

**Allotment Evaluation (AE)
For
Cundiyo Community (#535)**

Permittee		<u>Authorization Number</u>		
		3001218	3001219	
		3001221	3001235	
		3001237	3001241	
		3001248	3001251	
		3001255		
Livestock Use	Preference AUMs	<u>Permittee</u>	<u>Active</u>	<u>Suspended</u>
		3001218	18	6
		3001219	30	0
		3001221	39	5
		3001235	37	0
		3001237	80	0
		3001241	65	0
		3001248	87	0
		3001251	18	0
		3001255	45	34
		Total	419	45
	Period of Use	<u>Permittee</u>	<u>Kind</u>	<u>Season of Use</u>
		3001218	3 Horse	05/01 – 10/31
		3001219	10 Cattle	11/01 – 01/31
		3001221	7 Horse	06/01 – 08/31
		3001235	6 Cattle	06/01 – 08/31
			2 Horse	05/01 – 10/31
		3001237	6 Cattle	11/01 – 02/28
			2 Horse	05/01 – 10/31
		3001241	3 Cattle	05/01 – 10/31
			10 Cattle	11/01 – 03/31
			2 Horse	06/01 – 08/31
		3001248	5 Cattle	11/01 – 01/31
			11 Cattle	11/01 – 02/28
			2 Cattle	05/01 – 10/31
3001251	19 Cattle	11/01 – 02/28		
	3 Horse	12/01 – 02/28		
3001255	11 Cattle	11/01 – 01/31		
	Kind of Livestock	Cow Calf and Horse		
	Percent Public Land	AUMs are authorized at 100% public land		
Allotment Profile	Physical Description	Allotment 535 is just north, west and south of Cundiyo, in Santa Fe County, New Mexico. Elevation on this allotment is roughly between 6,300 and 7,800 feet. Landforms on the allotment include; arroyos, escarpments, hills, dissected ridges and benches. A large portion of the Santa Cruz Lake Recreation Area is within the allotment.		

Nineteen soil types are identified within the BLM lands in this allotment;

Alire loam, 2 to 6 percent slopes. This soil consists of loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived granite, schist, gneiss, loess, and volcanic ash. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, black grama, ring muhly, Galleta and broom snakeweed.

Arnor gravelly sandy loam, 2 to 8 percent slopes. This soil consists of gravelly sandy and gravelly sandy clay loams with rooting depths greater than 60 inches. Parent materials include: Slope alluvium derived from granite, gneiss and schist over residuum weathered from granite, gneiss and schist. Average annual precipitation in that area ranges from 14 to 16 inches. Vegetation is characterized by blue grama, black grama, ring muhly, Galleta and broom snakeweed.

Buckhorse-Altazano complex, 2 to 8 percent slopes, non-flooded and flooded. These soils consist of coarse and gravelly sandy loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from fanglomerate, sandstone, granite and mudstone. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, black grama, ring muhly, Galleta, oneseed juniper and broom snakeweed.

Chimayo-Rock outcrop-Quapaw complex, 50 to 90 percent slopes. This soil consists of gravelly sandy loams with a rooting depth between 20 and over 60 inches. Parent materials include: Colluvium derived from granite, gneiss, and schist over residuum weathered from granite, gneiss, and schist. Average annual precipitation in that area ranges from 14 to 16 inches. Vegetation is characterized by Arizona fescue, blue grama, mountain muhly, sedge, twoneedle pinyon.

Encantado very cobbly sandy loam, 25 to 45 percent slopes. This soil consists of very cobbly sandy loam with a rooting depth greater than 60 inches. Parent materials include: Alluvium derived from granite, quartzite and residuum weathered from granite, fanglomerate, and sandstone. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by black grama, blue grama, New Mexico feathergrass, oneseed juniper, sideoats grama, Galleta, pinyon pine.

Enmedio-Atalaya-Rock outcrop complex, 5 to 60 percent slopes. This soil consists of gravelly and cobbly sandy loams with a rooting depth between 40 and 60 inches. Parent materials

	<p>include: Colluvium derived from granite, gneiss, and schist over residuum weathered from granite, gneiss, and schist. Average annual precipitation in that area ranges from 14 to 16 inches. Vegetation is characterized by oneseed juniper, sideoats grama, black grama and little bluestem.</p> <p>Enmedio-Zafarano-Rock outcrop complex, 35 to 60 percent slopes. This soil consists of very gravelly loams with a rooting depth between 39 and 59 inches. Parent materials include: Colluvium derived from granite, gneiss, and schist over residuum weathered from granite, gneiss, and schist. Average annual precipitation in that area ranges from 15 to 17 inches. Vegetation is characterized by oneseed juniper, sideoats grama, black grama and little bluestem.</p> <p>Horcado-Nazario complex, 2 to 35 percent slopes. These soils consist of very gravelly loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from schist, gneiss and granite. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, black grama, New Mexico feathergrass, oneseed juniper, pinyon pine, sideoats grama, Galleta, bottlebrush squirreltail and broom snakeweed.</p> <p>Junebee gravelly sandy loam, 5 to 15 percent slopes. This soil consists of gravelly sandy loam with a rooting depth greater than 60 inches. Parent materials include: Alluvium derived from mudstone, fanglomerate, sandstone. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by Indian ricegrass, blue grama, sand dropseed and Galleta.</p> <p>Kachina fine sandy loam, 5 to 15 percent slopes. These soils consist of sandy loams and sandy clay loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from micaceous sandstone, siltstone, and mudstone. Average annual precipitation in that area ranges from 12 to 14 inches. Vegetation is characterized by blue grama, little bluestem, oneseed juniper, pinyon pine, sideoats grama and eriogonum.</p> <p>Latierra-Lamesilla-Levante complex, 2 to 15 percent slopes, non-flooded and flooded. These soils consist of gravelly coarse sandy loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from schist, gneiss and granite. Average annual precipitation in that area ranges from 12 to 14 inches. Vegetation is characterized by blue grama, black grama, New Mexico feathergrass, oneseed juniper, pinyon pine, sideoats grama, Galleta, oak, sand dropseed, Bigelow's rubber rabbitbrush and spike dropseed.</p>
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		<p>Levante-Riverwash complex, 1 to 3 percent slopes, flooded. These soils consist of loamy sands with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from granitic sandstone, schist, gneiss and granite. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, sand dropseed, black grama, Bigelow's rubber rabbitbrush, Galleta and spike dropseed.</p> <p>Morenda, Fiesta, and Espanola soils, 1 to 85 percent slopes, flooded and non-flooded. These soils consist of various gravelly loams with rooting depths greater than 60 inches. Parent materials include: Slope alluvium derived from granite gneiss and schist. Average annual precipitation in that area ranges from 16 to 18 inches.</p> <p>Ohke sandy loam, 1 to 3 percent slopes. This soil consists of sandy loams with a rooting depth greater than 60 inches. Parent materials include: Alluvium derived from schist, gneiss, and granite. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, oak, oneseed juniper, Galleta and black grama.</p> <p>Pedregal very gravelly loam, 2 to 15 percent slopes. This soil consists of very gravelly loams with a rooting depth greater than 60 inches. Parent materials include: Alluvium derived from schist, gneiss and granite over residuum weathered from granitic sandstone. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by oneseed juniper, Gambel oak, pinyon pine, blue grama and skunkbush sumac.</p> <p>Predawn loam, 1 to 4 percent slopes. This soil consists of loams with a rooting depth greater than 60 inches. Parent materials include: Alluvium derived from granite, schist, and quartzite and eolian material derived from volcanic ash. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, Galleta, ring muhly, black grama and broom snakeweed.</p> <p>Setonville-Antonchico complex, 3 to 15 percent slopes. This soil consists of gravelly sandy and clay loams with a rooting depth between 40 and 60 inches. Parent materials include: Slope alluvium derived from granite, gneiss, and schist over residuum weathered from granite, gneiss, and schist. Average annual precipitation in that area ranges from 14 to 16 inches.</p> <p>Sipapu-Yuzarra-Kachina complex, 5 to 65 percent slopes. These soils consist of gravelly sandy loams and fine sandy loams with rooting depths up to 20 inches as well as greater than 60 inches. Parent materials include: Colluvium and residuum derived from</p>
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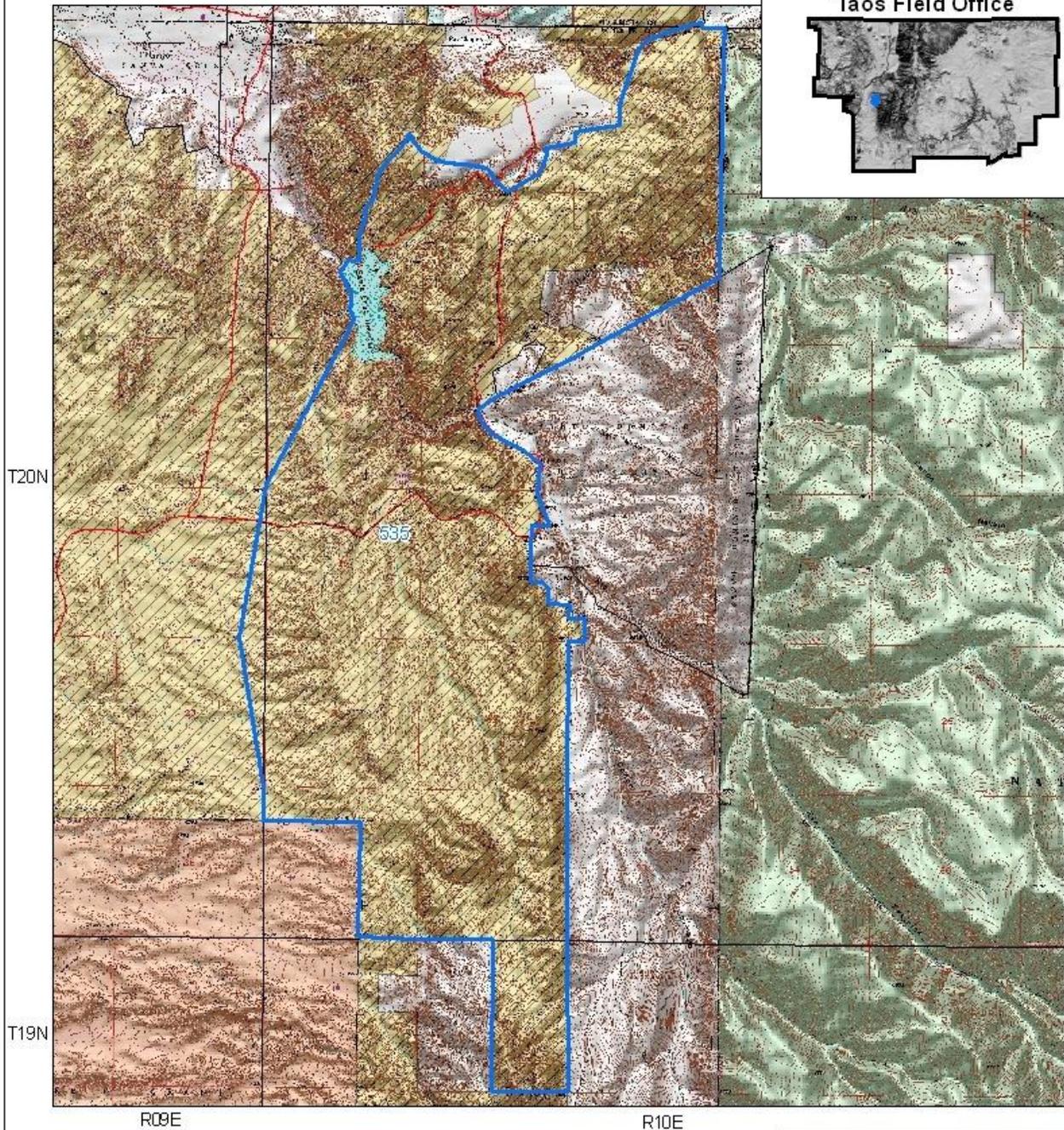
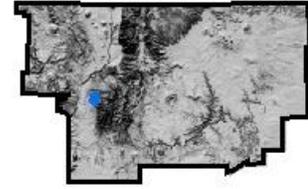
		<p>granitic sandstone, siltstone, and mudstone and Alluvium derived from granite, gneiss, and schist over residuum from granite, sandstone, and fanglomerate. Average annual precipitation in that area ranges from 12 to 14 inches. Vegetation is characterized by blue grama, black grama, mountain mahogany, little bluestem, oneseed juniper, pinyon pine, sideoats grama and eriogonum.</p> <p>Tanoan-Encantado complex, 5 to 25 percent slopes. These soils consist of gravelly sandy loams with rooting depths greater than 60 inches. Parent materials include: Alluvium derived from schist, gneiss, granite and basaltic tuff, as well as Colluvium and residuum, derived from granite, fanglomerate, and sandstone. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by blue grama, black grama, ring muhly, New Mexico feathergrass, sideoats grama, Galleta and oneseed juniper.</p>																						
	Land Status Acreage	<table border="1"> <thead> <tr> <th><u>BLM</u></th> <th><u>State</u></th> <th><u>Private</u></th> </tr> </thead> <tbody> <tr> <td>6,747</td> <td>0</td> <td>241</td> </tr> </tbody> </table>	<u>BLM</u>	<u>State</u>	<u>Private</u>	6,747	0	241																
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	Management Objectives	The allotment is under a 'Maintain' ('M') management category. 'M' category allotments are managed to maintain current satisfactory ecological condition.																						
	Key Forage Species	blue grama, sideoats grama, black grama and galleta																						
	Grazing System	Spring and winter grazing																						
Management Evaluation	Actual Use	<table border="1"> <thead> <tr> <th><u>AUMs</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr><td>186</td><td>2009</td></tr> <tr><td>202</td><td>2008</td></tr> <tr><td>237</td><td>2007</td></tr> <tr><td>68</td><td>2006</td></tr> <tr><td>276</td><td>2005</td></tr> <tr><td>271</td><td>2004</td></tr> <tr><td>112</td><td>2003</td></tr> <tr><td>184</td><td>2002</td></tr> <tr><td>235</td><td>2001</td></tr> <tr><td>122</td><td>2000</td></tr> </tbody> </table>	<u>AUMs</u>	<u>Year</u>	186	2009	202	2008	237	2007	68	2006	276	2005	271	2004	112	2003	184	2002	235	2001	122	2000
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	Utilization	Due to the lack of staff utilization studies have not been conducted. During the assessment visit it was determined that the allotment was either receiving slight to moderate amounts of utilization.																						
	Climate	The past water year (Oct. 1, 2008 – Sept. 30, 2009) the average temperature has been slightly above average (1 to 2 degrees Fahrenheit above average) and precipitation has been slightly below average (0 to 2 inches). The winter was slightly drier (0 - .75 inches below normal) and was warmer (2 - 3 degrees Fahrenheit above average). The spring was drier and warmer (1 – 1.5 inches below normal and 0 - 2 degrees Fahrenheit above average, respectively) This should provide below average plant growth for cool season plants. The summer was drier (0 - 1.5 below normal) and slightly warmer (0 - 1 above normal) which																						

	<p>should provide near normal for warm season plants.</p> <p>Climate change is a concern not only in New Mexico but globally. “Effects of increasing atmospheric CO₂ levels on plants are predicted to cause dramatic changes in native vegetation. Global climate change may accelerate rates of plant extinction, while ecosystem structure and function may shift. Ecological response to global changes in climate could shift ecosystems (i.e., shrublands replacing grasslands) and have effects, not only to an individual species, but to the ecosystem itself by additions and deletions of vegetation species” (Johnson, H.B., and H.S. Mayeux. 1992. Viewpoint: A view on species additions and deletions and the balance of nature. Journal of Wildlife Management 45:322-333.)</p> <p>We anticipate that our monitoring efforts will help indicate vegetation shifts, allowing for management modifications to address global climate change.</p>
	<p>Trend</p> <p>One long term trend plot has been established on this allotment, but it has not been re-read since 1991 due to a lack in staffing.</p> <p>A Rangeland Health Matrix was completed on May, 21 2009. The actual survey forms are available within the allotment file. Below is a summation of the information gathered by the survey. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be $5(\text{score}) \times 10(\text{indicators}) = 50/50 \times 100 = 100\%$ similarity, or what is expected based on an Ecological Site Description. Standards for each individual category are met when they are rated Proper Functioning Condition or Functioning at Risk-Upward Trend. Not meeting standards are ratings of; Functioning at Risk-Static, Functioning at Risk-Downward Trend and Non Functional.</p> <p>Soil and Site Stability Two indicators were deemed None to Slight, eight were deemed Slight to Moderate and one was deemed Moderate. Rating: 82%</p> <p>Hydrologic Function Three indicators were deemed None to Slight, six were deemed Slight to Moderate and one was deemed Moderate.</p>

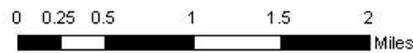
		<p>Rating: 84%</p> <p>Biotic Integrity Five indicators were deemed None to Slight and four were deemed Slight to Moderate. Rating: 91%</p> <p>Overall Rating: 86%</p> <p>Soils were rated at Functioning at Risk-Upward Trend, Biotic Flora was rated at Functioning at Risk-Upward Trend, and Biotic Fauna was rated at Functioning at Risk-Upward Trend.</p> <p>Based on a review of past assessments this allotment is on the upward trend, but still could use some improvement. This allotment does not appear to be adversely affected by livestock.</p>
	Riparian	<p>There is riparian vegetation along the Rio Quemado, Rio Medio and the Santa Cruz River and Lake within the allotment. The Rio Quemado is along the northern boundary of the allotment in a steep canyon. It has been rated as PFC. The Rio Medio is an internal boundary between BLM land and private lands and has been rated Functioning at Risk with main causes related to livestock grazing in 1994. Santa Cruz River, above the lake, was rated as PFC and Santa Cruz Lake was rated as Unclassified due to the primary purpose of the lake is for irrigation.</p>
	Wildlife	<p>Seasonal home ranges in the allotment include those for deer, bobcat, fox, coyote, small mammals, bats, raptors, turkey vulture, songbirds, and a variety of insects.</p> <p>Deer are grazers; however there is little dietary overlap between deer and cattle. Best management practices would ensure that forage production within this area can support both wildlife and livestock on a sustained basis.</p> <p>Critical wildlife areas on the allotment include winter range for deer. An important migratory corridor for avian and big-game species also occurs inside the allotment boundaries. On the Santa Cruz River, above the lake, there is potential long-term habitat for the southwestern willow flycatcher.</p>
	Threatened and Endangered Species	<p>It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment.</p> <p>Special status species that are likely to be found on the allotment include bald eagle and ferruginous hawk.</p>
Conclusions and Recommendations		<p>Overall, the vegetation appears to be in fair to good condition with fair to good diversity. Continued monitoring, as well as establishing more monitoring sites will help establish true trend</p>

		data and any possible changes in the future. It is recommended that grazing be renewed for another 10 years without any changes to the permit.
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Taos Field Office



Cundiyo Community (535)



Legend

- Allotment Boundary
- Bureau of Land Management
- Private
- State
- Forest Service
- Tribal

Produced by the BLM Taos Field Office - GIS on:
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7.5' Topos: Chimayo & Cundiyo