major Hydrologic Unit Areas (identified by four-digit numbers) that make up this MLRA is as follows: Middle Snake (1705), 49 percent; Black Rock Desert-Humboldt (1604), 28 percent; Upper Snake (1704), 15 percent; Great Salt Lake (1602), 5 percent; and Central Nevada Desert Basins (1606), 3 percent. The Humboldt River, the route of a major western pioneer trail, crosses the southern half of this area. Reaches of the Owyhee River in this area have been designated as National Wild and Scenic Rivers (Ag Handbook 296, 2006).

**Figure 2. MLRA 25 - Owyhee High Plateau**



## Climate

The average annual precipitation in most of this area is 7 to 16 inches (180 to 405 millimeters). The amount of precipitation is lowest in the eastern part of the area and increases with elevation. Rainfall occurs in spring and sporadically in summer, with snow during the winter months. The amount of precipitation is lowest from midsummer to early autumn. The average annual temperature is 35 to 53 degrees F (2 to 12 degrees C). The freeze-free period averages 130 days and ranges from 65 to 190 days, decreasing in length with elevation. It is typically less than 70 days in the mountains (Ag Handbook 296, 2006).

## RESOURCE CONCERN MODELING TOOL - NRCS CONSERVATION PRACTICE PHYSICAL EFFECTS MATRIX

The Natural Resources Conservation Service currently utilizes a modeling tool matrix, the conservation practice physical effects analysis, to evaluate long term effects relative to implementing a host of conservation management and or structural conservation practices to address resource concerns associated with a variety of land uses (NHCP, 2019). As an example, to address soil health and water quantity problems for irrigated cropland the standard conservation practices considered may include irrigation system improvements, a modification of the cropping system rotational sequence and potentially implementing pest management strategies to curtail or minimize invasive weed impacts. The following NRCS conservation practice listing identifies standard localized practices utilized to address primary resource concerns within major land resource areas 28A and 28B.

**Table 2-1 . Standard Conservation Practices for Irrigated Cropland, Irrigated Pasture and Hayland, Improved Rangelands - Seedings, and Native Rangelands/Watersheds in Major Land Resource Area 25.**

Conservation Practice	ID	Conservation Practice	ID	Conservation Practice	ID	Conservation Practice	ID	Conservation Practice	ID	Conservation Practice	ID
Brush Management	314	Forage and Biomass Planting	512	Irrigation Land Leveling	464	Pond	378	Salinity and Sodic Soil Management	610	Tree/Shrub Site Preparation	612
Channel Bed Stabilization	584	Forage and Biomass Planting	512	Irrigation Land Leveling	464	Pond	378	Salinity and Sodic Soil Management	610	Tree/Shrub Pruning	660
Clearing and Snagging	326	Forage Harvest Management	511	Irrigation Pipeline	430	Pond Sealing or Lining, Compacted Soil	520	Sediment Basin	350	Upland Wildlife Habitat Management	645
Conservation Cover	327	Fuel Break	383	Irrigation Reservoir	436	Pond Sealing or Lining, Concrete	522	Spring Development	574	Watering Facility	614
Conservation Crop Rotation	328	Grazing Land Mechanical Treatment	548	Irrigation System, Microirrigation	441	Pond Sealing or Lining, Flexible Membrane	521 A	Sprinkler System	442	Water Harvesting Catchment	636
Constructed Wetland	656	Groundwater Testing	355	Irrigation System, Surface and Subsurface	443	Precision Land Forming	462	Storm water Runoff Control	570	Water and Sediment Control Basin	638
Cover Crop	340	Herbaceous Weed	315	Irrigation System,	447	Prescribed Burning	338	Stream Crossing	578	Water spreading	640
Critical Area Planting	342	Herbaceous Wind Barriers	603	Irrigation Water Management	449	Prescribed Grazing	528	Stream Habitat Improvement and	395	Water Well	642
Dam	402	Firebreak	394	Land Reclamation,	453	Pumping Plant	533	Streambank and Shoreline	580	Well Decommissioning	351
Dam, Diversion	348	Forage and Biomass	512	Land Smoothing	466	Range Planting	550	Structure for Water	587	Wetland Creation	658
Diversion	362	Forage Harvest	511	Lined Waterway or Outlet	468	Residue and Tillage	329	Structures for Wildlife	649	Wetland Enhancement	659
Early Successional Habitat Development	647	Integrated Pest Management	595	Livestock Pipeline	516	Residue and Tillage Mgmt. Reduced Till	345	Subsurface Drain	606	Wetland Wildlife Habitat Management	644
Farmstead Energy Improvement	374	Irrigation Canal or Lateral	320	Livestock Shelter Structure	576	Restoration and Management of Rare or	643	Surface Drainage, Field Ditch	607	Wetland Restoration	657
Fence	382	Irrigation Ditch Lining	428	Nutrient Management	590	Riparian Forest Buffer	391	Surface Drainage, Main or	608	Windbreak/Shelterbelt	380
Firebreak	394	Irrigation Field Ditch	388	Open Channel	582	Cover	390	Tree/Shrub Establishment	612	Renovation	650



Throughout the northern Nevada's Great Basin comprising major land resource area 25, the primary resource concerns are typically associated with five (5 ea.) land uses; irrigated cropland served by center pivot and wheel line systems, flood irrigated pasture/hayland (perennial stream-fed), improved rangeland seedings (private and public lands), native rangeland/watersheds (private and public lands) and abandoned farm/agricultural lands. In the following figures the NRCS Conservation Practice Physical Effects Matrix tool summarizes integral conservation practice and management applications to address primary resources concerns associated with these land uses. For a complete listing of NRCS conservation practice standards and specifications reference the NRCS National Handbook of Conservation Practices (NHCP, 2019; web address [here](#))

Figure 2-1. Irrigated Crop Lands Resource Concerns and Conservation Practice Physical Effects.

<b>Conservation Practice Selection Tool - Irrigated Cropland</b> Major Land Resource Area 25 - Elko County - North East CD							
Use the CPPE to recommend practices that address the resource concerns: Enter the CPPE minimum acceptable "effect" value (1-5): <span style="border: 1px solid black; padding: 2px;">1</span> Select the "Run" button to view recommended practices for each resource concern (equal to or greater than the minimum acceptable value) Place an "x" to the left of the practice that may be included in the conservation plan. Select the "Sort" button to list selected practices at top of column, and "Results" for final report.		Land uses alfalfa hay, alfalfa-grass hay, grass hay, and small grains in rotation. Potential enhancements/conservation & management practice applications include well rehab or new construction, sprinkler system installation, critical area planting, and management practices irrigation water mgt., nutrient mgt., conservation crop rotation/forage harvest mgt., residue/tillage management-reduced till, integrated pest mgt., and pest mgt.. Primary resource concerns address soil wind erosion, soil quality degradation-organic matter depletion, soil quality degradation-compaction, insufficient water-inefficient use of irrigation water, insufficient water-inefficient moisture management, degraded plant condition-undesirable plant productivity & health, and degraded plant condition-excessive plant pressure.					
Soil Erosion - Wind Erosion	Soil Quality Degradation - Organic Matter Depletion	Soil Quality Degradation - Compaction	Insufficient Water - Inefficient Use of Irrigation Water	Insufficient Water - Inefficient Moisture Management	Degraded Plant Condition - Undesirable Plant Productivity and Health	Degraded Plant Condition - Excessive Plant Pest Pressure	
<input checked="" type="checkbox"/> Windbreak/Shelterbelt Establishment	<input checked="" type="checkbox"/> Residue and Tillage Management, Reduced Till	<input checked="" type="checkbox"/> Residue and Tillage Management, Reduced Till	<input checked="" type="checkbox"/> Water Well	<input checked="" type="checkbox"/> Residue and Tillage Management, Reduced Till	<input checked="" type="checkbox"/> Nutrient Management	<input checked="" type="checkbox"/> Sprinkler System	
<input checked="" type="checkbox"/> Sprinkler System	<input checked="" type="checkbox"/> Nutrient Management	<input checked="" type="checkbox"/> Forage Harvest Management	<input checked="" type="checkbox"/> Sprinkler System	<input checked="" type="checkbox"/> Forage Harvest Management	<input checked="" type="checkbox"/> Irrigation Water Management	<input checked="" type="checkbox"/> Irrigation Water Management	
<input checked="" type="checkbox"/> Irrigation Water Management	<input checked="" type="checkbox"/> Irrigation Water Management	<input checked="" type="checkbox"/> Conservation Crop Rotation	<input checked="" type="checkbox"/> Irrigation Water Management	<input checked="" type="checkbox"/> Conservation Crop Rotation	<input checked="" type="checkbox"/> Irrigation System, Surface & Subsurface	<input checked="" type="checkbox"/> Irrigation System, Surface & Subsurface	
<input checked="" type="checkbox"/> Irrigation System, Surface & Subsurface	<input checked="" type="checkbox"/> Forage Harvest Management		<input checked="" type="checkbox"/> Irrigation System, Surface & Subsurface Forage		<input checked="" type="checkbox"/> Forage Harvest Management	<input checked="" type="checkbox"/> Conservation Crop Rotation	
<input checked="" type="checkbox"/> Integrated Pest Management	<input checked="" type="checkbox"/> Critical Area Planting		<input checked="" type="checkbox"/> Harvest Management		<input checked="" type="checkbox"/> Conservation Crop Rotation	<input checked="" type="checkbox"/> Integrated Pest Management	
<input checked="" type="checkbox"/> Forage Harvest Management	<input checked="" type="checkbox"/> Conservation Crop Rotation		<input checked="" type="checkbox"/> Conservation Crop Rotation				
<input checked="" type="checkbox"/> Critical Area Planting							
<input checked="" type="checkbox"/> Conservation Crop Rotation							

Figure 2-2. Flood Irrigated Pasture Lands Resource Concerns and Conservation Practice Physical Effects .

<b>Conservation Practice Selection Tool - Surface Flood Irrigated Pasture/Hayland</b> MLRA 25 - Elko County - North East CD										
Use the CPPE to recommend practices that address the resource concerns: Enter the CPPE minimum acceptable "effect" value (1-5): <span style="border: 1px solid black; padding: 2px;">1</span> Select the "Run" button to view recommended practices for each resource concern (equal to or greater than the minimum acceptable value) Place an "x" to the left of the practice that may be included in the conservation plan. Select the "Sort" button to list selected practices at top of column, and "Results" for final report.										
Soil Erosion - Sheet and Rill Erosion	Excess Water - Runoff, Flooding, or Ponding	Insufficient Water - Inefficient Use of Irrigation Water	Water Quality Degradation - Pesticides in Surface Water	Water Quality Degradation - Nutrients in Surface water	Degraded Plant Condition - Undesirable Plant Productivity and Health	Degraded Plant Condition - Inadequate Structure and Composition	Fish and Wildlife - Inadequate Habitat - Cover/Shelter	Livestock Production Limitation - Inadequate Feed and Forage	Livestock Production Limitation - Inadequate Water	
x Prescribed Grazing	x Waterspreading Water and Sediment Control Basin	x Waterspreading	x Land Smoothing Irrigation Water Management	x Waterspreading	x Waterspreading	x Prescribed Grazing	x Waterspreading	x Waterspreading	x Watering Facility	
x Fence	x Surface Drainage, Field Ditch	x Surface Drainage, Field Ditch	x Land Smoothing Irrigation Water Management	x Prescribed Grazing	x Prescribed Grazing	x Nutrient Management	x Streambank and Shoreline Protection	x Surface Drainage, Field Ditch	x Water Well	
x Conservation Cover	x Structure for Water Control	x Structure for Water Control	x Land Smoothing Irrigation Water Management	x Nutrient Management	x Nutrient Management	x Forage Harvest Management	x Prescribed Grazing	x Prescribed Grazing	x Livestock Pipeline	
	x Structure for Water Control	x Land Smoothing	x Land Smoothing	x Land Smoothing	x Land Smoothing	x Conservation Cover	x Forage Harvest Management	x Irrigation Water Management		
	x Land Smoothing	x Irrigation Water Management	x Irrigation Water Management	x Irrigation Water Management	x Irrigation Water Management	x Integrated Pest Mgt.	x Conservation Cover	x Irrigation System, Surface & Subsurface		
	x Irrigation System, Surface & Subsurface	x Irrigation System, Surface & Subsurface	x Irrigation System, Surface & Subsurface	x Irrigation System, Surface & Subsurface	x Irrigation System, Surface & Subsurface			x Forage Harvest Management		
	x Irrigation Field Ditch	x Irrigation Field Ditch	x Irrigation Field Ditch	x Conservation Cover	x Forage Harvest Management			x Fence		

Figure 2-3. Improved Rangelands - Seedings Resource Concerns and Conservation Practice Physical Effects .

**Conservation Practice Selection Tool - Improved Rangelands - Seedings MLRA 25 - Elko County**

**Use the CPPE to recommend practices that address the resource concerns:**

Enter the CPPE minimum acceptable "effect" value (1-5):

1

Select the "Run" button to view recommended practices for each resource concern (equal to or greater than the minimum acceptable value) Place an "x" to the left of the practice that may be included in the conservation plan.

Select the "Sort" button to list selected practices at top of column, and "Results" for final report.

Land Use- Improved Rangeland Seedings: Declining seedings require restoration to address resource concerns associated with soil sheet & rill erosion, degraded plant conditions-inadequate structure and composition, degraded plant condition-excessive plant pressure, fish and wildlife-inadequate habitat-water, livestock production limitation-inadequate feed and forage and livestock production limitation-inadequate water. Stabilizing/enhancement conservation practices may include brush management, range planting, fence installation, water well, pumping plant & watering facility development, stock water pipeline installation combined with prescribed grazing system management to sustain habitat productivity & vigor.

	Soil Erosion - Sheet and Rill Erosion		Degraded Plant Condition - Undesirable Plant Productivity and Health		Degraded Plant Condition - Inadequate Structure and Composition		Degraded Plant Condition - Excessive Plant Pest Pressure		Fish and Wildlife - Inadequate Habitat - Water		Livestock Production Limitation - Inadequate Feed and Forage		Livestock Production Limitation - Inadequate Water	
x	Range Planting	x	Range Planting	x	Range Planting	x	Range Planting	x	Watering Facility	x	Range Planting	x	Watering Facility	
x	Prescribed Grazing	x	Prescribed Grazing	x	Prescribed Grazing	x	Prescribed Grazing	x	Water Well	x	Prescribed Grazing	x	Water Well	
x	Fence	x	Brush Management	x	Brush Management	x	Brush Management				x	Fence	x	Pumping Plant
x	Brush Management					x	Integrated Pest Mgt.				x	Brush Management	x	Livestock Pipeline

Figure 2-4. Native Rangelands/Watershed Resource Concerns and Conservation Practice Physical Effects .

<b>Conservation Practice Selection Tool - Native Rangelands - Watershed</b> MLRA's 25 - Elko County - North East CD																	
Use the CPPE to recommend practices that address the resource concerns: Enter the CPPE minimum acceptable "effect" value (1-5). Select the "Run" button to view recommended practices for each resource concern (equal to or greater than the minimum acceptable value) Place an "x" to the left of the practice that may be included in the conservation plan. Select the "Sort" button to list selected practices at top of column, and "Results" for final report.																	
<b>Land Use- Native Rangeland/Watershed:</b> Declining rangelands/watershed requires conservation practice & management applications to address soil sheet & rill erosion, soil erosion-classic gully, soil erosion-streambank, water quality degradation associated with pesticide use, noxious/invasive plants, degraded plant condition-undesirable plant productivity & health, degraded plant condition-inadequate structure & composition, fish and wildlife habitat-inadequate cover/shelter, fish and wildlife habitat continuity, livestock production limitation-inadequate feed and forage and livestock production limitation-inadequate water. Conservation practice and management alternatives include and not limited to the following: prescribed grazing systems, watering facility development (well, pipeline & troughs), fence installation, brush management, range planting, streambank and shoreline protection, stream habitat improvement and management, restoration and management of rare or declining habitats, and integrated pest management (noxious/invasive).																	
Soil Erosion - Sheet and Rill Erosion	Soil Erosion - Classic Gully Erosion	Soil Erosion - Streambank, Shoreline, Water Conveyance Channels			Water Quality Degradation - Pesticides in Surface Water	Degraded Plant Condition - Undesirable Plant Productivity and Health	Degraded Plant Condition - Inadequate Structure and Composition	Fish and Wildlife - Inadequate Habitat - Cover/Shelter	Fish and Wildlife - Inadequate Habitat - Habitat Continuity (Space)	Livestock Production Limitation - Inadequate Feed and Forage	Livestock Production Limitation - Inadequate Water						
x Restoration and Management of Rare or Declining Habitats	x Watering Facility	x	Watering Facility	x	Integrated Pest Management	x	Stream Habitat Improvement and Management	x	Range Planting	x	Streambank and Shoreline Protection	x	Watering Facility	x	Range Planting	x	Watering Facility
x Prescribed Grazing	x Range Planting	x	Streambank and Shoreline Protection			x	Range Planting	x	Prescribed Grazing	x	Stream Habitat Improvement and Management	x	Streambank and Shoreline Protection	x	Prescribed Grazing	x	Water Well
x Fence	x Prescribed Grazing	x	Stream Habitat Improvement and Management			x	Prescribed Grazing	x	Brush Management	x	Management of Rare or Declining Habitats	x	Stream Habitat Improvement and Management	x	Fence	x	Pumping Plant
x Brush Management	x Brush Management	x	Range Planting			x	Fence	x	Integrated Pest Mgt.	x	Range Planting	x	Restoration and Management of Rare or Declining Habitats	x	Brush Management	x	Livestock Pipeline
		x	Prescribed Grazing			x	Brush Management			x	Prescribed Grazing	x	Range Planting				
										x	Brush Management	x	Prescribed Grazing				
												x	Brush Management				

Figure 2-5. Abandoned Agricultural Lands Resource Concerns and Conservation Practice Physical Effects

<b>Conservation Practice Selection Tool - Abandoned Agricultural Lands</b> <b>MLRA 25 - Elko County - North East CD</b>				
<b>Use the CPPE to recommend practices that address the resource concerns:</b> Enter the CPPE minimum acceptable "effect" value (1-5): <input type="text" value="1"/>			<b>Abandoned Agricultural Lands:</b> Abandoned farm lands are subject to sheet and rill soil erosion, wind erosion, soil quality degradation with excessive salt concentration, degraded plant condition-structure & composition and degraded plant condition-excessive plant pressure from noxious/invasive species. Conservation & management practices required for stabilization may include range/critical area planting, conservation cover, fencing, integrated pest management and prescribed grazing management.	
Select the "Run" button to view recommended practices for each resource concern (equal to or greater than the minimum acceptable value) Place an "x" to the left of the practice that may be included in the conservation plan. Select the "Sort" button to list selected practices at top of column, and "Results" for final report.				
Soil Erosion - Sheet and Rill Erosion	Soil Erosion - Wind Erosion	Soil Quality Degradation - Concentration of Salts or Other Chemicals	Degraded Plant Condition - Inadequate Structure and Composition	Degraded Plant Condition - Excessive Plant Pest Pressure
x Range Planting x Prescribed Grazing x Integrated Pest Management x Fence x Critical Area Planting x Conservation Cover	x Range Planting x Prescribed Grazing x Integrated Pest Management x Critical Area Planting x Conservation Cover	x Range Planting x Prescribed Grazing x Critical Area Planting x Conservation Cover	x Range Planting x Prescribed Grazing x Critical Area Planting x Conservation Cover	x Range Planting x Prescribed Grazing x Critical Area Planting x Conservation Cover x Integrated Pest Management

## NORTHEAST ELKO CD GROUND WATER QUANTITY

Throughout the region (Appendix I, Figure 3-2. Northeast ELKO CD Hydro Basins) the average annual precipitation averages 7 to 16 inches annually. The amount of precipitation is lowest in the eastern part of the area and increases with elevation. Rainfall occurs in spring and sporadically in summer. Precipitation occurs mainly as snow in winter. The precipitation is distributed fairly evenly throughout fall, winter, and spring. The amount of precipitation is lowest from midsummer to early autumn. Precipitation supports groundwater recharge. Table 3-1 lists the major groundwater hydrographic basins in the Northeast Elko CD and summarizes committed duty groundwater rights and perennial yield of each basin.

**Table 3-1. North East Conservation District Ground Water Rights (In Acre-Feet).**

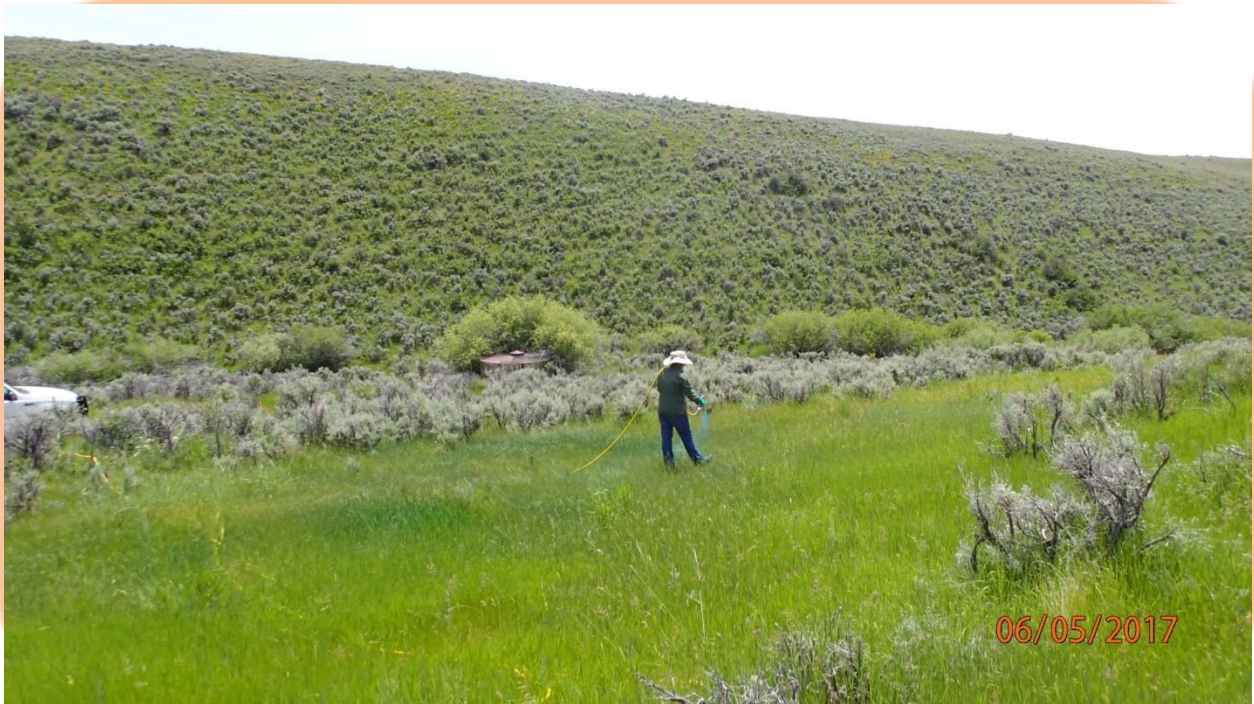
Basin	Perennial Yield (Acre Ft/Year)	Committed Acre Feet Annually (AFA) <sup>1</sup>
Goose Creek - 041	1700	1236
Grouse Creek - 190	350	33
Jarbidge River - 039	12000	36
Mary's River - 042	340000	24981
Pilot Creek Valley - 191	4500	3269
Salmon Falls Creek - 040	140000	6630
Thousand Springs Valley - Herril Siding-Brush Creek - 189A	1800	2778
Thousand Springs Valley - Montello-Crittenden - 189D	14000	20748
Thousand Springs Valley - Rocky Butte - 189C	1400	452
Thousand Springs Valley - Toano-Rock Springs - 189B	2600	1581

Source: Nevada Division of Water Resources

<sup>1</sup> Groundwater Committed is the sum of all permitted, certificated, decreed, reserved, relinquished, revocable and un-adjudicated vested claims to groundwater rights. Domestic Well Use is estimated as the number of active domestic wells multiplied by the estimated average use of 1 AFA per well. Domestic commitments may be represented under Groundwater Committed for wells with an appropriative right for domestic use, or for wells that were drilled under a relinquishment of an existing groundwater right. Groundwater Available for Appropriation is estimated as the difference between perennial yield and groundwater committed plus domestic well use. If groundwater committed exceeds perennial yield, available groundwater is zero. This simplified estimate does not take into account several variables that may affect groundwater availability, such as the supplemental nature of groundwater to surface water sources, rights that were issued with an expiration date, rights that are temporary in nature (i.e. mining and milling), the consumptive use of individual rights, hydrogeologic setting, hydraulic connectivity to surface water, adjudication status, and geothermal appropriations.

The highlighted basins indicate committed allocations that are near and or exceeding the estimated perennial yield. There are increasing demands for water use both within and outside of the designated water basins. Careful consideration and analysis will be required to minimize impacts and effects associated with over-allocation, particularly with out-of-basin transfers for residential/commercial/industrial development that can consume significant volume from a limited ground water resource bank. It is important for the CD to monitor and evaluate any proposed basin withdrawals and or transfers out-of-basin. Over-all the majority of watersheds are stable relative to estimated perennial yield (re-charge) versus potential maximum commitment (dish-charge). The more populated areas and basins with significant agricultural use are near or in excess of the estimated perennial yield.

# NORTHEAST ELKO CONSERVATION DISTRICT WEED MANAGEMENT AND CONTROL INITIATIVES



Medusahead treatment on Loamy Bottom 8-14PZ eco-site. Photo courtesy of Humboldt Watershed Cooperative Weed Management Area.

## **Cooperative Weed Management Areas (CWMA's)**

The management of noxious weeds is necessary to conserve and improve natural resources such as cropland, soil, forage, and wildlife habitat. Primary goals and objectives are to manage land resources for multiple use values and enhance economic stability throughout the Northeast Elko Conservation District. Currently the Northeast Elko CD works with three (3 ea.) cooperative weed management areas including Elko County, Goose Creek and the Humboldt Watershed Cooperative Weed Management Area. Weed management planning initiatives and control strategies are administered/implemented on public lands by the regulatory agencies, primarily the Bureau of Land Management Elko District, the Humboldt-Toiyabe National Forest Wells/Jarbidge Ranger Districts, and a number of local volunteer conservation groups including the Stewardship Alliance of North East Elko County. Private lands initiatives are administered/assisted through the Northeast Elko Conservation District, the University of Nevada Cooperative Extension, and the USDA Natural Resources Conservation Service.

The CWMA plans have been constructed to compliment the Nevada Noxious Weed Laws put in place by the Nevada Department of Agriculture. The targeted noxious weeds to be controlled are designated by the Nevada Department of Agriculture. Control is aimed at eradicating, reducing, suppressing or containing populations of non-native, invasive noxious

weeds which pose a threat to the environment and economies within Elko County. The Northeast Elko CD, the Nevada Department of Agriculture, UNRCES, USDA-NRCS, BLM, US Forest Service, and the Stewardship Alliance of Northeast Elko County (SANE) work jointly in the effort to identify on both private and public lands the areas of infestation, classify categorically the noxious species index, develop treatment and reclamation/rehab plans and monitor both treatment sites and new areas of infestation. Table 3-2 lists, alphabetically by common name the Nevada Noxious weed list. Extensive work has been completed by the CD/SANE group working jointly in securing partnership funding sources and implementing control initiatives on both private and public lands within the district. Reference the SANE Project List in Appendix II for a complete listing of projects planned and completed from 2013 thru present.

**Table 3-2. Nevada Noxious Weed List and Species That Have Been Identified and Mapped in Elko County**

African Rue	Giant Salvina	Hydrilla
Austrian fieldcress	Goats rue	Johnson grass
peaweed	Green fountain grass	Klamath weed
Black Henbane	Hemlock, poison	Knapweed, Diffuse
Camelthorn	Hemlock, water	Knapweed, Russian
Common crupina	Horse-nettle, Carolina	Knapweed, Spotted
Dyer's woad	Horse-nettle, White	Knapweed, Squarrose
Eurasian watermilfoil	Houndstongue	Leafy Spurge
Mayweed chamomile	Rush skeletonweed	Thistle, Sow
Mediterranean sage	Saltcedar (tamarisk)	Thistle, Iberian star
Medusahead	Sorghum alum	Thistle, Purple star
Perennial pepperweed	Sulfur cinquefoil	Thistle, Yellow star
( <i>tall white top</i> )	Syrian bean caper	Thistle, Malta star
Perennial sweet sudan	Thistle, Canadian	Toadflax, Dalmatian
Puncturevine	Thistle, Musk	Toadflax, yellow
Purple loosestrife	Thistle, Scotch	Whitetop or Hoary cress



# BUREAU OF LAND MANAGEMENT/NORTHEAST ELKO CD RESOURCE MANAGEMENT PLANNING INITIATIVES

## HERD MANAGEMENT AREAS

The Bureau of Land Management oversees 26.9 million acres of land in Nevada used by wild horses, wild burros and other species. Unchecked herds double in size every four years, due to a lack of natural predators and a rapid growth rate. The Northeast Elko Conservation District does not support a herd management area within the district. There are two bordering herd/herd management areas approximating 780,304 acres (Appendix I, Figure 3-3), the Goshute on the southern border and the earlier recognized Toano herd area, which is now comprises a portion of the Pilot Mountain unit. Both areas exceeded the appropriate management level (AML's) as designated by the BLM in 2017. While there are herd management areas adjacent to the district there are no herd management areas within the Northeast Elko Conservation District. The Bureau faces overwhelming complications relative to litigation constraints that inhibit timely gathers to reduce population numbers. As a result, with uncontrolled population numbers, overgrazing impacts are extreme throughout these herd management area and adjacent federal lands units in Elko County.

### Herd Area and Herd Management Area Statistics

as of March 1, 2017

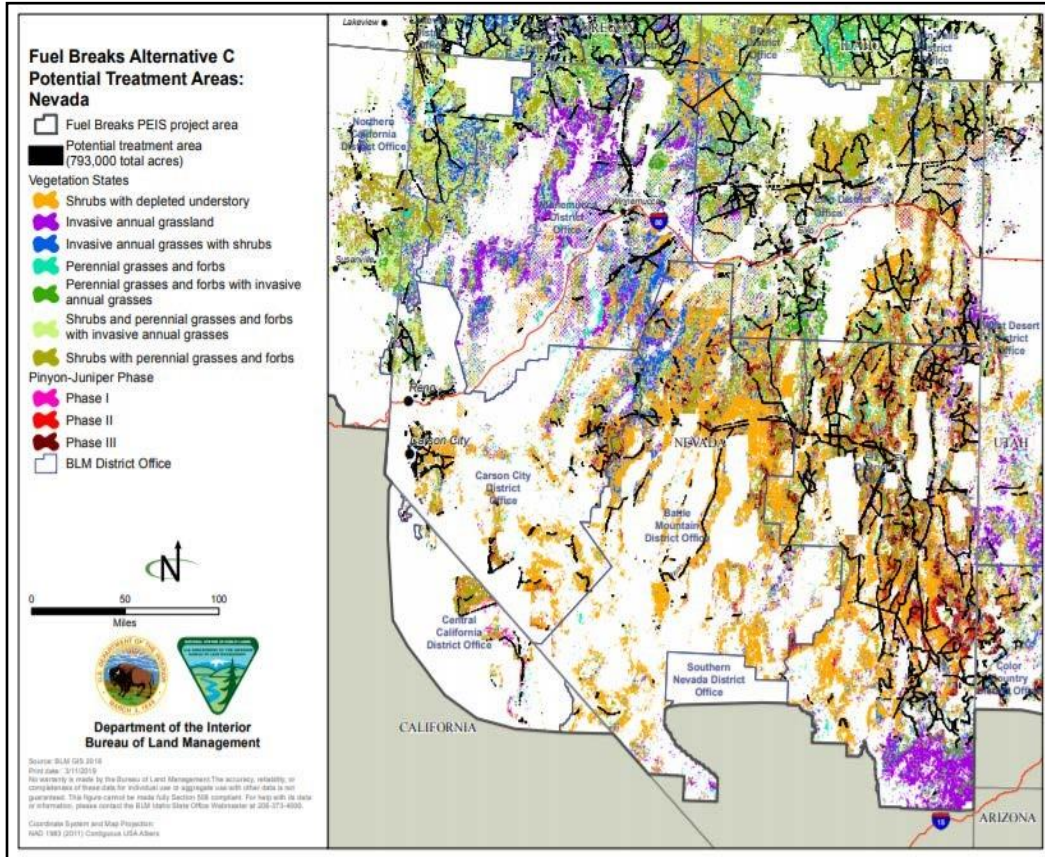
	Herd Area			Herd Management Area		Estimated Populations			High AML
	BLM Acres	Total Acres	Acres Transferred from BLM	BLM Acres	Total Acres	Horses	Burros	Total	
AZ	2,019,027	3,643,197	0	1,498,207	2,296,269	364	6,241	6,605	1,676
CA	5,170,931	7,021,651	1,425,649	2,053,082	2,533,722	5,088	3,657	8,745	2,200
CO	723,095	851,275	0	365,988	404,013	1,693	0	1,693	812
ID	420,783	477,300	0	383,894	418,268	563	0	563	617
MT	103,844	230,073	0	27,094	35,640	166	0	166	120
NV	19,741,193	22,890,624	437,436	14,032,947	15,668,201	34,780	2,931	37,711	12,811
NM	88,655	126,530	0	24,506	28,613	168	0	168	83
OR	3,608,660	4,312,356	130,335	2,733,577	2,978,751	4,302	49	4,351	2,715
UT	3,224,891	3,915,687	98,289	2,154,458	2,451,227	5,215	313	5,528	1,956
WY	7,301,975	10,344,424	0	3,633,879	4,768,682	7,144	0	7,144	3,725
TOTAL	42,403,054	53,813,117	2,091,709	26,907,632	31,583,386	59,483	13,191	72,674	26,715

## **FIRE MANAGEMENT/FUEL BREAKS INITIATIVE**

Large, unbroken swaths of grasses, brush and other vegetation have provided a continuous supply of fuel for the recent catastrophic rangeland wildfires that have burned across the Great Basin states. The concept behind fuel breaks is to break up or fragment continuous fuels by reducing vegetation in key locations. When a wildfire burns into a fuel break, the flame lengths decrease and its progress slows, making it safer and easier for firefighters to control. The fuel breaks would be strategically placed along roads and rights-of-way on BLM-administered lands. On June 21, 2019 the Department of the Interior's (DOI) Bureau of Land Management (BLM) released the Draft Programmatic Environmental Impact Statement (EIS) for Fuel Breaks in the Great Basin for a 45-day public comment period. This Draft Programmatic EIS analyzes a system of up to 11,000 miles of strategically placed fuel breaks to control wildfires within a 223-million-acre area that includes portions of Idaho, Oregon, Washington, California, Nevada (Figure 3) and Utah (BLMNV, 2019). The Northeast Elko Conservation District has sustained significant impacts from large scale fire over several decades which has led to vegetative type conversions effecting critical habitat regimens and watershed stability (Appendix I, Figure 3-4).

Tools used to create fuel breaks could include brown strips - areas where all vegetation has been removed; green strips - areas where vegetation that is more flammable has been replaced with less flammable vegetation; and mowing or targeted grazing depending on the locations and vegetation. A system of strategically placed fuel breaks in the Great Basin region would slow the spread of wildfires; thereby reducing wildfire size, improving firefighter safety and providing an anchor point for fire suppression activities, providing opportunities to control catastrophic wildfire, and creating buffers for maintaining important habitats. Fuel breaks would also offer greater protection to human life and property, sagebrush communities, and ongoing/pending habitat restoration investments, and reduce invasive plant species expansion. Wildfires continue to increase in size and frequency throughout the western United States in recent years. Further, the number of areas that burn repeatedly before habitats can be reestablished has increased. These fires negatively impact healthy rangelands, sagebrush communities, and the general productivity of the lands. In the last decade (2009-2018), 21 fires have exceeded 100,000 acres. During this same timeframe, the total number of acres burned in the project area was over 13.5 million acres.

**Figure 3. Fuel Breaks Alternative C Potential Treatment Areas: Nevada**



Efforts to suppress wildfires on BLM-administered lands in Utah, Nevada, and Idaho (for which data are available) have cost approximately \$373 million dollars between 2009 and 2018. These wildfires result in increased destruction of private property, degradation and loss of rangelands, loss of recreational opportunities, and habitat loss for a variety of species, including the conversion of native habitats to invasive annual grasses. The conversion of rangeland habitats to invasive annual grasslands further impedes rangeland health and productivity by slowing or preventing recovery of sagebrush communities. (BLMNV, 2019)

Currently the Northeast Elko Conservation District, through the SANE partners initiative, is working on a number of projects that address both vegetative fire buffering and post-fire reseeding rehabilitation efforts on private and public lands. A listing of the planned and completed project locations are summarized in the SANE Project List, Appendix II.

## **GREATER SAGE-GROUSE HABITAT CONSERVATION**

Greater Sage-Grouse is a state-managed wildlife species that depends on sagebrushsteppe ecosystems managed in partnership by federal, state and local authorities. Shared responsibilities mean that it makes sense for the BLM as the largest land manager to align its strategies with the state agencies responsible for managing the species. The BLM has better aligned its resource management plans with respective state wildlife management plans through amendments developed in collaboration with governors, state wildlife managers and other stakeholders. Records of Decision (RODs) signed on March 14 and 15, 2019, adopt these amendments and position state-level coalitions to move forward toward improved outcomes for the Greater Sage-Grouse (BLMSG, 2019)

The State's goal for the conservation of sage-grouse in the State of Nevada is to provide for the long-term conservation of sage-grouse by protecting the sagebrush ecosystem upon which the species depends. Redundant, representative, and resilient populations of sage-grouse will be maintained through amelioration of threats; conservation of key habitats; mitigation for loss of habitat due to anthropogenic disturbances; and restoration or rehabilitation of habitat degraded or lost due to Acts of Nature. Achieving the State's goal for the conservation of sage-grouse will provide benefits for the sagebrush ecosystem and for many other sagebrush obligate species. Sage-grouse are known to be an "umbrella species" for many sagebrush obligate and associated species (Hanser and Knick 2011). The enhancement and restoration measures that bring resiliency and restore ecological functions to sagebrush ecosystems will also serve to ensure quality habitat for sage thrasher, sage sparrow, Brewer's sparrow, sagebrush vole, pygmy rabbit, pronghorn antelope, mule deer, and many other species (Team, 2014). Significant habitat regimens, sagebrush-steppe, comprise major land resource areas 25 within the Northeast Elko Conservation District (Appendix I, Figure 3-5). Diversified seasonal habitats occur on private agricultural lands which are integral for the long-term stability of the population segments throughout the CD.

The Greater Sage-grouse Advisory Committee, using the best available science, identified fire and invasive plant species, principally cheatgrass (*Bromus tectorum*), as the primary threat to sage-grouse and their habitat in the State of Nevada. The State acknowledges these threats must be adequately addressed in order to achieve the conservation goal for sage-grouse within the State of Nevada; however, it is not economically or ecologically feasible to restore all fire damaged or invasive species dominated landscapes at this point, nor is it possible to prevent all fires (NVSETT, 2014). Upland seasonal habitat regimens, summer brood, springfall, winter and breeding (leks), require sound land use and management initiatives and practices to insure habitat propagation and stability into the future.

Fire and the subsequent reestablishment of plant species (native or not) is a natural process, and consequently this threat is extremely challenging across the western United States

as humans are still limited in our ability to directly control this cycle. However, scientific understanding of ecological processes and resource management techniques continues to improve. Adaptive management approaches, committed to by the State, will provide an opportunity to continue to gain a greater understanding of the ecological mechanisms that drive these processes and will subsequently lead to improvements in resource management practices that reduce the occurrence of catastrophic wildfire and minimize the risk of crossing ecological thresholds due to the invasion and subsequent potential domination by invasive annual grasses (NVSETT, 2014).

The following summarizes the preferred alternative identified in the Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region in March of 2019:

**Alternative D** was identified as the preferred alternative in the Draft EISs. This alternative balanced opportunities to use and develop the Planning Area, as well as conserving, maintaining, and enhancing GRSG (Greater Sage-Grouse) and its habitat. Protective measures were applied to GRSG habitat, while allowing for human disturbances with stringent mitigation measures. This alternative represents the mix and variety of management actions, based on the BLM's analysis and judgment, which best resolve the resource issues and management concerns while meeting laws, regulations, and policies pertaining to BLM management. As a result of public scoping comments, internal review, and cooperating agency coordination on the Draft RMPAs/EISs, this alternative was modified to become the Proposed RMPAs (Resource Management Planning Areas) and was analyzed in the Final EISs. The preferred alternatives, with slight variations, became the proposed plans in the Final EISs. In PHMAs (Planned Habitat Management Areas) under Alternative D, disturbance in GRSG habitat would be limited by excluding wind and solar energy development (except for certain counties in Southeastern Oregon, where avoidance is applied), avoiding most ROW (Right-Of-Way) development (subject to certain conditions), applying NSO stipulations to fluid mineral development, and closing PHMAs to non-energy leasable mineral development and mineral material sales. These management actions would protect GRSG habitat, while allowing other activities, subject to conditions. In GHMAs (General Habitat Management Areas) under Alternative D, allocations are less stringent but still aim to protect GRSG habitat (for example, applying moderate constraints and stipulations to fluid minerals in GHMAs). Under Alternative D, the BLM management would support sagebrush/perennial grass ecosystem restoration, would increase fire suppression in PHMAs and GHMAs, and would manage livestock grazing to maintain or enhance sagebrush and perennial grass ecosystems (BLMSG, 2019).

The Northeast Elko Conservation District, working in concert through the SANE group initiative, has been very pro-active with cooperative planning and project implementation relative to sage grouse habitat stabilization and enhancement on private/public lands throughout the district. These planned and completed projects are listed in Appendix II, SANE Project List.

## **RANGELAND HEALTH-RIPARIAN MANAGEMENT-GRAZING LANDS**

Within the CD there are some thirty-six (36 ea.) grazing allotments administered by the BLM and USFS. (Appendix I - Figure 3-6). The majority of agricultural operations throughout the district rely on the use of these public lands as an integral component of the ranching operation. Private agricultural lands (508,637 ac.) comprise approximately 21% of the total land base within the district. Without the use of the BLM/USFS pastures, again, the majority of cowcalf based operations would not be able to sustain agricultural enterprises in the Northeast Elko Conservation District. Maintaining optimal rangeland health (uplands) and proper functioning condition of ephemeral and perennial watershed remains a constant management objective on both private and public lands. In order for these agricultural operations to transition and stabilize as viable agri-business entities a comprehensive, dynamic and holistic management policy must be developed and implemented on public lands. Grazing management principals must be employed utilizing state of the art scientifically proven protocols in order to incorporate much needed flexibility in grazing schedules devised to sustain natural resource integrity and provide optimal management opportunities for the public grazing lands users.

Riparian Proper Functioning Condition (PFC) describes assessing on-the-ground conditions of a riparian area. A healthy riparian area is resilient. PFC gauges a riparian area's resiliency, or ability to hold together, during high stream flows. They are among the first landscape features to reflect damage from improper management or natural events, such as a flood or drought. Yet, water can also create opportunities for restoration and recovery including re-establishing native vegetation or improving fish and wildlife habitat. When riparian areas are not in PFC, they are not in a sustainable condition. To create a sustainable riparian area, cooperative restoration and management at a landscape level are key to bringing about desired conditions in watershed on public lands. Landscape-scale restoration is a priority because public land managers face increasing demand for water resources. Reliable supplies of water for domestic, agricultural, and industrial consumption are essential to community well-being and economic stability. Restoration can help balance human needs with those of fish and wildlife by increasing the quality and quantity of water resources (BLM).

The SANE group has initiated a number of range improvement projects within the district designed to improve grazing distribution and enhance rangeland/riparian resources on public and private lands. The current status relative to the planning and implementation stages of these range improvement projects are summarized in the SANE Project List, Appendix II.

## **PINION-JUNIPER MANAGEMENT INITIATIVE - NORTHEAST ELKO CD/SANE/BLM/NDOW**

Much research has been done documenting the negative ecological impacts related to the expansion and infill of PJ woodlands outside of native areas and encroachment of these woodlands into sagebrush steppe (Baker and Shinneman, 2004; Blackburn and Tueller, 1970; Burkhardt and Tisdale, 1976; Rowland, et al., 2008; Soule and Knapp, 1999; Wall, et al., 2001; Wilcox and Davenport, 1995). Negative impacts associated with this expansion and encroachment includes, but is not limited to, loss of wildlife habitat, increased erosion, loss of herbaceous species, increase in conditions conducive to weed invasion, and decrease in water quantity and quality (ECDNR-Tibbitts, 2012).

Currently within the Gollaher Mountain PMU the SANE group has initiated some fifteen pinion-juniper reduction projects that are in the planning/permitting stage. The treatment zones targeting Phase I and II PJ remediation is estimated to benefit approximately 102,853 acres of sage grouse habitat.

### **CULTURAL RESOURCES**

Created in 1979 by the Nevada Legislature, the Nevada State Register (or NVSRHP) is an official list kept by the Nevada State Historic Preservation Office of places and resources worthy of preservation (NRS 383.085). These resources reflect history, architecture, archaeology, and culture that are important to Nevadans. The Nevada State Register recognizes those places in the state that have significance to the past in a local, state, or national context, and possess good physical integrity to the period during which they were important. To be eligible, a resource can be a building, structure, site, or object. They can also be a larger landscape, or a collection of resources known as an historic district. (NVSHPO, 1979)

Within the Northeast Elko Conservation District several historical sites and historical districts (tribal and mining) have been identified by public lands regulatory agencies (BLM, USFS), tribal entities and the Nevada State Preservation Officer. Pre-historic data is administered by public lands management agencies and tribes in coordination with the State Historic Preservation Officer (SHPO). Protocols relative to procedures required to evaluate potential cultural properties are collaborated among the administering agencies and tribes. Federal programs administered and deployed on private and municipal/county/state lands require implementation of protocols as described for public lands as per code of federal regulation (CFR).

## **NORTHEAST ELKO CONSERVATION DISTRICT - STEWARDSHIP ALLIANCE OF NORTH EASTERN ELKO COUNTY PARTNERSHIP**

The Stewardship Alliance of Northeast Elko (SANE) is an organized group of ranchers, biologists, and resource specialists, all of whom have knowledge and experience with management and uses of rangeland in northeast Nevada. Ranchers who belong to SANE operate livestock businesses on more than 1.7 million acres of public and private lands within the Northeast Elko Conservation District. Federal resource management agencies include the US Forest Service (USFS), the Bureau of Land Management (BLM), and Natural Resources Conservation Service (NRCS). Participating State agencies include the Nevada Department of Wildlife (NDOW), the Nevada Division of Forestry (NDF), NE Elko County Conservation District (NECD), and University of Nevada Cooperative Extension (UNCE). SANE members recognize that private landowners have a large stake in conservation of healthy sagebrush ecosystems, and sage-grouse habitat in particular. Many have been actively involved in conducting improvements on their lands and in adjusting some management practices that benefit sage-grouse. SANE members recognize that private lands provide essential sage-grouse habitat and the greatest benefits to sage-grouse will come from addressing threats on both public and private land through a cooperative conservation approach.

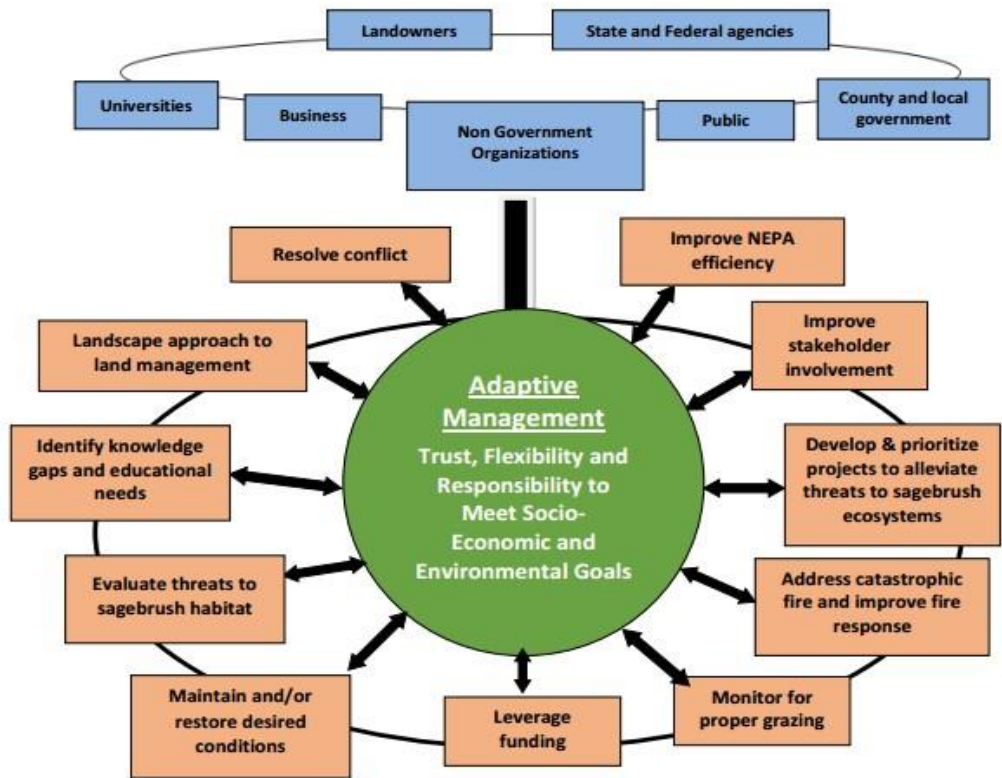
The purposes of this plan are to create a living document that:

- 1. Represents the objectives of the ranching community in NE Elko County;
- 2. Creates an environment of learning from all represented stakeholders; and
- 3. Creates a concise assemblage of pertinent information suitable for the US Fish and Wildlife Service (USFWS) administrative record regarding sage-grouse conservation in the Plan Area that better refines the threat assessment to greater sage -grouse with specific goals, objectives, and actions for conservation of greater sage-grouse and the habitat upon which they depend. (SANE, 2014)

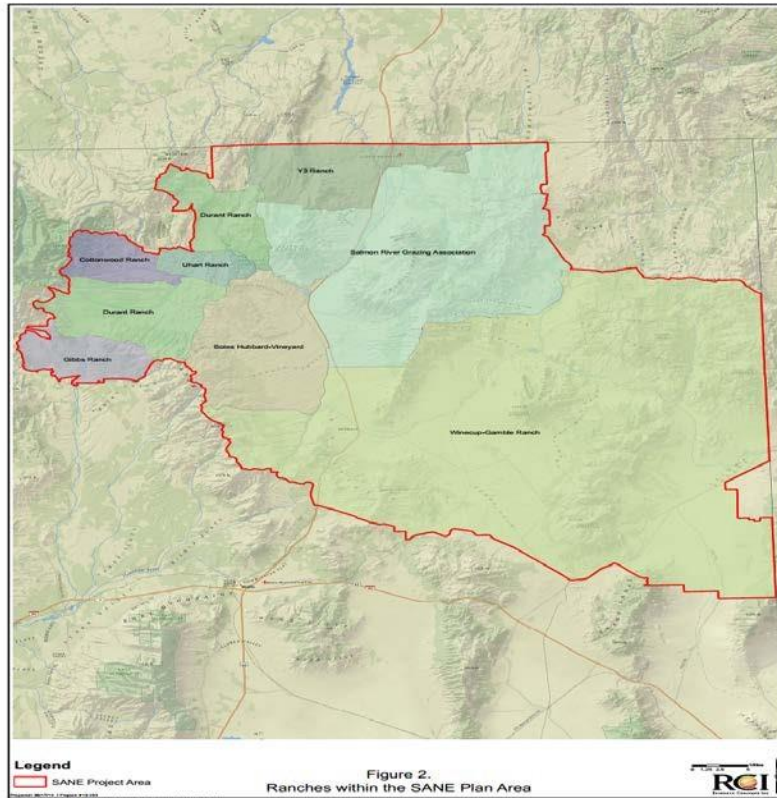


# Stewardship Alliance of NE Elko (SANE)

## Landowner-Driven Collaboration



## SANE Plan Area Map - Northeast Elko Conservation District



## RESOURCE NEEDS ASSESSMENT SURVEY POLL - DEPARTMENT OF ECONOMIC AND COOPERATIVE EXTENSION

### RESERVED

The purpose of the survey instrument is to gather public input from a broad range of agencies, organizations, businesses, and individuals within conservation districts (CDs) who have an interest in natural resource conditions. This information will inform and assist CD supervisors when working through the CPPE process and completing Conservation Action Plans. It will help supervisors assess natural resource conservation needs and set community conservation goals in context of community conservation goals and priorities.

Completed surveys in each participating District will help ensure that projects, research, and educational priorities meet the conservation needs in each District and across the state (NVACD, 2017).

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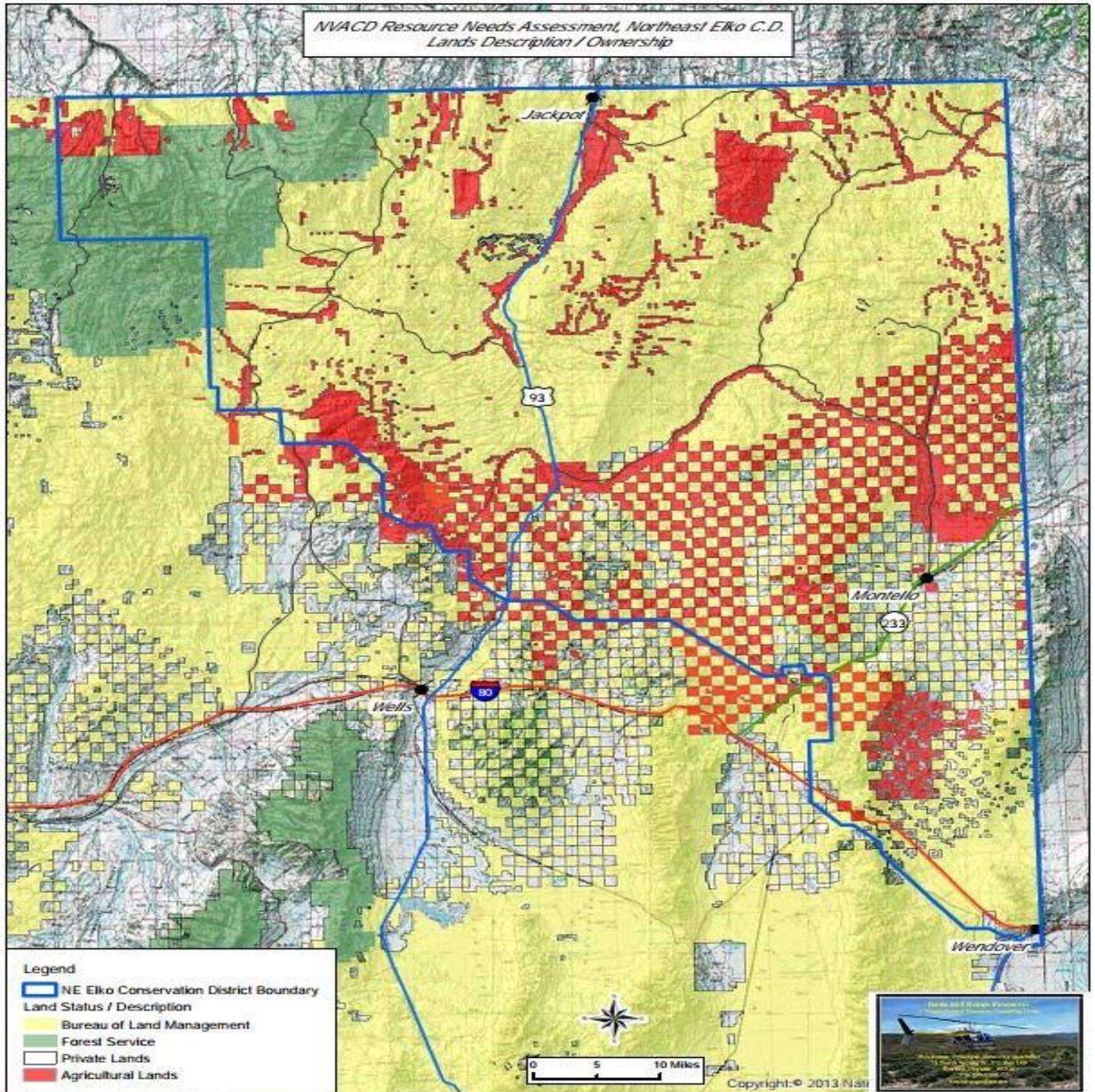
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# APPENDIX I – NORTHEAST ELKO CONSERVATION DISTRICT RESOURCE MAPS

Figure 3-1. Northeast Elko CD Land Ownership



**Figure 3-2. Northeast Elko CD Hydrological Basins**

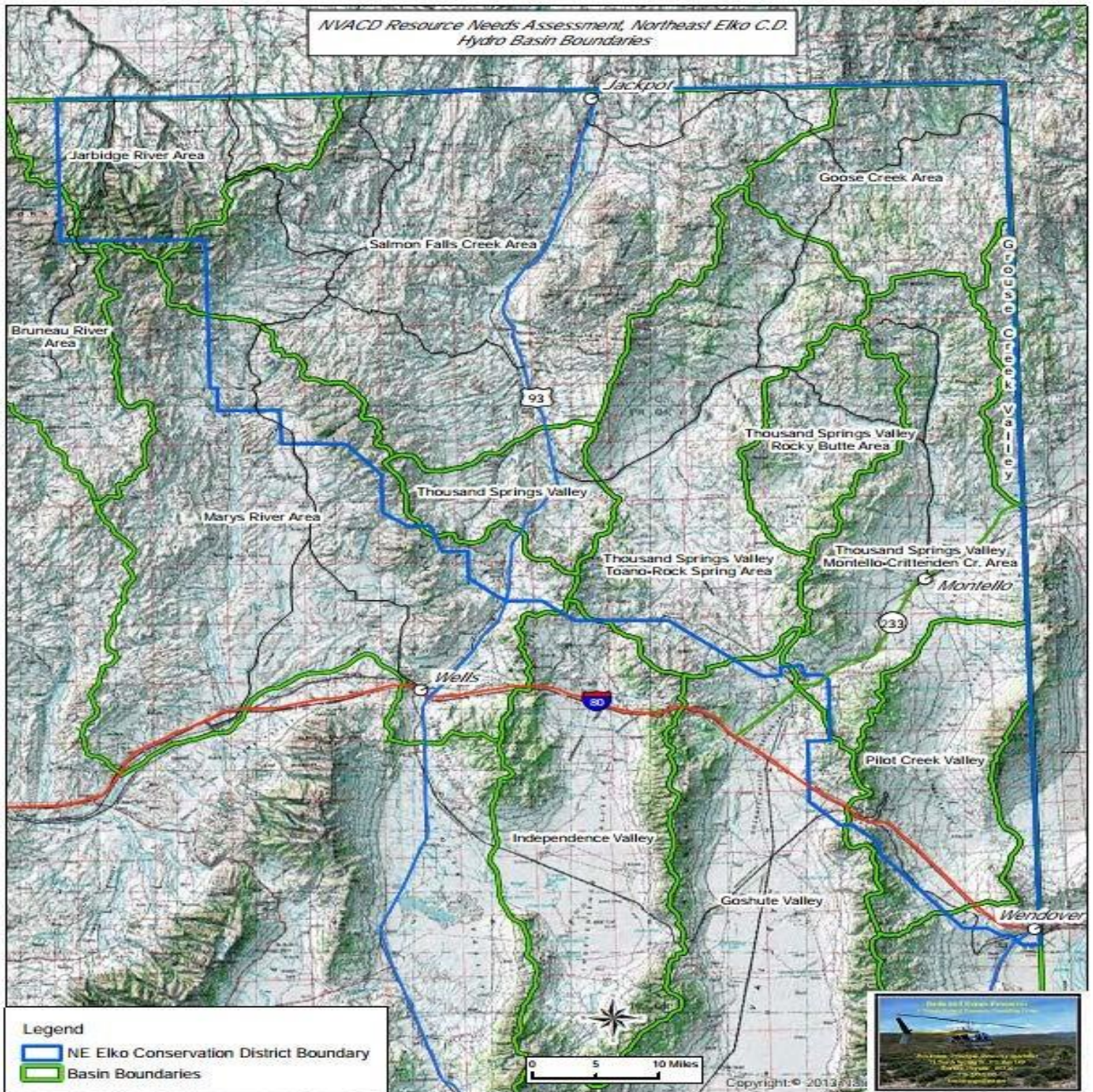


Figure 3-3. Northeast Elko CD Herd/Herd Management Areas

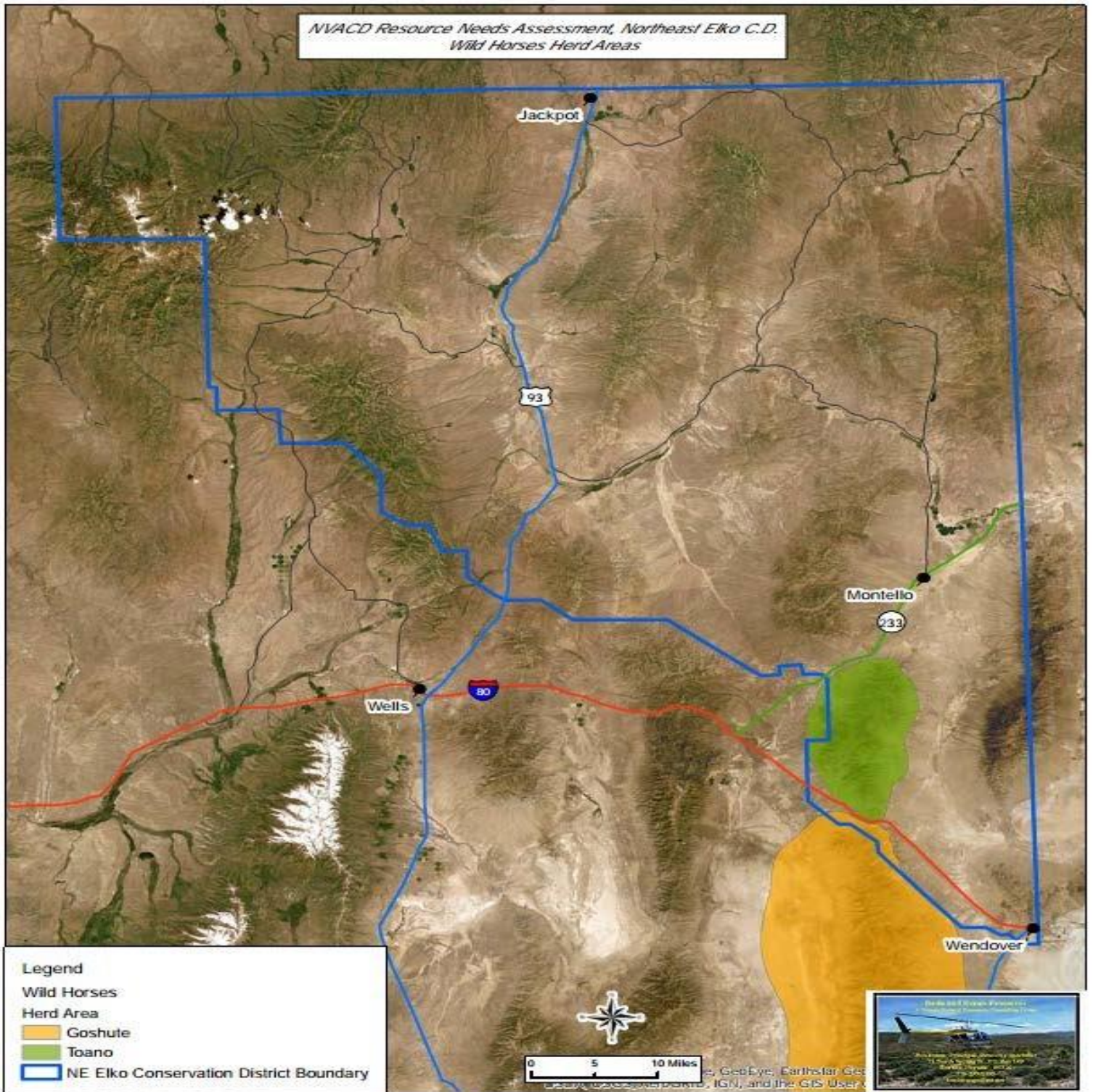


Figure 3-4. Northeast Elko CD Burn Map

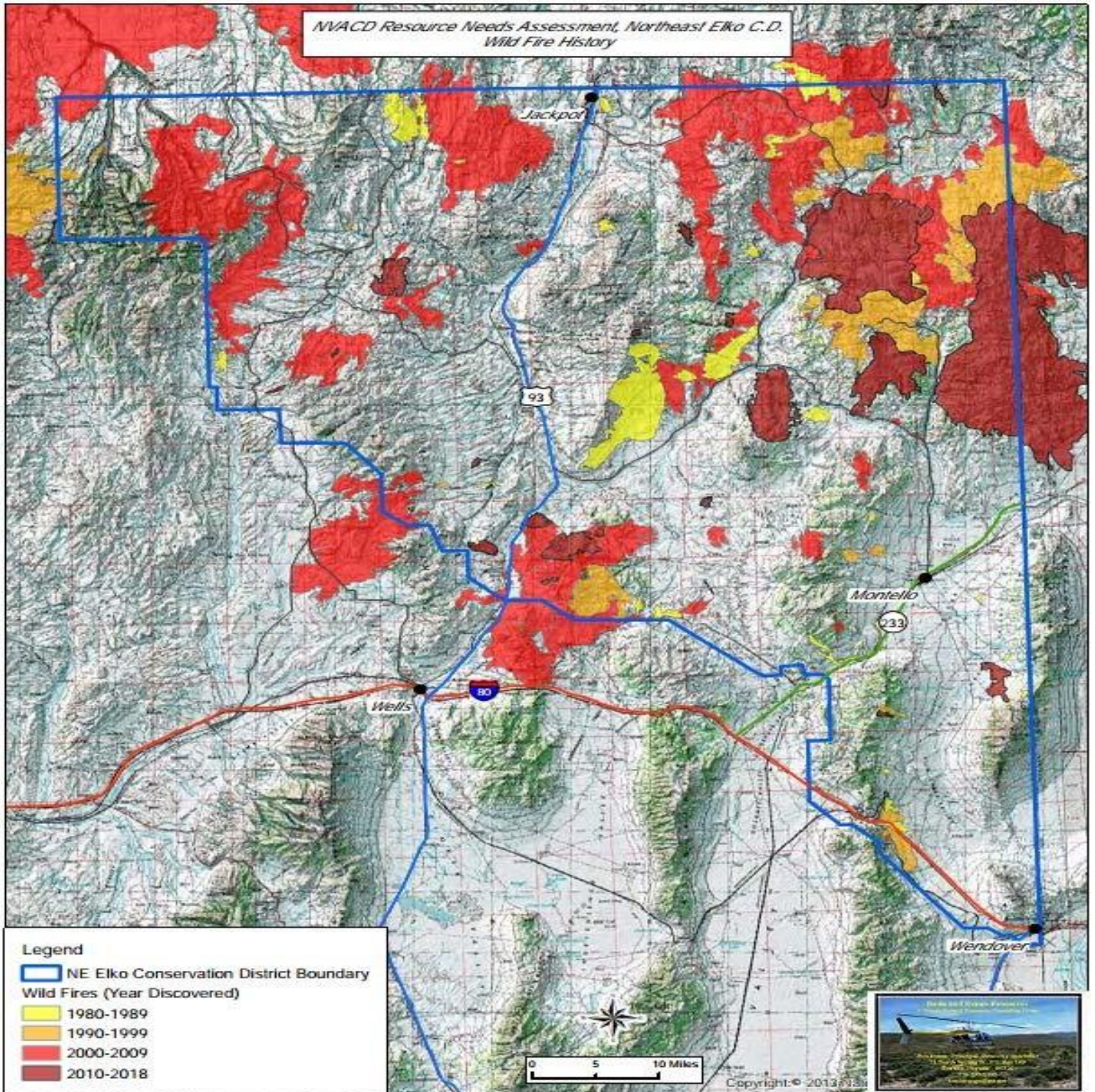
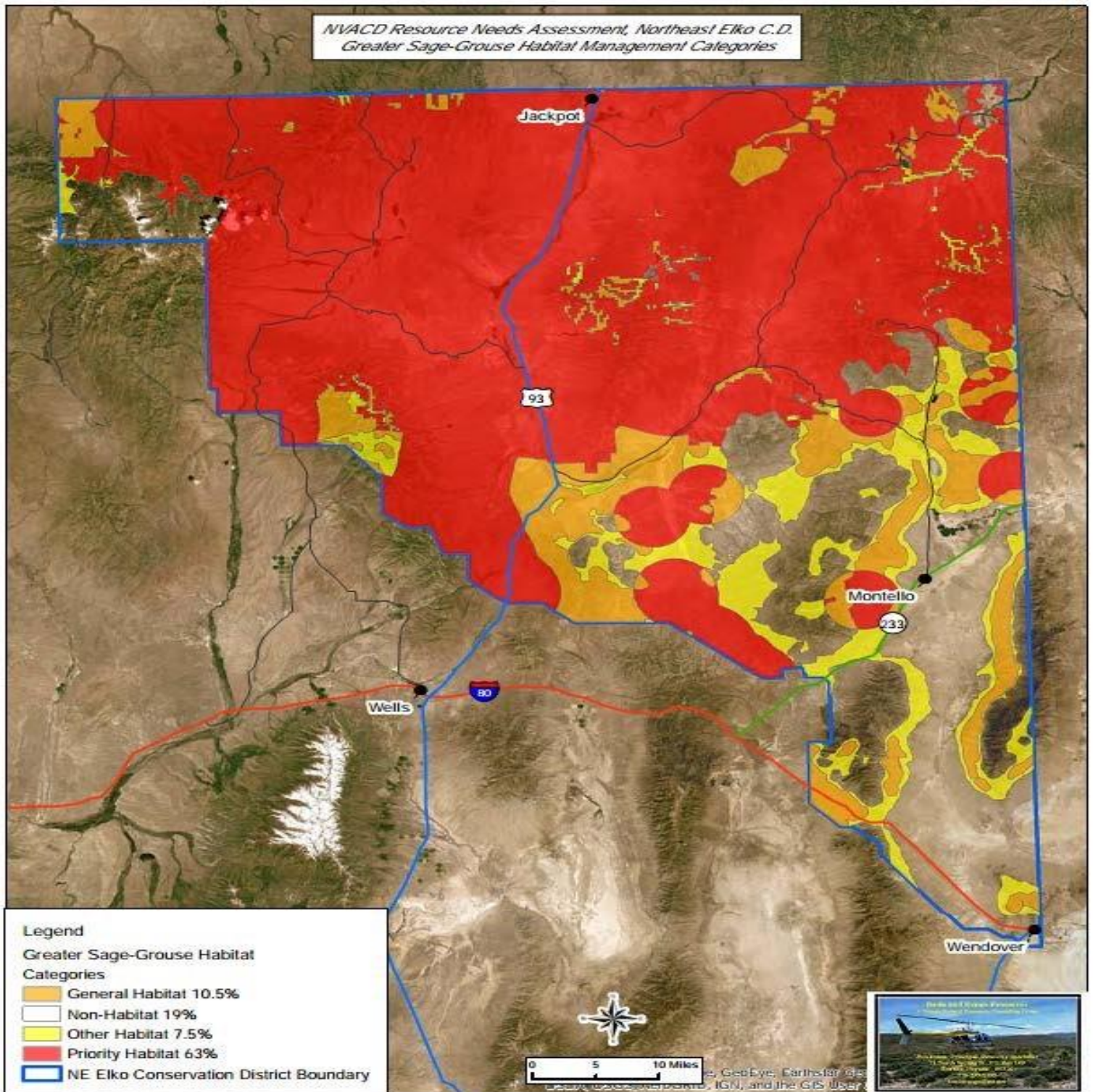
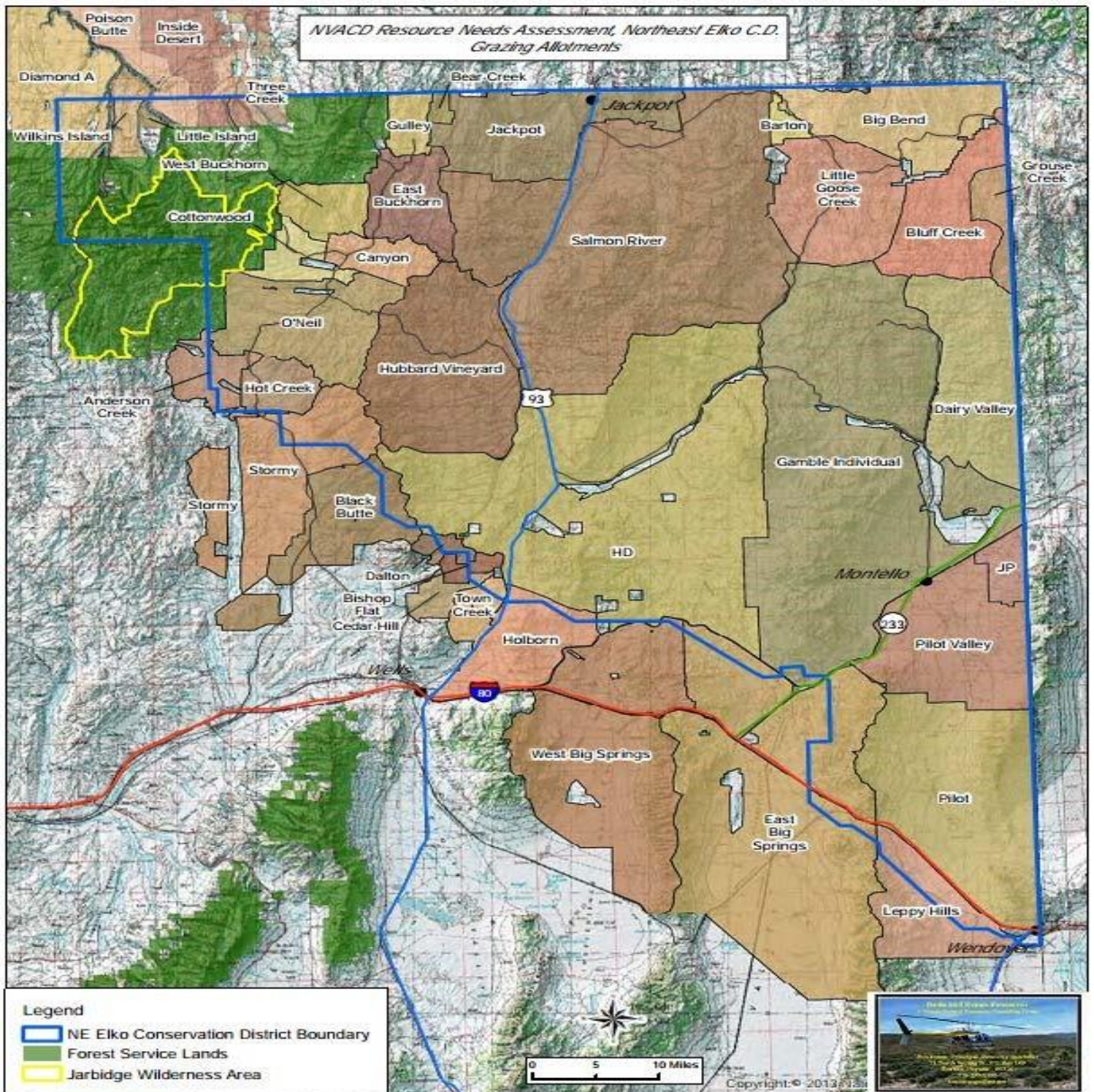




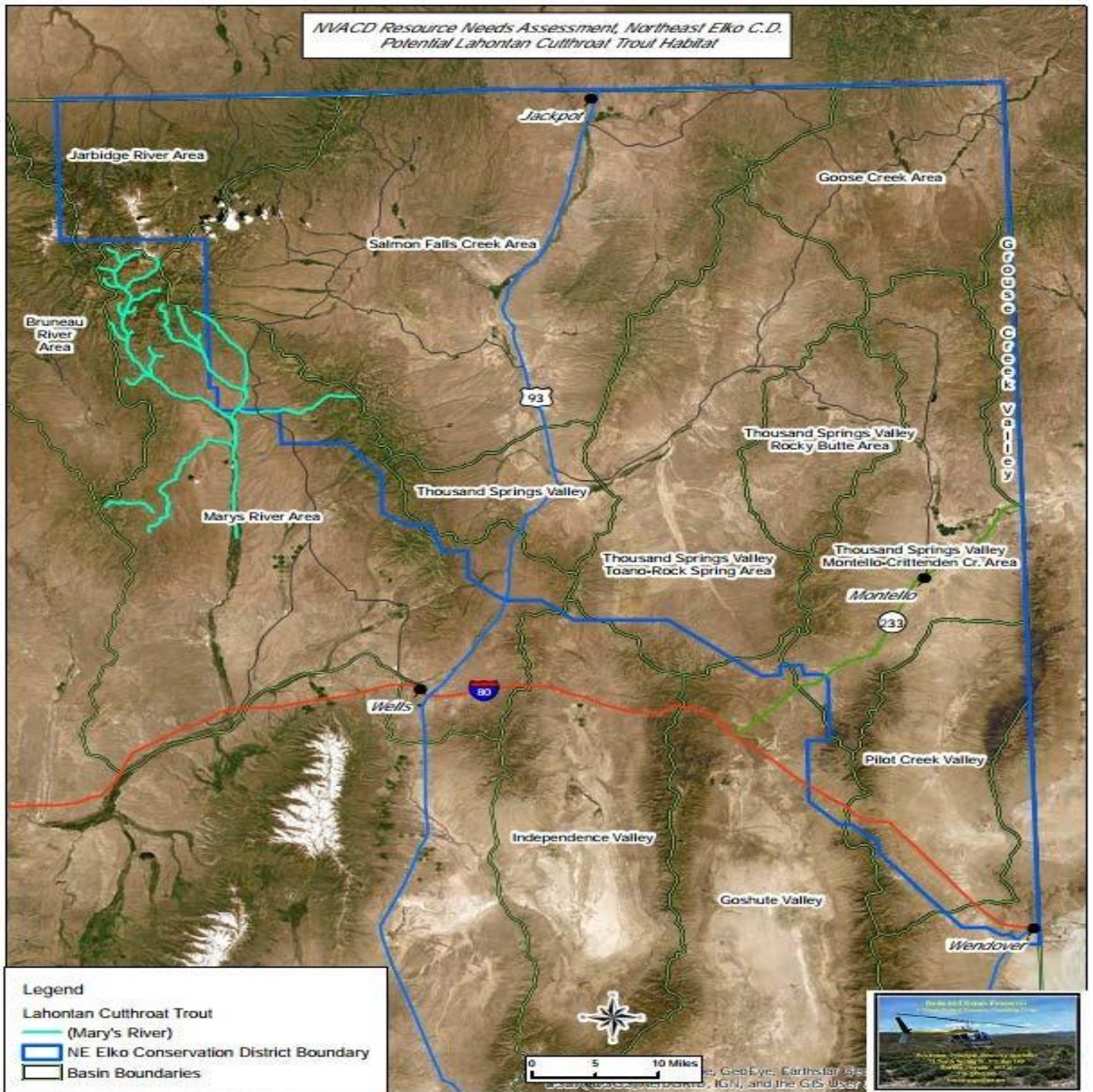
Figure 3-5. Northeast Elko CD Sage Grouse Habitat Regimens



**Figure 3-6. BLM and USFS Grazing Allotments - Northeast Elko CD**



**Figure 3-7. Potential Lahontan Cutthroat Trout Habitat - Mary's River Watershed**



## APPENDIX II - SANE PROJECT LIST - 1/4

Appendix II. SANE Project List

Project Name/Location	Sage Grouse Ecosystem Risk Score	NEPA Requirement	Description	Project ID	Population Management Unit (PMU)	State	Primary Land Manager	Responsible Party	Pasture Name	Primary Contact	Partners	Action Type	Total Acres
Volunteer Fire Response		NA	SANE VFD Created, they have 1 truck housed at Cottonwood Ranch, radios, pagers, PPE, and 1st year training. Requesting another truck. Will continue with annual training.	WG-11	All	NV	Private and Federal	James Rogers Connie Lee	Multiple	James Rogers	BLM/Private	Fire Pre-suppression	1,725,687.00
Strategic Fuel Breaks		Oneil PPA EA	One NEPA doc analyzing strategic fuel breaks; mowing, herbicide, etc.	PPA 28	Gollaheer	NV	Private and Federal	BLM	Multiple	BLM/Wells FO		Fire Pre-suppression	12,779.00
Goose Creek Milkvetch Detection		Completed	Especially concentrated in Little Goose Creek drainage related to Goose Creek milkvetch.	AP-3	Gollaheer	NV	BLM/Wells FO	All	Multiple	BLM/Wells FO	BLM/Private	Monitoring	1,834.00
Follow up noxious weed treatments		Completed	Black henbane, knapweed, leafy spurge. Winecup Gamble, Little Goose Creek road systems (mapped as 20 ft buffer)	AP-5	All	NV	BLM/Wells FO	BLM	Multiple	BLM/Wells FO		Monitoring	6,840.00
Reduce Raven Subsidies		NA	Reduce raven subsidies by burying dead animals, covering landfills, and reducing nesting substrates		All	NV	Private Lands	All				Predator Control	
Augmentation of fire rehab seedings (18 Mile Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 1	Gollaheer	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	343.00
Augmentation of fire rehab seedings (21 Mile Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 2	Gollaheer	NV	Private and Federal	BLM	Gamble Individual	BLM/Wells FO		Fire Rehabilitation	443.00
Augmentation of fire rehab seedings (Bell Canyon Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 3	Gollaheer	NV	BLM/Wells FO	BLM		BLM/Wells FO		Fire Rehabilitation	2,859.00
Augmentation of fire rehab seedings (West Basin Fire) Cow Creek		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 4	Gollaheer	NV	BLM/Wells FO	BLM		BLM/Wells FO		Fire Rehabilitation	3,422.00
Augmentation of fire rehab seedings (Deer Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 5	Snake	NV	BLM/Wells FO	BLM	Lower Deer	BLM/Wells FO		Fire Rehabilitation	15,776.00
Augmentation of fire rehab seedings (Hepworth Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 6	Snake	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	12,884.00
Augmentation of fire rehab seedings (West Basin Fire) N Gollaheer		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 7	Gollaheer	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	14,659.00
Augmentation of fire rehab seedings (Salmon Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 8	Oneil Basin	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	4,846.00
Augmentation of fire rehab seedings (Scott Creek Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 9	Oneil Basin	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	15,090.00
Augmentation of fire rehab seedings (S Cricket Fire #1)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 10	Snake	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	11,489.00
Augmentation of fire rehab seedings (West Fork Fire)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 11	Gollaheer	NV	Private and Federal	BLM		BLM/Wells FO		Fire Rehabilitation	10,203.00
Augmentation of fire rehab seedings (Wilkins)		Oneil PPA EA	Augmentation of fire rehab seedings with sagebrush and bitterbrush seedings. Ensure grazing plan is compatible.	PPA 12	Gollaheer	NV	BLM/Wells FO	BLM		BLM/Wells FO		Fire Rehabilitation	10,447.00
Sagebrush Planting		NA	Plant sagebrush seedlings on Cottowood private (seedlings will be planted in fall 2019)	CW-7	Oneil Basin	NV	Private Lands	Agee Smith		Agee Smith	NDF	Rangeland Seeding - Shrubs	
Chicken Springs Enclosure		Completed	Protect spring with an enclosure and pipe water to a trough. DNA done on chicken and dinner, chicken springs can implement. Project planning phase		Gollaheer	NV	BLM/Wells FO	BLM		James Rogers	BLM	Spring/Meadow Protection	2.00
Dinner Springs Enclosure		Completed	Protect spring with an enclosure and pipe water to a trough	AP-12	Gollaheer	NV	Private and Federal	BLM	Dairy Valley	BLM/Wells FO	James Rogers	Spring/Meadow Protection	1.00

## APPENDIX II - SANE PROJECT LIST - 2/4

TU Dry Creek Stream Restoration	EA in progress	Restore Dry Creek stream channel to PFC. Reconnecting 6 mi. of stream through culvert replacement and 1800 ft of stream bank restoration	AP-26	Snake	NV	Private and Federal	TU/NDOW	Dry Creek	Steve Boies	Trout Unlimited	Spring/meadow Restoration	
18 Mile Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 13	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	5,437.00
Corral Canyon Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 14	Gollaher	NV	Private and Federal			BLM/Wells FO	BLM/Private	Conifer removal	4,914.00
Dakes Reservoir Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 15	Gollaher	NV	Private and Federal					Conifer removal	1,623.00
Deadman Creek Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 16	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	4,372.00
Division Canyon Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 17	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	6,301.00
East Crittenden Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 18	Gollaher	NV	Private and Federal					Conifer removal	17,176.00
Eccles Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 19	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	1,252.00
Fivemile Draw Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 20	Gollaher	NV	Private and Federal					Conifer removal	2,588.00
Goose Creek Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 21	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	1,265.00
Granites Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 22	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	15,736.00
Murdock Mtn Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 23	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	14,695.00
Mustang Draw Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 24	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	3,078.00
NE Pequoop Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 25	Gollaher	NV	Private and Federal			BLM/Wells FO		Conifer removal	10,285.00
Rock Springs Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 26	Gollaher	NV	Private and Federal	SRCA/BLM	Granite/China Mountain	BLM/Wells FO	BLM/Private	Conifer removal	11,896.00
Sugarloaf Juniper Reduction	Oneil PPA EA	Remove phase 1 and some phase 2 juniper and sagebrush ecosystem restoration	PPA 27	Gollaher	NV	Private and Federal	SRCA/BLM	Granite/China Mountain	BLM/Wells FO	BLM/Private	Conifer removal	2,235.00
Conservation Planning	NA	NRCS Conservation Planning. Winecup and Cottonwood complete, Hubbard/Vineyard is in draft (32,700 acres of 52,700 acres completed), Gibbs partial	AP-27	All	NV	BLM/Wells FO	NRCS		NRCS	NRCS/Private	Planning Land Use	52,700.00
Install Fence Markers	CX done	Prioritize around leks. BLM has all the markers.	AP-13	Gollaher	NV	BLM/Wells FO	All	Multiple	TAC	BLM/Private	Fence Marking	
Maintenance of Dirt Tanks/Pipeline	NA	Improve water holding capacity, consider adding culverts	ON-1	Oneil Basin	NV	BLM/Wells FO	Joe Durant	Multiple	Joe Durant	Private	Livestock Watering Facility	
Upper Dairy Valley Exlosures	NA	Numerous Springs protections on mostly private ground have fallen in disrepair (1800 ft will be done Summer 2017)	WG-9	Gollaher	NV	BLM/Wells FO	James Rogers	Dairy Valley	James Rogers		Spring/Meadow Protection	3.00
Signboard Pipeline	Completed	Provide additional water source in Signboard Pass Pasture	WG-5	Gollaher	NV	BLM/Wells FO	BLM	Signboard Pass	James Rogers	BLM	Pipeline	
Delano Pipeline	Completed	Make temporary pipeline permanent	WG-7	Gollaher	NV	BLM/Wells FO	BLM		James Rogers	BLM	Pipeline	
Burnt Creek Pipeline	Completed	Install pipeline to a storage tank and trough	WG-8	Gollaher	NV	BLM/Wells FO	BLM		James Rogers	BLM	Pipeline	
Biopesticide	Completed	Create study plot on the use of biopesticide to address invading cheatgrass	AP-28	Oneil Basin	NV	BLM/Wells FO	Sam Cisney		Sam Cisney	BLM/Private	Research	50.00
Brush Creek Spring	NA	Spring Enclosure and Irrigation headgate installation to improve control of livestock and water for meadow irrigation	WG-3	Snake	NV	Private Lands	James Rogers	HD	James Rogers		Spring/Meadow Protection	476.00
North Black Mountain Water Access	NA	Alter new enclosure that excluded permittee from water source or install external trough.	CA-6	Oneil Basin	NV	BLM/Wells FO	BLM	Canyon	Domingo Uhart		Livestock Watering Facility	
Protect Mud Spring	Completed	Protect Springs - fence is pending	HV-38	Snake	NV	BLM/Wells FO	BLM	Cold Springs	Steve Boies		Spring/Meadow Protection	

## APPENDIX II - SANE PROJECT LIST - 3/4

Protect Spring BLM-EA-HV-06	Completed	Need to determine if this is really a spring	HV-6	Snake	NV	BLM/Wells FO	BLM	Hubbard Basin	Steve Boies		Spring/Meadow Protection	
Protect Spring BLM-EA-HV-09	Completed	Protect Springs, spring development complete, waiting on fence	HV-9	Snake	NV	BLM/Wells FO	BLM	Hubbard Basin	Steve Boies		Spring/Meadow Protection	
Protect Spring BLM-EA-HV-39	Completed	Protect Springs, spring development complete, waiting on fence	HV-39	Snake	NV	BLM/Wells FO	BLM	Hubbard Basin	Steve Boies		Spring/Meadow Protection	
Rock Spring	NA	Maintain spring and build enclosure	HV-2	Snake	NV	Private Lands	Steve Boies	C.S./H.B./C.S.M.	Steve Boies	USFWS	Spring/Meadow Protection	
White House Meadow	NA	Restore Fence that is in disrepair to protect Springs and Meadow (Fence has been repaired, meadow will be reseeded Summer 2017)	WG-10	Gollaher	NV	Private Lands	James Rogers	Dairy Valley	James Rogers		Spring/Meadow Protection	55.00
Black Mtn Spring Enhancement	Possibly Maintenance	There are three springs on the west side of Black Mtn that had been developed, but have fallen in disrepair. Need to maintain and fence.	CA-7	Oneil Basin	NV	BLM/Wells FO			Domingo Uhart	BLM	Spring/Meadow Protection	
Fence Removal - Bear Creek	NA	Fence no longer needed	Y3-3	Oneil Basin	NV	Private Lands		Bear Creek	Y3II-T, Gaved	Private	Fence Removal	
Cottonwood Creek Diversion and Meadow Enhancement	NA	Improve fish passage and water management of meadows on Cottonwood Creek (Legumes have already been planted. Open ditch system. RCPP project with TU.	CW-6	Oneil Basin	NV	Private Lands	NRCS		Agee Smith	Trout Unlimited	Spring/meadow Restoration	50.65
Raven Control	Permit required	Continue to remove ravens through permits with the USFWS near ranch and sewage ponds south of Jackpot	Y3-6	All	NV	USFWS	Travis Gaved	Multiple	Y3II-T, Gaved	BLM/Private	Predator Control	
Ninemile Fence Relocation	Completed	Remove 4.2 miles of existing fence and replace with 2.75 miles of new fence		Gollaher		Private and Federal	James Rogers		James Rogers	BLM	Fence Modification	
Bear Creek Rhone Cattle Guard	CX Done	Install Cattle Guard to reduce unintended cattle movement	Y3-13	Oneil Basin	NV	BLM/Wells FO		Jackpot	Y3II-T, Gaved	BLM	Fence Modification	
Butler Trap Seeding	NA	The other half of the Butler Trap Seeding	SR-26	Gollaher	NV	Private Lands	SRCA		SRCA	CD	Range Land Seeding - Non- Native	73.00
Create Chicken Springs Riparian Pasture	Electric fence probably covered, if not need EA	Cattleguard needed on County Road	CW-2	Oneil Basin	NV	BLM/Wells FO		Goat Creek	Agee Smith	BLM/Private	Fence Construction	
Fatal Springs East Cattle Guard	CX Done	Install Cattle Guard to reduce unintended cattle movement	Y3-10	Oneil Basin	NV	BLM/Wells FO			Y3II-T, Gaved	BLM	Fence Modification	
Fatal Springs West Cattle Guard	CX Done	Install Cattle Guard to reduce unintended cattle movement	Y3-9	Oneil Basin	NV	BLM/Wells FO		Jackpot	Y3II-T, Gaved	BLM	Fence Modification	
Mud Spring	CX needed	Liberty Fence Enclosure. 2 acres and 1311 Feet of Fence. Create Water Gap for controlled Livestock Use	WG-6	Gollaher	NV	BLM/Wells FO	BLM	Gamble Individual	James Rogers		Spring/Meadow Protection	15.00
Mudhole Spring Protection	CX needed	Fence out cattle from spring head using liberty pipe fence	CA-5	Oneil Basin	NV	BLM/Wells FO		Canyon	Domingo Uhart		Spring/Meadow Protection	1.44
Salmon River Allotment, Unnamed Spring A enclosure	CX needed	Livestock over-use at spring. Was originally proposed for enclosure in the 2000 Salmon River Allotment FMUD	AP-11	Snake	NV	BLM/Wells FO	BLM		BLM/Wells FO		Spring/Meadow Protection	16.00
Shlitz and Dry Creek Enclosures	NA	Consider removing enclosures	HV-7	Snake	NV	BLM/Wells FO	Steve Boies		BLM/Wells FO		Fence Removal	
Devil's Creek Enclosure	EA needed	Spring and Meadow Protection	SR-3	Gollaher	NV	BLM/Wells FO	BLM		BLM/Wells FO	BLM/Private	Spring/Meadow Protection	80.00
Tijuana Peak Enclosure	EA needed	Spring and Meadow Protection	SR-4	Gollaher	NV	BLM/Wells FO	BLM		BLM/Wells FO	BLM/Private	Spring/Meadow Protection	56.00
West Granite Enclosure	EA needed	Spring and Meadow Protection	SR-5	Gollaher	NV	BLM/Wells FO	BLM		BLM/Wells FO	BLM/Private	Spring/Meadow Protection	143.50
North Knoll Enclosure	EA needed	Spring and Meadow Protection	SR-10	Gollaher	NV	BLM/Wells FO	BLM		BLM/Wells FO	BLM/Private	Spring/Meadow Protection	61.50
Develop Rattlesnake spring	DNA Needed	Develop spring	HV-3	Snake	NV	BLM/Wells FO		C.S./H.B./C.S.M.	Steve Boies	BLM/Private	Spring/Meadow Protection	
Hillside Pipeline	EA needed	Extend Hillside pipeline to provide more watering points in Moonshine and Emigrant pastures.	SR-6	Gollaher	NV	BLM/Wells FO		Tijuana John	SRCA	BLM/Private	Pipeline and Trough	

## APPENDIX II - SANE PROJECT LIST - 4/4

Knoll Creek Fence Removal		EA needed	Remove old Experimental Pasture fences uses br UNR Knoll Creek Expt. Station. These fences no longer serve a management purpose.	SR-9	Snake	NV	Private and Federal		Salmon River 21	SRCA	BLM/Private	Fence Removal	
Tijuana John Rotational Fence		EA needed	Remove existing temporary fence and install a permanent fence to split Tijuana John into a North and South pasture. This will improve grazing distribution.	SR-5	Gollaher	NV	BLM/Wells FO	SRCA	Tijuana John	SRCA	BLM/Private	Fence Construction	
Mary's River Fence		EA needed	Divide Mary's River Pasture in the Anderson Allotment. Install fence to improve cattle distribution.	AC-1	Oneil Basin	NV	BLM/Wells FO			Gibbs Ranch		Fence Construction	
Bull Camp 36 Fence Relocation		EA needed	Reduce fence collision risk to lek, NEPA is under review	HV-11	Snake	NV	BLM/Wells FO		West Hubbard seeding	Steve Boies	BLM/Private	Fence Modification	
Granite Riparian Pasture		EA Needed	Create a pasture to protect riparian resources in the Granites.	SR-10	Gollaher	NV	BLM/Wells FO	BLM		SRCA	BLM/Private	Fence Construction	
Airport Rangeland Seeding - Non Native		EA needed		SR-8	Gollaher	NV	BLM/Wells FO		Salmon River 21	SRCA	BLM	Range Land Seeding - Non-Native	2,218.00
Boston Springs Pipeline		DNA? Probably EA	Extend Boston Springs Pipeline on Middlestack Mountain	SR-25	Gollaher	NV	Private and Federal		Granite/China Mountain	SRCA		Pipeline	
Connect West Basin to N Gollaher Pipeline		EA needed	Connect these two pipelines with 3/4 mi pipe (connected action to SR-2)	SR-28	Gollaher	NV	BLM/Wells FO			SRCA		Pipeline	
Cottonwood Pipe to Grassy		EA needed	Evaluate existing well	Y3-4	Oneil Basin	NV	BLM/Wells FO		Jackpot	Y3II-T. Gaved	BLM/Private	Pipeline and Trough	
Cottonwood Pipe to Grassy Pipe Connector		EA needed	Extension	Y3-7	Oneil Basin	NV	BLM/Wells FO		Jackpot	Y3II-T. Gaved	BLM	Pipeline	
Fence Construction related to SR-9?		EA needed	After fence is removed in SR-9 then install new fence	SR-8	Gollaher	NV	BLM/Wells FO		Salmon River 21	SRCA		Fence Construction	
Fix/Replace Indian Spr. pipe and 2 troughs		Possibly Maintenance	Fix and Replace pipe and troughs	Y3-2	Oneil Basin	NV	Private and Federal		Jackpot	Y3II-T. Gaved	BLM/Private	Pipeline and Trough	
Make existing temporary fire fence permanent		EA Needed	Improve cattle distribution	CA-2	Oneil Basin	NV	BLM/Wells FO		Canyon	Domingo Uhart	BLM/Private	Fence Construction	
Monitoring Existing Enclosures		NA	Monitoring effectiveness of existing enclosures to determine if they need to be maintained, modified or removed.		All	NV	Private and Federal				BLM/Private	Monitoring	
Sagehen Spring Pipeline		EA needed	Extend pipeline from Sagehen Springs north and south to provided new watering locations for Granite and Knoll Creek Pastures	SR-7	Gollaher	NV	BLM/Wells FO		Granite/China Mountain	SRCA	BLM/Private	Pipeline and Trough	
West Basin Pipeline - South		EA needed	Extension would provide water to Horse Creek Pasture. A New fence would be constructed to allow access from Horse Creek but not to the West Basin Pasture	SR-2	Gollaher	NV	Private and Federal		Salmon River 23 and North Gollaher	SRCA	BLM Private	Pipeline and Trough	
Soil Treatments		NA	Wetland improvement and soil testing ongoing at Gibbs. Nicole Master's soil ammendments to improve productivity and habitat on Cottonwood's meadows.		Oneil Basin	NV	Private Lands	Gibbs/Smiths		Agee Smith		Hay Meadow Improvements	75
Engineered Wetland Liners			Wetland creation (Tom B). Needs to be maintenance on BLM.		Oneil Basin	NV	Private and Federal	Gibbs/Smiths		Wyatt Mesna	NRCS/Private	Livestock Watering Facility	

## APPENDIX II - CONSERVATION PROGRAM FUNDING ARMS

Conservation Objective	Conservation Tool or Action	USFWS	NRCS	FSA	DOD	NDOW	Nevada CD Program	SETT	NFWF	WBC	Trout Unlimited	Pheasants Forever	The Nature Conservancy	Rocky Mountain Elk Foundation	Ducks Unlimited
Land Protection/Acquisition	Conservation Easements	NAWCA	ACEP		REPI, Easement Program	Q1, HCF, Technical Assistance			DTLRF*			Forever Land Trust	Easement holder	Easement holder	Easement Holder
	Other		ALE			Sentinel Landscapes			Acres for America, DTLRF*				Bank Enabling Agreements	Land Protections	
	Fee-title acquisition				REPI	Q1, HCF			DTLRF*, WBRP	WBRP		Build a Wildlife Area program, Forever Land Trust	TNC NV	Land Protections	Acquisition
	Conservation leases		WRE						DTLRF*				TNC NV	Land Protections	Management Agreements
Range Improvements	Grazing management plans	PFW	EQIP				SG Grant	CCS	CPP				Bank Enabling Agreements		
	Ranch Infrastructure	PFW	EQIP					CCS	CPP				Easements		
	Native species plantings	PFW, ES	EQIP	CRP		Wildlife Heritage, HCF, PCD, UGB	SG Grant	CCS	CPP			Native/Food Plot Seed Purchase	TNC NV	Habitat Stewardship	Conservation Opportunities
	Conifer and invasive species	PFW	EQIP			Wildlife Heritage, HCF, PCD, UGB	SG Grant	CCS	CPP, PTI, SLP						
Wetland and stream creation/restoration	Erosion control	PFW, NAWCA	EQIP			Wildlife Heritage, HCF, PCD		CCS	FSUWRGP, SLP				TNC NV		Conservation Opportunities
	In-stream enhancements	PFW, National Fish Habitat Action Plan	EQIP			Wildlife Heritage, HCF, PCD	SG Grant	CCS	AIA?, Bring Back the Natives?, FSUWRGP, LCT		Grant program		TNC NV		Conservation Opportunities
	Dikes/dams, water control	PFW, NAWCA	EQIP			HCF, DS									
	Invasive species control/native	PFW, NAWCA	EQIP			Wildlife Heritage, HCF, PCD, UGB, DS	SG Grant	CCS	LCT, PTI, SLP		Grant program		TNC NV		
	Watershed Protection	PFW				HCF			ESC, FSUWRGP, LCT	WBRP?	Grant program		TNC NV		Conservation Opportunities
	Wetland Mitigation														DU Wetland Mitigation Program
Riparian fencing	PFW	EQIP			Wildlife Heritage, HCF, PCD, UGB	SG Grant	CCS	SLP		Grant program					
Landowner Assurances		CCAA, HCF, Safe Harbor	WLW		Easement Program	HCF		CCS					Easements	Land Protections	Conservation Easements, Management Agreements
			SGL, RCPP			PL4W			AIA, CPP, DNGC, LCT, PTI, SLP						
Special Initiatives															
Urban Conservation															ESC

Conservation Programs	Conservation Programs
PFW: Partners for Fish and Wildlife	SG Grant: Sage Grouse Grant
NAWCA: North American Wetlands Conservation Act	CCS: Conservation Credits System
EQIP: Environmental Quality Incentives Program	AIA: Acres for America
WLW: Working Lands for Wildlife	CPP: Conservation Partners Program
	DTLRF*: Desert Terminal Lakes Restoration Fund. Must meet specific requirements within Great Basin
SGI: Sage Grouse Initiative	DNGC: Developing the Next Generation of Conservationists
RCPP: Regional Conservation Partners Program	ESC: Environmental Solutions for Communities
HCF: Habitat Conservation Fee	FSUWRGP: Five Star and Urban Waters Restoration Grant Program
PCD: Partners for Conservation and Development	
UCB-DS: Upland Game Bird-Duck Stamp	PTI: Pulling Together Initiative
PL4W: Private Lands 4 Wildlife	SLP: Sagebrush Landscapes Program
REPI: Readiness and Environmental Integration Program	WBRP: Walker Basin Restoration Program
PFW: Partners for Fish and Wildlife	SG Grant: Sage Grouse Grant