

**PROPOSED ACTION
GRAZING MANAGEMENT
FOR THE CORVA AND DOUBLE A GRAZING ALLOTMENTS
January 2009**

Introduction

The Williams Ranger District of the Kaibab National Forest is proposing to re-authorize cattle grazing on the Corva and Double A Allotments (see Maps 1 and 2). Grasslands, pinyon/juniper and ponderosa pine dominate the vegetation on the two joining allotments at an elevation ranging from 5,200 to 7,300 feet.

The Corva Allotment has 13,285 Forest Service acres approximately four miles west of Williams and north of Interstate 40. Allotment management follows a 10-pasture deferred rest rotation grazing system. Current permitted use for the allotment allows up to 324 head of yearling cattle from 5/15-10/31. The Corva Allotment is located within all or portions of T21N, R1W, Sections 2-4; T22N, R1W, Sections 23-26, 33-36; T22N, R1E, Sections 15-22, 26-35; T21N, R1E, Sections 3-6.

The Double A Allotment has 43,732 Forest Service acres approximately nine miles northwest of Williams and north of Interstate 40. Allotment management follows a five-pasture deferred rotation grazing system. Current permitted use for the allotment allows up to 250 head of cattle from 11/1-5/31. The Double A Allotment is located within all or portions of T23W, R1W, Sections 1-36; T23N, R2W, Sections 1, 12, 13-25, and 36; T22N, R1W, Sections 1-11, 14-30, 32-35; T22N, R2W, Sections 1, 12, 13, 24, and 25.

History, Existing and Desired Conditions

Corva Allotment

From 1875 to 1893 the Corva Allotment was unfenced and used in conjunction with surrounding allotments, primarily as sheep range. From 1893 to 1920 it was grazed by both cattle and sheep. From 1920 to 1977 it was grazed by cattle, yearlong. Once fenced (sometime in the 1930's), several reductions in permitted livestock numbers were made.

The first reduction was in 1939, from 280 head to 252 head of adult cattle. These numbers were carried until 1947 when David W. Shivers sold to George L. Crowe and numbers were reduced to 225 head. The permit changed hands again in 1952 when Rod Graves acquired it.

Permitted numbers and season of use remained at 225 head yearlong until 1977 when the permit was acquired by Mr. and Mrs. James Jennings. The new permit was issued for 324 yearling cattle to be grazed from May 15 to October 30. The change in the season of use was made due to a lack of adequate winter range on the allotment.

Harry Robertson acquired the permit in 1987 for the same numbers (324 yearlings) and a season of use of May 15 to October 31. Mr. Robertson kept the permit until 2005 when the 55 Ranch, LLC acquired it for the same numbers and season.

Actual use records indicate that from 1941 through 2008 there have been a number of years that some level of non-use was taken (see table 1).

Table 1. Corva Allotment History of Use from 1941 to 2008.

Year(s)	Permitted Use Number and AUM's on Corva Allotment	Actual Use Number and AUM's	Comments
1941-1947	252 adult cattle yearlong; 3,024 AUM's	189-266 head; 2,116-2,034 AUM's	
1948-1975	225 adult cattle yearlong; 2,700 AUM's	143-233 head; 1,716-2,762 AUM's	
1976	225 adult cattle yearlong; 2,700 AUM's	0	Total non-use taken in 1976
1977	225 adult cattle from 5/1-12/31; 1,440 AUM's	225 head; 1,440 AUM's	
1978-1986	324 yearling cattle from 5/1-10/30; 1,246 AUM's	14-324 head; 75-1,323 AUM's	Total non-use taken in 1982 and 1984
1987-1994	324 yearling cattle from 5/1-10/31; 1,268 AUM's	5-233 head; 29-1,279 AUM's	Total non-use taken in 1988
1995-1999	324 yearling cattle from 5/1-10/31; 1,268 AUM's	No data found	
2000-2008	324 yearling cattle from 5/1-10/31; 1,268 AUM's	170-324 head; 1,028-1,268 AUM's	Total non-use taken in 2000 & 2002 thru 2004

Double A Allotment

Prior to 1934 the Double A Allotment was unfenced and grazed by both sheep and cattle. In 1909, grazing permits were issued to a W. H. Campbell for 1,050 adult cattle (yearlong) and 4,000 sheep to run from April 10 to November 20. Another permit was issued to Mr. Ohaca for 2,000 sheep (season unknown).

Cattle numbers were reduced in 1910, 1913, 1915, 1916, 1918, and 1925, based on resource conditions and as the permit changed hands.

The Ohaca sheep permit was reduced to 2,000 head in 1912 following a transfer to the Martin & Martin Company. In 1919 the Ash Creek Cattle Company bought them out and the sheep permit was changed to cattle, with a 20% reduction in animal numbers. In 1924, the Ash Creek Cattle Company was issued a grazing permit for 1,240 adult cattle and 12 horses yearlong, and 748 adult cattle seasonally (4/1-11/30).

The permit transferred to the Three V Livestock Company in 1925 and was changed to sheep in 1927; 11,500 head were permitted from May 1 to October 15 but it appears that actual use was 6,000 sheep and non-use was taken for the remainder. In 1934 the permit was changed back to adult cattle; 972 head yearlong.

Cattle numbers were reduced again in 1940 to 622 adult cattle yearlong. Permitted numbers stayed put until 1969 when the allotment was changed to seasonal use (3/1-10/31); 980 yearling cattle and 10 horses were permitted.

In 1975 the allotment converted back to sheep grazing with 4,225 head permitted from May 26 to October 15. Numbers were reduced throughout the 1970's and early 1980's with 2,862 permitted from May 20 to October 31 in 1982.

The allotment was converted back to cattle when Don Brackin acquired it in 1983, with 250 adult cattle permitted from November 1 to May 31.

Since 1983 permitted numbers and season of use has stayed the same at 250 adult cattle from November 1 to May 14. Actual use during that period varied with partial non-use taken 14 times in those 26 years (54% of the time). The current permittees acquired the permits in 2004 for the same numbers and season of use. See Table 2 for the history of use from 1940 through 2008.

Table 2. Double A Allotment History of Use from 1940 to 2008.

Year(s)	Permitted Use Number and AUM's on Double A Allotment	Actual Use Number and AUM's	Comments
1940-1962	622 adult cattle yearlong; 7,464 AUM's	356-690 head; 1,415-7,622 AUM's	
1963-1968	622 adult cattle yearlong; 7,464 AUM's	688-800 yearlings; 4,441-6,400 AUM's	
1969-1974	980 yearling cattle from 3/1-10/31; 10 horses from 3/1-10/31 7,920 AUM's	674-1094 head; 5,472-8,750 AUM's	Total non-use taken in 1973
1975-1976	4,225 sheep from 5/26-10/15;	Unable to determine; Incomplete data	Partial non-use taken in both years; about 25%
1977-1978	4,225 sheep from 5/20-10/31;	Unable to determine; Incomplete data	Partial non-use taken in both years; ~10-30%
1979-1980	3,225 sheep from 5/20-10/31;	Unable to determine; Incomplete data	Partial non-use taken in both years; about 25%
1981-1982	2,862 sheep from 5/20-10/31;	Unable to determine; Incomplete data	Partial non-use taken in 1981; about 25%
1983-2008	250 adult cattle from 11/1-5/14; 2,116 AUM's	30-250 head; 207-1,934 AUM's	Partial non-use taken in 14 of 26 years (54% of time)

Corva and Double A Allotments

The topography is flat to steep. Several hills, ridges, and cinders cones exist on the allotments including: Corva Hill, Double A Knoll, Paradise Ridge, Fitzgerald Hill, Antolini Hill, and Hearst Mountain. Several sandstone quarries exist in the Double A South Pasture. Small ephemeral drainages (Ash Fork Draw, Juan Tank Canyon, Polson Dam Draw, Martin Dam Draw, and Johnson Canyon) occur throughout the allotments, but no riparian vegetation or hydric soils are present. These drainages run during snow melt and heavy monsoon storms.

Juniper grassland is the dominant cover type on the Double A Allotment and on the west half of the Corva Allotment. Ponderosa pine occurs on the east half of the Corva Allotment. Blue grama and bottlebrush squirreltail are the primary grassland species on the allotments.

Juniper treatments (i.e. grassland and savannah restoration) have taken place on both allotments as far back as the 1950's, and continue to this day. These treatments have allowed native grass and shrub species to re-establish, providing forage to wildlife and livestock, and increasing ground cover which reduces erosion.

Since the current livestock operator acquired the permits in 2004, the two allotments have been managed as one yearlong operation.

Permitted cattle numbers, under the current grazing management system, fall within the carrying capacity of the allotments. Carrying capacity for this analysis is based on: 1) actual use data, 2) condition and trend monitoring, 3) cattle and wildlife use patterns, 4) cattle health and condition, 5) soil surveys (Terrestrial Ecosystem Survey), 6) forage production estimates, and 7) professional opinion.

Our records show no utilization over the 40 percent guideline established for the allotments.

Seven Parker three-step monitoring transects were established on the Corva Allotment in 1954. One new transect was established in 1961 and another in 1979. One of these (C8) is in a location that does not represent the area and has been dropped from further consideration. The location for C4 has been moved about ¼ miles northeast of the original location to a more appropriate monitoring site that shares the same soil unit.

Seven Parker three-step monitoring transects were established on the Double A Allotment in 1960. Sometime between 1960 and 1969 one transect (C5) was either destroyed or altered to the point that it was no longer a viable monitoring location. No reason for dropping that transect was given in the 1969 analysis write-up.

Paced frequency transects were read at eight locations on Corva and six on Double A in the fall of 2008. An additional 4 were established and read at two exclosures in the Southwest Pasture of the Double A (2 inside and 2 outside of each exclosure).

The transects represent the major soil map units.

The trend for total plant cover and grass cover on the Corva Allotment is static in most areas, but downward in some areas since 1982. The trend on the Double A Allotment is static or upward in all key areas since 1981 except one, where the increase in juniper has negatively affected the understory.

Plant communities on both allotments have changed since the early 1980's. Juniper has invaded or increased on many grassland and savannah soils. Cool season grass species have greatly declined and have been replaced by the warm season grass blue grama. A reduction in cool season grass species is following a trend found throughout the Forest in grazed and ungrazed areas. The cool season grass reduction is most likely caused by a decrease in winter/spring moisture, an increase in average temperature, and/or an increase in warm season grasses.

These trends exist under the current cattle grazing system and within the current utilization guideline for cattle and wildlife. Grazing by livestock and wildlife has remained within this utilization guideline. Cattle must be moved early if the grazing intensity level is reached prior to planned rotations, or cattle may not enter an area if grazing intensity from wildlife already meets the grazing intensity guideline (see page 3, utilization). The current permittee has been very responsive to drought by reducing cattle use (see Tables 3 and 4).

Soil condition status is obtained from the Kaibab National Forest Terrestrial Ecosystems Survey (TES) (USDA 1995). Based on TES predictions, satisfactory, unsatisfactory, and unstable soils exist on the Double A and Corva Allotments. Of 56,318 acres on the allotments, 40,685 acres are in satisfactory soil/watershed condition (72%); 97 acres are naturally unstable (0%); and 15,318 acres are in unsatisfactory condition (28%). These data were collected for the TES from 1979 to 1986. The TES data combines soil map unit data from across the Forest, so it is not representative of any specific location on the ground.

Litter cover has increased on most of the transects since 1981, leading to a decline in bare ground. Increased ground cover and organic matter both improve soil condition; therefore we expect that soil conditions have improved in most areas of the allotments. Most key areas appear to have stable soils, without rills or gullies. However, some areas on the allotments have seen a decline in understory plant cover due to juniper encroachment and/or drought. In some of these areas, there are water flow patterns showing evidence of sheet erosion.

Purpose and Need

The Corva and Double A Allotments are scheduled for an environmental analysis of grazing use on the Kaibab National Forest, as required by the Rescission Act (Burns Amendment 1995). This analysis is required in order to ensure that cattle grazing is consistent with the goals, objectives, standards and guidelines of the Kaibab National Forest Plan (1987, as amended).

The purpose of this project is to re-authorize cattle grazing on the Corva and Double A Allotments, and to ensure that the allotment is managed in a manner that maintains and/or moves the area toward Forest Plan objectives and desired conditions. Understory species composition and ground cover is shifting as a result of recent climate patterns and an increase in juniper, and is occurring regardless of cattle use. The recent climate patterns could be occurring as a result of global climate change.

Continued monitoring will help managers to evaluate the status of maintaining and improving rangeland conditions into the future.

Management is consistent with Forest Plan standards, guidelines, goals, and objectives.

The Corva and Double A Allotments contain lands identified as suitable for domestic livestock grazing in the Kaibab Forest Plan. Continued livestock grazing is consistent with the goals, objectives, standards, and guidelines of the Forest Plan (USDA Forest Service, 1987).

Proposed Action

A Proposed Action has been developed to meet the project's purpose and need. The Proposed Action would continue current grazing management by issuing a new grazing permit and continuing adaptive management and monitoring.

Authorization

The Williams District of the Kaibab National Forest specifically proposes the following:

Reauthorize grazing on the Corva and Double A Allotments.

- The authorization would be through a term grazing permit on the Corva and Double A Allotments for up to 250 head of adult cattle (cow-calf) year-round, which equals 3,000 Animal Unit Months (AUM's). The two allotments have been managed like this since 2004.
- The proposed grazing management system will incorporate yearlong rest and seasonal deferment, with an emphasis on spring deferment. All pastures, except the upper elevation pastures that receive significant snowfall, are available for use during the year to increase seasonal deferment. Spring deferment, from March 15 to June 15, will include minimizing the number of pastures used during this time period, and not using the same pasture again the following spring.
- The proposed permitted use is based on professional opinion, condition and trend studies completed in 2008, actual use data for the allotment for the past 20 years, and the effects of this use on resource conditions. It also reflects the estimated annual forage production available for livestock on the allotment considering climate, grazing period, grazing occurrence, timing, frequency, and intensity of grazing proposed, as well as proper livestock management.
- The current utilization¹ guideline would continue to allow up to 40 percent use by cattle and/or wildlife at the end of the cattle grazing season. This includes "conservative" grazing intensity,

¹ Utilization is the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). It is a comparison of the amount of herbage left compared with the amount of

which is measured before the end of the growing season and is used in determining when livestock will move to the next pasture in the rotation, in combination with other factors such as weather patterns, likelihood of plant regrowth, and previous years' utilization levels. Livestock would move to the next pasture when grazing intensity approaches a conservative level (40%) before August 30. The pasture would not be grazed again during the same grazing season.

- The period of use will not exceed the carrying capacity of each pasture.

Adaptive Management

- The Proposed Action includes the continued use of adaptive management, which provides more flexibility for managing cattle. Adaptive management allows the Forest Service to adjust the timing, period and occurrence of cattle grazing, movement of cattle within the allotment, and cattle numbers. If adjustments are needed, they are implemented through the Annual Operating Instructions, which would adjust numbers so cattle use is consistent with current productivity. This allows plant, soil, and watershed conditions to be maintained or improved while range improvements are implemented over time. An example of a situation that could call for adaptive management adjustments is drought.
- Adaptive management is designed to provide sufficient flexibility to adapt management to changing circumstances. If monitoring indicates that desired conditions are not being achieved, management will be modified in cooperation with the permittee. Changes may include administrative decisions such as the specific number of livestock authorized annually, specific dates of grazing, class of animal or modifications in grazing area rotations. However, such changes will not exceed the limits for timing, intensity, period, number, occurrence and frequency of cattle grazing defined in this Proposed Action.

Additional Structural Grazing Improvements

A reliable water system would better distribute cattle within the two allotments and provide water to wildlife (see improvement map). Existing dirt stock tanks are often unreliable sources of water in this area. Money for the improvements will come from a combination of grants and partnerships, federal, state, and permittee funds. All the improvements would have archaeology clearances to avoid all archaeological sites. The Forest Service does not have the funds with current projected budget to fund such projects. The improvements would likely be built over the next 10 years; however, the schedule will be dependent on funding.

- A water pipeline system supplied from Double A Lake (located on private land) would be developed to improve water distribution and reliability on the Double A Allotment north of the railroad tracks. Approximately 30 miles of pipeline would be installed below ground with storage tanks and troughs (drinkers) for livestock and wildlife use. The pipeline would primarily follow existing road ways.

The majority of troughs would be installed adjacent to existing stock tanks in order to limit additional disturbances. The pipeline system would be completed in phases, and each phase would be completed only when funding is acquired. As phases of this pipeline are completed, we would evaluate the need for the remaining phases. A power line right-of-way would also be

herbage produced during the year. Utilization is measured at the end of the growing season when the total annual production can be accounted for, and the effects of grazing in the whole management unit can be assessed. Utilization guidelines are intended to indicate a level of use or desired stocking rate to be achieved over a period of years.

established from the railroad grade to Double A Lake along an existing road in order to provide electricity for a water pump. The drinkers will be turned off when the grazing intensity limits are reached in the surrounding area to improve livestock distribution.

- Five water haul sites would be set up with storage tanks and drinkers. These drinkers would be used when there is adequate forage in these areas to support livestock use, but water is limited. Dirt stock tanks are often unreliable sources of water in this area. The storage tanks would be located adjacent to existing roads. The drinkers will be turned off when the grazing intensity limits are reached in the surrounding area to improve livestock distribution.
- Six waterlots would be constructed around existing stock tanks to control access. The waterlots would be open or closed to control the movement of cattle within the allotments. The waterlots would be constructed with wildlife jumps to minimize wildlife impacts. A small loading/working facility (approximately 50' X 100') would also be added to the Brown Tank waterlot.
- Approximately 1.5 miles of fence would be removed from the Corva and Middle Pastures, creating one large pasture. Another 2 to 2.5 miles of fence would be removed from the Orr Pastures (Upper, Lower, Bull). These fences were only necessary when the Corva Allotment was used year-long.

Monitoring

Monitoring is adaptive, and as improved methods are developed these new methods will be considered. Depending on the availability of funding, the type of monitoring and frequency for the monitoring would include:

- Visual observations to be conducted on a yearly basis, and includes: permittee compliance, allotment inspections, range readiness, forage production, rangeland utilization;
- Long-term trend monitoring will be conducted at the historic Parker three step plots on the allotment every 5 to 10 years, or as funding becomes available. Monitoring data at the Parker three step plots currently includes frequency, canopy cover, dry weight rank, comparative yield, photos, and ground cover readings to estimate trend. Plant frequency and ground cover plots were used to estimate trend; the dry weight rank method was used to estimate relative species composition by weight; species composition was estimated by 1/10 acre canopy cover plots; and comparative yield was used to estimate forage production.

Other Considerations

Cultural Resources: Activities associated with allotment improvements will be managed to avoid cultural resource sites and ensure no effect to cultural resources. Before initiating any activities as part of this project, a District Archaeologist will be notified to ensure the proposed activities have cultural resource clearance, and that project personnel are aware of the conditions specified in the final Corva and Double A Allotment Management Plan Cultural Resource Clearance Report. As the improvements are laid out on the ground, if effects on cultural sites cannot be avoided or mitigated, the improvements will not be completed.

The Double A Wild Burro Territory is located north of the railroad tracks of the Double A Allotment. The Kaibab National Forest will work to keep burro numbers between 22 and 35 head, as is designated in the Kaibab Forest Plan.

Juniper tree encroachment has caused watershed conditions in some areas to decline. Approximately 15,000 acres of these allotments have been treated since the 1950's. A portion of these allotments (approximately 13,500 acres) is part of the Winter Range Restoration Area (i.e. grassland and savannah restoration), which will likely be implemented in the next couple of years, depending on funding. Additional treatments will likely be completed in this area, but they are outside the scope of this analysis.

Kaibab Forest Plan Consistency: This action responds to the goals and objectives outlined in the 1987 Kaibab Forest Plan (Forest Plan) and all subsequent amendments, and helps maintain and/or move the project area towards desired conditions described in that plan. This project is consistent with the direction listed in the Forest-wide standards and guidelines, and in the standards and guidelines for the following Management Area (MA): MA 1 Western Williams.

This project is also consistent with the following:

- Congressional intent to allow grazing on suitable lands (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 policy on rangeland management (FSM 2202.1, FSM 2203.1).
- Federal regulation (36 CFR 222.2 (c)) which states that National Forest System lands would be allocated for livestock grazing and these allotment management plans would be prepared consistent with land management plans, and the Clean Water Act of 1948, Clean Air Act of 1955, Endangered Species Act of 1973, and 13186 (Conservation of Migratory Birds), and National Historic Preservation Act 1966, as amended.
- Authorization of livestock grazing permits for a ten-year period is required by law (FLPMA Sec. 402 (a)&(b) (3) and 36 CFR 222.3), unless there is pending disposal, or it would be devoted to other uses prior to the end of ten years, or it would be in best interest of sound land management to specify a shorter term.

Decision to be Made and Timing of Decision

The Williams District Ranger is the Responsible Official for this project and will decide whether or not to re-authorize cattle grazing and in what manner, as described in the Proposed Action, alternatives to the proposed action, or current cattle management.

The Williams District Ranger expects to issue a decision by September 2009. Implementation of the Allotment Management Plan would immediately follow the decision and close of the appeal period (if applicable). Reauthorization of cattle grazing would be for a minimum of ten years. However, future NEPA for additional projects within the allotment, changing rangeland condition, or violations of the term grazing permit could change the length of this decision.

Contact Person

For more information about this proposal, contact Mike Hannemann, Range and Watershed Staff Officer for the Kaibab National Forest at (928) 635-8221, fax (928) 635-8208 or via e-mail at mhannemann@fs.fed.us.

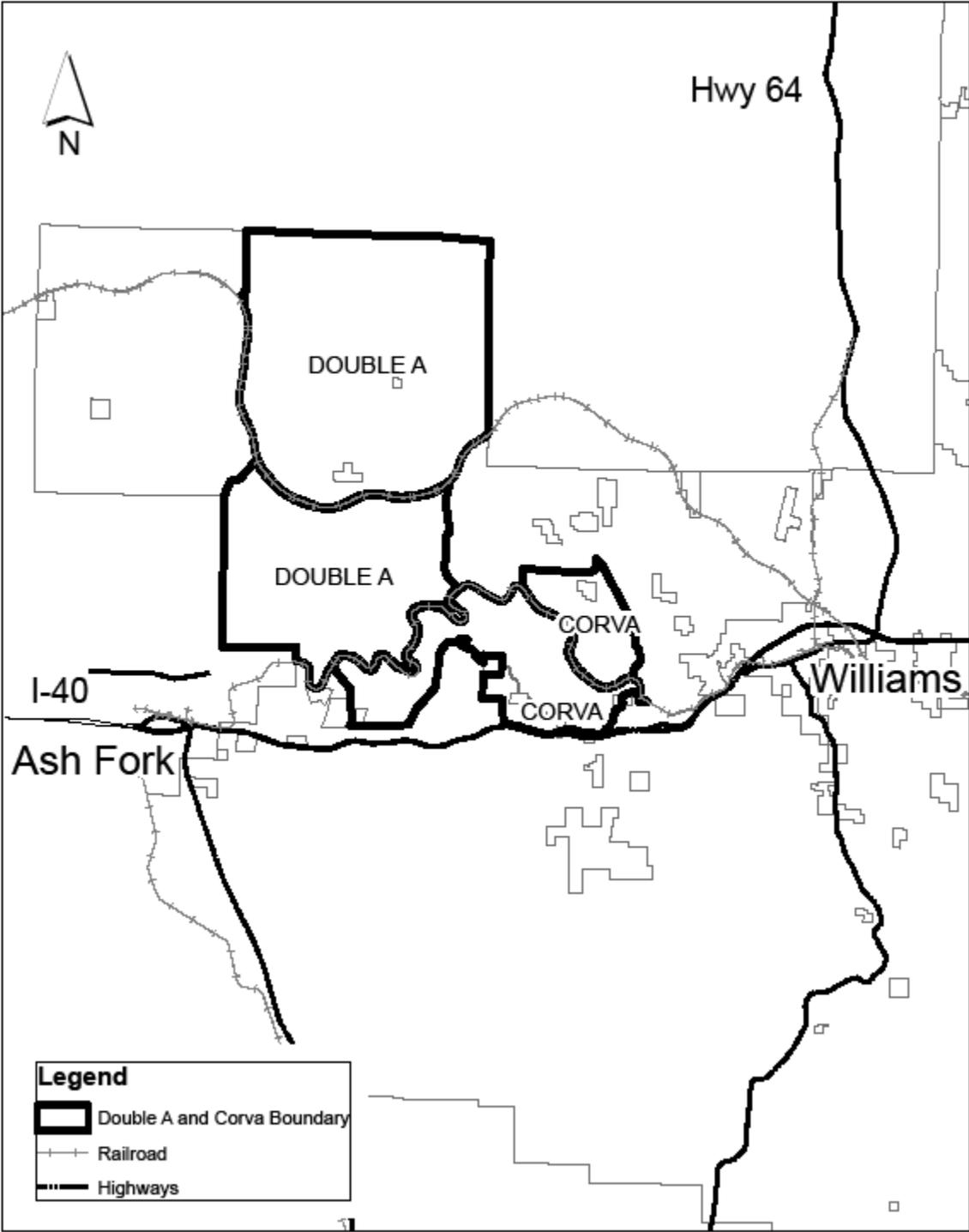
Table 3. Corva Allotment, season of use, actual use numbers, and animal unit months from 1999 to 2008.

Year	Dates	Number (Cattle)	AUM's
2008	5/15-10/31	218	1615
2007	5/15-10/31	190	1062
2006	5/15-10/31	170	1129
2005	5/15-10/31	225	1028
2004	5/15-10/31	0	0
2003	5/15-10/31	0	0
2002	5/15-10/31	0	0
2001	5/15-10/31	324	1268
2000	5/15-10/31	0	0
1999	5/15-10/31	No data	

Table 4. Double A Allotment, season of use, actual use numbers, and animal unit months from 1999 to 2008.

Year	Dates	Number (Cattle)	AUM's
2008	11/1-5/14	200	2343
2007	11/1-5/14	230	1134
2006	11/1-5/14	170	1439
2005	11/1-5/14	170	1129
2004	11/1-5/14	30	207
2003	11/1-5/14	35	300
2002	11/1-5/14	32	77
2001	11/1-5/14	250	1784
2000	11/1-5/14	200	1387
1999	11/1-5/14	250	1851

Map 1. Location Map for Double A and Corva Allotments



Map 2. Double A and Corva Proposed Improvements

