

U.S. Department of the Interior Bureau of Land Management

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Big Game Wildlife Water Development Sites

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: 775-726-8100
Fax: 775-726-8111



I.

BACKGROUND INFORMATION

Introduction

In the past, the Bureau of Land Management (BLM), in cooperation with the Nevada Department of Wildlife (NDOW), has constructed wildlife water developments throughout the desert to improve the distribution and subsequent use of habitat by game and wildlife species. Currently, pronghorn populations have not reached management targets, mule deer are in a fifteen year decline, and elk are using less than half their potential habitat in Lincoln County.

Wildlife water developments hold many benefits for the game animals listed above as well as for many other non-game species. Marshal et al. (2006) found that although large game usage of habitat near water developments does increase, vegetation in the form of forage quality does not significantly decrease. A greater diversity of non-game than game animals in fact visit such developments (AFGD 2004, O'Brien et al 2006: see Krausman et al. 2006). The conservation benefits of wildlife water developments offset or mitigate disturbances to the habitat of these species and do not disturb or otherwise negatively affect the project area.

Purpose and Need

The purpose of the proposed action is to improve availability and distribution of dependable waters sources in habitat identified as water limiting for large-game animals (i.e. pronghorn, mule deer, and elk). These areas have sufficient food and cover, but provide limited seasonal habitat due to a lack of available water. There are many reasons for this lack of available water. For example, human development in Lincoln County, the encroachment of Pinyon/Juniper (P/J) woodlands, and large scale wildfires have decreased the amount and availability of suitable habitat in some areas. In other areas, free flowing springs historically used by these species have been developed and piped for support of livestock operations. These wildlife water developments would primarily benefit pronghorn antelope, mule deer, and elk.

Relationship to Planning

The proposed action is consistent with Federal, State, and local laws, regulations, policies, and plans.

The proposed action is subject to and in conformance with the Caliente Management Framework Plan Tortoise Amendment(CMFP; BLM 2000). The CMFP identified water as a limiting factor for wildlife species (Decisions, page 13). Wildlife Objective 3

directed BLM to improve habitats including developing 95 new waters. Wildlife Objective 3.2 recommended that BLM improve 88,200 acres of mule deer habitat and included habitat in the Clover Mountains. Furthermore, Wildlife Objective 3.5 directed BLM to develop and fence 65 additional waters in 7 mountain ranges including the Clover Mountains.

In addition the proposed action is consistent with the Proposed Final Ely Resource Management Plan (RMP). Implementation of the RMP would increase water availability in order to improve distribution and possibly population numbers throughout suitable habitat.

The proposed action is consistent with the Lincoln County Public Land and Natural Resource Management Plan (1997) and the Lincoln County Elk Management Plan. The Lincoln County Elk Management Plan (revised 2006) includes *“developing, maintaining, and improving availability and distribution of water as a strategy for maintaining the desired distribution of elk.”*

The proposed action is consistent with Executive Order 13443, signed in August of 2007. President Bush directed the Department of Interior to “Manage wildlife and wildlife habitats on public lands in a manner that expands and enhances hunting opportunities.”

Issues

No substantial issues were brought up during scoping.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVE(S)

Proposed Action

BLM proposes to partner with NDOW on the construction of 25 new wildlife water developments (Table 1) beginning in the summer of 2008. The NDOW guzzler crew would access sites using existing two-track roads (Figure 1). Some snags may need to be removed to clear access. A rubber-tired backhoe would be used to level the areas where the storage tanks and apron would be located. Three pickup trucks with trailers and an ATV would be used to haul tools. Volunteers would be required to walk in from the road used to the site. Approximately one day would be needed to prepare each site using a backhoe and one to two days per site would be needed to install the wildlife water development.

Wildlife water developments would be constructed using either plastic or metal aprons and storage tanks with a built-in drinker. Water developments designed specifically for antelope, would utilize one apron (25' x 80') and two tanks (1800 gallons each). This would apply to sites Delamar 1 and 2, Delamar Mountain, Head Chaining, Pine Pasture, Hamlin Valley 5, 6, and 7, South Spring Valley 3 and 4, Limestone, Lake Valley 1 and 2,

and Delamar Valley 1 and 2. Water developments designed for use by antelope/deer or just deer would utilize one apron (25' x 100') and 3 tanks (1800 gallons each). This design would apply to Pine pasture, Lake Valley 3, and Delamar Mountain. Water developments designed for use by elk, elk/deer, or very large numbers of deer would use one apron (25' x 120') and 4 tanks (1800 gallons each). Those water development sites would include Stateline, Stateline 2, Burnt Timber, Head Chaining, Crestline, Acoma, Burnt Canyon Burn, Burnt Canyon, Prohibition 1 and 2, Two Kiln Burn, and Horse Thief Chaining. To prevent damage due to heavy snow loading, the apron would be constructed on the ground. For metal aprons, a framework of 16 gauge metal 2" x 4" purlins (wood support structure) would support 22 gauge "B" decking panels. Water would be collected in a 12" x 12" x 39' gutter. Plastic aprons are generally long and narrow, covering between 2,000 – 3,000 square feet each. Two Johnson filtration screens would be used to filter out dirt and debris. The water would flow through 2" polyethylene pipes to between two and four, 1,800 gallon brown polyethylene storage tanks partially buried below the aprons. The pipe would be buried between the apron and storage tanks. The tanks would be plumbed together and situated on the landscape to allow for drinking at all drinkers, yet eliminate the need for a float valve system. Water would be available to all wildlife at the open drinkers built into the top of the tank. Excess water would overflow through the drinker.

A four-strand, barbed wire fence would be constructed around the apron to prevent damage to the apron from livestock, wildlife, or wild horses. The bottom wire would be barbless. The apron fence would be approximately 10' wider than the outer edges of the apron. A pipe rail fence with two 1-5/8" steel rails at 24" and 42" above the ground would be installed around the storage tanks and drinker. This would prevent cattle and wild horses from accessing the site. The apron, steel fencing, and any exposed pipe would be left to rust and corrode thus visually integrating the project into the surrounding environment. The tanks are brown in color and should blend into the landscape or background.

The installation of each wildlife water development would result in fewer than 1 acre of total disturbance. This represents a total disturbance of about 25 acres across the entire eastern portion of Lincoln County. If gates are present at each site, they would be closed following construction. Access to the site for subsequent annual inspections and routine maintenance would be on foot.

Design Features

The following Standard Operating Procedures would be adhered to:

1. The proposed action would comply with the *Ely District Policy Management Actions for the Conservation of Migratory Birds* (Instruction Memorandum NV-040-2001-02).
2. A cultural survey of each treatment area would be conducted and

appropriate site documentation completed prior to project implementation. National Register eligible cultural resources would be avoided or impacts would be mitigated as necessary before treatments are implemented.

3. Access would be via existing two-track roads. No permanent new roads or trails would be created. Some off-road travel could occur, however, off-road travel would be limited to that necessary to safely and practically achieve resource objectives.
4. The BLM Ely District Weed Management Standard Operating Procedures and recommendations contained in the Weed Risk Assessment for the project would be followed.
 - a. Prior to the entry of vehicles and equipment to a project area, areas of concern would be identified and flagged in the field by a weed scientist or qualified biologist. The flagging would alert personnel or participants to avoid areas of concern. These sites would be recorded using global positioning systems or other Ely District Office approved equipment and provided to the District Office Weed Coordinator or designated contact person.
 - b. Prior to entering public lands, the contractor, operator, or permit holder would provide information and training regarding noxious weed management and identification to all personnel who would be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds would be explained.
 - c. To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving would be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment would be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression would be cleaned as a part of check-in and demobilization procedures. Cleaning efforts would concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis would be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs would be swept out and refuse would be disposed of in waste receptacles. Cleaning sites would be recorded using global positioning systems or other mutually

acceptable equipment and provided to the District Office Weed Coordinator or designated contact person.

- d. To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for reclamation or stabilization activities, feed, bedding would be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office.
- e. To eliminate the introduction of noxious weed seeds, roots, or rhizomes all source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation would be inspected and found to be free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office. Inspections would be conducted by a weed scientist or qualified biologist.
- f. Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- g. Reclamation would normally be accomplished with native seeds only. These would be representative of the indigenous species present in the adjacent habitat. Rationale for potential seeding with selected nonnative species would be documented. Possible exceptions would include use of non-native species for a temporary cover crop to out-compete weeds. Where large acreages are burned by fires and seeding is required for erosion control, all native species could be cost prohibitive and/or unavailable. In all cases, seed mixes would be approved by the BLM authorized Officer prior to planting.
- h. Mixing of herbicides and rinsing of herbicide containers and spray equipment would be conducted only in areas that are safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
- i. Methods used to accomplish weed and insect control objectives would consider seasonal distribution of large wildlife species.
- j. Any noxious weeds that become established will be controlled.

5. NDOW would reseed the disturbed areas using a BLM approved seed mix provided by BLM Ely Field Office.
6. A project inspector would be assigned to the project to insure it is constructed according to specifications. The project would be inspected and maintained annually by BLM and/or NDOW personnel, as well as volunteers. The sites would be checked for noxious weeds annually for at least three seasons, or until native vegetation has recovered enough to lessen the chance of infestation.
7. Equipment would not be allowed to operate when the ground is unsuitable (i.e. excessively muddy or when saturated with moisture) or in terrain too steep to minimize ground impacts.
8. Removal of vegetation would be kept to the minimum necessary for construction. At the end of each project, NDOW would spread the remainder of the vegetation that was removed and place it along bare ground and disturbed areas to provide soil shade and cover.
9. Pursuant to Nevada Revised Statutes 527.060-120, all cactus species native to the State of Nevada are protected and regulated. Surveys conducted in the Spring of 2007 identified cactus species occurring within and adjacent to the proposed action. Construction activities would result in the removal of some cactus within the project area. However, NDOW would avoid removal of cactus as much as practicable.
10. Location sites shall be maintained in a sanitary condition at all times; litter shall be disposed of promptly at an authorized solid waste disposal site. Failure to remove litter may result in assessment of damages by the Authorized Officer, BLM. "Litter" means all discarded matter including but not limited to trash, garbage, refuse, ashes and equipment. Site must be maintained and left in a clean and safe condition.
11. NDOW is responsible for clean-up and assumes liability for any and all releases of hazardous substances and or oil (more than one quart) disposed on public land as defined in the National Oil and Hazardous Substances Contingency Plan (40 CFR 300). NDOW will immediately notify the BLM Authorized Officer of any and all releases of hazardous substances and or oil (more than one quart) on public land.
12. Project area cleanup would be accomplished by removing all refuse to an approved sanitary landfill.
13. NDOW would flag the exclusion fence using white flagging to decrease

the potential for wildlife and wild horse collisions or entanglements.

Table 1. Proposed guzzler sites (UTM Coordinates)

Priority	Name	Northing	Easting	Primary_sp	Tanks
1	Hamlin Valley 5	755324	4273512	antelope	2
2	Hamlin Valley 6	756143	4278492	antelope	2
3	Hamlin Valley 7	744417	4281162	antelope	2
4	Stateline	754258	4212021	elk	4
5	Stateline Burn 2	751241	4209943	elk	4
6	Burnt Timber	756817	4215829	elk	4
7	Pine Pasture	737990	4149034	mule deer	3
8	Head Chaining	730350	4154257	mule deer	4
9	Crestline	755777	4166266	elk & deer	4
10	Acoma	755742	4163975	elk & deer	4
11	S. Spring Valley 3	736134	4271637	antelope	2
12	South Spring Valley 4	726897	4221164	antelope	2
13	Limestone	737317	4276939	antelope	2
14	Burnt Canyon Burn	746216	4234934	elk	4
15	Burnt Can. Chaining 2	748929	4230608	elk	4
16	Prohibition 1	756406	4193866	elk	4
17	Prohibition 2	753442	4196841	elk	4
18	Two kiln burn	750264	4189573	elk	4
19	Lake Valley 1	713898	4281511	antelope	2
20	Lake Valley 2	715744	4269329	antelope	2
21	Lake Valley 3	723776	4255374	antelope & deer	3
22	Delamar Mountain	701800	4132000	mule deer	3
23	Delamar Valley 1	689079	4143146	antelope	2
24	Delamar Valley 2	687542	4154285	antelope	2
25	Horsethief Chaining 2	740493	4214785	elk	4

Figure 1. Map of proposed wildlife water developments in Lincoln County.

No Action Alternative

Under the no action alternative, these wildlife water developments would not be constructed. Wildlife would continue to need available water in order to increase their

distribution and abundance throughout the project area.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The areas affected by the Proposed Action are located in Lincoln County, Nevada. Most sites are located on the east side of the county with State Highway 93 as a western boundary. The topography in the area is typical of that found in the southern Great Basin.

A. Mandatory Items for Consideration

The mandatory items for consideration are listed in Table 1. Rationales for those elements not affected are also listed in Table 1. These mandatory items will not be considered further in this document. The mandatory items that are considered in the EA are described in the Affected Environment (Section III) and are analyzed in the Environmental Consequences (Section IV).

Table 1. Mandatory Items for Consideration

Mandatory Items	No Effect or Negligible Effect	May Be Affected	Not Present	Rationale
Air Quality	X			Air quality throughout the area is generally good, but disturbance of the soil surface during construction could cause dust and airborne particles to increase for a brief period of time.
Areas of Critical Environmental Concern (ACEC)			X	
Cultural Resources	X			In accordance with the <i>Archeological Resources Protection Act of 1979</i> , “any material remains of past human life or activities which are of archaeological interest” shall be assessed and secured “for the present and future benefits of the American People”. All ground disturbing activities will be subject to Section 106 review and, if needed, SHPO consultation as per BLM Nevada’s implementation of the Protocol for cultural resources. <i>Analysis of the Cultural Resource Analysis and Probability Model for the Bureau of Land Management, Ely District</i> (Drews and Ingbar, 2004) indicated that the proposed project locations are predominately within a medium to high

				<p>cultural sensitivity level. Additionally, a cultural Needs Assessment has been completed and it has been identified that only two of the proposed locations have been previously inventoried.</p> <p>All proposed activities and disturbances must avoid cultural resources. Prior to proposed ground disturbing activities, all project areas will be inventoried to identify possible cultural resources. If the cultural resources are discovered at or near proposed water developments, the proposed project will be moved to a distance of 100 meters or greater from the resources.</p>
Environmental Justice	X			
Farmlands (Prime or Unique)	X			Only two of the 25 proposed sites are located on Prime or Unique farmland. The proposed action will not cause the prime farmland to be converted; therefore there will be no effects.
Floodplains			X	
Migratory Birds	X			A number of migratory bird species are known to have a distribution that overlaps with the proposed action sites. Because the disturbance is so small (< 1 acre) in relationship to the overall distribution and abundance of habitat and the numerous species, it is highly unlikely that the construction of the proposed wildlife water development sites would negatively affect migratory birds.
Native American Religious Concern	X			No concerns were raised regarding the proposed action.
Noxious Weeds and Non-Native, Invasive Species		X		Any ground disturbing activity has the potential to aid in the spread of noxious and non-native invasive weeds.
Federally Listed or Proposed Plant and Animal Species			X	
Special Status Animal and Plant Species (Federally candidate threatened or endangered species and state sensitive species)			X	No state or BLM listed sensitive species are known to reside within the area of influence of the wildlife water development sites. It is highly unlikely that unknown individuals would be impacted by the proposed action.
Wastes (Hazardous and Solid)			X	
Water Quality (Drinking and Ground)			X	

Wetlands/Riparian			X	
Wild Horses and Burros		X		Although the proposed water developments do not utilize springs or ephemeral water sources available to all animals, they have the potential to facilitate an increase in the number of wild ungulates on the landscape. This could lead to competition for available forage, but likely only to the degree to which dietary overlap exists between wild horses and other wildlife species.
Wilderness Values			X	
Wild and Scenic Rivers			X	

In addition to the mandatory items, the BLM considers other resources and uses that occur on public lands and the issues that may result from the implementation of the Proposed Action. The potential resources and uses, or non-mandatory items that may be affected are listed in Table 2. A brief rationale for either considering or not considering the non-mandatory items further is provided. The non-mandatory items that are considered in the EA are described in the Affected Environment (Section III) and are analyzed in the Environmental Consequences (Section IV).

Table 2. Non-critical elements of the human environment

Non-mandatory items	No Effect or Negligible Effect	May Affect	Not Present	Rationale
Socioeconomics	X			The Proposed Action would provide work for those constructing and rebuilding wildlife water development sites.
Vegetative Resources	X			Due to the very small amount of disturbance (1 acre/site), it is highly unlikely that the vegetative resources would be affected. It would remove 1 acre/site of potential forage available to livestock and other grazing/browsing species.
Range/Livestock grazing	X			It is highly unlikely that the proposed action would greatly decrease range productivity, diversity, or vigor. It may facilitate an increase in the number of wild ungulates on the landscape. This could lead to minimal competition for available forage, but likely only to the degree to which dietary overlap occurs between livestock and other species of wildlife.

Wildlife		X		The area surrounding the wildlife water development sites provides year-round habitat for mule deer, pronghorn antelope, and elk. The area also provides habitat for coyotes, rabbits, sagebrush obligate birds, and other small mammals and reptiles. The project, as proposed, should greatly benefit many species of wildlife, especially big game.
Soils		X		Soil types, characteristics, and development vary across all wildlife water development sites. Most soils are fairly shallow. Soils would likely be affected locally where they would be excavated and graded for tank interment and apron placement, as well as minor effects due to cross country travel after leaving roads.
Recreation	X			Planned OHV events may be one of the largest recreation uses throughout the area of influence surrounding the proposed wildlife water development sites. In order to minimize interaction and conflict between OHV event participants and wildlife, all proposed sites are >400 yards from an existing race route or are concealed due to topography and vegetation. In addition, dispersed recreation in this area includes: large and small game hunting, wildlife observation and photography, hiking and general off highway vehicle use.
Visual Resources	X			Most proposed wildlife water developments would not be visible from any road. They would be painted in accordance with the standard environmental colors to blend natural into the surrounding landscape therefore keeping consistent with the Visual Resource Management (VRM) Class III and IV objectives.

Potentially Affected Mandatory and Non-Mandatory Items for Consideration

Based on the review of existing baseline data and surveys conducted in preparation of this EA, BLM specialists have identified the following as potentially affected Mandatory and Non-Mandatory items for consideration:

- Noxious Weeds and Non-native Invasive Species
- Wild Horses and Burros
- Wildlife

- Soils

Noxious Weeds, Invasive or Non-Native Species

The BLM defines a weed as a non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition and diversity of the site it occupies. A weed's presence deteriorates the health of the site, it makes efficient use of natural resources difficult, and it may interfere with management objectives for that site. It is an invasive species that requires a concerted effort (manpower and resources) to remove from its current location, if it can be removed at all. "Noxious" weeds refer to those plant species which have been legally designated as unwanted or undesirable. This includes national, state and county or local designations.

No field surveys were conducted for this project. Instead the Ely District weed inventory data was consulted for this project. There are currently no documented weed infestations at the project areas. The following species are found along roads and drainages leading throughout area:

<i>Acroptilon repens</i>	Russian knapweed
<i>Carduus nutans</i>	Musk thistle
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Centaurea stoebe</i>	Spotted knapweed
<i>Conium maculatum</i>	Poison hemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Lepidium draba</i>	Hoary cress
<i>Lepidium latifolium</i>	Tall whitetop
<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Onopordum acanthium</i>	Scotch thistle
<i>Tamarix spp.</i>	Salt cedar
<i>Tribulus terrestris</i>	Puncturevine

While not officially inventoried the following weeds probably occur in or around the allotment: cheatgrass (*Bromus tectorum*), field bindweed (*Convolvulus arvensis*), halogeton (*Halogeton glomeratus*), and Russian thistle (*Salsola kali*). Regions of this area were last inventoried for noxious weed in 2003 and 2005.

Wild Horses and Burros

Of the 25 proposed wildlife water development sites, 17 would occur in HMAs. The majority (11) would occur within the Wilson Creek HMA. The other sites would be located in the following HMAs: Deer Lodge Canyon (3), Clover Mountains (2), and Delamar Mountains (1). Currently there are an estimated 386 wild horses on the Wilson Creek HMA, which contains more than 687,000 acres and has an Appropriate Management Level (AML) of 160 horses. The Deer Lodge Canyon HMA (~110,000 acres) has an estimated 35 wild horses, with an AML of 30-50 horses. The Clover Mountains HMA (~173,000 acres) has an estimated 78 horses, with an AML of 1-16. The Delamar Mountains HMA (~186,000) has an estimated 45 wild horses, with an AML of 51-85.

Wildlife

The areas associated with the proposed action have sufficient food and cover to be classified as suitable habitat for big game, but they lack the necessary water for daily life history water requirements.

Currently, pronghorn are at record high population levels. Nevertheless, NDOW continues to augment populations and develop reliable water sources through their available habitat (NDOW 2008).

Mule deer population numbers are still well below historical numbers. Between 2008 and 2007 there was a 5% decrease in overall numbers. In addition, aerial counts administered by NDOW resulted in one of the lowest fawn production values ever (33 fawns/100 adults; (NDOW 2008)).

Rocky Mountain Elk population numbers increased marginally in 2007. Although numbers have increased during the past 10 years, NDOW estimates that less than half the potential elk habitat available in the county is being utilized, owing in part to the lack of, or improper distribution of water sources (NDOW 2008).

Soils

The soil types in the areas of the proposed action are strongly associated with landforms and physiographic location (Blackburn 1998). The types of soils that have developed have been strongly influenced by the type of bedrock geology. The valley locations are typified by unconsolidated sedimentary deposits including alluvial and lakebed deposits. The areas adjacent to the mountain ranges are composed of alluvial fans and related features. The mountain ranges generally are composed of sedimentary, metamorphic, and igneous rocks. Soils can indicate the natural mosaic in a landscape or watershed as the complex geology, climate, topography, vegetation, and time work together as factors of soil formation.

Soils can be found in the following four major settings in any of the valleys and adjacent mountain ranges.

Basin floors: These soils occupy level to gentle slopes and can be very deep. Texture ranges from moderately coarse to fine-grained. They generally show little soil profile development, although in some cases accumulations of soluble salts and silica occur at depth.

Alluvial Fans and Stream Terraces: Soils in these areas occupy level to moderate slopes, and consist of fine to coarse textures. They generally exhibit little profile development.

Fan Piedmonts: These soils formed where alluvial fans coalesced into a single linear feature that paralleled a mountain front (Blackburn 1998). These soils have level to moderately steep slopes and can be shallow to very deep. Texture ranges from moderately coarse or gravelly to moderately fine.

Hills and Mountains: These soils are found on mountain slopes, and the sides of hills and are very shallow to deep. They contain gravel and coarse-textured material and in many places are underlain by bedrock at shallow depths.

According to the soil surveys, one of the following soil types can be found at each of the proposed wildlife water development sites: very stony loam, very cobbly loam, very cobbly sandy loam, very gravelly loam, very gravelly sandy loam, very gravelly fine sandy loam, stony sandy loam, silty clay loam, loamy sand, gravelly sandy loam, gravelly loam, gravelly fine sandy loam, gravelly clay loam, and fine sandy loam. Of these silty clay loams, loamy sands, and fine sandy loams are susceptible to erosion.

IV. ENVIRONMENTAL CONSEQUENCES

Resources Not Present or Not Affected by the Proposed Action

The following elements of the human environment are either not affected or are not present in the project area: areas of critical environmental concern (ACEC), cultural resources, environmental justice, farmlands, flood plains, migratory birds, Native American religious concerns, Federally Listed or Proposed Plant and Animal Species, Special status animal and plant species, wastes, water quality (drinking/ground), wetlands/riparian, wilderness values, wild and scenic rivers, socioeconomics, range/livestock grazing, recreation, and visual resources.

Noxious Weeds and Invasive Plants

Proposed Action

A Noxious & Invasive Weeds Risk Assessment was completed for this project (Appendix I). The ground disturbance created by the excavation of the sites could lead to the introduction of new weed infestations to the project area. If new weed infestations establish within the project area this could have an adverse impact those native plant communities since the areas are currently considered to be weed-free. Also, any increase of cheatgrass could alter the fire regime in the area. With the BLM Ely District Weed Management Standard Operating Procedures included in the proposed action the impact to weeds should be lowered.

No Action Alternative

There would be no change to noxious weeds and invasive plants.

Wild horses and burros

Proposed Action

Wildlife water developments do not utilize springs, ephemeral or free water sources available to all animals. These developments collect snow melt and rain water and are designed specifically for wildlife. They have the potential to facilitate an increase in the number of wild ungulates on the landscape. They fence out livestock and wild horses to increase the opportunity for wildlife species to utilize habitat that they otherwise would be unable to occupy. This could lead to competition for available forage between mule deer, elk, or antelope and wild horses. Nevertheless it would likely only occur to the degree to which dietary overlap exists between wild horses and each wildlife species and in accordance with overall population numbers and carry capacity of the area.

In addition, some temporary disturbance to normal behavior and range use patterns may occur during construction of the wildlife water development.

No Action Alternative

No impacts to wild horses would occur.

Wildlife

Proposed Action

By placing wildlife water developments throughout unoccupied or limited occupancy habitats, big game and many other wildlife species will benefit. Although there may be some temporary disturbance to normal behavior and range use patterns that may occur

during construction of the wildlife water development. Overall, dependable water sources would expand useable habitat for these species, allowing them to increase in population size and range distribution.

Pronghorn need and use water developments, especially during dry, hot summer seasons (Beale and Smith 1970, Morgart et al. 2005). Water developments would create more acceptable habitat for pronghorn, thereby mitigating other human disturbances and augmenting populations (Deblinger and Alldredge 1991).

Deer depend on free water, especially during the dry season. They are generally found within 3 km of a water source (Marshal et al. 2006). Although it can take up to three years for deer to discover and begin using new water sources, their use of an area does increase where water developments exist (Marshal et al. 2006). Wildlife water developments would create more suitable habitat for mule deer.

NDOW estimates that less than half the potential elk habitat available in the county is being utilized, owing in part to the lack of, or improper distribution of water sources. Elk are considered limited by water in their distribution throughout the Western United States (McCabe 1982, O'Neil 1985). "Increasing the distribution and availability of water on many of the driest rangelands will likely enhance elk use of such areas, especially during dry seasons or years" (Krausman et al. 2006).

No Action Alternative

Under the no action alternative wildlife water developments would not be built, and therefore, wildlife would not benefit. Big game and other wildlife species would continue to be restricted to their current distribution until water was available.

Soil

Proposed Action

Soils would likely be affected locally where they would be excavated and graded for tank interment and apron placement. There would also be minor effects on soils where heavy equipment or pickup trucks travel off-road to deliver materials and construct the proposed development. Those constructing the development would stay on rocky or gravelly soils as much as possible to reduce the disturbance and movement of silty soils. They would also avoid steep slopes. The total number of acres disturbed, per proposed site, depends upon how far from an existing established road they have to travel to arrive at the proposed site.

No Action Alternative

The soils at the proposed sites would remain undisturbed.

V. Cumulative Impacts

The purpose of the cumulative analysis in the EA is to evaluate the significance of the Proposed Action's contributions to cumulative impacts. A cumulative impact is defined under federal regulations as follows:

'...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time' (40 CFR 1508.7).

According to the 1997 CEQ Handbook *Guidelines for Assessing and Documenting Cumulative Impacts*, the analysis can be focused on those issues and resource values identified during scoping that are of major importance. The primary issue identified by the ID team for this project is the lack of dependable water sources in reasonably secure locations for wildlife.

Past Actions

In the past 25+ years, there have been over 100 small game guzzlers and more than 76 big game guzzlers constructed throughout the Ely District. Of the 76 big game guzzlers, seven were constructed primarily for mule deer, twelve for elk, twenty-seven for pronghorn antelope, and thirty for desert bighorn sheep. The construction of wildlife water developments have allowed for the release of chukar into several areas of the Ely District, and the reintroduction of desert bighorn sheep into the Delamar Mountains, the Hiko Range, and the South Egan Ranges. These actions have allowed small game and big game species to expand their distribution into unoccupied habitat and increase in numbers.

Present Actions

The collective area, over which the proposed wildlife water developments would be installed, is used for many different purposes. Most of the area is grazed by domestic livestock. In addition, much of the area also receives use by wild horses, antelope, mule deer, and elk. Recreation activities within the surrounding area include dispersed recreation, camping, fishing, hunting, trapping, wildlife viewing, and OHV use. In addition, the area is used for some mineral extraction and mining, as well as an active place for wildland fire.

Reasonably Foreseeable Future Actions

A new resource management plan (RMP) is currently being developed for the Ely Field Office BLM area. The final EIS for the RMP was published in November 2007. According to the new RMP, resources management would occur by watershed. The proposed action would occur within 13 different watersheds.

The reasonably foreseeable future actions (RFFAs) within the project area include the following: lands sales and developments such as Toquop Energy Project and Coyote Springs Investment; right of ways for pipeline, power line and/or groundwater projects such as Southern Nevada Water Authority and the Lincoln County Water District (LCWD) water projects, the Southwest Intertie Project (SWIP), UNEV gas pipeline, and multiple powerline projects; construction of the DOE Caliente to Nevada Test Site rail line; road construction such as paving of the Kane Springs Road and construction of the road from Caliente to Mesquite; wind energy development; additional mining development; DOD activities; OHV races and other recreational use; hazardous fuels reduction and wildland fire.

Noxious Weeds and Invasive Plants

Noxious weeds may increase for a time due to any of the aforementioned RFFAs. Most future actions may increase weed distribution and abundance during the construction phase. The proposed action would disturb a very small area separate from the other project areas, thereby not increasing the overall cumulative impact to noxious weeds and invasive plants. If followed, the standard operating procedures, the mitigation measures found in this EA, as well as the plans for revegetation of disturbed areas would greatly reduce the spread of noxious weeds and invasive plants.

Wild Horse and Burro

Wild horses may be displaced or they may experience a disruption of normal behavioral patterns during the construction, implementation, or operation of some of the developments within the project area. Wildland fire and energy development fields may disrupt contiguous habitats causing fragmentation and reduced forage availability. The proposed action would disturb a very small area separate from other RFFA project areas, thereby not increasing the overall cumulative impact to wild horses and burros.

Wildlife

Wildlife may be affected negatively by displacement or disruption of normal behavioral patterns due to construction, project operations and maintenance, and site rehabilitation. In addition, some of these projects and actions could increase traffic, conflicts with humans, and competition for habitat niches. Some of these actions may also decrease forage quality, quantity, and composition. Overall, the proposed action would disturb a very small area separate from other RFFA project areas, thereby not increasing the overall impact to wildlife.

Soils

Soils may be disturbed to different degrees dependent upon the RFFAs. Most projects

attempt to minimize disturbance and to stabilize soils as quickly as possible post project implementation. Standard operating procedures specific to each RFFA and mitigation measures employed before, during, and after the implementation of the RFFA decrease the cumulative impacts to soil resources. Overall, the proposed action would disturb a very small area separate from other RFFA project areas, thereby not increasing the overall impact to soil resources.

VI. PROPOSED MITIGATING MEASURES

Appropriate mitigation measures have been included as part of the proposed action (see Appendix 1).

VIII. CONSULTATION AND COORDINATION

The BLM consulted and coordinated with the following individuals, Federal, state and local agencies, tribes and non-BLM persons during the development of this environmental assessment:

Internal District Review

Chris Linehan	Visual Resources Management, Recreation
Bonnie Million	Noxious and Invasive Weeds
Troy Grooms	Rangeland Management/Vegetation/Livestock Grazing
Kari Harrison	Soils, Air, Water Quality, Wetlands/Riparian, Floodplains
Joseph David	Environmental Coordination
Lynn Wulf	Cultural Resources
Elvis Wall	Native American Religious Concerns
Rick Baxter	Wildlife/T&E/Migratory Birds/Special Status Species
David Jacobson	Wilderness, ACEC
Brenda Linnell	Lands
Melanie Peterson	Hazardous Waste
John Longinetti	Engineering

Federal and State Officials and Agencies

Brad Hardenbrook	Nevada Division of Wildlife
Mike Scott	Nevada Division of Wildlife
Craig Stevenson	Nevada Division of Wildlife

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United States Department of the Interior
Bureau of Land Management
Decision Record
FINDING OF NO SIGNIFICANT IMPACT
DECISION RECORD
Big Game Wildlife Water Development Sites
Environmental Assessment
NV-045-08-009

Introduction

BLM will partner with NDOW to construct 25 new wildlife water developments beginning summer of 2008. The NDOW guzzler crew would access sites using existing two-track roads. Approximately one day would be needed to prepare each site using a backhoe, and one to two days per site would be needed to install the wildlife water development.

Wildlife water developments would be constructed using either plastic or metal aprons and storage tanks with a built-in drinker. The tanks would be plumbed together and use a gravity feed system. Water would be available to all wildlife at the open drinkers built into the top of the tank.

A four-strand, barbed wire fence would be constructed around the apron to prevent damage to the apron from livestock, wildlife, or wild horses. The bottom wire would be barbless. A pipe rail fence with two 1-5/8" steel rails at 24" and 42" above the ground would be installed around the storage tanks and drinker. This would prevent cattle and wild horses from accessing the site.

The installation of each wildlife water development would result in fewer than 1 acre of total disturbance. The entire project represents a total disturbance of about 25 acres across the entire eastern portion of Lincoln County.

Wildlife water developments hold many benefits for game animals as well as for many other non-game species. Large game usage of habitat near water developments does increase, but vegetation in the form of forage quality does not significantly decrease. The conservation benefits of wildlife water developments offset or mitigate disturbances to the habitat of these species and do not disturb or otherwise negatively affect the project area.

Finding of No Significant Impact

I have reviewed Environmental Assessment (EA) NV-045-08-009, dated July 24, 2008. After consideration of the environmental impacts as described in the EA, and incorporated herein, I have determined that the proposed actions with the standard operating procedures as described in the EA will not significantly affect the quality of the human environment and that an Environmental Impact Statement (EIS) is not required to be prepared. This finding and conclusion is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 Code of Federal

Regulations 1508.27), both with regard to the context and the intensity of impacts described in the EA. I have determined the proposed action is in conformance with the Caliente Management Framework Plan Tortoise Amendment (2000).

Context:

The Bureau of Land Management (BLM) has the authority to protect and provide habitat for wildlife under the Federal Land Policy and Management Act of 1976 (43 United States Code 1701 et seq.) (FLPMA).

Intensity:

1) Impacts that may be both beneficial and adverse:

No significant negative impacts were noted. The proposed action will result in improved economics and tourism of the surrounding communities through hunting and wildlife viewing opportunities. Any negative effects caused by the proposed action are thought to be short term and temporary. Negative effects such as damaged roads are required to be repaired as part of the special stipulations that the permit holder agrees to.

2) The degree to which the proposed action affects public health or safety:

The proposed action will not have significant negative effects to public health and safety. Coordination with state agencies and stipulations to minimize any negative effects to the public health are agreed upon by the permit holder. The spread of invasive, non-native plant species will be minimal and not significant as identified by the weeds risk assessment completed for the proposed action. Stipulations requiring NDOW to implement practices to prevent the spread of noxious weeds will be attached to the permit.

3) Unique characteristics of the geographic area such as proximity to historical or cultural resources, parks lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

The project area is representative of the Great Basin and Mojave ecosystem. No significant impacts are anticipated from the proposed action to floodplains, wetlands, and riparian areas; wilderness values, ACECs, and wild and scenic rivers; Visual Resource Management; cultural, Paleontological, and historical resource values; prime or unique farmlands; environmental justice; water quality (drinking/ground); Native American religious concerns; or migratory birds.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial:

The effects of implementing the proposed action are not highly controversial.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:

There are no known effects of the proposed action which are considered uncertain or involve unique or unknown risks.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The proposed action does not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. All future similar events would be subject to the same environmental assessment standards and independent decision making.

7) Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts: Based on the conditions set forth in this Finding of No

Significant Impact, no significant impacts will occur due to the proposed action. The subsequent land use would be regulated by local, state, and federal regulations as applicable; therefore, no significantly cumulative impacts are anticipated.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources:

The proposed action will not cause the loss or destruction of significant scientific, cultural or historical resources. A cultural needs assessment was completed to determine the threat the proposed action will pose to cultural and historical resources. Mitigation actions identified ensure that cultural or historical resources will not be damaged including avoidance through moving the proposed wildlife water development site to avoid damage or disruption of a cultural or historical resource.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973:

The EA has identified that no significant or adverse impacts will result to a threatened or endangered species from implementing the proposed action.

10) Whether the action threatens a violation of Federal, State, local or tribal law or requirements imposed for the protection of the environment: This action is consistent with federal, state, local, and tribal laws and other requirements for the protection of the environment. The proposed action will not violate or threaten to violate any Federal, State, or local law or requirement imposed for the protection of the environment.

Decision Record

I have reviewed Environmental Assessment (EA) NV-045-08-009, dated July 24, 2008. I have determined the proposed action is in conformance with the approved Caliente Management Framework Plan Tortoise Amendment (2000). It is my decision to implement the proposal as described, subject to the attached permit conditions and special stipulations. I hereby approve this proposal which was mitigated through route planning procedures, and requirements contained in permit conditions and special stipulations which are included as part of this decision.

Rationale for Decision

Approval of this proposal will allow the applicant to construct the wildlife water developments described herein, which is a legitimate multiple use that will result in no significant impact to important resource values.

Public Involvement

This document was made available for public review for 15 days on the BLM Ely District website.

Ron Clementsen
Field Manager
Caliente Field Office.

Date

Appendix I

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

**Wildlife Water Developments
Throughout Lincoln County, Nevada**

On June 17th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the wildlife water development projects in throughout Lincoln County, Nevada. BLM proposes to partner with NDOW on the construction of 25 new wildlife water developments. The NDOW guzzler crew would access sites using existing two-track roads. A rubber-tired backhoe would be used to level the areas where the storage tanks and apron would be located. Three pickup trucks with trailers and an ATV would be used to haul tools. Wildlife water developments would be constructed using either plastic or metal aprons with storage tanks with a built-in drinker. Water would be available to all wildlife at the open drinkers built into the top of the tank. Excess water would overflow through the drinker. A four-strand, barbed wire fence would be constructed around the apron to prevent damage to the apron from livestock, wildlife, or wild horses. The installation of each wildlife water development would result in less than 1 acre of total disturbance.

No field surveys were conducted for this project. Instead the Ely District weed inventory data was consulted for this project. There are currently no documented weed infestations at the project areas. The following species are found along roads and drainages leading throughout area:

<i>Acroptilon repens</i>	Russian knapweed
<i>Carduus nutans</i>	Musk thistle
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Centaurea stoebe</i>	Spotted knapweed
<i>Conium maculatum</i>	Poison hemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Lepidium draba</i>	Hoary cress
<i>Lepidium latifolium</i>	Tall whitetop
<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Onopordum acanthium</i>	Scotch thistle
<i>Tamarix spp.</i>	Salt cedar
<i>Tribulus terrestris</i>	Puncturevine

While not officially inventoried the following weeds probably occur in or around the allotment: cheatgrass (*Bromus tectorum*), field bindweed (*Convolvulus arvensis*), halogeton (*Halogeton glomeratus*), and Russian thistle (*Salsola kali*). Regions of this area was last inventoried for noxious weed in 2003 and 2005.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For this project, the factor rates as Moderate (4) at the present time. The ground disturbance created by the excavation of the site could lead to the introduction of new weed infestations to the project area.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

This project rates as High (8) at the present time. If new weed infestations establish within the project area this could have an adverse impact those native plant communities since the areas are currently considered to be weed-free. Also, any increase of cheatgrass could alter the fire regime in the area.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

For this project, the Risk Rating is Moderate (32). This indicates that the project can proceed as planned as long as the following measures are followed:

- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all

personnel who will be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.

- To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Field Office Weed Coordinator or designated contact person.
- To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for reclamation or stabilization activities, feed, bedding will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely Field Office.
- Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- Reclamation would normally be accomplished with native seeds only. These would be representative of the indigenous species present in the adjacent habitat. Rationale for potential seeding with selected nonnative species would be documented. Possible exceptions would include use of non-native species for a temporary cover crop to out-compete weeds. Where large acreages are burned by fires and seeding is required for erosion control, all native species could be cost prohibitive and/or unavailable. In all cases, seed mixes would be approved by the BLM Authorized Officer prior to planting.

Reviewed by: _____ 6/17/2008
Bonnie M. Million Date
Ely District Noxious & Invasive Weeds Coordinator

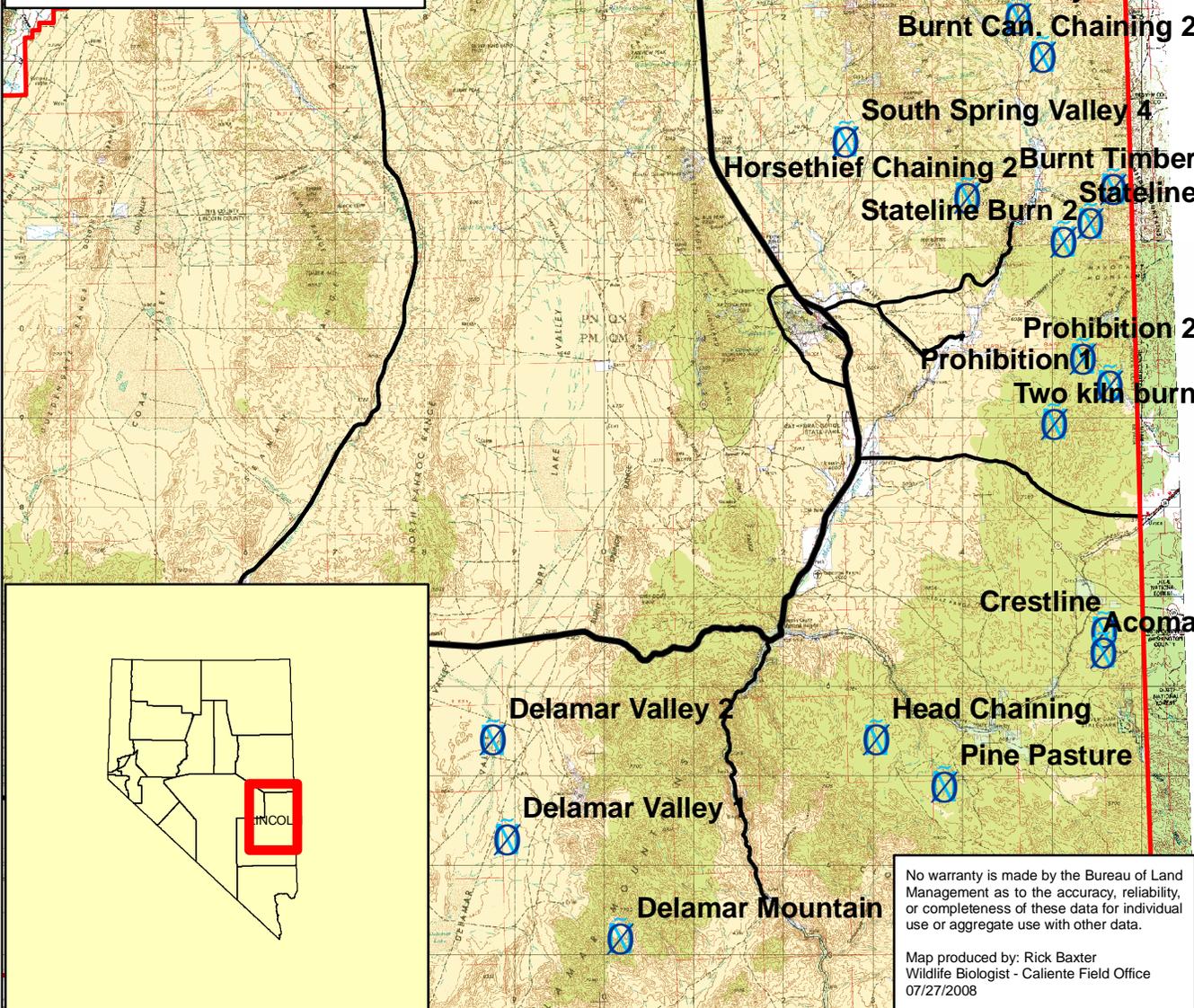
Wildlife Water Developments in Lincoln County

Legend

-  Wildlife water developments
-  District boundary
-  BLM
-  USFS
-  NPS
-  FWS
-  PVT



0 2 4 8 12 16 20 Miles



Lake Valley 1
Hamlin Valley 7
Limestone
Lake Valley 2
Hamlin Valley 6
S. Spring Valley 3
Hamlin Valley 5
Lake Valley 3
Burnt Canyon Burn
Burnt Can. Chaining 2
South Spring Valley 4
Horsethief Chaining 2
Stateline Burn 2
Stateline
Prohibition 2
Prohibition 1
Two kill burn
Crestline
Acoma
Delamar Valley 2
Head Chaining
Pine Pasture
Delamar Valley
Delamar Mountain

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.
Map produced by: Rick Baxter
Wildlife Biologist - Caliente Field Office
07/27/2008

Ely District Office