

# Range Specialist Report Errata

August 2022

## 1. Range, Environmental Consequences, Effects Common to Both Action Alternatives (p. 16) the following bolded text is added and text is deleted:

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**Original:** The increase in forage within treatment areas would improve allotment conditions and allow for more flexibility in grazing management systems. Livestock distribution would improve because forage is more available in uplands. An increase in pasture graze periods would allow for additional pasture rest or deferment in other pastures within an individual allotment.

**Errata:** The increase in forage within treatment areas would improve allotment conditions and allow for more flexibility in grazing management systems. **While this project does not propose to increase total livestock numbers or change the seasons-of-use beyond those previously authorized, there could be secondary benefits related to livestock management.** Livestock distribution could improve because forage **could be** more available in uplands, **potentially reducing grazing impacts to riparian areas. Timing and rotation of pasture use within an allotment may gain flexibility by allowing for** pasture rest or deferment **where needed, due to potential increased availability of forage in treated pastures. Additionally, livestock could be utilizing a lower percentage of the total produced forage on the allotment, thus reducing the overall potential impacts of grazing.**

**Significance:** The additions provide additional clarification to the potential benefits of project implementation to grazing management systems.

## 2. Range, Environmental Consequences, Effects Common to Both Action Alternatives (p. 18) the following sentence is deleted:

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Stream and riparian area restoration would have a long-term benefit to livestock grazing management by increasing forage and by improving bank stability.

**Significance:** The errata (#5 directly above) includes impacts to riparian areas.

# **Four Forest Restoration Initiative, Rim Country Environmental Impact Statement**

## **Range Specialist Report**

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**for:**

4FRI Rim Country Environmental Impact Statement  
March, 2022, updated August 2022

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## Introduction/Project Information

The Rangeland resources are not directly related to the Purpose and Need of this project. The effects of the treatments to the understory vegetation will be analyzed; there were no issues relating to the understory vegetation.

Livestock grazing is authorized through Term Grazing Permits. Allotment Management Plans (AMPs) are developed through the NEPA process. This is the process used to analyze stocking rates, season of use, and management for Allotments. The Purpose and Need for this project is not related to the Term Grazing Permit/Allotment Management Plans, and there were no issues were identified in scoping. Although no permanent changes to the stocking, season of use, or management will occur with this decision, annual changes could occur, if deemed necessary. These changes may include rest or deferment of pasture, and would be discussed as needed, such as during the Annual Operating Instruction meetings.

## Relevant Law, Regulation, and Policy

### Range Management Relevant Laws, Regulations and Policy

#### *Congress*

Congressional intent to allow grazing on National Forest System lands comes from the following acts: Multiple Use-Sustained Yield Act of 1960, Forest and Rangeland Renewable Resources Planning Act of 1974, Federal Land Policy and Management Act of 1976, National Forest Management Act of 1976.

#### *Forest Service Manuals*

The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff in more than one unit to plan and execute assigned programs and activities.

Forest Service Manual 2200 – Range Management

***Forest Service Handbooks***

Forest Service Handbooks (FSH) are the principal source of specialized guidance and instruction for carrying out the direction issued in the FSM. Specialists and technicians are the primary audience of Handbook direction. Handbooks may also incorporate external directives with related USDA and Forest Service directive supplements.

Forest Service Handbook 2209.13 – Grazing Permit Administration Handbook

Service Wide Issuance

2209.13 - Grazing Permit Administration Handbook (Region 3)

Regulations for Range Management are found at 36 CFR Part 222, Subpart A - Grazing and Livestock Use on the National Forest System, Subpart B – Management of Wild Free-Roaming Horses and Burros, and Subpart C – Grazing Fees. Regulations at 36 CFR 222.2 (c) state that National Forest System lands would be allocated for cattle grazing and allotment management plans (AMP) would be prepared consistent with land management plans.

## **Land Management Plan Direction**

The Land Management Plan for the Apache-Sitgreaves National Forest provides management direction for range resource as follows:

- Desired conditions for Livestock Grazing:
  - 1) Livestock grazing contributes to the social, economic, and cultural diversity and stability of rural communities. (p. 96)
  - 2) Livestock grazing and associated activities occur such that healthy, diverse plant communities, satisfactory conditions soils, and wildlife habitat are maintained or improved. (p. 96)
  - 3) Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). (p.97)
- Guidelines for Livestock Grazing:
  - 1) As areas are mechanically treated or burned, or after large disturbances, timing of livestock grazing should be modified as needed, in order to move toward desired conditions and to accomplish the objectives for the treatment or disturbed area. (p. 97)
  - 2) Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that plants providing for these needs remain at or move toward a healthy, persistent state. (p. 97)
- Desired Conditions for all PNVTs:
  - 1) Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). (p. 29)

The Land Management Plan for the Coconino National Forest provides management direction for range resource as follows:

- Desired Conditions for Livestock Grazing

- 1) There are opportunities to engage in ranching activities and graze livestock on NFS lands. These activities contribute to the stability and social, economic, and cultural aspects of the communities in central and northern Arizona. (p. 82)
  - 2) Permitted livestock grazing is consistent with the desired conditions of other resources. However, conditions immediately adjacent to livestock concentration areas, such as earthen stock ponds, developed springs, and other features that concentrate livestock, may be inconsistent with general desired conditions for vegetation and soil such as lower levels of vegetation and higher levels of soil compaction. (p. 86)
  - 3) Grasses and forbs provide forage for permitted livestock. (p. 86)
- Standards for Livestock Grazing
    - 1) Troughs and uncovered storage tanks shall incorporate animal escape devices. (p. 86)
  - Guidelines for Livestock Grazing
    - 1) Grazing and browsing use by authorized livestock and wildlife should be in balance with available forage production. (p. 86)
    - 2) Livestock grazing should be managed to meet, or move toward, the desired conditions for forest resources such as soil, water, vegetation, and species. (p. 86)
    - 3) Burned or mechanically treated areas should be given sufficient rest from livestock grazing, especially during the growing season, to ensure plant recovery and vigor and to ensure that perennial plants would not be permanently damaged by grazing. Grazing should not be authorized in burned or mechanically treated areas until Forest Service specialists determine plant recovery and vigor in the burned or treated area by considering characteristics such as seed heads or flowers, multiple leaves or branches, and/or a root system that does not allow them to be easily pulled from the ground. These characteristics provide evidence of plant recovery, vigor, and reproductive ability. (p. 86)
    - 4) Structural range improvements (such as fences, troughs, earthen stock ponds, pipelines) should be located, constructed, reconstructed, maintained, and used in a manner consistent with the desired conditions for riparian areas, wet meadows, aspen, formally identified archaeological sites, known locations of Southwestern Region sensitive species, and other sensitive resources. Range improvements should be modified, relocated, or removed when found incompatible. (p. 86)
    - 5) Salt, minerals, and/or other supplements should be located and used so that sensitive resources are protected from excessive trampling, compaction, salinization, and other impacts. For example, these supplements should be located at least a quarter of a mile from riparian areas, formally identified archaeological sites, known locations of Southwestern Region sensitive species, and other sensitive resources. (p. 86)
    - 6) Gates in waterlot fencing should be left open to wildlife except when controlling livestock distribution. (p. 86)
    - 7) Where permitted livestock have access to riparian areas, the use of riparian species should provide for maintenance of those species, allow for regeneration of new individuals, protect bank and soil stability, and reduce the effects of flooding. Maintenance of woody riparian species should lead to diverse age classes of woody riparian species where potential for native woody vegetation exists. This guideline would not apply to fine-scale activities and facilities such as intermittent livestock crossing locations, water gaps, or other infrastructure used to minimize impacts to riparian areas at a larger scale. (pp. 86-87)

## Affected Environment

### *Existing Conditions*

The affected environment for this range analysis is the Rim Country project area, approximately 1,240,000 acres. Only allotments within the project area are considered. Within the project area, approximately 1,129,000 are within grazing allotments and 109,000 acres are not within an allotment. The majority of the understory vegetation within the grazing area is dominated by Arizona fescue, mountain muhly, pine dropseed, blue grama and squirreltail.

Within the project area there are 70 livestock grazing allotments, with 69 active allotments and one vacant. Of these 70 allotments, 68 permit cattle grazing and two permit sheep grazing (one being a sheep driveway). The amount of each allotment lying within the project area varies from less than 1% to 100%.

Of the range allotments in this project area, 57 have been through a rigorous evaluation and NEPA process (FSM r3-2209.13-90). Of the 1,129,000 acres of this project that are part of grazing allotments, 96% of these acres have been through NEPA process. Generally rest or deferred rotation grazing system is used in these allotments.

The allotments, their total acres, their acres within the project area, the current numbers of permitted livestock, and their seasons of use are listed in Table 1. The effects analysis in this report is geared toward the effects on these allotments within the project area.

**Table 1. Allotment Overview**

| Forest | Allotment       | Total Acres | Acres within the Project | On/Off dates                                 | Livestock # and kind        |
|--------|-----------------|-------------|--------------------------|--|-----------------------------|
| A-S    | Arab            | 4,602       | 4,147                    | 6/1 to 10/31                                 | 27 c/c                      |
| A-S    | Black Canyon    | 17,030      | 17,030                   | 6/1 to 10/31                                 | 60 c/c                      |
| A-S    | Blue Ridge      | 11,629      | 11,627                   | 6/1 to 10/31                                 | 131 c/c                     |
| A-S    | Brown Creek     | 9,937       | 9,779                    | 6/1 to 10/31                                 | 50 c/c and 9 yr/s           |
| A-S    | Buck Springs    | 8,507       | 8,507                    | 6/1 to 10/31                                 | 70 c/c                      |
| A-S    | Chevelon Canyon | 43,089      | 34,699                   | 6/15 to 10/15                                | 109 c/c                     |
| A-S    | Clay Springs    | 23,737      | 11,332                   | 11/1 to 2/28<br>11/1 to 5/31<br>6/1 to 10/31 | 208 c/c<br>22 c/c<br>38 c/c |
| A-S    | Clear Creek     | 17,399      | 757                      | 8/16 to 10/31                                | 125 c/c                     |
| A-S    | Ellsworth       | 1,996       | 1,989                    | 5/16 to 10/31                                | 33 c/c                      |
| A-S    | Heber           | 156,548     | 84,195                   | 5/1 to 10/31                                 | 905 c/c                     |
| A-S    | Johnson         | 740         | 739                      | 6/1 to 10/31                                 | 14 c/c                      |
| A-S    | Lake Mountain   | 26,328      | 26,321                   | 6/1 to 10/31                                 | 144 c/c                     |
| A-S    | Limestone       | 49,247      | 49,247                   | 6/15 to 9/15                                 | 133 c/c                     |
| A-S    | Long Tom        | 74,855      | 64,371                   | 6/1 to 9/15                                  | 3900 sheep                  |
| A-S    | Ortega          | 12,724      | 26                       | 5/1 to 9/30                                  | 300 c/c                     |
| A-S    | Park-Day        | 25,635      | 1,528                    | 3/1 to 2/28                                  | 120 c/c                     |
| A-S    | Pinyon          | 1,823       | 441                      | 6/1 to 10/31                                 | 90 yr/s                     |

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| Forest   | Allotment                | Total Acres     | Acres within the Project | On/Off dates                                 | Livestock # and kind          |
|----------|--------------------------|-----------------|--------------------------|--|-------------------------------|
| A-S      | Railroad                 | 89,077          | 45,880                   | 3/1 to 2/28                                  | 512 c/c                       |
| A-S      | Show Low                 | 33,509          | 8,257                    | 3/1 to 2/28                                  | 288 c/c                       |
| A-S      | Sponsellor               | 11,542          | 7,512                    | 6/1 to 10/31                                 | 259 c/c                       |
| A-S      | Town Tank                | 3,053           | 3,053                    | 7/15 to 9/14                                 | 9 c/c                         |
| A-S      | Wallace                  | 42,053          | 26,721                   | 6/1 to 10/15                                 | 425 yr/s                      |
| A-S      | Wildcat                  | 21,389          | 20,861                   | 6/1 to 10/31                                 | 121 c/c                       |
| A-S      | Willow Wash              | 52,713          | 27,862                   | 5/1 to 11/30                                 | 210 c/c                       |
| Coconino | 13-Mile Rock             | 37,029          | 10,530                   | 3/1 to 2/28                                  | 550 c/c and 6 hd horses       |
| Coconino | Apache Maid              | 147,526         | 53,453                   | 3/1 to 2/28                                  | 1,445 c/c and 10 horses       |
| Coconino | Baker Lake/Calf Pen      | 18,205          | 16,957                   | 5/1 to 11/1                                  | 640 c/c and 10 hd horses      |
| Coconino | Bar T Bar                | 186,310         | 97,022                   | 5/20 to 11/1                                 | 3,470 c/c and 30 hd horses    |
| Coconino | Beaver Creek             | 71,195          | 44,490                   | 3/1 to 2/28                                  | 1,150 c/c and 5 horses        |
| Coconino | Buck Springs             | 45,122          | 45,122                   | vacant                                       |                               |
| Coconino | Buckhorn                 | 34,942          | 15,114                   | 3/1 to 2/28                                  | 275 c/c                       |
| Coconino | Fossil Creek             | 42,159          | 2                        | 1/1 to 12/31                                 | 294 c/c and 6 hd horses       |
| Coconino | Hackberry/Pivot Rock     | 78,519          | 53,989                   | 1/1 to 12/31                                 | 640 c/c and 10 hd horses      |
| Coconino | Walker Basin             | 70,970          | 21,422                   | 3/1 to 2/28                                  | 540 c/c and 10 hd horses      |
| Coconino | Willow Valley            | 4,776           | 4,776                    | 5/20 to 10/20                                | 140 c/c and 3 hd horses       |
| Coconino | Windmill                 | 90,329          | 34                       | 1/1 to 12/31<br>6/1 to 10/31<br>11/1 to 5/31 | 250 c/c<br>250 c/c<br>100 c/c |
| Tonto    | 13 Ranch                 | 15,473          | 15,473                   | 5/1 to 10/31                                 | 63 c/c                        |
| Tonto    | A-Cross                  | 26,494          | 10,168                   | 01/01 to 12/31                               | 160 c/c                       |
| Tonto    | Armer Mountain           | 30,320          | 5,930                    | 01/01 to 12/31<br>01/01 to 05/31             | 167 c/c<br>101 yearlings      |
| Tonto    | Bar X (4 pastures added) | 14,460 (+32786) | 10,965                   | 1/1-12/31<br>1/1-5/15                        | 552 c/c<br>160 yr/s           |
| Tonto    | Bryant Mountain          | 2,684           | 12                       | 1/1 to 12/31                                 | 59 c/c                        |
| Tonto    | Buzzard Roost            | 47,253          | 38,239                   | 1/1 to 12/31                                 | 416 c/c                       |
| Tonto    | Cedar Bench              | 32,616          | 2,816                    | 11/1 to 5/31                                 | 250 c/c                       |

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| Forest | Allotment                 | Total Acres | Acres within the Project | On/Off dates  | Livestock # and kind   |
|--------|---------------------------|-------------|--------------------------|---|--|
| Tonto  | Center Mountain           | 9,753       | 1,368                    | 1/1 – 4/30<br>5/1 – 9/30<br>10/1 – 12/31<br>1/1 – 4/30  | 39 c/c<br>24 c/c<br>39 c/c<br>15 yearlings                   |
| Tonto  | Cherry Creek              | 30,434      | 4,062                    | 3/1 – 2/28  | 392 c/c  |
| Tonto  | Christopher Mountain      | 9,742       | 6,812                    | 3/1 to 2/28   | 200 c/c  |
| Tonto  | Colcord Canyon            | 4,539       | 4,539                    | Same as Bar X   | Combined-Bar x   |
| Tonto  | Cross V                   | 35,277      | 17,446                   | Combined into Diamond Rim   | 250 c/c  |
| Tonto  | Crouch Mesa               | 7,391       | 522                      | 3/1 – 2/28<br>1/1 – 10/31   | 51 C/c<br>21 yearling  |
| Tonto  | Dagger                    | 58,088      | 1,840                    | 01/01 to 12/31<br>11/1 to 4/30  | 125 c/c<br>10 horses   |
| Tonto  | Deadman Mesa              | 16,901      | 797                      | Vacant  |  |
| Tonto  | Del Shay                  | 13,119      | 0                        | 01/01 to 12/31<br>01/01 to 05/31  | 127 c/c<br>126 yearlings                                     |
| Tonto  | Ellinwood                 | 18,547      | 15,280                   | Same as Christopher Mountain  |  |
| Tonto  | Flying V                  | 57,162      | 1,943                    | 3/1 – 2/28<br>3/1 – 7/31  | 650 C/c<br>200 yearling                                      |
| Tonto  | Frio Canyon               | 10,389      | 2,288                    | 1/1 – 10/31   | 100 yearlings  |
| Tonto  | Gentry Mountain           | 9,309       | 5,666                    | 1/1 to 12/31<br>1/1 to 10/31  | 115 c/c<br>30 yrs  |
| Tonto  | Green Valley              | 48,000      | 29,187                   | Combined w/Diamond Rim  |  |
| Tonto  | Greenback                 | 21,455      | 0                        | 01/01 to 12/31<br>01/01 to 05/31  | 285 c/c<br>157 yearlings                                     |
| Tonto  | Haigler Creek             | 8,744       | 8,582                    | Combined w/Bar X  |  |
| Tonto  | Hardscrabble              | 20,538      | 5,328                    | 3/1 to 2/28   | 140 c/c  |
| Tonto  | Heber-Reno Sheep Driveway | 28,558      | 10,613                   | 5/1 to 5/31 and 9/16 to 10/20<br>4/20 to 5/14 and 9/8 to 10/8<br>4/21 to 5/15 and 9/9 to 10/9 | 3900 sheep and 14 burros<br>3055 sheep, 1 horse and 7 burros |

| Forest | Allotment                                   | Total Acres   | Acres within the Project | On/Off dates   | Livestock # and kind                                       |
|--------|---|---------------|--------------------------|--|--|
|        | Pastures split added to adjacent allotments |               |                          | 3/1 to 2/28<br>1/1 to 5/15   | 2000 sheep, 1 horse and 7 burros<br><br>499 c/c<br>93 yr/s |
| Tonto  | Indian Gardens                              | 16,445        | 16,445                   |  | Combined w/Diamond Rim                                     |
| Tonto  | O.W. +pasture added                         | 4,432 + 4,226 | 4,419                    | 6/1 to 10/15<br>1/1-12/31  | 76 c/c<br>6 bulls  |
| Tonto  | Payson                                      | 39,262        | 20,558                   | Combined into Diamond Rim  |  |
| Tonto  | Pine  | 33,265        | 18,612                   | 5/1 to 10/31   | 92 c/c   |
| Tonto  | Pleasant Valley                             | 5,430         | 70                       | 3/1 - 2/28<br>1/1 – 10/15  | 40 C/c<br>28 yearling                                      |
| Tonto  | Red Lake                                    | 19,769        | 19,708                   | Same as Gentry Mtn   |  |
| Tonto  | Seventy Six                                 | 23,325        | 2                        | 01/01 to 12/31<br>01/01 to 05/31                                     | 305 c/c<br>213 yearlings                                   |
| Tonto  | Tonto Basin                                 | 118,548       | 17,823                   | 01/01 to 12/31<br>01/01 to 05/31<br>01/01 to 12/31<br>01/01 to 05/31 | 342 c/c<br>262 yearlings<br>266 c/c<br>193 yearlings       |
| Tonto  | Young                                       | 4,972         | 2,181                    | Combined w/Bar X   |  |

Diamond Rim: Season of use and numbers: 3/1 to 2/28 w/619 c/c, and 1/1 to 9/30 w/40 yearling

*General Overview of Potential and Existing Livestock Grazing Effects on Fire, Understory Species, Riparian, Aspen, Soils, and Hydrologic Function*

Livestock grazing can affect vegetation by reducing plant height, plant canopy cover, and ground cover, and can compact soils. Current grazing management systems on allotments within the project area are designed to mitigate these effects by rotating grazing so individual forage plants are not grazed at the same time each year. They are also designed so forage species can reach maturity and seed most years. Current allotment management plans generally have utilization guidelines of 25-40% by ungulates, which leaves 60-75% for ground cover, soils, fire spread, hiding cover, and forage for other animals and insects. Adaptive management for all allotment grazing management systems in the project area is also mitigation to grazing. It is primarily used to match livestock numbers with annual available forage. In some areas managed livestock grazing can affect the spread of natural fire by the removal of fine herbaceous fuel until the plants regrow. Historic unregulated livestock management from the 1860's to the 1920's removed a significant the amount of forage plants and did not allow for much regrowth. As range management practices were improved through the years, more forage plants became available to carry a

fire. A likely factor in the increase in the amount of forest acres burned in recent history is a result of this improvement in range management practices.

Current grazing management systems effects on fire within the project area is short lived and limited in area. The effect is normally limited to one pasture in an allotment, until that pasture can regrow, for typically between two to six weeks depending on climate conditions. It is also limited in scope because of conservative 25-40% utilization levels used in these grazing management systems in the project area, leaving 60-75% of the plants available for fire spread or mulch. The exceptions are generally corrected overtime by resting the pasture, deferring use, reducing grazed periods, and/or reducing livestock numbers. Many fuels reduction and restoration projects have occurred within the project area and have been successful with livestock grazing.

Grazing effects appear less important than abiotic and biotic factors in explaining the observed spatial variation in vegetation (Laughlin and Abella 2007). The model results imply that ungulate (cattle, sheep, deer, and elk) grazing might directly influence plant community composition. Heavy grazing can shift the community toward greater abundance of unpalatable species (Westoby et al., 1989; O'Connor, 1991). A few unpalatable species, including broom snakeweed (*Gutierrezia sarothrae*) and spreading fleabane (*Erigeron divergens*), were most abundant in the heavily grazed plots (Abella and Covington, 2006). It is likely that the unregulated grazing in the 1860s to 1920s in the project area likely led to temporary changes in vegetation. As heavy grazing was eliminated over time the plant composition responded.

Livestock grazing can affect riparian and aspen areas similarly to upland areas. However, livestock can be more attracted to riparian and aspen areas because of the increased water and/or forage. Riparian plants and aspen can be reduced by grazing these species. Special livestock management techniques have been employed within the project area to reduce the effects including livestock exclosures, deferred grazing, herding, and alternative water sources with adjustments in Allotment Management Plans over the years. These practices have limited the amount of livestock grazing on riparian vegetation and aspen. Additional adjustments in management may be necessary to reduce effects on these areas, especially if riparian and aspen regeneration areas would be expanded with new management practices.

Domestic cattle grazing has the potential to affect soil and hydrologic functions that are important in the maintenance of long-term productivity and favorable conditions of water flow. Specifically, changes in the soil's surface structure and its ability to accept, hold, and release water may be affected by compaction caused by trampling. The nutrient cycling function of the soil may be interrupted by removal of vegetation that affects above ground nutrient inputs into the system. Finally, the soil's resistance to erosion is affected by changes in plant density, composition, and protective vegetative ground cover that are part of the organic components in the soil.

The effects of livestock grazing on soil and hydrologic function is limited within the project area because of the current management in place that limits utilization, maintains forage plants, and limits compaction with deferred and rest rotational grazing systems.

#### *Historic and Past Factors Affecting Current Understory Vegetation*

Since European settlement within the project area heavy tree harvest, fire exclusion, overgrazing, and climate change have altered the trajectory of stand development, ecosystem function, and the spatial pattern of ponderosa pine stands in northern Arizona (Moore et al 2004). Many others have documented this as well (Arnold 1950, Rummel 1951, Cooper 1960, Manday and West 1983, Stein 1988, Savage and Swetnam 1990, Savage 1991, Covington and Moore 1994, Swetnam and Baisan 1996, Allen et al 2002).

#### *Grazing Effects from the 1860s to Present*

There is a long livestock grazing history within the project area. The first pioneers settled in this area in the 1860s with their livestock. As more settlers moved in, they brought with them more and more

livestock. Initially, livestock numbers were low but they increased quickly throughout the entire project area. The major factor contributing to the increase in cattle was when the Atlantic and Pacific Railroad connected Flagstaff to Albuquerque and the eastern U.S. markets in 1882.

Cattle production in the project area peaked in 1891. After a two-year drought from 1891 to July of 1893, the financial panic of 1893, and the winter of 1892-93, cattle numbers were greatly reduced.

The project area was designated national forest land in 1907-08. There were no legal hindrances to grazing on the public domain, but permits were required. Grazing management was minimal, consisting of issuing permits and collecting fees. Uncontrolled public domain grazing inevitably produced conflict and exploitation in which the range deteriorated and most stockmen suffered. To help resolve some of these problems, the first fences were built in 1915.

In 1916, the Homestead Act allowed settlers to claim up to 640 acres and graze 50 head of cattle on these 640 acres. The act provided vast opportunities for settlement in the West and resulted in overgrazing of many areas including the project area.

Livestock numbers on the A-S, Coconino, and Tonto National Forests have generally declined since the 1890's. One exception to this general trend was during WWII when numbers were temporary increased. In the early years, livestock reductions were generally made when allotments changed hands. Some of the reductions were made for range protection without a permit changing hands. A complete record of the early grazing history of individual allotments does not exist. However, an estimated summary of permitted head months from 1910 to 2010 for the Coconino National Forest is presented in Table 2.. As new data is found and compiled these numbers may change slightly.

**Table 2. Permitted head months of Cattle, Horses, sheep, and goats on the Coconino National Forest, 1910-2020**

| Year           | Permitted Head Months |
|----------------|-----------------------|
| 1910           | 607,000               |
| 1920           | 847,000               |
| 1930           | 389,000               |
| 1940           | 333,000               |
| Late 1940's-50 | 250,000               |
| 1960           | 212,000               |
| 1970           | 196,000               |
| 1980           | 176,000               |
| 1990           | 151,000               |
| 2000           | 141,000               |
| 2010           | 131,000               |
| 2020           | 123,000               |

Table 2 displays updated Permitted Head Months, which includes 2020 data. This Table combines Permitted Livestock (cattle, horses, sheep, and goats) into a single table. Some numbers were also updated with more current data from INFRA, which is the range management database.

On the A-S National Forests, livestock numbers have declined for more than 20 years, as the forests have balanced permitted numbers with the capacity of the land. In 1983, there were approximately 230,000 AUMs permitted, approximately 214,000 AUMs permitted in 1985, compared to approximately 180,000 AUMs permitted in 2011 and 2020.

Livestock grazing began on the area now known as the Tonto NF in the late 1800s. Heavy grazing was occurring in the 1880s and livestock numbers reached their peak in about 1900, with an estimated 1.5 to two million head grazing the area now known as the Tonto NF. Mostly cattle grazed on the Tonto, although some sheep, goats, and hogs have utilized the rangelands as well as native ungulates. A harsh drought in 1904, followed by new supervision by the Forest Service in 1905, reduced the number of cattle by 80 to 90 percent to 150,000 to 200,000 head. Permitted cattle numbers have been reduced since the 1900's, to approximately 25,000 cattle in 2013 and approximately 28,000 permitted in 2020.

From the 1920s until the early 1930s, individual allotments were fenced. After the allotments were fenced, the pastures started to be divided and water sources developed. By 1940, most dual use between cattle and sheep ended in this region as most of the permittees switched to cattle. All of these changes improved grazing management and reduced the effects from grazing on understory vegetation within the project area.

Arnold (1955) described the following effect from early livestock grazing. "Under heavy grazing the original tall bunchgrasses have been largely replaced by plants more resistant to grazing, except where dense tree cover discourages livestock use. In addition, grass cover decreases as pine reproduction becomes established; the greater the density of pine saplings, the less the total herbaceous cover. Decline in total forage production as a result of competition from young pine stands is accompanied by no great botanical change in the herbaceous vegetation, but heavy grazing induces a major change in species composition. In openings within the forest, ranges in good to excellent condition near Flagstaff support a high proportion of midgrasses, dominated by Arizona fescue, mountain muhly, muttongrass, and June grass. Under heavy grazing pressure, the midgrasses are replaced by a shortgrass cover composed largely of blue grama and squirreltail. Under still more severe use, even these resistant grasses are largely replaced by less desirable perennial and annual forbs."

Cooper (1960) follows up with a summary of the effects of livestock management through history. "The large reduction in numbers of livestock permitted on national forests, plus the extensive conversion of sheep operations to cattle, have greatly alleviated the browsing problem. Localized damage continues due to livestock concentration, but is relatively minor. The results of past browsing damage, however, are clearly apparent in large areas that lack reproduction due to past sheep use. Grazing has been important in reducing the spread of fire. Large amounts of flammable grass, which used to remain on the ground, are now removed by grazing animals. Many of the early arguments against reduction of grazing on the national forests were based on the premise that heavy grazing made forest fires much less frequent. It has been widely held that removal of herbaceous cover and plant litter by grazing animals, and the exposure of mineral seedbeds by livestock trampling, have been important factors in the establishment of dense pine stands. Pine seeds germinate well under proper weather conditions on almost any type of ground cover, but they soon die from desiccation unless they become rooted in mineral soil. In addition, direct root competition for soil water from the established grass cover is considered to inhibit seedling growth."

"In a normal year, most if not all pine seedlings in a virgin forest would die regardless of competition. In the rare year in which a wave of seedlings establishes itself, there may be so much moisture that no degree of herbaceous competition is really inhibitory. Reduction of competition may be a means of encouraging better reproduction in managed stands, but under virgin conditions it appears that seedlings could have developed even in a heavy grass cover. The reduction of grass competition and the preparation of a mineral seedbed by grazing animals probably helped to bring about the dense thickets, but do not

seem to have been the controlling factor. There are many severely grazed openings which remain nearly denuded of vegetation and in which pine seedlings have not become established” (Cooper 1960).

The Hill Plots livestock grazing exclosures were established in 1911 near the project area. The exclosures were reevaluated in 2004 (Bakker and Moore 2007). In 1941, canopy cover of tree regeneration was significantly higher inside exclosures. In 2004, total tree canopy cover was twice as high, density was three times higher, trees were smaller, and total basal area was 40% higher inside exclosures. Understory species density, herbaceous plant density, and herbaceous cover were negatively correlated with overstory vegetation in both years. Most understory variables were lower inside exclosures in 2004. Differences between grazing treatments disappeared once overstory effects were accounted for, indicating that they were due to the differential overstory response to historical livestock grazing practices. These variables did not differ between grazing treatments or years once overstory effects were accounted for, indicating that the declines were driven by the increased dominance of the overstory during this period. In addition, the understory vegetation was more strongly controlled by the ponderosa pine overstory than by recent livestock grazing or by temporal dynamics, indicating that overstory effects must be accounted for when examining understory responses in this ecosystem. Bakker et. al. (2010), conclude that the habitat has a stronger effect than livestock grazing on the herbaceous understory vegetation of this Southwestern Ponderosa pine bunchgrass ecosystem, particularly at small grain sizes.

In summary, historic livestock effects on understory vegetation follow the history of livestock management within the project area. Range trends within the project area follow this grazing history. Unregulated grazing from the 1860s to the 1920s led to declines in grass, forb, and shrubs and an increase in trees. Since then, grazing management practices have evolved through time to limit overgrazing by livestock and to match conservative livestock utilization with forage production. With the improvement in grazing management, trends in understory vegetation have generally improved in areas where tree density does not limit recovery. Tree density limits the amount of understory vegetation since as tree densities increase, the understory vegetation declines. The direct relationship between tree basal area and understory production has been widely studied (Moore et al 2004, Arnold 1950, Cooper 1960, Pearson and Jameson 1967). In these studies, the direct relationship between tree density and understory vegetation was observed regardless of whether the study area was grazed by livestock, or whether the study area was excluded from livestock grazing.

#### *Tree Density Effects – Pre-settlement to the Present*

Tree stand structure has changed dramatically from pre-settlement conditions to present day. Stands of trees are dominantly even-aged, where they used to be more uneven-aged. Trees are primarily mid-size with little large or small trees, where they used to be of various sizes. Trees are spaced throughout the forest, where they used to be more groupy or clumpy with more forest openings. An increase in tree density has increased the probability for an increase in tree mortality from insects, disease, drought, and fire. An increase in trees has reduced understory vegetation amount, species, and composition.

A century ago the pine forests were dominated by widely-spaced large trees with a more open, herbaceous forest floor (Cooper 1960). Typical historic tree group/patch size ranged from 0.1 to 0.75 acres in size, (two to >40 trees) (White 1985). This historic range of variability condition for trees per acre on the Fort Valley Experimental Forest, near Flagstaff, Arizona, is estimated to average 23 to 56 trees per acre (Covington and Moore 1992). This increase in trees primarily came from the 1919 pine seedlings established in this high moisture year. Because of this increase in trees, understory vegetation and forage has declined over time within the project area.

This relationship between trees and herbaceous understory has been well documented (Moore et al 2004, Arnold 1950, Cooper 1960). The 1960s Wild Bill Range study by the Rocky Mountain Research Station (near the project area) showed a solid relationship between tree basal area (BA) and herbage production. As tree basal area increased from 0 to 50 BA sq. ft. per acre, there was a sharp drop in forage from over

650 to 100 pounds per acre. Tree BAs above 50 had herbage production between 100 and 45 pounds per acre (Pearson and Jameson 1967). One reason for the decrease in allowable livestock numbers through history within the project area has been this increase in trees and decrease in forage. This is evident in the allotments within the project area.

Arnold (1950) showed the relationship between canopy cover and herbaceous densities and grass yields was highly significant uniform linear regression. Grasses and forbs decreased at about the same rate as canopy cover increased. There was about a five-fold decrease in herbaceous cover from 10 to 100 percent canopy cover. Under complete canopy cover, trees make full use of the site regardless of site conditions. Under an even-aged forest, each 1% in density of ground cover was equal to an air-dry grass yield of 150 lbs. In uneven-aged forests, the relationship between canopy and herbaceous density was still linear, but with more variability. Perennial herbs made up a small but constant part of the understory. Annuals were rare except in years of abundant moisture.

Several studies have shown high ponderosa pine abundance to depress understory plant production (Ffolliott 1983; Tapia et al. 1990; Moore & Deiter 1992, Laughlin et al 2011), since pine trees create deep shade, intercept precipitation, and compete for soil resources (McLaughlin 1978; Riegel et al. 1995; Naumburg and DeWald 1999). Pine abundance was also related to variation in species composition, suggesting that differences in forest structure could cause changes in floristic assemblages (Laughlin et al 2005).

Laughlin et al 2011 wrote “A century of increasing ponderosa pine density was associated with shifts in herbaceous plant strategies and reduced functional diversity. Shade- and stress-tolerant herbaceous plants that use a more conservative strategy for acquiring and maintaining resources have increased in relative abundance over time likely because light, water, and nutrients have become more limiting beneath the dense overstory.”

Bakker and Moore (2007) reexamined the Hill Plot livestock exclosures built in 1910's. The Hill Plots are located near the project area and have similar vegetation types. They determined that, in 1941, the canopy cover of tree regeneration was significantly higher inside exclosures. In 2004, total tree canopy cover was twice as high, density was three times higher, trees were smaller, and total basal area was 40% higher inside exclosures. Understory species density, herbaceous plant density, and herbaceous cover were negatively correlated with overstory vegetation in both years. Most understory variables were lower inside exclosures in 2004. Differences between grazing treatments disappeared once overstory effects were accounted for, indicating that they were due to the differential overstory response to historical livestock grazing practices. Between 1941 and 2004, species density declined by 34%: herbaceous plant density by 37%, shrub cover by 69%, total herbaceous cover by 59%, graminoid cover by 39%, and forb cover by 82%. However, these variables did not differ between grazing treatments or years once overstory effects were accounted for, indicating that the declines were driven by the increased dominance of the overstory during this period. In addition, the understory vegetation was more strongly controlled by the ponderosa pine overstory than by recent livestock grazing or by temporal dynamics, indicating that overstory effects must be accounted for when examining understory responses in this ecosystem. Smith (1967) noted that bunchgrass cover decreased at all levels of grazing within the open and dense timber types, noting that the increase in the canopy cover of trees appears to be responsible.

### *Fire Effects*

Fire suppression has been the norm in the project area since European settlement until recent years. Pre-settlement natural wildfires burned regularly in the project areas ponderosa pine forest. These fires reduced the number of pine trees, provided abundant nutrient cycling, and reduced pine litter build-up on the forest floor. The reduction in fire frequency reduced these processes.

One study (Laughlin et al 2005) showed that length of time since a fire may also be important for preserving landscape-scale heterogeneity with respect to plant community structure. The variability in plant cover and annual forb richness is much greater on sites that have burned recently and frequently than on sites that have not burned for over 60 years. However, variability in total species richness and in perennial forb richness was not noticeably greater in recently burned forests than in fire-excluded forests. Apparently, plant cover and annual species are more sensitive than total species richness and perennial forb richness to variations in conditions created by fire.

Gundale (etal. 2005) wrote that native grass species that reportedly dominated the understory of historical ponderosa pine forests likely relied on rapid nitrogen cycling that was promoted by periodic fire. Differences in short-term N cycling rates among restoration treatments may lead to substantial differences in site productivity and plant community composition. In addition to differences among restoration treatments, N cycling appears to have a positive linear relationship with fire severity within the severity range experienced in this study.

With the reduction in fire, by suppression effort through the years, has resulted in more trees and pine needle ground cover, less understory forage was available for livestock grazing over time in the project area. This is another reason that livestock numbers have declined over time. Where fires have occurred within the project area such as the Rodeo-Chediski fire of 2002, forage production has increased and the timing of recovery was related to fire severity, pre-fire conditions and rehabilitation effects.

#### *Climate Effects*

Precipitation and temperature influence what plants can grow and where. Variations of climate through time have greatly influenced plant conditions in the project area. For example, a high moisture period along with a high pine seed crop and low understory competition from heavy livestock grazing produced the dense 1919 pine tree crop in much of the project area. Lesser tree seed crops were also established in 1910, 1914, and 1929.

The climate in the Southwest United States is characterized by an erratic precipitation pattern. The amount, timing, and location of precipitation are extremely variable and difficult to predict. The months of March, April, and May generally define the cool season growing period and July, August, and September for the warm season plants.

Climate influences on vegetation in the project area has been shown to be the dominant factor in several rangeland studies comparing grazing management and restoration practices (Loeser et al 2007, Abella 2004, Laughlin and Moore 2009, Laughlin et al 2006, Breshears et al. 2005, Moore et al 2006).

Shifts in precipitation and temperature (up or down, plus intensity and duration) could change through time. If these changes occur forest plants could shift with these longer duration trends. Livestock numbers and season of use within the project area over the last 20 years or so (and likely longer) have gone up and down to match the changes in climate from season to season and year to year through adaptive management. The goal for livestock management in this area is to match forage utilization with available forage production. The more or less forage produced in a given season or year, the more or less that is available for livestock to utilize.

## **Assumptions and Methodology**

Annual planning occurs prior to the livestock grazing season. During this planning the livestock numbers and the grazing season are developed based on several factors including the previous year's management plans and outcomes, current year's predictions, and current resource conditions. During the grazing season, changes may be needed to the rotation or numbers, due to unexpected changes in conditions, such as those caused by drought or fire. This is a piece of the adaptive management cycle. Annual monitoring

typically includes an assessment of current conditions, a measure of livestock usage and actual use. Long-term monitoring usually consists of condition and trend monitoring every five to 15 years measuring plant canopy cover, plant frequency, species composition, and/or ground cover.

## Issues/Indicators/Analysis Topics

Significant issues from comments on the proposed action are not related to range management.

Measures/indicators

- 1) How would project activities affect livestock grazing management in the project area?
- 2) How would project activities affect livestock forage in the project area?
- 3) Would livestock grazing affect the restoration of understory species?

## Summary of Alternatives and Resource Protection Measures (Design Features, Best Management Practices, Mitigation and Conservation Measures)

Table 3. Range Management Design Features

| DF/BMP/M&CM Number | Description   |
|--------------------|---|
| RM001              | Historic range monitoring sites including witness trees/posts, 1-inch angle iron stakes, and any other site location markers would be protected. These sites would not be excluded from treatment, but care needs to be taken to avoid loss of these site markers and damage to the areas and shown as a protected improvement on the sale/contract/agreement area map. These sites would not be used as locations for temporary access roads, skid trails, landing areas, or large slash piles. District range and timber personnel will coordinate on these locations during presale packaging and prior to implementation.   |
| RM002              | The sale administrator would work closely with the district range staff to determine pasture use during thinning activities. On the ground placement of in-woods processing sites would also be coordinated with District range staff.  |
| RM003              | All fences and range improvements will be included as protected improvement on the sale/contract/agreement area. Skid trail layout would attempt to keep equipment on one side fences to avoid having to cut fences. If fences need to be cut, a gate or temporary cattle guard may need to be constructed/installed with appropriate bracing; these areas shall be coordinated with district range personnel prior to cutting. If the fence is cut or damaged it shall be repaired to conditions equal to or better than existed (to Forest Service Standards). When funding is available or a need exists, temporary cattle guards may be installed on haul roads where gates exist within active grazed pastures. All cattle guards on haul roads would be maintained throughout hauling activities and cleaned, if necessary, upon completion of a sale. Damage to other range improvements, such as tanks, drainage into tanks, spillways, drinkers, pipelines, corrals, etc., shall be repaired or cleaned to a condition that was as good as or better than existed. Skid trails, roads, landings, etc. should not be placed next to these range improvements. Minimize the location of skid trails, temporary roads, and landings adjacent to these range improvements. |
| RM004              | Rest or deferment of a pasture by livestock may occur after the completion of ground disturbing activities, such as prescribed burning and mechanical thinning. Range management personnel will evaluate conditions to determine when adjustment to livestock management, such as rest or deferment of a pasture is needed. Several factors may be used to assist in these determinations, such as plant recovery, plant vigor, and size of the disturbed area in relation to the pasture size. Plants that are well rooted, have multiple leaves or branches, and/or are producing seed head or flowers provide evidence of plant recovery, vigor, and reproductive ability.   |

| DF/BMP/M&CM Number | Description  |
|--------------------|--|
| RM005              | The removal or exclusion of livestock water would be mitigated with alternative water sources, providing lanes to the water, or piping water to a livestock drinker.   |
| RM006              | <p>Prior to the construction of any enclosure fences or barriers, which exclude forage and/or water, or the removal of a water source, such as earthen tanks or trough, there needs to be a review by the district ranger, range management personnel and other specialist to evaluate the extent and amounts that may be excluded on an allotment/pasture (see AQ010 and SI003).</p> <p>If a pasture/allotment has a considerable amount or extent of fencing or water exclusion, which could change livestock management such as numbers, season of use, distribution, etc., then these proposals should be analyzed during the Allotment Management Planning process. During this process, livestock management on the allotment can be evaluated along with the resource concern that would have initiated the fence and other possible solutions may arise.</p> |
| RM007              | <p>Range and fire managers will coordinate prescribed burning and grazing schedules to minimize disruption of grazing while maximizing the implementation of prescribed fires. Each allotment will have specific management needs to be considered as management actions are planned and implemented. Past and future burn plans, projected rest/deferment are examples of things that should be considered when burn plans are being written and prior to implementation of prescribed fire. Grazing options, such as swing pastures, may be utilized to increase flexibility for range and fire managers. Long-term and annual prescribed fire plans should be developed and adjusted to minimize burning in multiple pastures of an allotment, unless recognized and approved.</p>  |

## Environmental Consequences

### Alternative 1

#### *Direct and Indirect effects*

In Alternative 1, there would be no management activities occurring within the project area as a result of the Rim Country Project. Because no activities would occur, tree densities and canopy cover would remain high and understory plant cover would stay the same. Over time, tree densities and canopy cover would continue to increase, under which understory vegetative cover and production would decline. Understory species would also be reduced because of the buildup of pine needles and the lack of nutrient cycling.

The reduction in understory vegetation over time would reduce the amount of forage available to livestock. Over time, livestock numbers may need to be reduced. This reduction in forage and decrease in livestock numbers has been recorded throughout the project area. There is no reason to believe that this trend would not continue under Alternative 1.

Under Alternative 1, additional prescribed fire would not occur in the project area. Without these acres of prescribed burning, no pasture rest periods would be necessary after burning.

Since no treatments are planned in Alternative 1, grazing management would continue as has generally been planned and actually carried out in the past. However, this alternative would not adequately reduce the increased risk of uncharacteristic wildfire and this is only projected to increase in the future.

Uncharacteristic wildfires can burn with high severity and burn through multiple pastures, burning fences and other structural range improvements. Uncharacteristic wildfire would have an adverse effect on livestock grazing management and forage until the area recovers and structural improvements are replaced. See the Fire Ecology Report for additional information.

### Effects Common to Both Action Alternatives

The environmental consequences for Alternatives 2 and 3 are based upon the application of design features and other resource protection measures.

Tree thinning and prescribed burning would increase understory vegetation. Understory species and composition would change primarily by increasing shade-intolerant understory species and decreasing shade-tolerant species. Understory species would also be increased because of the reduction of pine needles and the increase in nutrient cycling provided by burning. All these factors would improve forage production for livestock within the areas treated.

Alternatives 2 and 3 would directly decrease tree density by mechanical tree thinning and prescribed burning. Overall stand tree basal areas may not measurably change all treatment areas but an increase in the groupy/clumpy arrangement would substantially increase herbaceous species production by creating openings between these groups. The indirect effect of cutting trees in a groupy/clumpy arrangement would increase herbaceous vegetation because of the overall increase in sunlight reaching the soil. The increase in forage would have short-term (within three years) and long-term 10-year beneficial effects on livestock grazing. In research near the project area, herbaceous production dropped from greater than 650 pounds per acre to 100 pounds per acre when basal area increased above 50 square feet/acre (Pearson and Jameson 1967). In another study, grasses increased by more than 470 percent cover in high-intensity harvest units compared to a 53 percent increase in pre-treatment control units (Stoddard et al. 2011). Griffis et al. (2001) also found that the abundance of native grasses increased significantly along with treatment intensity throughout thinned and burned stands.

The increase in forage within treatment areas would improve allotment conditions and allow for more flexibility in grazing management systems. While this project does not propose to increase total livestock numbers or change the seasons-of-use beyond those previously authorized, there could be secondary benefits related to livestock management. Livestock distribution could improve because forage could be more available in uplands, potentially reducing grazing impacts to riparian areas. Timing and rotation of pasture use within an allotment may gain flexibility by allowing for pasture rest or deferment where needed, due to potential increased availability of forage in treated pastures. Additionally, livestock could be utilizing a lower percentage of the total produced forage on the allotment, thus reducing the overall potential impacts of grazing.

Prescribed burning would have an adverse effect on livestock grazing by removing forage available to livestock. This effect would be short term until the forage plants regrow, typically within one year. This effect would be offset by the long-term maintenance of open areas after burning. The prescribed burning would be phased throughout the project area to minimize effects on individual allotments. Pastures could be rested prior to prescribed burning, in coordination with the range specialist, but it would not be a requirement to reach burning objectives. Some allotments in the project area have the ability to rest a pasture, if needed after a burn with little effect on overall allotment grazing management. However, livestock numbers or season of use might have to be annually adjusted on some allotments because of the combined effects from prescribed burns and other factors like wildfire and drought. If the burned areas do not recover within a year, then livestock would likely continue to run in the same pastures, reducing the

amount of rotational grazing on an allotment. This might also lead to a temporary reduction in livestock numbers or a reduction in length of grazing season to maintain the health of the grazed pastures until the treatment area recovers and rotational grazing is restored. Adaptive management would continue to be used to adjust livestock numbers to meet annual forage production, with or without the burns.

Annual adjustments in grazing of livestock after prescribed fires are a mitigation to reduce effects on forage species. These mitigations have been shown to maintain static understory conditions in grazed areas. Adjustments needed, such as rest or deferment are difficult to determine because each pastures response to ground disturbing treatments (including mechanical thinning and prescribed fire) is unique. Climatic conditions, soils, vegetation, the severity of fire effects, burn amount, intensity of vegetation treatments, and pasture management may vary greatly from year to year or from pasture to pasture.

The removal of trees during mechanical thinning operations would have little effect on livestock grazing. Mitigations would be implemented to maintain structural range improvements and keep livestock within designated pastures during these operations. Pastures may be deferred during operations to minimize equipment and livestock conflicts, but it is not mandatory. Mechanical thinning has been conducted throughout the project area for many years with few effects on livestock grazing operations, although post-treatment inspections may result in changes to annual pasture rotations (such as deferment).

#### ***Stand Improvement, and the Uneven-aged treatments***

With the Stand Improvement and Uneven-aged treatments, mechanical and fire treatments would occur leaving tree groups with differing sizes of interspaces between the tree groups. Stand Improvement and Uneven-aged treatments in the low site, would result in an increase in herbaceous cover and production, and the treatments in the moderate site and high sites would still result in an increase in herbaceous cover and production, but less of an increase than the higher interspace treatments.

#### ***Aspen Restoration***

These treatment areas may include the removal of conifers within aspen clones. Removal of aspen, disturbing the ground and/or applying fire may also be used to stimulate aspen suckering. This type of treatment generally would result in an increase in herbaceous cover and production.

#### ***Facilitative Operations Mechanical***

The inclusion of FO in burn units would be designed to improve safety, improve treatment effectiveness, expand burn windows, and minimize disturbance. FO treatments may include mastication/chipping; lop and scatter; thinning/limbing; and moving, rearranging, or removal of jackpots or excessive surface fuels. This type of treatment generally would result in an increase in herbaceous cover and production.

#### ***Facilitative Operations Prescribed Fire Only in PACs***

This includes broadcast burning, jackpotting, pile burning, and blacklining. This type of treatment generally would result in a slight increase in herbaceous cover and production.

#### ***MSO Recovery-Replacement Nest/Roost***

Mechanical and fire treatments designed to develop uneven-aged structure, irregular tree spacing, and a mosaic of interspace and tree groups of varying size. This type of treatment generally would result in a slight increase in herbaceous cover and production.

#### ***MSO PAC – Hand thin and Mechanical***

Mechanical treatment outside core areas that thins to improve structure, maintain and develop large trees, and reduce risk of high-severity fire in PACs. Accompanied by prescribed fire. This type of treatment generally would result in a slight increase in herbaceous cover and production.

### ***Savanna***

Savanna restoration includes a mechanical and fire treatment that restores pre-settlement tree density and pattern, and manages for a range of 70 to 90% interspace between groups or individual trees. Areas with this treatment type would generally result in an increase herbaceous cover and production.

### ***Severe Disturbance Area Treatment***

A combination of burning, thinning out undesirable species, and reforestation are all options within these areas. Burning where the tree cover is low would generally slightly improve herbaceous cover and production, by removing needle cast and heavy fuel loading. Thinning out undesirable species such as Alligator juniper and Gambel oak, would in the short term reduce the canopy cover and promote herbaceous cover and production, but as these species tend to re-sprout quickly after treatment (usually less than a year), they would become re-established and thereby again reducing the herbaceous cover and production. Planting of trees in the short term would have minor effects of forage cover and production, except for small areas around the planting sites. In the long- term (10-20 years) planted trees would start grow increasing in size and canopy closure, and would drop needles, reducing forage production over time. If these areas are planted, burning operations, would not be effective in reducing canopy cover of undesirable species or of the planted species. This treatment would reduce herbaceous cover and production slowly over time.

### ***Grassland and Meadow Restoration***

Mechanical and fire treatments to reduce or eliminate tree encroachment (pine and junipers). Remove tree established since interruption of the historic fire regime. Promote and re-establish the historic meadow edge. Areas with this treatment type would generally result in an increase herbaceous cover and production.

Spring exclosure areas would not be available for livestock grazing and would have an adverse effect on available forage within a pasture. However, these exclosures would not be large enough and would not amass in any particular pasture to reduce pasture stocking rates. In addition, by the time these exclosures would be completed, it is anticipated the increase in pasture forage by the tree thinning and burning would help to offset the forage lost within the exclosures. Spring projects would not have a measurable impact on the capacity of allotment or grazing management.

Aspen exclosure areas would not be available for livestock grazing and would have an adverse impact on available forage within a pasture. However, the majority of these exclosures would not be large enough or amassed in any particular pasture to reduce pasture stocking rates. Aspen projects would not have a measureable impact on the capacity of allotment or grazing management.

Road decommissioning would have a beneficial effect on livestock grazing by growing additional forage in the old road bed. Constructing temporary roads would have a temporary adverse effect to livestock grazing when the forage on the road was disturbed. No road project would have a measureable impact on the capacity of allotments or grazing management.

## **Alternative 2**

This alternative has the largest amount of acres proposed for treatments, leading to the biggest increase in forage production. This alternative also proposes the most acres of severe disturbance area treatments, which could include treatment options such as tree planting. These areas are generally within previously burned areas, such as the Rodeo-Chediski fire area. If the tree planting treatment is chosen, a decrease in production would occur overtime, in these areas.

This alternative contains the largest amount of acres proposed for mechanical treatment and prescribed fire. Therefore, this alternative would have the most livestock management adjustments, such as pasture rest or deferment, following treatments.

The following table displays the acres of treatment types broken out by amounts of expected forage production categories.

**Table 4. Alternative 2 Forage Production Categories by Treatment Type**

| Treatments  | Acres   | Expected forage production change |
|---|---------|-----------------------------------|
| Stand Improvement- low site, uneven-aged -low site, grassland restoration, riparian restoration, savanna, meadow restoration, WUI & Infrastructure protection.  | 206,000 | Greatest increase                 |
| Stand Improvement-high site and moderate site, uneven-aged-high site and moderate site, Aspen Restoration, and Facilitative Operations Mechanical   | 502,000 | Moderate Increase                 |
| Facilitative Operations Prescribed Fire Only, Grassland Prescribed Fire Only, MSO Recovery, PAC mechanical & hand thin, Prescribed fire only, Riparian Prescribed Fire only, Wet meadow Prescribed Fire only. | 150,000 | Slight Increase                   |
| Severe Disturbance Area Treatment   | 135,500 | Possible decline                  |

\* Severe disturbance treatments could include treatment options such as tree planting, which over time would reduce production.

As displayed above Alternative 2 has more overall acres of treatments, than is proposed in Alternative 3.

**Table 5. Alternative 2 Expected Forage Production Categories Broken Out By Allotment/Pastures**

| Allotment    | Pasture          | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |   |
|--------------|------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|---|
| Arab         | Aniceto          | 1,946               | 1,946                            | 100%                                | 1268       | 677       | 1         | 0               |   |
|              | Buckwheat        | 863                 | 863                              | 100%                                | 472        | 391       | 0         | 0               |   |
|              | Butler           | 1,141               | 1,135                            | 99%                                 | 540        | 576       | 0         | 19              |   |
|              | Jackson          | 651                 | 203                              | 31%                                 | 130        | 73        | 0         | 0               |   |
| Black Canyon | H.P.#1           | 202                 | 202                              | 100%                                | 12         | 190       | 0         | 0               |   |
|              | H.P.#2           | 130                 | 130                              | 100%                                | 55         | 75        | 0         | 0               |   |
|              | King Phillip     | 4,589               | 4,589                            | 100%                                | 978        | 3,301     | 0         | 311             |   |
|              | Nelson           | 1,808               | 1,808                            | 100%                                | 240        | 1,567     | 0         | 0               |   |
|              | Porter           | 2,059               | 2,059                            | 100%                                | 1,454      | 605       | 0         | 0               |   |
|              | Sharp Hollow     | 4,935               | 4,935                            | 100%                                | 687        | 2,873     | 0         | 1,375           |   |
|              | Stermer          | 3,308               | 3,308                            | 100%                                | 413        | 1,420     | 0         | 1,475           |   |
|              | Blue Ridge       | Admin Pasture       | 106                              | 106                                 | 82%        | 88        | 0         | 0               | 0 |
|              | Cattle Exclosure | 16                  | 16                               | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Chimney          | 652                 | 650                              | 14%                                 | 88         | 0         | 0         | 0               |   |
|              | Chimney 1        | 391                 | 391                              | 41%                                 | 162        | 0         | 0         | 0               |   |
|              | Chimney 2        | 303                 | 303                              | 68%                                 | 204        | 0         | 0         | 0               |   |
|              | Jaques Marsh     | 220                 | 220                              | 19%                                 | 41         | 0         | 0         | 0               |   |
|              | North Blue Ridge | 4,021               | 4,021                            | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Scotts           | 462                 | 462                              | 0%                                  | 2          | 0         | 0         | 0               |   |
|              | South Blue Ridge | 4,226               | 4,226                            | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Twin Knoll       | 1,020               | 1,020                            | 0%                                  | 2          | 0         | 0         | 0               |   |
|              | Unallocated      | 212                 | 212                              | 57%                                 | 121        | 0         | 0         | 0               |   |

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| Allotment       | Pasture                 | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Brown Creek     | Cattle Enclosure 1      | 2                   | 2                                | 42%                                 | 1          | 0         | 0         | 0               |
|                 | Cattle Enclosure 2      | 17                  | 17                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Cattle Enclosure 3      | 104                 | 104                              | 3%                                  | 3          | 0         | 0         | 0               |
|                 | Cattle Enclosure 4      | 62                  | 62                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Elk Enclosure           | 3                   | 3                                | 97%                                 | 3          | 0         | 0         | 0               |
|                 | Marshall                | 4,695               | 4,690                            | 9%                                  | 301        | 101       | 0         | 0               |
|                 | Penrod Holding          | 258                 | 105                              | 32%                                 | 83         | 0         | 0         | 0               |
|                 | Turkey                  | 4,796               | 4,796                            | 18%                                 | 538        | 306       | 0         | 0               |
| Buck Springs    | Brushy                  | 2,777               | 2,777                            | 25%                                 | 131        | 304       | 270       | 0               |
|                 | Brushy Flat Enclosure   | 14                  | 14                               | 100%                                | 14         | 0         | 0         | 0               |
|                 | Brushy Flat Tank        | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Brushy Spring Enclosure | 1                   | 1                                | 100%                                | 1          | 0         | 0         | 0               |
|                 | Buck Springs            | 3,365               | 3,365                            | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Buck Springs Tank       | 11                  | 11                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Elk Springs             | 2,089               | 2,089                            | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Lion Tank               | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Tank 1                  | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Tank 2                  | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Holding 1       | 134                 | 134                              | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Holding 2       | 98                  | 98                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Trap            | 8                   | 8                                | 0%                                  | 0          | 0         | 0         | 0               |
| Chevelon Canyon | Alder H.P.              | 264                 | 264                              | 100%                                | 0          | 264       | 0         | 0               |

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|---------------|----------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|               | Breed          | 8,439               | 8,439                            | 100%                                | 746        | 5841      | 9551750   | 102             |
|               | Circle Bar     | 10,887              | 10,887                           | 100%                                | 440        | 10113     | 333       | 0               |
|               | Nagel H.P.     | 208                 | 208                              | 100%                                | 1          | 207       | 0         | 0               |
|               | Sandpoint      | 8,914               | 8,914                            | 100%                                | 2095       | 5465      | 1,353     | 0               |
|               | Vigil-Durfee   | 11,623              | 5,987                            | 52%                                 | 102        | 5,885     | 0         | 0               |
| Clay Springs  | +IL            | 3,845               | 115                              | 3%                                  | 0          | 56        | 0         | 59              |
|               | Summer North   | 4,530               | 4,530                            | 100%                                | 114        | 1346      | 0         | 3,070           |
|               | Summer South   | 6,687               | 6,687                            | 100%                                | 1,375      | 1887      | 0         | 4,425           |
| Clear Creek   | South          | 7,855               | 757                              | 10%                                 | 31         | 532       | 194       | 0               |
| Ellsworth     | East Ellsworth | 1,227               | 1,222                            | 33%                                 | 401        | 0         | 0         | 0               |
|               | West Ellsworth | 769                 | 767                              | 82%                                 | 627        | 0         | 0         | 0               |
| Heber         | Bunger         | 21,893              | 21,893                           | 100%                                | 2,098      | 6115      | 645       | 13035           |
|               | Gentry         | 17,906              | 17,906                           | 100%                                | 1,824      | 3095      | 3087      | 9893            |
|               | H.P.           | 595                 | 595                              | 100%                                | 43         | 38        | 4         | 510             |
|               | Halter Cross   | 7,410               | 1,850                            | 25%                                 | 100        | 1,488     | 0         | 262             |
|               | HP #2          | 13                  | 13                               | 100%                                | 0          | 13        | 0         | 0               |
|               | Mud Tank       | 13,220              | 5,740                            | 43%                                 | 349        | 5,391     | 0         | 0               |
|               | Nelson         | 11,007              | 11,007                           | 96%                                 | 1,954      | 6974      | 2391621   | 0               |
|               | Oil Well       | 13,608              | 1,390                            | 10%                                 | 100        | 1290      | 0         | 0               |
|               | Phoenix Park   | 23,801              | 23,801                           | 100%                                | 3210       | 9336      | 327       | 10,922          |
| Johnson       | Johnson        | 740                 | 739                              | 64%                                 | 475        | 0         | 0         | 0               |
| Lake Mountain | Brown Creek    | 9                   | 9                                | 100%                                | 8          | 1         | 0         | 0               |
|               | Brown Springs  | 121                 | 121                              | 100%                                | 92         | 29        | 0         | 0               |

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|-----------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Cattle Enclosure AZ G&F | 6                   | 6                                | 100%                                | 6          | 0         | 0         | 0               |
|           | Doyle                   | 3,539               | 3,539                            | 16%                                 | 505        | 54        | 0         | 0               |
|           | Exclosure 1             | 74                  | 74                               | 100%                                | 0          | 74        | 0         | 0               |
|           | Exclosure 12            | 13                  | 13                               | 100%                                | 0          | 13        | 0         | 0               |
|           | Exclosure 13            | 9                   | 9                                | 100%                                | 0          | 9         | 0         | 0               |
|           | Exclosure 17            | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|           | Exclosure 2             | 4                   | 4                                | 100%                                | 0          | 4         | 0         | 0               |
|           | Exclosure 3             | 14                  | 14                               | 100%                                | 0          | 14        | 0         | 0               |
|           | Exclosure 4             | 8                   | 8                                | 100%                                | 0          | 8         | 0         | 0               |
|           | Exclosure 9             | 21                  | 21                               | 100%                                | 0          | 21        | 0         | 0               |
|           | Firebox                 | 3,091               | 3,091                            | 100%                                | 1000       | 1342      | 749       | 0               |
|           | Holding                 | 148                 | 148                              | 100%                                | 142        | 6         | 0         | 0               |
|           | Holding 1               | 117                 | 117                              | 27%                                 | 32         | 0         | 0         | 0               |
|           | Holding 2               | 228                 | 228                              | 60%                                 | 137        | 0         | 0         | 0               |
|           | Lake Mountain           | 5,578               | 5,578                            | 90%                                 | 2040       | 2683      | 315       | 0               |
|           | Los Burros              | 211                 | 211                              | 100%                                | 99         | 112       | 0         | 0               |
|           | Mineral                 | 4,182               | 4,182                            | 29%                                 | 1,204      | 5         | 0         | 0               |
|           | Porter Lake             | 1,028               | 1,027                            | 100%                                | 83         | 890       | 54        | 0               |
|           | Porter Trap             | 15                  | 15                               | 100%                                | 13         | 2         | 0         | 0               |
|           | Quakie                  | 1,426               | 1,422                            | 100%                                | 189        | 896       | 166       | 171             |
|           | Reservation             | 2,509               | 2,509                            | 100%                                | 1249       | 1221      | 40        | 0               |
|           | Section 1 Tank          | 5                   | 5                                | 100%                                | 3          | 1         | 0         | 0               |
|           | Unallocated             | 80                  | 80                               | 100%                                | 80         | 0         | 0         | 0               |

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|---------------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|               |                    | 111                 | 111                              | 47%                                 | 52         | 0         | 0         | 0               |
|               | Wolf Mountain      | 3,776               | 3,776                            | 98%                                 | 1275       | 1,682     | 748       | 0               |
| Limestone     | Double Cabin       | 9,368               | 9,368                            | 100%                                | 524        | 5062      | 3,145     | 598             |
|               | Five Mile          | 8,622               | 8,622                            | 100%                                | 1941       | 4713      | 1967      | 0               |
|               | Hart Canyon H.P.   | 232                 | 232                              | 100%                                | 157        | 74        | 0         | 0               |
|               | Ohaco              | 11,836              | 11,836                           | 100%                                | 2794       | 6490      | 2,482     | 67              |
|               | Pius Farm #1 H.P.  | 223                 | 223                              | 100%                                | 222        | 1         | 0         | 0               |
|               | Pius Farm #2 H.P.  | 707                 | 707                              | 100%                                | 223        | 57        | 420       | 6               |
|               | Tentground         | 9,164               | 9,164                            | 100%                                | 284        | 7807      | 1,073     | 0               |
|               | Wilkins            | 9,059               | 9,059                            | 100%                                | 1358       | 6314      | 1,388     | 0               |
| Long Tom      | Long Tom           | 74,855              | 64,371                           | 48%                                 | 4153       | 17973     | 13201     | 608             |
| Ortega        | Woolhouse          | 2,835               | 26                               | 1%                                  | 16         | 0         | 0         | 0               |
| Park-Day Wash | Park               | 4,337               | 1,528                            | 35%                                 | 62         | 675       | 0         | 791             |
| Pinyon        | East               | 845                 | 441                              | 38%                                 | 318        | 0         | 0         | 0               |
| Railroad      | Bear Canyon        | 6,658               | 6,658                            | 100%                                | 745        | 2422      | 0         | 3,490           |
|               | Blue Grass         | 5,321               | 1,370                            | 26%                                 | 40         | 1329      | 0         | 0               |
|               | Brittenham Holding | 162                 | 162                              | 100%                                | 0          | 161       | 0         | 1               |
|               | Bull               | 309                 | 309                              | 100%                                | 18         | 254       | 0         | 37              |
|               | Capps              | 1,674               | 439                              | 26%                                 | 0          | 139       | 0         | 300             |
|               | Deer Lick          | 1,573               | 1,573                            | 100%                                | 386        | 751       | 0         | 436             |
|               | East Bull          | 731                 | 731                              | 100%                                | 0          | 131       | 0         | 600             |
|               | East Cottonwood    | 4,450               | 4,450                            | 100%                                | 8          | 2452      | 0         | 1,990           |
|               | Fence Tank         | 9,247               | 9,241                            | 83%                                 | 1438       | 1570      | 0         | 4,683           |

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|------------|---------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|            | Lons                | 9,209               | 9,209                            | 100%                                | 1093       | 2429      | 127       | 5,560           |
|            | McNeil East         | 2,949               | 2,949                            | 31%                                 | 673        | 250       | 0         | 0               |
|            | McNeil West         | 989                 | 989                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Middle              | 806                 | 430                              | 53%                                 | 68         | 361       | 0         | 0               |
|            | Mortensen           | 1,552               | 2                                | 0%                                  | 0          | 1         | 0         | 1               |
|            | Mortensen Holding   | 668                 | 663                              | 99%                                 | 86         | 166       | 0         | 410             |
|            | Owens               | 1,287               | 492                              | 38%                                 | 0          | 417       | 0         | 75              |
|            | Pinedale            | 2,177               | 2,177                            | 100%                                | 227        | 927       | 0         | 1,021           |
|            | Rattlesnake         | 3,914               | 4                                | 0%                                  | 0          | 4         | 0         | 0               |
|            | South Juniper Ridge | 2,377               | 2,377                            | 100%                                | 112        | 526       | 0         | 1,739           |
|            | Wilson              | 4,614               | 4                                | 0%                                  | 0          | 4         | 0         | 0               |
|            | Winter              | 1,701               | 1,652                            | 97%                                 | 21         | 1,626     | 0         | 0               |
| Show Low   | Porter              | 8,244               | 8,243                            | 11%                                 | 897        | 0         | 0         | 0               |
|            | Second Knoll        | 3,292               | 13                               | 0%                                  | 8          | 0         | 0         | 0               |
| Sponsellor | East Sponsellor     | 2,978               | 197                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Holding 1           | 416                 | 416                              | 1%                                  | 2          | 0         | 0         | 0               |
|            | Holding 2           | 162                 | 162                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | South Sponseller    | 5,825               | 5,825                            | 0%                                  | 0          | 0         | 0         | 0               |
|            | West Sponseller     | 2,160               | 912                              | 26%                                 | 555        | 0         | 0         | 0               |
| Town Tank  | East Town Tank      | 558                 | 558                              | 100%                                | 0          | 0         | 0         | 558             |
|            | Holding             | 83                  | 83                               | 100%                                | 83         | 0         | 0         | 0               |
|            | Polson              | 1,020               | 1,020                            | 100%                                | 97         | 152       | 0         | 771             |
|            | West Town Tank      | 1,393               | 1,393                            | 100%                                | 58         | 20        | 0         | 1,314           |

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|-----------------|--------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Wallace         | Barney       | 6,463               | 6,463                            | 100%                                | 807        | 5654      | 2         | 0               |
|                 | FS.H.P.      | 147                 | 147                              | 100%                                | 27         | 120       | 0         | 0               |
|                 | Gramma       | 6,931               | 6,931                            | 100%                                | 950        | 4618      | 1363      | 0               |
|                 | Tillman      | 9,928               | 1,638                            | 16%                                 | 81         | 1087      | 470       | 0               |
|                 | Wall H.P.    | 343                 | 343                              | 100%                                | 27         | 316       | 0         | 0               |
|                 | Waters       | 11,200              | 11,200                           | 100%                                | 2162       | 8271      | 551       | 215             |
| Wildcat         | Buckhorn     | 5,523               | 5,523                            | 100%                                | 258        | 4832      | 433       | 0               |
|                 | Daze         | 4,400               | 4,400                            | 100%                                | 1,210      | 2,234     | 362       | 593             |
|                 | Ellsworth    | 4,155               | 4,155                            | 100%                                | 2269       | 1752      | 113       | 0               |
|                 | H.P.#1       | 1,295               | 1,155                            | 89%                                 | 31         | 1,006     | 0         | 119             |
|                 | Hanks        | 5,416               | 5,416                            | 84%                                 | 831        | 3534      | 196       | 0               |
|                 | Wrna         | 334                 | 211                              | 63%                                 | 0          | 35        | 3         | 173             |
| Willow Wash     | Aztec        | 4,130               | 4,130                            | 100%                                | 900        | 563       | 0         | 2,666           |
|                 | Bear Springs | 4,497               | 4,497                            | 100%                                | 821        | 1256      | 0         | 2,418           |
|                 | Cottonwood   | 6,203               | 6,203                            | 100%                                | 1,435      | 793       | 0         | 3,975           |
|                 | East Sundown | 3,745               | 63                               | 2%                                  | 0          | 57        | 0         | 6               |
|                 | Phelps       | 4,256               | 4,256                            | 100%                                | 338        | 860       | 0         | 3,058           |
|                 | Ranch        | 2,631               | 2,556                            | 97%                                 | 181        | 585       | 0         | 1,789           |
|                 | Sackett      | 3,875               | 2,762                            | 71%                                 | 217        | 1375      | 0         | 1,170           |
|                 | West Sundown | 4,620               | 982                              | 21%                                 | 0          | 693       | 0         | 289             |
|                 | Yarrow       | 2,414               | 2,414                            | 100%                                | 12         | 443       | 0         | 1,959           |
|                 | 13-Mile Rock | Good Enough         | 755                              | 650                                 | 86%        | 5         | 535       | 110             |
| Horse Water Lot |              | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |

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|-------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|             | Jack Pine Water Lot     | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|             | Lone Pine Water Lot     | 8                   | 8                                | 100%                                | 8          | 0         | 0         | 0               |
|             | Meadow Canyon North     | 1,443               | 673                              | 47%                                 | 382        | 4         | 286       | 0               |
|             | Meadow Canyon South     | 1,896               | 1,084                            | 57%                                 | 608        | 413       | 63        | 0               |
|             | New Tank Holding        | 16                  | 16                               | 100%                                | 0          | 16        | 0         | 0               |
|             | Section 8 Water Lot     | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|             | Toms                    | 3,516               | 3,353                            | 95%                                 | 49         | 2,179     | 1,125     | 0               |
|             | Tule                    | 2,487               | 2,381                            | 96%                                 | 1,282      | 1,023     | 75        | 0               |
|             | Tule Holding            | 72                  | 72                               | 100%                                | 26         | 47        | 0         | 0               |
|             | Tule Waterlot           | 3                   | 3                                | 100%                                | 2          | 2         | 0         | 0               |
|             | Wilbur                  | 2,558               | 2,281                            | 89%                                 | 227        | 1,441     | 613       | 0               |
|             | Wilbur 2 Waterlot       | 1                   | 1                                | 100%                                | 1          | 0         | 0         | 0               |
| Apache Maid | 61 Water Lot            | 4                   | 4                                | 100%                                | 0          | 4         | 0         | 0               |
|             | Bargaman                | 875                 | 875                              | 100%                                | 182        | 153       | 539       | 0               |
|             | Bargaman Flat           | 146                 | 146                              | 100%                                | 131        | 1         | 13        | 0               |
|             | Blind Lake              | 7,497               | 7,379                            | 30%                                 | 401        | 0         | 1866      | 0               |
|             | Blind Lake Horse        | 330                 | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Bull                    | 665                 | 301                              | 45%                                 | 132        | 98        | 71        | 0               |
|             | Cabin                   | 518                 | 490                              | 95%                                 | 277        | 213       | 0         | 0               |
|             | Campbell Spring         | 9,348               | 9,348                            | 17%                                 | 311        | 0         | 1304      | 0               |
|             | Dave's Water Lot        | 4                   | 2                                | 52%                                 | 2          | 1         | 0         | 0               |
|             | Foster Spring Enclosure | 4                   | 4                                | 65%                                 | 2          | 0         | 0         | 0               |

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|-----------|------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Gash Flat East         | 1,398               | 8                                | 0%                                  | 1          | 0         | 1         | 0               |
|           | Gash Flat Middle       | 668                 | 8                                | 1%                                  | 1          | 0         | 6         | 0               |
|           | Gash Flat West         | 918                 | 1                                | 0%                                  | 0          | 0         | 1         | 0               |
|           | Horse Summer           | 203                 | 203                              | 31%                                 | 63         | 0         | 0         | 0               |
|           | Horse Trap Water Lot   | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|           | Hutch                  | 7,600               | 2,293                            | 30%                                 | 391        | 524       | 1377      | 0               |
|           | Maid Holding           | 155                 | 155                              | 97%                                 | 151        | 0         | 0         | 0               |
|           | Pine Mountain East     | 7,003               | 6,898                            | 98%                                 | 4072       | 2822      | 0         | 4               |
|           | Pine Mountain West     | 6,958               | 6,958                            | 100%                                | 1728       | 3802      | 1417      | 0               |
|           | Pine Ridge Water Lot   | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|           | Sawmill                | 6,727               | 2,170                            | 32%                                 | 725        | 1281      | 164       | 0               |
|           | Shipping Lane East     | 660                 | 660                              | 100%                                | 240        | 420       | 0         | 0               |
|           | Shipping Lane West     | 460                 | 460                              | 100%                                | 153        | 134       | 174       | 0               |
|           | Snake Tanks            | 6,719               | 1,006                            | 15%                                 | 782        | 224       | 0         | 0               |
|           | Stoneman               | 8,394               | 3,447                            | 18%                                 | 1,307      | 0         | 165       | 0               |
|           | Sue's Water Lot        | 8                   | 8                                | 84%                                 | 7          | 0         | 0         | 0               |
|           | T-Bar Cabin            | 29                  | 29                               | 47%                                 | 13         | 0         | 0         | 0               |
|           | T-Bar Cabin #1         | 77                  | 73                               | 90%                                 | 69         | 0         | 0         | 0               |
|           | T-Bar Cabin #2         | 253                 | 248                              | 76%                                 | 193        | 0         | 0         | 0               |
|           | T-Bar Tank 2 Enclosure | 5                   | 5                                | 81%                                 | 4          | 0         | 0         | 0               |
|           | Wild Horse             | 7,550               | 7,550                            | 100%                                | 1194       | 5155      | 1200      | 0               |
|           | Woodland               | 7,354               | 2,727                            | 10%                                 | 741        | 0         | 1         | 0               |

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| Allotment           | Pasture              | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|---------------------|----------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Baker Lake/Calf Pen | Baker Lake           | 2,476               | 2,476                            | 72%                                 | 241        | 1422      | 108       | 0               |
|                     | Brush                | 3,660               | 3,410                            | 93%                                 | 999        | 2060      | 180       | 172             |
|                     | Calf Pen 7           | 283                 | 283                              | 100%                                | 283        | 0         | 0         | 0               |
|                     | Cinch Hook           | 1,017               | 1,017                            | 100%                                | 53         | 964       | 0         | 0               |
|                     | Five Mile            | 1,014               | 1,014                            | 100%                                | 587        | 221       | 90        | 117             |
|                     | Highway Junction     | 728                 | 728                              | 93%                                 | 175        | 401       | 100       | 0               |
|                     | Milk Ranch           | 3,338               | 3,338                            | 100%                                | 1312       | 1991      | 35        | 0               |
|                     | Pocket               | 3,031               | 2,060                            | 68%                                 | 894        | 1009      | 90        | 68              |
|                     | Strawberry Point     | 1,184               | 1,184                            | 100%                                | 578        | 507       | 100       | 0               |
|                     | Twentynine Mile Lake | 1,474               | 1,447                            | 98%                                 | 147        | 1147      | 114       | 38              |
| Bar T Bar           | 064                  | 164                 | 164                              | 100%                                | 162        | 2         | 0         | 0               |
|                     | 075                  | 42                  | 6                                | 15%                                 | 4          | 3         | 0         | 0               |
|                     | 090                  | 21                  | 21                               | 100%                                | 20         | 1         | 0         | 0               |
|                     | 092                  | 39                  | 39                               | 100%                                | 39         | 0         | 0         | 0               |
|                     | 099                  | 87                  | 87                               | 100%                                | 55         | 32        | 0         | 0               |
|                     | Baucom               | 1,273               | 1,273                            | 100%                                | 955        | 318       | 0         | 0               |
|                     | Boulder Waterlot     | 11                  | 11                               | 100%                                | 11         | 0         | 0         | 0               |
|                     | Buckhorn             | 11,480              | 11,480                           | 92%                                 | 1104       | 4398      | 3487      | 1529            |
|                     | Buckhorn Waterlot    | 2                   | 2                                | 100%                                | 0          | 0         | 0         | 2               |
|                     | Clinton's Pool       | 1,367               | 1,367                            | 100%                                | 1133       | 234       | 0         | 0               |
|                     | Clint's              | 827                 | 827                              | 7%                                  | 59         | 0         | 0         | 0               |
|                     | Clints Waterlot      | 10                  | 10                               | 100%                                | 9          | 1         | 0         | 0               |
|                     | David's              | 895                 | 895                              | 7%                                  | 8          | 58        | 0         | 0               |

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| Allotment | Pasture            | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Duke Waterlot      | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|           | East Green Howard  | 3,984               | 3,984                            | 100%                                | 3143       | 840       | 2         | 0               |
|           | East Melatone      | 6,517               | 2,611                            | 40%                                 | 965        | 1463      | 183       | 0               |
|           | Fisher             | 9,683               | 9,261                            | 93%                                 | 3319       | 3862      | 1,781     | 0               |
|           | Girlscout          | 13                  | 13                               | 100%                                | 8          | 5         | 0         | 0               |
|           | Green Waterlot     | 6                   | 6                                | 100%                                | 0          | 6         | 0         | 0               |
|           | Hay Lake 1         | 2,173               | 943                              | 43%                                 | 369        | 574       | 0         | 0               |
|           | Hay Lake 10        | 434                 | 434                              | 100%                                | 299        | 135       | 0         | 0               |
|           | Hay Lake 2         | 306                 | 28                               | 9%                                  | 12         | 16        | 0         | 0               |
|           | Hay Lake 3         | 341                 | 136                              | 40%                                 | 126        | 10        | 0         | 0               |
|           | Hay Lake 4         | 253                 | 253                              | 100%                                | 238        | 16        | 0         | 0               |
|           | Hay Lake 5         | 128                 | 128                              | 100%                                | 110        | 18        | 0         | 0               |
|           | Hay Lake 7         | 41                  | 41                               | 100%                                | 41         | 0         | 0         | 0               |
|           | Hay Lake 8         | 94                  | 94                               | 100%                                | 94         | 0         | 0         | 0               |
|           | Hay Lake 9         | 412                 | 412                              | 100%                                | 154        | 257       | 0         | 0               |
|           | Home               | 304                 | 304                              | 0%                                  | 0          | 0         | 0         | 0               |
|           | Homestead Waterlot | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|           | Horse              | 490                 | 490                              | 100%                                | 490        | 0         | 0         | 0               |
|           | Horse Trap 1       | 77                  | 77                               | 100%                                | 77         | 0         | 0         | 0               |
|           | Horse Trap 2       | 24                  | 24                               | 100%                                | 24         | 0         | 0         | 0               |
|           | Janice             | 1,716               | 1,716                            | 100%                                | 1416       | 299       | 0         | 0               |
|           | Lane               | 113                 | 113                              | 100%                                | 74         | 38        | 0         | 0               |
|           | Lost Eden Horse    | 181                 | 181                              | 100%                                | 179        | 2         | 0         | 0               |

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| Allotment | Pasture                  | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------|--------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Lost Eden Waterlot       | 16                  | 16                               | 100%                                | 12         | 4         | 0         | 0               |
|           | Mary's                   | 1,124               | 1,124                            | 97%                                 | 187        | 790       | 110       | 0               |
|           | Marys Waterlot           | 4                   | 4                                | 98%                                 | 4          | 0         | 0         | 0               |
|           | Mesa Waterlot            | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|           | Monty's                  | 666                 | 666                              | 100%                                | 540        | 126       | 0         | 0               |
|           | Montys Waterlot          | 52                  | 52                               | 100%                                | 52         | 0         | 0         | 0               |
|           | Moqui                    | 39                  | 39                               | 100%                                | 39         | 0         | 0         | 0               |
|           | Moqui East               | 67                  | 67                               | 100%                                | 9          | 0         | 0         | 58              |
|           | Moqui West               | 16,443              | 16,443                           | 40%                                 | 1368       | 3208      | 1,285     | 722             |
|           | Park                     | 818                 | 818                              | 27%                                 | 80         | 144       | 0         | 0               |
|           | Prairie Dog              | 3,178               | 3,178                            | 100%                                | 2029       | 1148      | 0         | 0               |
|           | PW Waterlot              | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|           | Sarah's                  | 1,131               | 1,131                            | 81%                                 | 104        | 474       | 333       | 0               |
|           | Todd                     | 186                 | 186                              | 100%                                | 180        | 6         | 0         | 0               |
|           | Trap 1                   | 201                 | 201                              | 100%                                | 176        | 25        | 0         | 0               |
|           | Trap 2                   | 312                 | 312                              | 100%                                | 0          | 294       | 18        | 0               |
|           | Turkey Mountain          | 2,005               | 2,005                            | 100%                                | 1454       | 551       | 0         | 0               |
|           | Turkey Mountain Waterlot | 10                  | 10                               | 100%                                | 10         | 0         | 0         | 0               |
|           | Two Eleven               | 138                 | 138                              | 100%                                | 33         | 105       | 0         | 0               |
|           | Victorine Waterlot       | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|           | West Green Howard        | 5,106               | 5,106                            | 97%                                 | 4684       | 260       | 0         | 0               |
|           | West Melatone            | 3,821               | 611                              | 16%                                 | 589        | 23        | 0         | 0               |
|           | Wilkins                  | 15,129              | 12,650                           | 72%                                 | 1990       | 7413      | 0         | 1,556           |

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| Allotment    | Pasture            | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|--------------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|              | Wochner            | 1,550               | 1,550                            | 100%                                | 1174       | 375       | 0         | 0               |
|              | Woods Water Lot    | 9                   | 9                                | 100%                                | 7          | 1         | 0         | 0               |
|              | Y7 Waterlot        | 14                  | 14                               | 100%                                | 12         | 2         | 0         | 0               |
|              | Yellowjacket       | 13,244              | 13,244                           | 98%                                 | 3478       | 8319      | 1,208     | 0               |
| Beaver Creek | 072                | 32                  | 32                               | 100%                                | 7          | 25        | 0         | 0               |
|              | Antelope           | 529                 | 202                              | 26%                                 | 139        | 0         | 0         | 0               |
|              | Antelope Water Lot | 14                  | 5                                | 24%                                 | 3          | 0         | 0         | 0               |
|              | Banfield           | 448                 | 448                              | 0%                                  | 2          | 0         | 0         | 0               |
|              | Bar D              | 2,153               | 2,153                            | 39%                                 | 370        | 473       | 0         | 0               |
|              | Bar-D Water Lot    | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|              | Brady North        | 2,139               | 1,994                            | 48%                                 | 913        | 108       | 0         | 0               |
|              | Brady South        | 2,226               | 2,226                            | 74%                                 | 565        | 1031      | 0         | 42              |
|              | Brady Water Lot    | 6                   | 6                                | 100%                                | 3          | 3         | 0         | 0               |
|              | Buck Mountain      | 4,308               | 4,308                            | 38%                                 | 454        | 1141      | 26        | 0               |
|              | Crossing           | 503                 | 503                              | 100%                                | 21         | 482       | 0         | 0               |
|              | Divide Water Lot   | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|              | Fred's Water Lot   | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Goswick            | 1,522               | 1,522                            | 2%                                  | 26         | 0         | 0         | 0               |
|              | Goswick Holding    | 84                  | 84                               | 0%                                  | 0          | 0         | 0         | 0               |
|              | Happy Jack         | 4,336               | 4,336                            | 15%                                 | 145        | 328       | 195       | 0               |
|              | Hollingshead East  | 257                 | 257                              | 3%                                  | 7          | 0         | 0         | 0               |
|              | Hollingshead West  | 2,110               | 2,110                            | 1%                                  | 26         | 0         | 0         | 0               |
|              | Horse Knoll        | 1,392               | 522                              | 38%                                 | 447        | 75        | 0         | 0               |

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|--------------|---------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|              | Jose Water Lot      | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Landmark North      | 4,683               | 4,683                            | 100%                                | 2114       | 2512      | 57        | 0               |
|              | Landmark Shipping   | 861                 | 861                              | 90%                                 | 628        | 149       | 0         | 0               |
|              | Landmark South      | 4,245               | 4,245                            | 100%                                | 520        | 3040      | 620       | 66              |
|              | Lower Jacks         | 2,540               | 2,540                            | 24%                                 | 3          | 0         | 602       | 0               |
|              | May's Water Lot     | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Pine Ridge          | 1,214               | 82                               | 7%                                  | 82         | 0         | 0         | 0               |
|              | Schroeder Water Lot | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|              | Sheep Water Lot     | 2                   | 2                                | 100%                                | 1          | 1         | 0         | 0               |
|              | Shipping #1         | 751                 | 751                              | 100%                                | 31         | 714       | 6         | 0               |
|              | Shipping #2         | 966                 | 966                              | 100%                                | 481        | 485       | 0         | 0               |
|              | Shipping #3         | 660                 | 660                              | 100%                                | 72         | 588       | 0         | 0               |
|              | Triangle            | 3,546               | 3,546                            | 100%                                | 863        | 2683      | 0         | 0               |
|              | Upper Jacks         | 3,483               | 3,483                            | 18%                                 | 1          | 0         | 628       | 0               |
|              | Waldroup            | 1,202               | 1,202                            | 100%                                | 524        | 678       | 0         | 0               |
|              | Woodland            | 2,025               | 743                              | 4%                                  | 89         | 0         | 0         | 0               |
| Buck Springs | Burn                | 639                 | 639                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Dines               | 1,103               | 1,103                            | 100%                                | 257        | 742       | 104       | 0               |
|              | Double North        | 2,129               | 2,129                            | 1%                                  | 12         | 0         | 0         | 0               |
|              | Forest Service      | 412                 | 412                              | 100%                                | 5          | 340       | 67        | 0               |
|              | Genes               | 69                  | 69                               | 100%                                | 0          | 69        | 0         | 0               |
|              | Holding/Horse       | 158                 | 158                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Jumbo               | 1,527               | 1,527                            | 0%                                  | 2          | 0         | 0         | 0               |

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|-----------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Knolls             | 1,171               | 1,171                            | 100%                                | 11         | 1160      | 0         | 0               |
|           | Lane               | 82                  | 82                               | 100%                                | 0          | 82        | 0         | 0               |
|           | Limestone          | 172                 | 172                              | 100%                                | 2          | 170       | 0         | 0               |
|           | McCarty            | 2,536               | 2,536                            | 2%                                  | 29         | 0         | 11        | 0               |
|           | Moonshine          | 1,287               | 1,287                            | 100%                                | 36         | 1126      | 124       | 0               |
|           | North              | 9,459               | 9,459                            | 96%                                 | 1307       | 5183      | 2545      | 51              |
|           | North Battleground | 5,445               | 5,445                            | 3%                                  | 95         | 0         | 48        | 0               |
|           | North Holding      | 78                  | 78                               | 100%                                | 0          | 78        | 0         | 0               |
|           | North McClintock   | 2,052               | 2,052                            | 98%                                 | 122        | 1277      | 614       | 0               |
|           | North Pinchot      | 5,883               | 5,883                            | 38%                                 | 174        | 1086      | 955       | 0               |
|           | Schneider          | 101                 | 101                              | 100%                                | 0          | 101       | 0         | 0               |
|           | South Battleground | 7,595               | 7,595                            | 7%                                  | 175        | 169       | 54        | 107             |
|           | South Pinchot      | 2,980               | 2,980                            | 63%                                 | 82         | 703       | 1087      | 0               |
|           | Steer              | 243                 | 243                              | 100%                                | 0          | 243       | 0         | 0               |
| Buckhorn  | Brushy             | 520                 | 520                              | 100%                                | 387        | 72        | 55        | 4               |
|           | Brushy Holding     | 15                  | 15                               | 100%                                | 0          | 0         | 8         | 7               |
|           | Buckhorn           | 2,623               | 63                               | 2%                                  | 61         | 2         | 0         | 0               |
|           | Buckhorn Horse     | 277                 | 277                              | 100%                                | 187        | 90        | 0         | 0               |
|           | Clover             | 2,753               | 2,753                            | 0%                                  | 0          | 6         | 0         | 0               |
|           | Dirty Name         | 728                 | 728                              | 100%                                | 605        | 123       | 0         | 0               |
|           | Dukey              | 2,375               | 2,375                            | 100%                                | 593        | 1448      | 204       | 130             |
|           | Experimental       | 1,260               | 1,260                            | 0%                                  | 0          | 0         | 0         | 0               |
|           | Maxwell Holding    | 12                  | 12                               | 100%                                | 12         | 0         | 0         | 0               |

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|----------------------|-----------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                      | Maxwell North         | 1,524               | 1,524                            | 100%                                | 1,021      | 503       | 0         | 0               |
|                      | Maxwell Waterlot      | 4                   | 4                                | 100%                                | 2          | 3         | 0         | 0               |
|                      | Oak Grove Water Lot   | 5                   | 5                                | 100%                                | 5          | 0         | 0         | 0               |
|                      | Oak North             | 2,125               | 2,125                            | 100%                                | 1500       | 625       | 0         | 0               |
|                      | Pecks Point Water Lot | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Snake Water Lot       | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|                      | Walker Water Lot      | 2                   | 2                                | 100%                                | 1          | 1         | 0         | 0               |
|                      | Willow                | 3,448               | 3,448                            | 57%                                 | 132        | 1685      | 37        | 115             |
| Fossil Creek         | Manzanita             | 1,049               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Salmon Lake           | 804                 | 2                                | 0%                                  | 1          | 0         | 0         | 0               |
| Hackberry/Pivot Rock | 009                   | 74                  | 74                               | 7%                                  | 5          | 0         | 0         | 0               |
|                      | 011                   | 59                  | 59                               | 2%                                  | 1          | 0         | 0         | 0               |
|                      | 012                   | 9                   | 9                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | 013                   | 31                  | 31                               | 0%                                  | 0          | 0         | 0         | 0               |
|                      | 142A Water Lot        | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |
|                      | Baker                 | 1,791               | 1,791                            | 0%                                  | 0          | 3         | 0         | 0               |
|                      | Bald 4                | 3,874               | 3,874                            | 19%                                 | 207        | 426       | 0         | 86              |
|                      | Bed Bug East          | 983                 | 983                              | 3%                                  | 29         | 0         | 0         | 0               |
|                      | Bed Bug West          | 2,263               | 2,263                            | 2%                                  | 35         | 0         | 0         | 0               |
|                      | Calloway              | 4,525               | 4,525                            | 92%                                 | 560        | 3386      | 229       | 0               |
|                      | Calloway Gathering    | 20                  | 20                               | 100%                                | 6          | 15        | 0         | 0               |
|                      | Clear Creek           | 1,490               | 1,490                            | 4%                                  | 62         | 0         | 0         | 0               |
|                      | Corral                | 633                 | 629                              | 99%                                 | 17         | 612       | 0         | 0               |

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|-----------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Dry Lake                | 1,930               | 1,930                            | 2%                                  | 35         | 0         | 0         | 0               |
|           | Fuller Water Lot        | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|           | Good Enough Water Lot   | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |
|           | Horse                   | 473                 | 473                              | 1%                                  | 3          | 0         | 0         | 0               |
|           | Huffer                  | 2,453               | 2,453                            | 2%                                  | 45         | 0         | 7         | 0               |
|           | Kehl                    | 7,586               | 7,710                            | 16%                                 | 469        | 495       | 36        | 195             |
|           | Lee Johnson Water Lot   | 0                   | 0                                | 100%                                | 0          | 0         | 0         | 0               |
|           | Long Valley             | 323                 | 323                              | 0%                                  | 0          | 0         | 0         | 0               |
|           | Long Valley Water Lot   | 5                   | 5                                | 0%                                  | 0          | 0         | 0         | 0               |
|           | Miller                  | 4,622               | 4,501                            | 2%                                  | 94         | 0         | 7         | 0               |
|           | Neck 1                  | 826                 | 826                              | 0%                                  | 1          | 0         | 0         | 0               |
|           | Neck 2                  | 1,417               | 1,417                            | 88%                                 | 405        | 715       | 0         | 132             |
|           | Neck 3                  | 242                 | 242                              | 100%                                | 100        | 142       | 0         | 0               |
|           | Potato North            | 1,556               | 1,556                            | 1%                                  | 13         | 0         | 0         | 0               |
|           | Potato South            | 1,679               | 1,679                            | 10%                                 | 87         | 83        | 1         | 0               |
|           | Sandrock                | 1,047               | 1,044                            | 100%                                | 491        | 553       | 0         | 0               |
|           | Sandrock Draw Water Lot | 4                   | 4                                | 100%                                | 0          | 4         | 0         | 0               |
|           | Shipping                | 639                 | 639                              | 2%                                  | 12         | 0         | 0         | 0               |
|           | Toms Creek              | 10,325              | 10,304                           | 94%                                 | 244        | 6612      | 2,825     | 46              |
|           | Twentyseven Mile        | 2,733               | 2,532                            | 93%                                 | 398        | 1601      | 534       | 0               |
|           | Vickers Water Lot       | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |

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|--------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|              | Water Lot               | 0                   | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 0                   | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Wingfield               | 594                 | 594                              | 18%                                 | 8          | 0         | 100       | 0               |
| Walker Basin | 020                     | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|              | Aztec Water Lot         | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|              | Banfield                | 3,833               | 3,833                            | 57%                                 | 760        | 1,438     | 0         | 0               |
|              | Banfield Water Lot      | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Cherry Tree Water Lot   | 6                   | 6                                | 100%                                | 6          | 0         | 0         | 0               |
|              | East Snake Ridge        | 1,765               | 1,765                            | 100%                                | 965        | 794       | 0         | 0               |
|              | Harris Meadow Water Lot | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|              | Harris Water Lot        | 27                  | 27                               | 100%                                | 20         | 7         | 0         | 0               |
|              | Horse Knoll             | 6,273               | 3,818                            | 49%                                 | 2211       | 889       | 0         | 0               |
|              | Kitty Pan Water Lot     | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Lucky Water Lot         | 8                   | 8                                | 100%                                | 4          | 4         | 0         | 0               |
|              | Mahan Horse             | 258                 | 258                              | 100%                                | 222        | 21        | 0         | 15              |
|              | Mahan Park              | 160                 | 160                              | 73%                                 | 109        | 8         | 0         | 0               |
|              | Mesa Water Lot          | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Middle Snake Ridge      | 2,024               | 2,024                            | 87%                                 | 1,613      | 143       | 0         | 0               |
|              | Peewee Water Lot        | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |

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| Allotment     | Pasture                | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|---------------|------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|               | Pine                   | 3,206               | 3,206                            | 100%                                | 1051       | 2154      | 0         | 0               |
|               | Sams Butte Water Lot   | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|               | Snake Ridge Water Lot  | 1                   | 1                                | 100%                                | 1          | 0         | 0         | 0               |
|               | Steer                  | 2,860               | 2,860                            | 100%                                | 1150       | 1351      | 30        | 329             |
|               | Summer Heifer          | 1,369               | 1,369                            | 100%                                | 969        | 399       | 0         | 0               |
|               | Toilet Paper Water Lot | 3                   | 3                                | 100%                                | 2          | 1         | 0         | 0               |
|               | Turkey Draw Water Lot  | 8                   | 8                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Underpass              | 510                 | 510                              | 100%                                | 8          | 502       | 0         | 0               |
|               | West Snake Ridge       | 1,882               | 1,540                            | 82%                                 | 1181       | 334       | 25        | 0               |
| Willow Valley | Antelope               | 1,191               | 1,191                            | 100%                                | 86         | 1104      | 1         | 0               |
|               | Bushy Knoll Waterlot   | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|               | D7                     | 791                 | 791                              | 100%                                | 176        | 613       | 2         | 0               |
|               | Deer                   | 725                 | 725                              | 89%                                 | 174        | 468       | 0         | 0               |
|               | Gathering Pasture      | 71                  | 71                               | 54%                                 | 38         | 1         | 0         | 0               |
|               | Mud Lake               | 1,373               | 1,373                            | 42%                                 | 98         | 447       | 0         | 35              |
|               | North Riparian         | 236                 | 236                              | 100%                                | 166        | 70        | 0         | 0               |
|               | Randall                | 260                 | 260                              | 100%                                | 152        | 108       | 0         | 0               |
|               | South Riparian         | 126                 | 126                              | 99%                                 | 117        | 8         | 0         | 0               |
| Windmill      | Luke Mountain          | 10,202              | 34                               | 0%                                  | 0          | 0         | 34        | 0               |
| 13 Ranch      | Gordon Pasture         | 112                 | 112                              | 100%                                | 0          | 112       | 0         | 0               |
|               | Gordon                 | 2,186               | 2,186                            | 69%                                 | 122        | 427       | 967       | 0               |

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| Allotment       | Pasture                       | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------------|-------------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                 | Highway 260 Pasture           | 1,377               | 1,377                            | 41%                                 | 154        | 381       | 29        | 0               |
|                 | Horse Pasture                 | 257                 | 257                              | 27%                                 | 32         | 38        | 0         | 0               |
|                 | Hunter Pasture                | 3,201               | 3,201                            | 85%                                 | 145        | 1781      | 809       | 0               |
|                 | North Pasture                 | 3,309               | 3,309                            | 100%                                | 366        | 1332      | 1611      | 0               |
|                 | Snowshoe Pasture              | 4,471               | 4,471                            | 100%                                | 77         | 4315      | 79        | 0               |
| A - Cross       | Rose Creek Pasture            | 1,872               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Armer Mountain  | Hopkins Pasture               | 7,978               | 4,836                            | 59%                                 | 1064       | 3307      | 59        | 280             |
|                 | Salome Pasture                | 6,276               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Bar X           | Bar X Pasture                 | 687                 | 687                              | 98%                                 | 214        | 459       | 0         | 0               |
|                 | Cross Y II Pasture            | 1,411               | 1,411                            | 100%                                | 263        | 778       | 370       | 0               |
|                 | Haigler Pasture               | 1,179               | 1,163                            | 98%                                 | 720        | 441       | 0         | 0               |
|                 | Lower Dry Creek               | 1,464               | 703                              | 48%                                 | 86         | 616       | 0         | 0               |
|                 | Upper Dry Creek               | 1,412               | 1,132                            | 80%                                 | 46         | 1056      | 30        | 0               |
|                 | Westhole Pasture              | 1,182               | 477                              | 40%                                 | 76         | 401       | 0         | 0               |
| Bryant Mountain | Bryant Pasture                | 2,684               | 12                               | 0%                                  | 0          | 12        | 0         | 0               |
| Buzzard Roost   | Buzzard Roost Pasture         | 3,549               | 681                              | 19%                                 | 14         | 666       | 0         | 0               |
|                 | Cataract Tank Holding Pasture | 53                  | 53                               | 100%                                | 0          | 43        | 10        | 0               |
|                 | Copper Mountain Pasture       | 10,649              | 8,080                            | 76%                                 | 774        | 6238      | 184       | 879             |
|                 | Dinner Creek Pasture          | 549                 | 549                              | 100%                                | 0          | 520       | 28        | 0               |
|                 | Headquarters Pasture          | 746                 | 746                              | 100%                                | 0          | 737       | 0         | 9               |

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| Allotment | Pasture                          | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------|----------------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Holding Pasture                  | 151                 | 151                              | 100%                                | 0          | 147       | 3         | 0               |
|           | Indian Camp Reservoir            | 4                   | 4                                | 100%                                | 0          | 4         | 0         | 0               |
|           | Jerky Butte Pasture              | 2,069               | 1,771                            | 85%                                 | 23         | 1599      | 136       | 0               |
|           | Juniper Flat Holding Pasture     | 1,096               | 88                               | 8%                                  | 16         | 72        | 0         | 0               |
|           | Juniper Flat Pasture             | 941                 | 533                              | 57%                                 | 149        | 384       | 0         | 0               |
|           | Lacy Holding Pasture             | 251                 | 251                              | 100%                                | 0          | 231       | 19        | 0               |
|           | Middle Pasture                   | 9,061               | 9,061                            | 100%                                | 1012       | 6099      | 1305      | 645             |
|           | North Shipping Pasture           | 741                 | 325                              | 44%                                 | 7          | 318       | 0         | 0               |
|           | Pine Mountain Pasture            | 9,723               | 9,512                            | 98%                                 | 2404       | 4893      | 2049      | 166             |
|           | Redman Mesa Pasture              | 4,458               | 4,458                            | 100%                                | 282        | 4167      | 7         | 0               |
|           | Redman Mesa Tank Holding Pasture | 16                  | 16                               | 100%                                | 0          | 16        | 0         | 0               |
|           | Shipping Pasture                 | 83                  | 72                               | 88%                                 | 0          | 72        | 0         | 0               |
|           | Thoroughbred Pasture             | 2,975               | 1,750                            | 59%                                 | 192        | 1557      | 0         | 0               |
|           | Trap                             | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|           | Trap                             | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|           | Trap                             | 3                   | 3                                | 100%                                | 0          | 0         | 30        | 0               |
|           | Trap                             | 4                   | 4                                | 100%                                | 0          | 4         | 0         | 0               |
|           | Trap                             | 7                   | 7                                | 100%                                | 0          | 7         | 0         | 0               |
|           | Trap                             | 9                   | 9                                | 100%                                | 4          | 5         | 0         | 0               |

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| Allotment            | Pasture                  | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|----------------------|--------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Cedar Bench          | FU Pasture               | 318                 | 318                              | 100%                                | 31         | 286       | 0         | 0               |
|                      | Open Pasture             | 3,311               | 1,161                            | 35%                                 | 116        | 1,045     | 0         | 0               |
|                      | Ranch Pasture            | 691                 | 691                              | 100%                                | 122        | 564       | 3         | 0               |
|                      | YH Pasture               | 374                 | 374                              | 100%                                | 0          | 374       | 0         | 0               |
| Center Mountain      | North Pasture            | 4,430               | 1,204                            | 27%                                 | 17         | 32        | 474       | 680             |
|                      | South Pasture            | 5,323               | 164                              | 3%                                  | 4          | 21        | 78        | 61              |
| Cherry Creek         | Cherry Holding Pasture   | 931                 | 100                              | 11%                                 | 31         | 68        | 0         | 0               |
|                      | Dinner Pasture           | 7,208               | 3,825                            | 53%                                 | 603        | 3028      | 150       | 44              |
|                      | Olligar Pasture          | 6,062               | 117                              | 2%                                  | 28         | 89        | 0         | 0               |
|                      | South Cherry Pasture     | 10,070              | 16                               | 0%                                  | 13         | 0         | 0         | 3               |
|                      | Squaw Holding Pasture    | 393                 | 5                                | 1%                                  | 0          | 5         | 0         | 0               |
| Christopher Mountain | Highway 260 West Pasture | 3,012               | 3,012                            | 100%                                | 490        | 1915      | 607       | 0               |
|                      | Holding Pasture          | 239                 | 239                              | 100%                                | 190        | 41        | 9         | 0               |
|                      | Holding                  | 626                 | 626                              | 100%                                | 147        | 472       | 7         | 0               |
|                      | Mescal Ridge Pasture     | 5,218               | 2,759                            | 51%                                 | 711        | 1853      | 115       | 0               |
| Cross V              | Bean Patch Pasture       | 3,641               | 13                               | 0%                                  | 0          | 13        | 0         | 0               |
|                      | Beaver Valley            | 2,714               | 142                              | 5%                                  | 0          | 139       | 3         | 0               |
|                      | Brody Pasture            | 2,164               | 2,164                            | 100%                                | 314        | 1,022     | 2         | 824             |
|                      | Diamond Pasture          | 4,219               | 4,099                            | 96%                                 | 313        | 3725      | 17        | 0               |
|                      | Dry Dude Pasture         | 1,825               | 1,825                            | 100%                                | 6          | 67        | 0         | 1,752           |
|                      | East Verde Pasture       | 9,517               | 9,187                            | 91%                                 | 2119       | 3721      | 213       | 2,612           |

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| Allotment       | Pasture                    | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------------|----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                 | Star Valley Pasture        | 5,844               | 14                               | 0%                                  | 0          | 14        | 0         | 0               |
|                 | Trap                       | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
| Crouch Mesa     | Brewer Pasture             | 1,304               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Deadman Pasture            | 1,034               | 417                              | 40%                                 | 92         | 326       | 0         | 0               |
|                 | Mesa Pasture               | 2,682               | 104                              | 4%                                  | 0          | 104       | 0         | 0               |
| Dagger          | Oak Creek Mesa Pasture     | 17,985              | 1,840                            | 10%                                 | 350        | 812       | 141       | 496             |
| Deadman Mesa    | Nash Point Pasture         | 394                 | 388                              | 98%                                 | 315        | 71        | 0         | 0               |
|                 | Upper Fossil Creek Pasture | 3,241               | 62                               | 2%                                  | 61         | 0         | 0         | 0               |
|                 | Upper Mesa Pasture         | 2,061               | 347                              | 17%                                 | 47         | 297       | 0         | 0               |
| Del Shay        | Del Shay Pasture           | 3,703               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Ellinwood       | Cottonwood Pasture         | 8,644               | 6,119                            | 69%                                 | 84         | 5886      | 0         | 0               |
|                 | Highway 260 East Pasture   | 4,639               | 4,639                            | 95%                                 | 1052       | 1407      | 1883      | 59              |
|                 | Horse Mountain Pasture     | 3,961               | 3,219                            | 81%                                 | 288        | 2539      | 391       | 0               |
|                 | Hunter Creek Pasture       | 931                 | 931                              | 90%                                 | 370        | 453       | 19        | 0               |
| Flying V        | Gentry Pasture             | 3,036               | 1,943                            | 64%                                 | 110        | 1271      | 561       | 0               |
| Frio Canyon     | Deadman Pasture            | 4,232               | 1,539                            | 36%                                 | 569        | 631       | 339       | 0               |
|                 | Dump Pasture               | 3,674               | 706                              | 19%                                 | 161        | 542       | 4         | 0               |
|                 | North Turkey Pasture       | 909                 | 42                               | 5%                                  | 0          | 42        | 0         | 0               |
|                 | South Turkey Pasture       | 1,239               | 1                                | 0%                                  | 0          | 1         | 0         | 0               |
| Gentry Mountain | Gentry Pasture             | 4,356               | 1,172                            | 23%                                 | 192        | 784       | 44        | 0               |

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| Allotment     | Pasture                 | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|---------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|               | Sheep Pasture           | 4,953               | 4,494                            | 90%                                 | 207        | 4024      | 62        | 161             |
| Green Valley  | Bonita Pasture          | 3,201               | 3,201                            | 100%                                | 38         | 678       | 0         | 2,484           |
|               | Diamond Pasture         | 10,843              | 10,098                           | 74%                                 | 2227       | 5517      | 95        | 167             |
|               | Ellison Pasture         | 2,090               | 2,090                            | 96%                                 | 54         | 141       | 0         | 1802            |
|               | Holding Pasture         | 68                  | 68                               | 52%                                 | 35         | 0         | 0         | 0               |
|               | Holding Pasture         | 280                 | 115                              | 41%                                 | 107        | 8         | 0         | 0               |
|               | Holding Pasture         | 360                 | 348                              | 96%                                 | 337        | 10        | 0         | 0               |
|               | Kings Ridge Pasture     | 5,516               | 3,005                            | 54%                                 | 718        | 2270      | 16        | 0               |
|               | Moore Pasture           | 4,189               | 4,189                            | 95%                                 | 184        | 180       | 35        | 3,567           |
|               | Myrtle-Pyeatt Pasture   | 3,885               | 3,885                            | 80%                                 | 1251       | 1702      | 26        | 111             |
|               | Ponderosa Pasture       | 1,497               | 1,497                            | 87%                                 | 657        | 650       | 0         | 0               |
|               | Trap                    | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|               | Upper Neal Pasture      | 1,940               | 93                               | 5%                                  | 1          | 92        | 0         | 0               |
|               | Winter Division Pasture | 10,057              | 188                              | 2%                                  | 83         | 105       | 0         | 0               |
| Greenback     | Basin Pasture           | 15,008              | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Haigler Creek | Cross Y Pasture         | 1,045               | 1,045                            | 93%                                 | 707        | 251       | 13        | 0               |
|               | Oxbow Pasture           | 3,099               | 2,937                            | 94%                                 | 978        | 1923      | 27        | 0               |
| Hardscrabble  | Button Flat Pasture     | 1,846               | 1,254                            | 68%                                 | 332        | 922       | 0         | 0               |
|               | Hardscrabble Pasture    | 98                  | 98                               | 100%                                | 0          | 98        | 0         | 0               |
|               | Natural Bridge Pasture  | 2,274               | 45                               | 2%                                  | 0          | 45        | 0         | 0               |
|               | Pine Pasture            | 5,527               | 3,659                            | 66%                                 | 889        | 2725      | 42        | 0               |

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| Allotment                 | Pasture                    | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|---------------------------|----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                           | Rock Creek Pasture         | 3,169               | 39                               | 1%                                  | 0          | 39        | 0         | 0               |
|                           | Trap                       | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |
|                           |                            | 2                   | 1                                | 98%                                 | 0          | 1         | 0         | 0               |
|                           |                            | 5                   | 5                                | 94%                                 | 0          | 5         | 0         | 0               |
|                           | UA Pasture                 | 225                 | 225                              | 100%                                | 0          | 225       | 0         | 0               |
| Heber-Reno Sheep Driveway | Sheep Driveway             | 4,233               | 4,233                            | 100%                                | 318        | 736       | 299       | 2872            |
|                           | Sheep Drive                | 11,463              | 6,380                            | 52%                                 | 747        | 3494      | 1299      | 382             |
| Indian Gardens            | Dead Horse Pasture         | 2,155               | 2,155                            | 98%                                 | 916        | 1049      | 151       | 0               |
|                           | Dick Williams Pasture      | 6,633               | 6,633                            | 99%                                 | 1264       | 2126      | 1315      | 1,831           |
|                           | Roberts Mesa North Pasture | 270                 | 270                              | 100%                                | 0          | 0         | 0         | 270             |
|                           | RM North Pasture           | 3,644               | 3,644                            | 100%                                | 451        | 504       | 20        | 2,667           |
|                           | Roberts Mesa South Pasture | 3,435               | 3,435                            | 99%                                 | 1173       | 2174      | 51        | 0               |
| O.W.                      | East Canyon Creek Pasture  | 1,026               | 1,015                            | 99%                                 | 160        | 197       | 0         | 658             |
|                           | Headquarters North Pasture | 88                  | 88                               | 100%                                | 88         | 0         | 0         | 0               |
|                           | Headquarters South Pasture | 86                  | 86                               | 100%                                | 31         | 0         |           | 55              |
|                           | Mule Creek Pasture         | 1,079               | 1,076                            | 100%                                | 215        | 52        | 412       | 398             |
|                           | West Canyon Creek Pasture  | 2,080               | 2,080                            | 100%                                | 193        | 388       | 655       | 844             |
| Payson                    | Boy Scout Pasture          | 9,571               | 9,324                            | 96%                                 | 1922       | 2962      | 3122      | 1,159           |
|                           | Girl Scout Pasture         | 10,079              | 10,072                           | 99%                                 | 2669       | 4793      | 1963      | 584             |

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| Allotment       | Pasture                     | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------------|-----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                 | Hells Half Acre Pasture     | 7,298               | 1,156                            | 16%                                 | 276        | 337       | 543       | 0               |
|                 | Holding Trap                | 6                   | 6                                | 100%                                | 0          | 6         | 0         | 0               |
| Pine            | Buckhead Holding Pasture    | 269                 | 269                              | 100%                                | 0          | 269       | 0         | 0               |
|                 | Cedar Mesa North Pasture    | 6,481               | 6,456                            | 99%                                 | 1685       | 4083      | 623       | 0               |
|                 | Cedar Mesa South Pasture    | 2,660               | 83                               | 3%                                  | 0          | 83        | 0         | 0               |
|                 | Red Hills Pasture           | 2,451               | 740                              | 30%                                 | 296        | 443       | 0         | 0               |
|                 | Strawberry Mountain Pasture | 2,164               | 2,164                            | 97%                                 | 784        | 721       | 598       | 0               |
|                 | Strawberry Point Pasture    | 2,227               | 2,227                            | 96%                                 | 733        | 907       | 453       | 35              |
| Pleasant Valley | Haught Pasture              | 537                 | 13                               | 2%                                  | 1          | 12        | 0         | 0               |
|                 | Northeast Pasture           | 2,251               | 47                               | 2%                                  | 1          | 46        | 0         | 0               |
| Red Lake        | Frog Pasture                | 3,725               | 3,725                            | 100%                                | 1663       | 1776      | 272       | 0               |
|                 | Ramer Tank                  | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|                 | Red Lake Pasture            | 9,699               | 9,699                            | 100%                                | 1194       | 5492      | 1257      | 1756            |
|                 | Second Pasture              | 5,806               | 5,806                            | 100%                                | 1034       | 4554      | 53        | 165             |
| Seventy Six     | Coffeepot Pasture           | 5,921               | 2                                | 0%                                  | 0          | 2         | 0         | 0               |
| Tonto Basin     | Clover/Bearhead Pasture     | 36,364              | 17,176                           | 47%                                 | 150        | 9233      | 827       | 6959            |
|                 | Holding Pasture             | 98                  | 98                               | 100%                                | 0          | 13        | 0         | 85              |
|                 |                             | 229                 | 229                              | 38%                                 | 0          | 0         | 0         | 87              |
|                 |                             | 319                 | 319                              | 84%                                 | 1          | 267       | 0         | 0               |

| Allotment | Pasture                | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | Acres Decrease* |
|-----------|------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Young     | Round Mountain Pasture | 2,466               | 2,181                            | 88%                                 | 108        | 1784      | 137       | 152             |

\* Severe disturbance treatments could include treatment options such as tree planting, which over time would reduce production.

### Alternative 3

This alternative would also have an increase in forage production resulting from the proposed treatments. Due to less proposed acres of treatment, the overall forage production would be less than with alternative two. This alternative also proposes less acres of severe disturbance area treatments than is proposed in alternative two, which could include treatment options including tree planting. These areas are generally within previously burned areas, such as the Rodeo-Chediski fire area. If the tree planting treatment is chosen, a decrease in production would occur overtime, in these areas.

This alternative contains the less amount of acres proposed for mechanical treatment and prescribed fire. Therefor this alternative would have the less adjustments needed, such as pasture rest or deferment, following treatments than with alternative two.

The following tables displays the acres of treatment types broken out by amounts of expected forage production categories.

**Table 6. Alternative 3 Forage Production Categories by Treatment Type**

| Treatments  | Acres   | Expected forage production change |
|---|---------|-----------------------------------|
| Stand Improvement- low site, uneven-aged -low site, grassland restoration, riparian restoration, savanna, meadow restoration, WUI & Infrastructure protection.  | 134,000 | Greatest increase                 |
| Stand Improvement-high site and moderate site, uneven-aged-high site and moderate site, Aspen Restoration, and Facilitative Operations Mechanical   | 275,000 | Moderate Increase                 |
| Facilitative Operations Prescribed Fire Only, Grassland Prescribed Fire Only, MSO Recovery, PAC mechanical & hand thin, Prescribed fire only, Riparian Prescribed Fire only, Wet meadow Prescribed Fire only. | 89,000  | Slight Increase                   |
| Severe Disturbance Area Treatment   | 33,000  | Possible decline                  |

\* Severe disturbance treatments could include treatment options such as tree planting, which over time would reduce production.

**Table 7. Alternative 3 Expected Forage Production Categories Broken Out By Allotment/Pastures**

| Allotment    | Pasture            | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|--------------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Arab         | Aniceto            | 1,946               | 1,946                            | 91%                                 | 1244       | 523       | 1         | 0               |
|              | Buckwheat          | 863                 | 863                              | 79%                                 | 437        | 246       | 0         | 0               |
|              | Butler             | 1,141               | 1,135                            | 84%                                 | 524        | 435       | 0         | 0               |
|              | Jackson            | 651                 | 203                              | 31%                                 | 130        | 73        | 0         | 0               |
| Black Canyon | H.P.#1             | 202                 | 202                              | 55%                                 | 12         | 99        | 0         | 0               |
|              | H.P.#2             | 130                 | 130                              | 77%                                 | 27         | 73        | 0         | 0               |
|              | King Phillip       | 4,589               | 4,589                            | 68%                                 | 901        | 2233      | 0         | 0               |
|              | Nelson             | 1,808               | 1,808                            | 85%                                 | 240        | 1,305     | 0         | 0               |
|              | Porter             | 2,059               | 2,059                            | 69%                                 | 1097       | 319       | 0         | 0               |
|              | Sharp Hollow       | 4,935               | 4,935                            | 10%                                 | 413        | 56        | 0         | 0               |
|              | Stermer            | 3,308               | 3,308                            | 17%                                 | 209        | 179       | 0         | 166             |
|              | Unallocated        | 212                 | 212                              | 57%                                 | 121        | 0         | 0         | 0               |
| Blue Ridge   | Admin Pasture      | 106                 | 106                              | 82%                                 | 88         | 0         | 0         | 0               |
|              | Cattle Exclosure   | 16                  | 16                               | 0%                                  | 0          | 0         | 0         | 0               |
|              | Chimney            | 652                 | 650                              | 14%                                 | 88         | 0         | 0         | 0               |
|              | Chimney 1          | 391                 | 391                              | 41%                                 | 162        | 0         | 0         | 0               |
|              | Chimney 2          | 303                 | 303                              | 68%                                 | 204        | 0         | 0         | 0               |
|              | Jaques Marsh       | 220                 | 220                              | 19%                                 | 41         | 0         | 0         | 0               |
|              | North Blue Ridge   | 4,021               | 4,021                            | 0%                                  | 0          | 0         | 0         | 0               |
|              | Scotts             | 462                 | 462                              | 0%                                  | 2          | 0         | 0         | 0               |
|              | South Blue Ridge   | 4,226               | 4,226                            | 0%                                  | 0          | 0         | 0         | 0               |
|              | Twin Knoll         | 1,020               | 1,020                            | 0%                                  | 2          | 0         | 0         | 0               |
| Brown Creek  | Cattle Exclosure 1 | 2                   | 2                                | 42%                                 | 1          | 0         | 0         | 0               |
|              | Cattle Exclosure 2 | 17                  | 17                               | 0%                                  | 0          | 0         | 0         | 0               |
|              | Cattle Exclosure 3 | 104                 | 104                              | 3%                                  | 3          | 0         | 0         | 0               |
|              | Cattle Exclosure 4 | 62                  | 62                               | 0%                                  | 0          | 0         | 0         | 0               |

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|-----------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                 | Elk Enclosure           | 3                   | 3                                | 97%                                 | 3          | 0         | 0         | 0               |
|                 | Marshall                | 4,695               | 4,690                            | 6%                                  | 299        | 0         | 0         | 0               |
|                 | Penrod Holding          | 258                 | 105                              | 32%                                 | 83         | 0         | 0         | 0               |
|                 | Turkey                  | 4,796               | 4,796                            | 0%                                  | 4          | 0         | 0         | 0               |
| Buck Springs    | Brushy                  | 2,777               | 2,777                            | 1%                                  | 16         | 0         | 0         | 0               |
|                 | Brushy Flat Enclosure   | 14                  | 14                               | 100%                                | 14         | 0         | 0         | 0               |
|                 | Brushy Flat Tank        | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Brushy Spring Enclosure | 1                   | 1                                | 67%                                 | 1          | 0         | 0         | 0               |
|                 | Buck Springs            | 3,365               | 3,365                            | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Buck Springs Tank       | 11                  | 11                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Elk Springs             | 2,089               | 2,089                            | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Lion Tank               | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Tank 1                  | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Tank 2                  | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Holding 1       | 134                 | 134                              | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Holding 2       | 98                  | 98                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Whitcom Trap            | 8                   | 8                                | 0%                                  | 0          | 0         | 0         | 0               |
| Chevelon Canyon | Alder H.P.              | 264                 | 264                              | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Breed                   | 8,439               | 8,439                            | 89%                                 | 466        | 5209      | 1750      | 102             |
|                 | Circle Bar              | 10,887              | 10,887                           | 100%                                | 440        | 10113     | 333       | 0               |
|                 | Nagel H.P.              | 208                 | 208                              | 100%                                | 1          | 207       | 0         | 0               |
|                 | Sandpoint               | 8,914               | 8,914                            | 31%                                 | 383        | 2003      | 333       | 0               |
|                 | Vigil-Durfee            | 11,623              | 5,987                            | 0%                                  | 0          | 0         | 0         | 0               |
| Clay Springs    | +IL                     | 3,845               | 115                              | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Summer North            | 4,530               | 4,530                            | 1%                                  | 42         | 0         | 0         | 0               |
|                 | Summer South            | 6,687               | 6,687                            | 1%                                  | 48         | 0         | 0         | 1               |

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|---------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Clear Creek   | South                   | 7,855               | 757                              | 1%                                  | 24         | 0         | 19        | 0               |
| Ellsworth     | East Ellsworth          | 1,227               | 1,222                            | 33%                                 | 401        | 0         | 0         | 0               |
|               | West Ellsworth          | 769                 | 767                              | 82%                                 | 627        | 0         | 0         | 0               |
| Heber         | Bunger                  | 21,893              | 21,893                           | 20%                                 | 650        | 2219      | 0         | 1,423           |
|               | Gentry                  | 17,906              | 17,906                           | 3%                                  | 348        | 82        | 0         | 49              |
|               | H.P.                    | 595                 | 595                              | 1%                                  | 5          | 0         | 0         | 0               |
|               | Halter Cross            | 7,410               | 1,850                            | 1%                                  | 42         | 0         | 0         | 0               |
|               | HP #2                   | 13                  | 13                               | 100%                                | 0          | 13        | 0         | 0               |
|               | Mud Tank                | 13,220              | 5,740                            | 25%                                 | 287        | 3067      | 0         | 0               |
|               | Nelson                  | 11,007              | 11,007                           | 96%                                 | 1954       | 6974      | 1621      | 0               |
|               | Oil Well                | 13,608              | 1,390                            | 10%                                 | 100        | 1290      | 0         | 0               |
|               | Phoenix Park            | 23,801              | 23,801                           | 0%                                  | 39         | 0         | 0         | 0               |
| Johnson       | Johnson                 | 740                 | 739                              | 64%                                 | 475        | 0         | 0         | 0               |
| Lake Mountain | Brown Creek             | 9                   | 9                                | 91%                                 | 8          | 0         | 0         | 0               |
|               | Brown Springs           | 121                 | 121                              | 2%                                  | 2          | 0         | 0         | 0               |
|               | Cattle Enclosure AZ G&F | 6                   | 6                                | 100%                                | 6          | 0         | 0         | 0               |
|               | Doyle                   | 3,539               | 3,539                            | 11%                                 | 384        | 0         | 0         | 0               |
|               | Enclosure 1             | 74                  | 74                               | 0%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 12            | 13                  | 13                               | 0%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 13            | 9                   | 9                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 17            | 3                   | 3                                | 82%                                 | 3          | 0         | 0         | 0               |
|               | Enclosure 2             | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 3             | 14                  | 14                               | 0%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 4             | 8                   | 8                                | 5%                                  | 0          | 0         | 0         | 0               |
|               | Enclosure 9             | 21                  | 21                               | 0%                                  | 0          | 0         | 0         | 0               |
|               | Firebox                 | 3,091               | 3,091                            | 54%                                 | 574        | 480       | 620       | 0               |

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|---------------|-------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|               | Holding           | 148                 | 148                              | 100%                                | 142        | 6         | 0         | 0               |
|               | Holding 1         | 117                 | 117                              | 27%                                 | 32         | 0         | 0         | 0               |
|               | Holding 2         | 228                 | 228                              | 60%                                 | 137        | 0         | 0         | 0               |
|               | Lake Mountain     | 5,578               | 5,578                            | 22%                                 | 887        | 330       | 5         | 0               |
|               | Los Burros        | 211                 | 211                              | 24%                                 | 51         | 0         | 0         | 0               |
|               | Mineral           | 4,182               | 4,182                            | 29%                                 | 1,200      | 0         | 0         | 0               |
|               | Porter Lake       | 1,028               | 1,027                            | 8%                                  | 83         | 0         | 0         | 0               |
|               | Porter Trap       | 15                  | 15                               | 87%                                 | 13         | 0         | 0         | 0               |
|               | Quakie            | 1,426               | 1,422                            | 5%                                  | 24         | 49        | 0         | 0               |
|               | Reservation       | 2,509               | 2,509                            | 16%                                 | 164        | 209       | 40        | 0               |
|               | Section 1 Tank    | 5                   | 5                                | 73%                                 | 3          | 0         | 0         | 0               |
|               | Unallocated       | 80                  | 80                               | 100%                                | 80         | 0         | 0         | 0               |
|               | Unallocated       | 111                 | 111                              | 47%                                 | 52         | 0         | 0         | 0               |
|               | Wolf Mountain     | 3,776               | 3,776                            | 50%                                 | 478        | 681       | 741       | 0               |
| Limestone     | Double Cabin      | 9,368               | 9,368                            | 100%                                | 524        | 5062      | 3155      | 598             |
|               | Five Mile         | 8,622               | 8,622                            | 90%                                 | 1941       | 4713      | 1,074     | 0               |
|               | Hart Canyon H.P.  | 232                 | 232                              | 100%                                | 157        | 74        | 0         | 0               |
|               | Ohaco             | 11,836              | 11,836                           | 100%                                | 2794       | 6490      | 2482      | 67              |
|               | Pius Farm #1 H.P. | 223                 | 223                              | 100%                                | 222        | 1         | 0         | 0               |
|               | Pius Farm #2 H.P. | 707                 | 707                              | 100%                                | 223        | 57        | 420       | 6               |
|               | Tentground        | 9,164               | 9,164                            | 100%                                | 284        | 7807      | 1,073     | 0               |
|               | Wilkins           | 9,059               | 9,059                            | 38%                                 | 2          | 2,957     | 468       | 0               |
| Long Tom      | Long Tom          | 74,855              | 64,371                           | 7%                                  | 2293       | 2038      | 746       | 44              |
| Ortega        | Woolhouse         | 2,835               | 26                               | 1%                                  | 16         | 0         | 0         | 0               |
| Park-Day Wash | Park              | 4,337               | 1,528                            | 1%                                  | 62         | 0         | 0         | 0               |
| Pinyon        | East              | 845                 | 441                              | 38%                                 | 318        | 0         | 0         | 0               |
| Railroad      | Bear Canyon       | 6,658               | 6,658                            | 0%                                  | 3          | 0         | 0         | 0               |

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|------------|---------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|            | Blue Grass          | 5,321               | 1,370                            | 0%                                  | 14         | 0         | 0         | 0               |
|            | Brittenham Holding  | 162                 | 162                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Bull                | 309                 | 309                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Capps               | 1,674               | 439                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Deer Lick           | 1,573               | 1,573                            | 99%                                 | 385        | 737       | 0         | 428             |
|            | East Bull           | 731                 | 731                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | East Cottonwood     | 4,450               | 4,450                            | 0%                                  | 4          | 6         | 0         | 6               |
|            | Fence Tank          | 9,247               | 9,241                            | 24%                                 | 685        | 418       | 0         | 1,091           |
|            | Lons                | 9,209               | 9,209                            | 48%                                 | 818        | 1556      | 127       | 1,912           |
|            | McNeil East         | 2,949               | 2,949                            | 31%                                 | 673        | 250       | 0         | 0               |
|            | McNeil West         | 989                 | 989                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Middle              | 806                 | 430                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Mortensen           | 1,552               | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|            | Mortensen Holding   | 668                 | 663                              | 11%                                 | 76         | 0         | 0         | 0               |
|            | Owens               | 1,287               | 492                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Pinedale            | 2,177               | 2,177                            | 15%                                 | 59         | 210       | 0         | 54              |
|            | Rattlesnake         | 3,914               | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|            | South Juniper Ridge | 2,377               | 2,377                            | 21%                                 | 23         | 210       | 0         | 278             |
|            | Wilson              | 4,614               | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|            | Winter              | 1,701               | 1,652                            | 0%                                  | 0          | 0         | 0         | 0               |
| Show Low   | Porter              | 8,244               | 8,243                            | 11%                                 | 897        | 0         | 0         | 0               |
|            | Second Knoll        | 3,292               | 13                               | 0%                                  | 8          | 0         | 0         | 0               |
| Sponsellor | East Sponsellor     | 2,978               | 197                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | Holding 1           | 416                 | 416                              | 1%                                  | 2          | 0         | 0         | 0               |
|            | Holding 2           | 162                 | 162                              | 0%                                  | 0          | 0         | 0         | 0               |
|            | South Sponseller    | 5,825               | 5,825                            | 0%                                  | 0          | 0         | 0         | 0               |
|            | West Sponseller     | 2,160               | 912                              | 26%                                 | 555        | 0         | 0         | 0               |

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|--------------|-----------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|---|
| Town Tank    | East Town Tank  | 558                 | 558                              | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Holding         | 83                  | 83                               | 96%                                 | 79         | 0         | 0         | 0               |   |
|              | Polson          | 1,020               | 1,020                            | 95%                                 | 96         | 140       | 0         | 735             |   |
| Wallace      | West Town Tank  | 1,393               | 1,393                            | 19%                                 | 3          | 0         | 0         | 268             |   |
|              | Barney          | 6,463               | 6,463                            | 0%                                  | 7          | 0         | 0         | 0               |   |
|              | FS.H.P.         | 147                 | 147                              | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Gramma          | 6,931               | 6,931                            | 70%                                 | 829        | 2719      | 1317      | 0               |   |
|              | Tillman         | 9,928               | 1,638                            | 0%                                  | 0          | 0         | 41        | 0               |   |
|              | Wall H.P.       | 343                 | 343                              | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Waters          | 11,200              | 11,200                           | 98%                                 | 2162       | 8082      | 551       | 215             |   |
|              | Wildcat         | Buckhorn            | 5,523                            | 5,523                               | 20%        | 93        | 590       | 433             | 0 |
|              |                 | Daze                | 4,400                            | 4,400                               | 1%         | 62        | 0         | 0               | 0 |
| Ellsworth    |                 | 4,155               | 4,155                            | 17%                                 | 254        | 341       | 103       | 0               |   |
| H.P.#1       |                 | 1,295               | 1,155                            | 2%                                  | 25         | 0         | 0         | 0               |   |
| Hanks        |                 | 5,416               | 5,416                            | 53%                                 | 622        | 2040      | 196       | 0               |   |
| Willow Wash  | Wrna            | 334                 | 211                              | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Aztec           | 4,130               | 4,130                            | 21%                                 | 209        | 89        | 0         | 559             |   |
|              | Bear Springs    | 4,497               | 4,497                            | 27%                                 | 391        | 494       | 0         | 340             |   |
|              | Cottonwood      | 6,203               | 6,203                            | 53%                                 | 1068       | 491       | 0         | 1,752           |   |
|              | East Sundown    | 3,745               | 63                               | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Phelps          | 4,256               | 4,256                            | 25%                                 | 120        | 133       | 0         | 805             |   |
|              | Ranch           | 2,631               | 2,556                            | 0%                                  | 9          | 0         | 0         | 0               |   |
|              | Sackett         | 3,875               | 2,762                            | 4%                                  | 168        | 0         | 0         | 0               |   |
|              | West Sundown    | 4,620               | 982                              | 0%                                  | 0          | 0         | 0         | 0               |   |
| 13-Mile Rock | Yarrow          | 2,414               | 2,414                            | 0%                                  | 0          | 0         | 0         | 0               |   |
|              | Good Enough     | 755                 | 650                              | 86%                                 | 5          | 535       | 110       | 0               |   |
|              | Horse Water Lot | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |   |

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|-------------|-------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|             | Jack Pine Water Lot     | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Lone Pine Water Lot     | 8                   | 8                                | 100%                                | 8          | 0         | 0         | 0               |
|             | Meadow Canyon North     | 1,443               | 673                              | 24%                                 | 353        | 0         | 0         | 0               |
|             | Meadow Canyon South     | 1,896               | 1,084                            | 25%                                 | 478        | 0         | 0         | 0               |
|             | New Tank Holding        | 16                  | 16                               | 0%                                  | 0          | 0         | 0         | 0               |
|             | Section 8 Water Lot     | 4                   | 4                                | 8%                                  | 0          | 0         | 0         | 0               |
|             | Toms                    | 3,516               | 3,353                            | 95%                                 | 49         | 2179      | 1125      | 0               |
|             | Tule                    | 2,487               | 2,381                            | 36%                                 | 902        | 0         | 0         | 0               |
|             | Tule Holding            | 72                  | 72                               | 35%                                 | 26         | 0         | 0         | 0               |
|             | Tule Waterlot           | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Wilbur                  | 2,558               | 2,281                            | 67%                                 | 190        | 1,049     | 478       | 0               |
|             | Wilbur 2 Waterlot       | 1                   | 1                                | 100%                                | 1          | 0         | 0         | 0               |
| Apache Maid | 61 Water Lot            | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Bargaman                | 875                 | 875                              | 93%                                 | 132        | 142       | 538       | 0               |
|             | Bargaman Flat           | 146                 | 146                              | 95%                                 | 126        | 0         | 13        | 0               |
|             | Blind Lake              | 7,497               | 7,379                            | 5%                                  | 401        | 0         | 1         | 0               |
|             | Blind Lake Horse        | 330                 | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Bull                    | 665                 | 301                              | 3%                                  | 19         | 0         | 0         | 0               |
|             | Cabin                   | 518                 | 490                              | 50%                                 | 257        | 0         | 0         | 0               |
|             | Campbell Spring         | 9,348               | 9,348                            | 3%                                  | 311        | 0         | 3         | 0               |
|             | Dave's Water Lot        | 4                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Foster Spring Exclosure | 4                   | 4                                | 65%                                 | 2          | 0         | 0         | 0               |
|             | Gash Flat East          | 1,398               | 8                                | 0%                                  | 1          | 0         | 0         | 0               |
|             | Gash Flat Middle        | 668                 | 8                                | 1%                                  | 1          | 0         | 5         | 0               |
|             | Gash Flat West          | 918                 | 1                                | 0%                                  | 0          | 0         | 0         | 0               |

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|---------------------|------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                     | Horse Summer           | 203                 | 203                              | 31%                                 | 63         | 0         | 0         | 0               |
|                     | Horse Trap Water Lot   | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                     | Hutch                  | 7,600               | 2,293                            | 26%                                 | 375        | 522       | 1034      | 0               |
|                     | Maid Holding           | 155                 | 155                              | 97%                                 | 151        | 0         | 0         | 0               |
|                     | Pine Mountain East     | 7,003               | 6,898                            | 15%                                 | 1,061      | 0         | 0         | 0               |
|                     | Pine Mountain West     | 6,958               | 6,958                            | 62%                                 | 834        | 2288      | 1213      | 0               |
|                     | Pine Ridge Water Lot   | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                     | Sawmill                | 6,727               | 2,170                            | 3%                                  | 179        | 7         | 0         | 0               |
|                     | Shipping Lane East     | 660                 | 660                              | 32%                                 | 208        | 0         | 0         | 0               |
|                     | Shipping Lane West     | 460                 | 460                              | 37%                                 | 63         | 26        | 83        | 0               |
|                     | Snake Tanks            | 6,719               | 1,006                            | 9%                                  | 612        | 0         | 0         | 0               |
|                     | Stoneman               | 8,394               | 3,447                            | 16%                                 | 1,307      | 0         | 0         | 0               |
|                     | Sue's Water Lot        | 8                   | 8                                | 84%                                 | 7          | 0         | 0         | 0               |
|                     | T-Bar Cabin            | 29                  | 29                               | 47%                                 | 13         | 0         | 0         | 0               |
|                     | T-Bar Cabin #1         | 77                  | 73                               | 90%                                 | 69         | 0         | 0         | 0               |
|                     | T-Bar Cabin #2         | 253                 | 248                              | 76%                                 | 193        | 0         | 0         | 0               |
|                     | T-Bar Tank 2 Exclosure | 5                   | 5                                | 81%                                 | 4          | 0         | 0         | 0               |
|                     | Wild Horse             | 7,550               | 7,550                            | 1%                                  | 53         | 0         | 0         | 0               |
|                     | Woodland               | 7,354               | 2,727                            | 10%                                 | 741        | 0         | 0         | 0               |
| Baker Lake/Calf Pen | Baker Lake             | 2,476               | 2,476                            | 72%                                 | 241        | 1422      | 108       | 0               |
|                     | Brush                  | 3,660               | 3,410                            | 6%                                  | 216        | 0         | 0         | 0               |
|                     | Calf Pen 7             | 283                 | 283                              | 2%                                  | 5          | 0         | 0         | 0               |
|                     | Cinch Hook             | 1,017               | 1,017                            | 100%                                | 53         | 964       | 0         | 0               |
|                     | Five Mile              | 1,014               | 1,014                            | 100%                                | 587        | 221       | 90        | 117             |
|                     | Highway Junction       | 728                 | 728                              | 93%                                 | 175        | 401       | 100       | 0               |
|                     | Milk Ranch             | 3,338               | 3,338                            | 100%                                | 1312       | 1991      | 35        | 0               |

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|-----------|----------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Pocket               | 3,031               | 2,060                            | 0%                                  | 0          | 0         | 0         | 0               |
|           | Strawberry Point     | 1,184               | 1,184                            | 100%                                | 578        | 507       | 100       | 0               |
|           | Twentynine Mile Lake | 1,474               | 1,447                            | 0%                                  | 0          | 0         | 0         | 0               |
| Bar T Bar | 064                  | 164                 | 164                              | 2%                                  | 3          | 0         | 0         | 0               |
|           | 075                  | 42                  | 6                                | 15%                                 | 4          | 3         | 0         | 0               |
|           | 090                  | 21                  | 21                               | 0%                                  | 0          | 0         | 0         | 0               |
|           | 092                  | 39                  | 39                               | 100%                                | 39         | 0         | 0         | 0               |
|           | 099                  | 87                  | 87                               | 0%                                  | 0          | 0         | 0         | 0               |
|           | Baucom               | 1,273               | 1,273                            | 32%                                 | 402        | 0         | 0         | 0               |
|           | Boulder Waterlot     | 11                  | 11                               | 34%                                 | 4          | 0         | 0         | 0               |
|           | Buckhorn             | 11,480              | 11,480                           | 92%                                 | 1104       | 4398      | 3487      | 1529            |
|           | Buckhorn Waterlot    | 2                   | 2                                | 100%                                | 0          | 0         | 0         | 2               |
|           | Clinton's Pool       | 1,367               | 1,367                            | 54%                                 | 734        | 0         | 0         | 0               |
|           | Clint's              | 827                 | 827                              | 2%                                  | 19         | 0         | 0         | 0               |
|           | Clints Waterlot      | 10                  | 10                               | 29%                                 | 3          | 0         | 0         | 0               |
|           | David's              | 895                 | 895                              | 0%                                  | 4          | 0         | 0         | 0               |
|           | Duke Waterlot        | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|           | East Green Howard    | 3,984               | 3,984                            | 62%                                 | 2,458      | 0         | 2         | 0               |
|           | East Melatone        | 6,517               | 2,611                            | 14%                                 | 909        | 0         | 6         | 0               |
|           | Fisher               | 9,683               | 9,261                            | 10%                                 | 494        | 407       | 77        | 0               |
|           | Girlscout            | 13                  | 13                               | 0%                                  | 0          | 0         | 0         | 0               |
|           | Green Waterlot       | 6                   | 6                                | 0%                                  | 0          | 0         | 0         | 0               |
|           | Hay Lake 1           | 2,173               | 943                              | 13%                                 | 292        | 0         | 0         | 0               |
|           | Hay Lake 10          | 434                 | 434                              | 24%                                 | 103        | 0         | 0         | 0               |
|           | Hay Lake 2           | 306                 | 28                               | 4%                                  | 12         | 0         | 0         | 0               |
|           | Hay Lake 3           | 341                 | 136                              | 29%                                 | 100        | 0         | 0         | 0               |
|           | Hay Lake 4           | 253                 | 253                              | 50%                                 | 127        | 0         | 0         | 0               |

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|-----------|--------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Hay Lake 5         | 128                 | 128                              | 81%                                 | 104        | 0         | 0         | 0               |
|           | Hay Lake 7         | 41                  | 41                               | 100%                                | 41         | 0         | 0         | 0               |
|           | Hay Lake 8         | 94                  | 94                               | 100%                                | 94         | 0         | 0         | 0               |
|           | Hay Lake 9         | 412                 | 412                              | 37%                                 | 153        | 0         | 0         | 0               |
|           | Home               | 304                 | 304                              | 0%                                  | 0          | 0         | 0         | 0               |
|           | Homestead Waterlot | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|           | Horse              | 490                 | 490                              | 0%                                  | 0          | 0         | 0         | 0               |
|           | Horse Trap 1       | 77                  | 77                               | 63%                                 | 49         | 0         | 0         | 0               |
|           | Horse Trap 2       | 24                  | 24                               | 80%                                 | 19         | 0         | 0         | 0               |
|           | Janice             | 1,716               | 1,716                            | 32%                                 | 544        | 0         | 0         | 0               |
|           | Lane               | 113                 | 113                              | 96%                                 | 72         | 36        | 0         | 0               |
|           | Lost Eden Horse    | 181                 | 181                              | 100%                                | 179        | 2         | 0         | 0               |
|           | Lost Eden Waterlot | 16                  | 16                               | 100%                                | 12         | 4         | 0         | 0               |
|           | Mary's             | 1,124               | 1,124                            | 97%                                 | 187        | 789       | 110       | 0               |
|           | Marys Waterlot     | 4                   | 4                                | 98%                                 | 4          | 0         | 0         | 0               |
|           | Mesa Waterlot      | 2                   | 2                                | 100%                                | 2          | 0         | 0         | 0               |
|           | Monty's            | 666                 | 666                              | 17%                                 | 113        | 0         | 0         | 0               |
|           | Montys Waterlot    | 52                  | 52                               | 45%                                 | 24         | 0         | 0         | 0               |
|           | Moqui              | 39                  | 39                               | 78%                                 | 30         | 0         | 0         | 0               |
|           | Moqui East         | 67                  | 67                               | 100%                                | 9          | 0         | 0         | 58              |
|           | Moqui West         | 16,443              | 16,443                           | 20%                                 | 597        | 894       | 1002      | 719             |
|           | Park               | 818                 | 818                              | 3%                                  | 27         | 0         | 0         | 0               |
|           | Prairie Dog        | 3,178               | 3,178                            | 21%                                 | 678        | 0         | 0         | 0               |
|           | PW Waterlot        | 4                   | 4                                | 100%                                | 4          | 0         | 0         | 0               |
|           | Sarah's            | 1,131               | 1,131                            | 76%                                 | 87         | 444       | 332       | 0               |
|           | Todd               | 186                 | 186                              | 100%                                | 180        | 6         | 0         | 0               |
|           | Trap 1             | 201                 | 201                              | 18%                                 | 37         | 0         | 0         | 0               |

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|              | Trap 2                   | 312                 | 312                              | 100%                                | 0          | 294       | 18        | 0               |
|              | Turkey Mountain          | 2,005               | 2,005                            | 63%                                 | 1,254      | 0         | 0         | 0               |
|              | Turkey Mountain Waterlot | 10                  | 10                               | 11%                                 | 1          | 0         | 0         | 0               |
|              | Two Eleven               | 138                 | 138                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Victorine Waterlot       | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|              | West Green Howard        | 5,106               | 5,106                            | 39%                                 | 1,995      | 0         | 0         | 0               |
|              | West Melatone            | 3,821               | 611                              | 14%                                 | 525        | 0         | 0         | 0               |
|              | Wilkins                  | 15,129              | 12,650                           | 66%                                 | 1990       | 6407      | 0         | 1555            |
|              | Wochner                  | 1,550               | 1,550                            | 37%                                 | 573        | 0         | 0         | 0               |
|              | Woods Water Lot          | 9                   | 9                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Y7 Waterlot              | 14                  | 14                               | 0%                                  | 0          | 0         | 0         | 0               |
|              | Yellowjacket             | 13,244              | 13,244                           | 36%                                 | 1705       | 1839      | 1,208     | 0               |
| Beaver Creek | 072                      | 32                  | 32                               | 100%                                | 7          | 25        | 0         | 0               |
|              | Antelope                 | 529                 | 202                              | 26%                                 | 139        | 0         | 0         | 0               |
|              | Antelope Water Lot       | 14                  | 5                                | 24%                                 | 3          | 0         | 0         | 0               |
|              | Banfield                 | 448                 | 448                              | 0%                                  | 2          | 0         | 0         | 0               |
|              | Bar D                    | 2,153               | 2,153                            | 1%                                  | 12         | 0         | 0         | 0               |
|              | Bar-D Water Lot          | 2                   | 2                                | 97%                                 | 2          | 0         | 0         | 0               |
|              | Brady North              | 2,139               | 1,994                            | 42%                                 | 894        | 0         | 0         | 0               |
|              | Brady South              | 2,226               | 2,226                            | 11%                                 | 241        | 0         | 0         | 0               |
|              | Brady Water Lot          | 6                   | 6                                | 45%                                 | 3          | 0         | 0         | 0               |
|              | Buck Mountain            | 4,308               | 4,308                            | 27%                                 | 303        | 833       | 26        | 0               |
|              | Crossing                 | 503                 | 503                              | 12%                                 | 13         | 43        | 0         | 0               |
|              | Divide Water Lot         | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Fred's Water Lot         | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Goswick                  | 1,522               | 1,522                            | 2%                                  | 26         | 0         | 0         | 0               |

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|              | Goswick Holding     | 84                  | 84                               | 0%                                  | 0          | 0         | 0         | 0               |
|              | Happy Jack          | 4,336               | 4,336                            | 0%                                  | 0          | 0         | 0         | 0               |
|              | Hollingshead East   | 257                 | 257                              | 3%                                  | 7          | 0         | 0         | 0               |
|              | Hollingshead West   | 2,110               | 2,110                            | 1%                                  | 26         | 0         | 0         | 0               |
|              | Horse Knoll         | 1,392               | 522                              | 26%                                 | 361        | 0         | 0         | 0               |
|              | Jose Water Lot      | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Landmark North      | 4,683               | 4,683                            | 8%                                  | 366        | 1         | 0         | 0               |
|              | Landmark Shipping   | 861                 | 861                              | 60%                                 | 435        | 78        | 0         | 0               |
|              | Landmark South      | 4,245               | 4,245                            | 27%                                 | 55         | 501       | 575       | 0               |
|              | Lower Jacks         | 2,540               | 2,540                            | 0%                                  | 3          | 0         | 0         | 0               |
|              | May's Water Lot     | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Pine Ridge          | 1,214               | 82                               | 7%                                  | 82         | 0         | 0         | 0               |
|              | Schroeder Water Lot | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Sheep Water Lot     | 2                   | 2                                | 56%                                 | 1          | 0         | 0         | 0               |
|              | Shipping #1         | 751                 | 751                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Shipping #2         | 966                 | 966                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Shipping #3         | 660                 | 660                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Triangle            | 3,546               | 3,546                            | 3%                                  | 104        | 0         | 0         | 0               |
|              | Upper Jacks         | 3,483               | 3,483                            | 0%                                  | 1          | 0         | 0         | 0               |
|              | Waldroup            | 1,202               | 1,202                            | 30%                                 | 113        | 249       | 0         | 0               |
|              | Woodland            | 2,025               | 743                              | 4%                                  | 89         | 0         | 0         | 0               |
| Buck Springs | Burn                | 639                 | 639                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Dines               | 1,103               | 1,103                            | 100%                                | 257        | 742       | 104       | 0               |
|              | Double North        | 2,129               | 2,129                            | 1%                                  | 12         | 0         | 0         | 0               |
|              | Forest Service      | 412                 | 412                              | 100%                                | 5          | 340       | 67        | 0               |
|              | Genes               | 69                  | 69                               | 100%                                | 0          | 69        | 0         | 0               |
|              | Holding/Horse       | 158                 | 158                              | 0%                                  | 0          | 0         | 0         | 0               |

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|           | Jumbo               | 1,527               | 1,527                            | 0%                                  | 2          | 0         | 0         | 0               |
|           | Knolls              | 1,171               | 1,171                            | 100%                                | 11         | 1160      | 0         | 0               |
|           | Lane                | 82                  | 82                               | 100%                                | 0          | 82        | 0         | 0               |
|           | Limestone           | 172                 | 172                              | 100%                                | 2          | 170       | 0         | 0               |
|           | McCarty             | 2,536               | 2,536                            | 2%                                  | 29         | 0         | 11        | 0               |
|           | Moonshine           | 1,287               | 1,287                            | 100%                                | 36         | 1126      | 124       | 0               |
|           | North               | 9,459               | 9,459                            | 96%                                 | 1307       | 5183      | 2545      | 51              |
|           | North Battleground  | 5,445               | 5,445                            | 3%                                  | 95         | 0         | 48        | 0               |
|           | North Holding       | 78                  | 78                               | 100%                                | 0          | 78        | 0         | 0               |
|           | North McClintock    | 2,052               | 2,052                            | 98%                                 | 122        | 1277      | 614       | 0               |
|           | North Pinchot       | 5,883               | 5,883                            | 38%                                 | 174        | 1086      | 955       | 0               |
|           | Schneider           | 101                 | 101                              | 100%                                | 0          | 101       | 0         | 0               |
|           | South Battleground  | 7,595               | 7,595                            | 7%                                  | 175        | 169       | 54        | 107             |
|           | South Pinchot       | 2,980               | 2,980                            | 63%                                 | 82         | 695       | 1087      | 0               |
|           | Steer               | 243                 | 243                              | 100%                                | 0          | 243       | 0         | 0               |
| Buckhorn  | Brushy              | 520                 | 520                              | 3%                                  | 15         | 0         | 0         | 0               |
|           | Brushy Holding      | 15                  | 15                               | 0%                                  | 0          | 0         | 0         | 0               |
|           | Buckhorn            | 2,623               | 63                               | 2%                                  | 56         | 0         | 0         | 0               |
|           | Buckhorn Horse      | 277                 | 277                              | 43%                                 | 118        | 0         | 0         | 0               |
|           | Clover              | 2,753               | 2,753                            | 0%                                  | 0          | 0         | 0         | 0               |
|           | Dirty Name          | 728                 | 728                              | 16%                                 | 117        | 0         | 0         | 0               |
|           | Dukey               | 2,375               | 2,375                            | 1%                                  | 34         | 0         | 0         | 0               |
|           | Experimental        | 1,260               | 1,260                            | 0%                                  | 0          | 0         | 0         | 0               |
|           | Maxwell Holding     | 12                  | 12                               | 0%                                  | 0          | 0         | 0         | 0               |
|           | Maxwell North       | 1,524               | 1,524                            | 16%                                 | 246        | 0         | 0         | 0               |
|           | Maxwell Waterlot    | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|           | Oak Grove Water Lot | 5                   | 5                                | 100%                                | 5          | 0         | 0         | 0               |

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|                      | Oak North             | 2,125               | 2,125                            | 60%                                 | 1,282      | 0         | 0         | 0               |
|                      | Pecks Point Water Lot | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Snake Water Lot       | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Walker Water Lot      | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Willow                | 3,448               | 3,448                            | 2%                                  | 70         | 0         | 0         | 0               |
| Fossil Creek         | Manzanita             | 1,049               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Salmon Lake           | 804                 | 2                                | 0%                                  | 1          | 0         | 0         | 0               |
| Hackberry/Pivot Rock | 009                   | 74                  | 74                               | 7%                                  | 5          | 0         | 0         | 0               |
|                      | 011                   | 59                  | 59                               | 2%                                  | 1          | 0         | 0         | 0               |
|                      | 012                   | 9                   | 9                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | 013                   | 31                  | 31                               | 0%                                  | 0          | 0         | 0         | 0               |
|                      | 142A Water Lot        | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Baker                 | 1,791               | 1,791                            | 0%                                  | 0          | 3         | 0         | 0               |
|                      | Bald 4                | 3,874               | 3,874                            | 2%                                  | 63         | 4         | 0         | 0               |
|                      | Bed Bug East          | 983                 | 983                              | 3%                                  | 29         | 0         | 0         | 0               |
|                      | Bed Bug West          | 2,263               | 2,263                            | 2%                                  | 35         | 0         | 0         | 0               |
|                      | Calloway              | 4,525               | 4,525                            | 79%                                 | 483        | 2886      | 196       | 0               |
|                      | Calloway Gathering    | 20                  | 20                               | 100%                                | 6          | 15        | 0         | 0               |
|                      | Clear Creek           | 1,490               | 1,490                            | 4%                                  | 62         | 0         | 0         | 0               |
|                      | Corral                | 633                 | 629                              | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Dry Lake              | 1,930               | 1,930                            | 2%                                  | 35         | 0         | 0         | 0               |
|                      | Fuller Water Lot      | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Good Enough Water Lot | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |
|                      | Horse                 | 473                 | 473                              | 1%                                  | 3          | 0         | 0         | 0               |
|                      | Huffer                | 2,453               | 2,453                            | 2%                                  | 45         | 0         | 7         | 0               |
|                      | Kehl                  | 7,586               | 7,710                            | 16%                                 | 469        | 495       | 36        | 195             |

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|              | Lee Johnson Water Lot   | 0                   | 0                                | 100%                                | 0          | 0         | 0         | 0               |
|              | Long Valley             | 323                 | 323                              | 0%                                  | 0          | 0         | 0         | 0               |
|              | Long Valley Water Lot   | 5                   | 5                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Miller                  | 4,622               | 4,501                            | 2%                                  | 94         | 0         | 7         | 0               |
|              | Neck 1                  | 826                 | 826                              | 0%                                  | 1          | 0         | 0         | 0               |
|              | Neck 2                  | 1,417               | 1,417                            | 2%                                  | 25         | 0         | 0         | 0               |
|              | Neck 3                  | 242                 | 242                              | 17%                                 | 41         | 0         | 0         | 0               |
|              | Potato North            | 1,556               | 1,556                            | 1%                                  | 13         | 0         | 0         | 0               |
|              | Potato South            | 1,679               | 1,679                            | 10%                                 | 87         | 83        | 1         | 0               |
|              | Sandrock                | 1,047               | 1,044                            | 27%                                 | 281        | 0         | 0         | 0               |
|              | Sandrock Draw Water Lot | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Shipping                | 639                 | 639                              | 2%                                  | 12         | 0         | 0         | 0               |
|              | Toms Creek              | 10,325              | 10,304                           | 94%                                 | 244        | 6612      | 2825      | 46              |
|              | Twentyseven Mile        | 2,733               | 2,532                            | 1%                                  | 15         | 0         | 0         | 0               |
|              | Vickers Water Lot       | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Water Lot               | 0                   | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 0                   | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 1                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|              |                         | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Wingfield               | 594                 | 594                              | 1%                                  | 8          | 0         | 0         | 0               |
| Walker Basin | 020                     | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|              | Aztec Water Lot         | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|              | Banfield                | 3,833               | 3,833                            | 24%                                 | 265        | 668       | 0         | 0               |
|              | Banfield Water Lot      | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |

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|               | Cherry Tree Water Lot   | 6                   | 6                                | 33%                                 | 2          | 0         | 0         | 0               |
|               | East Snake Ridge        | 1,765               | 1,765                            | 10%                                 | 180        | 0         | 0         | 0               |
|               | Harris Meadow Water Lot | 3                   | 3                                | 72%                                 | 2          | 0         | 0         | 0               |
|               | Harris Water Lot        | 27                  | 27                               | 73%                                 | 20         | 0         | 0         | 0               |
|               | Horse Knoll             | 6,273               | 3,818                            | 30%                                 | 1859       | 0         | 0         | 0               |
|               | Kitty Pan Water Lot     | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Lucky Water Lot         | 8                   | 8                                | 100%                                | 4          | 4         | 0         | 0               |
|               | Mahan Horse             | 258                 | 258                              | 5%                                  | 12         | 0         | 0         | 0               |
|               | Mahan Park              | 160                 | 160                              | 55%                                 | 88         | 0         | 0         | 0               |
|               | Mesa Water Lot          | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Middle Snake Ridge      | 2,024               | 2,024                            | 57%                                 | 1148       | 0         | 0         | 0               |
|               | Peewee Water Lot        | 3                   | 3                                | 100%                                | 3          | 0         | 0         | 0               |
|               | Pine                    | 3,206               | 3,206                            | 92%                                 | 919        | 2033      | 0         | 0               |
|               | Sams Butte Water Lot    | 2                   | 2                                | 67%                                 | 1          | 0         | 0         | 0               |
|               | Snake Ridge Water Lot   | 1                   | 1                                | 100%                                | 1          | 0         | 0         | 0               |
|               | Steer                   | 2,860               | 2,860                            | 9%                                  | 144        | 125       | 0         | 0               |
|               | Summer Heifer           | 1,369               | 1,369                            | 10%                                 | 143        | 0         | 0         | 0               |
|               | Toilet Paper Water Lot  | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Turkey Draw Water Lot   | 8                   | 8                                | 0%                                  | 0          | 0         | 0         | 0               |
|               | Underpass               | 510                 | 510                              | 100%                                | 8          | 502       | 0         | 0               |
|               | West Snake Ridge        | 1,882               | 1,540                            | 43%                                 | 801        | 0         | 0         | 0               |
| Willow Valley | Antelope                | 1,191               | 1,191                            | 87%                                 | 86         | 952       | 1         | 0               |
|               | Bushy Knoll Waterlot    | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|               | D7                      | 791                 | 791                              | 100%                                | 176        | 613       | 2         | 0               |

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|                 | Deer                          | 725                 | 725                              | 88%                                 | 174        | 467       | 0         | 0               |
|                 | Gathering Pasture             | 71                  | 71                               | 54%                                 | 38         | 1         | 0         | 0               |
|                 | Mud Lake                      | 1,373               | 1,373                            | 30%                                 | 32         | 340       | 0         | 35              |
|                 | North Riparian                | 236                 | 236                              | 100%                                | 166        | 70        | 0         | 0               |
|                 | Randall                       | 260                 | 260                              | 100%                                | 152        | 108       | 0         | 0               |
|                 | South Riparian                | 126                 | 126                              | 99%                                 | 117        | 8         | 0         | 0               |
| Windmill        | Luke Mountain                 | 10,202              | 34                               | 0%                                  | 0          | 0         | 0         | 0               |
| 13 Ranch        | Gordon Pasture                | 112                 | 112                              | 100%                                | 0          | 112       | 0         | 0               |
|                 | Gordon Pasture                | 2,186               | 2,186                            | 69%                                 | 122        | 427       | 967       | 0               |
|                 | Highway 260 Pasture           | 1,377               | 1,377                            | 41%                                 | 154        | 381       | 29        | 0               |
|                 | Horse Pasture                 | 257                 | 257                              | 27%                                 | 32         | 38        | 0         | 0               |
|                 | Hunter Pasture                | 3,201               | 3,201                            | 85%                                 | 145        | 1781      | 809       | 0               |
|                 | North Pasture                 | 3,309               | 3,309                            | 100%                                | 366        | 1332      | 1611      | 0               |
|                 | Snowshoe Pasture              | 4,471               | 4,471                            | 100%                                | 77         | 4315      | 79        | 0               |
| A - Cross       | Rose Creek Pasture            | 1,872               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Armer Mountain  | Hopkins Pasture               | 7,978               | 4,836                            | 59%                                 | 1064       | 3307      | 59        | 280             |
|                 | Salome Pasture                | 6,276               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Bar X           | Bar X Pasture                 | 687                 | 687                              | 98%                                 | 214        | 459       | 0         | 0               |
|                 | Cross Y II Pasture            | 1,411               | 1,411                            | 99%                                 | 263        | 768       | 370       | 0               |
|                 | Haigler Pasture               | 1,179               | 1,163                            | 98%                                 | 720        | 441       | 0         | 0               |
|                 | Lower Dry Creek               | 1,464               | 703                              | 48%                                 | 86         | 616       | 0         | 0               |
|                 | Upper Dry Creek               | 1,412               | 1,132                            | 64%                                 | 8          | 866       | 30        | 0               |
|                 | Westhole Pasture              | 1,182               | 477                              | 40%                                 | 76         | 401       | 0         | 0               |
| Bryant Mountain | Bryant Pasture                | 2,684               | 12                               | 0%                                  | 0          | 0         | 0         | 0               |
| Buzzard Roost   | Buzzard Roost Pasture         | 3,549               | 681                              | 19%                                 | 14         | 666       | 0         | 0               |
|                 | Cataract Tank Holding Pasture | 53                  | 53                               | 24%                                 | 0          | 2         | 10        | 0               |

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| Allotment   | Pasture                          | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|-------------|----------------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|             | Copper Mountain Pasture          | 10,649              | 8,080                            | 21%                                 | 155        | 2026      | 44        | 0               |
|             | Dinner Creek Pasture             | 549                 | 549                              | 0%                                  | 0          | 0         | 0         | 0               |
|             | Headquarters Pasture             | 746                 | 746                              | 99%                                 | 0          | 733       | 0         | 2               |
|             | Holding Pasture                  | 151                 | 151                              | 0%                                  | 0          | 0         | 0         | 0               |
|             | Indian Camp Reservoir            | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|             | Jerky Butte Pasture              | 2,069               | 1,771                            | 23%                                 | 23         | 416       | 31        | 0               |
|             | Juniper Flat Holding Pasture     | 1,096               | 88                               | 0%                                  | 0          | 0         | 0         | 0               |
|             | Juniper Flat Pasture             | 941                 | 533                              | 0%                                  | 0          | 0         | 0         | 0               |
|             | Lacy Holding Pasture             | 251                 | 251                              | 100%                                | 0          | 231       | 19        | 0               |
|             | Middle Pasture                   | 9,061               | 9,061                            | 48%                                 | 351        | 2918      | 1019      | 93              |
|             | North Shipping Pasture           | 741                 | 325                              | 1%                                  | 7          | 0         | 0         | 0               |
|             | Pine Mountain Pasture            | 9,723               | 9,512                            | 50%                                 | 1477       | 2597      | 762       | 0               |
|             | Redman Mesa Pasture              | 4,458               | 4,458                            | 48%                                 | 200        | 1915      | 7         | 0               |
|             | Redman Mesa Tank Holding Pasture | 16                  | 16                               | 0%                                  | 0          | 0         | 0         | 0               |
|             | Shipping Pasture                 | 83                  | 72                               | 0%                                  | 0          | 0         | 0         | 0               |
|             | Thoroughbred Pasture             | 2,975               | 1,750                            | 21%                                 | 28         | 604       | 0         | 0               |
|             | Trap                             | 2                   | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
|             |                                  | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|             |                                  | 3                   | 3                                | 0%                                  | 0          | 0         | 0         | 0               |
|             |                                  | 4                   | 4                                | 0%                                  | 0          | 0         | 0         | 0               |
|             |                                  | 7                   | 7                                | 0%                                  | 0          | 0         | 0         | 0               |
|             |                                  | 9                   | 9                                | 92%                                 | 3          | 5         | 0         | 0               |
| Cedar Bench | FU Pasture                       | 318                 | 318                              | 76%                                 | 31         | 211       | 0         | 0               |

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| Allotment            | Pasture                  | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|----------------------|--------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                      | Open Pasture             | 3,311               | 1,161                            | 2%                                  | 27         | 44        | 0         | 0               |
|                      | Ranch Pasture            | 691                 | 691                              | 82%                                 | 119        | 445       | 3         | 0               |
|                      | YH Pasture               | 374                 | 374                              | 0%                                  | 0          | 0         | 0         | 0               |
| Center Mountain      | North Pasture            | 4,430               | 1,204                            | 0%                                  | 17         | 0         | 0         | 0               |
|                      | South Pasture            | 5,323               | 164                              | 0%                                  | 0          | 0         | 0         | 0               |
| Cherry Creek         | Cherry Holding Pasture   | 931                 | 100                              | 3%                                  | 31         | 0         | 0         | 0               |
|                      | Dinner Pasture           | 7,208               | 3,825                            | 0%                                  | 12         | 0         | 0         | 0               |
|                      | Olligar Pasture          | 6,062               | 117                              | 0%                                  | 0          | 0         | 0         | 0               |
|                      | South Cherry Pasture     | 10,070              | 16                               | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Squaw Holding Pasture    | 393                 | 5                                | 0%                                  | 0          | 0         | 0         | 0               |
| Christopher Mountain | Highway 260 West Pasture | 3,012               | 3,012                            | 100%                                | 490        | 1915      | 607       | 0               |
|                      | Holding Pasture          | 239                 | 239                              | 100%                                | 190        | 41        | 9         | 0               |
|                      |                          | 626                 | 626                              | 100%                                | 147        | 472       | 7         | 0               |
|                      | Mescal Ridge Pasture     | 5,218               | 2,759                            | 50%                                 | 711        | 1804      | 115       | 0               |
| Cross V              | Bean Patch Pasture       | 3,641               | 13                               | 0%                                  | 0          | 13        | 0         | 0               |
|                      | Beaver Valley            | 2,714               | 142                              | 5%                                  | 0          | 139       | 3         | 0               |
|                      | Brody Pasture            | 2,164               | 2,164                            | 64%                                 | 288        | 934       | 2         | 167             |
|                      | Diamond Pasture          | 4,219               | 4,099                            | 96%                                 | 313        | 3725      | 17        | 0               |
|                      | Dry Dude Pasture         | 1,825               | 1,825                            | 41%                                 | 0          | 0         | 0         | 742             |
|                      | East Verde Pasture       | 9,517               | 9,187                            | 90%                                 | 2116       | 3661      | 213       | 2,604           |
|                      | Star Valley Pasture      | 5,844               | 14                               | 0%                                  | 0          | 14        | 0         | 0               |
|                      | Trap                     | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
| Crouch Mesa          | Brewer Pasture           | 1,304               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
|                      | Deadman Pasture          | 1,034               | 417                              | 1%                                  | 13         | 0         | 0         | 0               |
|                      | Mesa Pasture             | 2,682               | 104                              | 4%                                  | 0          | 104       | 0         | 0               |

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| Allotment       | Pasture                    | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|-----------------|----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
| Dagger          | Oak Creek Mesa Pasture     | 17,985              | 1,840                            | 0%                                  | 1          | 0         | 0         | 0               |
| Deadman Mesa    | Nash Point Pasture         | 394                 | 388                              | 62%                                 | 193        | 50        | 0         | 0               |
|                 | Upper Fossil Creek Pasture | 3,241               | 62                               | 2%                                  | 61         | 0         | 0         | 0               |
|                 | Upper Mesa Pasture         | 2,061               | 347                              | 2%                                  | 16         | 23        | 0         | 0               |
| Del Shay        | Del Shay Pasture           | 3,703               | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Ellinwood       | Cottonwood Pasture         | 8,644               | 6,119                            | 14%                                 | 68         | 1,178     | 0         | 0               |
|                 | Highway 260 East Pasture   | 4,639               | 4,639                            | 95%                                 | 1052       | 1407      | 1883      | 59              |
|                 | Horse Mountain Pasture     | 3,961               | 3,219                            | 79%                                 | 288        | 2464      | 391       | 0               |
|                 | Hunter Creek Pasture       | 931                 | 931                              | 90%                                 | 370        | 453       | 19        | 0               |
| Flying V        | Gentry Pasture             | 3,036               | 1,943                            | 64%                                 | 110        | 1271      | 561       | 0               |
| Frio Canyon     | Deadman Pasture            | 4,232               | 1,539                            | 0%                                  | 8          | 0         | 0         | 0               |
|                 | Dump Pasture               | 3,674               | 706                              | 1%                                  | 48         | 0         | 0         | 0               |
|                 | North Turkey Pasture       | 909                 | 42                               | 0%                                  | 0          | 0         | 0         | 0               |
|                 | South Turkey Pasture       | 1,239               | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
| Gentry Mountain | Gentry Pasture             | 4,356               | 1,172                            | 23%                                 | 192        | 784       | 44        | 0               |
|                 | Sheep Pasture              | 4,953               | 4,494                            | 84%                                 | 200        | 3747      | 62        | 144             |
| Green Valley    | Bonita Pasture             | 3,201               | 3,201                            | 47%                                 | 38         | 622       | 0         | 844             |
|                 | Diamond Pasture            | 10,843              | 10,098                           | 73%                                 | 2224       | 5499      | 95        | 129             |
|                 | Ellison Pasture            | 2,090               | 2,090                            | 4%                                  | 47         | 28        | 0         | 3               |
|                 | Holding Pasture            | 68                  | 68                               | 49%                                 | 33         | 0         | 0         | 0               |
|                 |                            | 280                 | 115                              | 41%                                 | 107        | 8         | 0         | 0               |
|                 |                            | 360                 | 348                              | 96%                                 | 337        | 10        | 0         | 0               |
|                 | Kings Ridge Pasture        | 5,516               | 3,005                            | 21%                                 | 650        | 495       | 16        | 0               |
|                 | Moore Pasture              | 4,189               | 4,189                            | 14%                                 | 167        | 0         | 0         | 412             |
|                 | Myrtle-Pyeatt Pasture      | 3,885               | 3,885                            | 69%                                 | 1072       | 1600      | 26        | 0               |

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| Allotment                 | Pasture                    | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|---------------------------|----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                           | Ponderosa Pasture          | 1,497               | 1,497                            | 85%                                 | 657        | 616       | 0         | 0               |
|                           | Trap                       | 3                   | 3                                | 100%                                | 0          | 3         | 0         | 0               |
|                           | Upper Neal Pasture         | 1,940               | 93                               | 5%                                  | 1          | 92        | 0         | 0               |
|                           | Winter Division Pasture    | 10,057              | 188                              | 2%                                  | 77         | 105       | 0         | 0               |
| Greenback                 | Basin Pasture              | 15,008              | 0                                | 0%                                  | 0          | 0         | 0         | 0               |
| Haigler Creek             | Cross Y Pasture            | 1,045               | 1,045                            | 93%                                 | 707        | 251       | 13        | 0               |
|                           | Oxbow Pasture              | 3,099               | 2,937                            | 94%                                 | 978        | 1913      | 27        | 0               |
| Hardscrabble              | Button Flat Pasture        | 1,846               | 1,254                            | 11%                                 | 126        | 72        | 0         | 0               |
|                           | Hardscrabble Pasture       | 98                  | 98                               | 100%                                | 0          | 98        | 0         | 0               |
|                           | Natural Bridge Pasture     | 2,274               | 45                               | 0%                                  | 0          | 0         | 0         | 0               |
|                           | Pine Pasture               | 5,527               | 3,659                            | 58%                                 | 729        | 2433      | 42        | 0               |
|                           | Rock Creek Pasture         | 3,169               | 39                               | 0%                                  | 0          | 0         | 0         | 0               |
|                           | Trap                       | 1                   | 1                                | 100%                                | 0          | 1         | 0         | 0               |
|                           |                            | 2                   | 1                                | 0%                                  | 0          | 0         | 0         | 0               |
|                           |                            | 5                   | 5                                | 0%                                  | 0          | 0         | 0         | 0               |
|                           | UA Pasture                 | 225                 | 225                              | 0%                                  | 0          | 0         | 0         | 0               |
| Heber-Reno Sheep Driveway | Sheep Driveway             | 4,233               | 4,233                            | 100%                                | 318        | 736       | 299       | 2872            |
|                           |                            | 11,463              | 6,380                            | 47%                                 | 661        | 2935      | 1299      | 435             |
| Indian Gardens            | Dead Horse Pasture         | 2,155               | 2,155                            | 98%                                 | 918        | 1049      | 151       | 0               |
|                           | Dick Williams Pasture      | 6,633               | 6,633                            | 90%                                 | 1164       | 2106      | 1255      | 1,440           |
|                           | Roberts Mesa North Pasture | 270                 | 270                              | 0%                                  | 0          | 0         | 0         | 0               |
|                           |                            | 3,644               | 3,644                            | 8%                                  | 82         | 69        | 0         | 140             |
|                           | Roberts Mesa South Pasture | 3,435               | 3,435                            | 99%                                 | 1173       | 2174      | 51        | 0               |
| O.W.                      | East Canyon Creek Pasture  | 1,026               | 1,015                            | 99%                                 | 160        | 197       | 0         | 658             |

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| Allotment       | Pasture                     | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|-----------------|-----------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|                 | Headquarters North Pasture  | 88                  | 88                               | 100%                                | 88         | 0         | 0         | 0               |
|                 | Headquarters South Pasture  | 86                  | 86                               | 100%                                | 31         | 0         | 0         | 55              |
|                 | Mule Creek Pasture          | 1,079               | 1,076                            | 100%                                | 215        | 52        | 412       | 398             |
|                 | West Canyon Creek Pasture   | 2,080               | 2,080                            | 100%                                | 193        | 388       | 655       | 844             |
| Payson          | Boy Scout Pasture           | 9,571               | 9,324                            | 96%                                 | 1922       | 2962      | 3122      | 1159            |
|                 | Girl Scout Pasture          | 10,079              | 10,072                           | 99%                                 | 2669       | 4793      | 1963      | 584             |
|                 | Hells Half Acre Pasture     | 7,298               | 1,156                            | 16%                                 | 276        | 337       | 543       | 0               |
|                 | Holding Trap                | 6                   | 6                                | 100%                                | 0          | 6         | 0         | 0               |
| Pine            | Buckhead Holding Pasture    | 269                 | 269                              | 0%                                  | 0          | 0         | 0         | 0               |
|                 | Cedar Mesa North Pasture    | 6,481               | 6,456                            | 76%                                 | 1281       | 3009      | 623       | 0               |
|                 | Cedar Mesa South Pasture    | 2,660               | 83                               | 1%                                  | 0          | 16        | 0         | 0               |
|                 | Red Hills Pasture           | 2,451               | 740                              | 0%                                  | 0          | 2         | 0         | 0               |
|                 | Strawberry Mountain Pasture | 2,164               | 2,164                            | 97%                                 | 784        | 721       | 598       | 0               |
|                 | Strawberry Point Pasture    | 2,227               | 2,227                            | 96%                                 | 733        | 907       | 453       | 35              |
| Pleasant Valley | Haught Pasture              | 537                 | 13                               | 0%                                  | 1          | 0         | 0         | 0               |
|                 | Northeast Pasture           | 2,251               | 47                               | 2%                                  | 1          | 46        | 0         | 0               |
| Red Lake        | Frog Pasture                | 3,725               | 3,725                            | 100%                                | 1663       | 1663      | 272       | 0               |
|                 | Ramer Tank                  | 2                   | 2                                | 100%                                | 0          | 2         | 0         | 0               |
|                 | Red Lake Pasture            | 9,699               | 9,699                            | 100%                                | 1194       | 5492      | 1257      | 1756            |
|                 | Second Pasture              | 5,806               | 5,806                            | 74%                                 | 735        | 3387      | 53        | 111             |
| Seventy Six     | Coffeepot Pasture           | 5,921               | 2                                | 0%                                  | 0          | 0         | 0         | 0               |
| Tonto Basin     | Clover/Bearhead Pasture     | 36,364              | 17,176                           | 5%                                  | 123        | 476       | 0         | 1,387           |

| Allotment | Pasture                | Total Pasture Acres | Acres of Pasture in Project Area | % of Pasture w/ Proposed Treatments | Acres High | Acres Mod | Acres Low | *Acres Decrease |
|-----------|------------------------|---------------------|----------------------------------|-------------------------------------|------------|-----------|-----------|-----------------|
|           | Holding Pasture        | 98                  | 98                               | 100%                                | 0          | 13        | 0         | 85              |
|           |                        | 229                 | 229                              | 38%                                 | 0          | 0         | 0         | 87              |
|           |                        | 319                 | 319                              | 84%                                 | 1          | 267       | 0         | 0               |
| Young     | Round Mountain Pasture | 2,466               | 2,181                            | 66%                                 | 51         | 1291      | 152       | 0               |

\* Severe disturbance treatments could include treatment options such as tree planting, which over time would reduce production.

## Effects from Use of In-woods Processing and Storage Sites

The development and use of the proposed processing areas would make any potential forage unavailable to livestock grazing for approximately 20 years from their initial development. These processing sites would reduce the amount of forage available in these areas which could last up to 20 years. This effect would be small compared to the size of the allotment, and would likely have no noticeable effect on livestock management.

## Cumulative Effects Analysis

The area considered for cumulative effects analysis includes 100 percent of the acres within allotments that occur within the project area. This is a logical boundary because changes to grazing management in one pasture of an allotment affect the management in the entire allotment.

The time frame for these combined effects is 23 years, 20 years for the project implementation and three years following implementation for the forage to respond to treatments. Changes in conditions of the vegetation depend on the presence or absence of favorable growing conditions. If growing conditions are favorable, understory plants would generally recover from the effects of the proposed forest management activities within one to three years. If growing conditions are not favorable, plant recovery would occur more slowly (up to two or more years). Vegetation recovery from the other activities and natural events may take this long depending on annual weather conditions particularly annual precipitation.

Continuation of current management, absent the proposed treatments in the Rim Country project area, would result in further reductions in forage production over time with the increase in tree density. Past restoration projects within and close to the project area have increased forage and understory vegetation. Forest Service policy and Land Management Plan direction is to manage for uneven-aged stands and allow fire to return to its nature role in ecosystems. Current grazing management uses adaptive management to meet objectives established in existing allotment management plans. Past vegetation and prescribed fire projects have resulted in the current resource conditions.

The cumulative effects on livestock grazing management and livestock forage from Alternative 1 would be no change in the short term, but would result in a long-term decrease in forage with the increase in tree density. The 4FRI Rim Country project area would not be treated with the additional activities proposed. When other current and reasonably foreseeable projects are considered, approximately 282,290 acres would be treated (168,416 acres of mechanical thinning and 113,875 acres of burning), which would increase forage production. Livestock grazing management decisions, such as if pastures would be rested or deferred would be determined through inspections. With fewer treatment acres, there would be fewer effects on pasture rotations.

The treatments proposed in Alternatives 2 and 3 would overlap with the other current and reasonably foreseeable projects in the project area. Any overlap, when added to forage production improvements from other projects, the understory species in Rim Country would result in a positive cumulative increase in production, more in alternative 2 than in alternative 3. Livestock grazing management decisions such as pasture rest or deferred rotations would increase with the acres of treatments in both action alternatives, more in alternative 2 than 3, and would be determined through inspections.

## Irreversible and Irretrievable Commitments of Resources

*Unavoidable Adverse Effects, Irreversible and Irretrievable Commitment of Resources, Compliance with the Land Management Plan(s).*

There would be no long term unavoidable adverse effects in any of the Alternatives related to livestock grazing because effects would be short term in nature and would not affect grazing permit capacity.

There are also no irreversible and irretrievable commitments of resources because forage grows back after treatments or after managed grazing.

The alternatives are in compliance with the Apache-Sitgreaves, Coconino, and Tonto Land Management Plans' direction for livestock grazing.

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