

## Coordinated Resource Management Plan

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### **Noland Ranch including Turtle Mountain, Morenci, Metcalf and Granville allotments**

#### **Coordinated Plan Participants**

- Dustin(Cash) & Crystal Noland, Permittees
- USDA, FS, Clifton Ranger District
- USDI-BLM Safford
- USDA-NRCS
- Arizona Game and Fish Department
- Arizona State Land Department
- Arizona Association of Natural Resource Conservation Districts

#### **Description of Ranch and Location**

The Noland Ranch is located adjacent to the copper mining town of Morenci, Arizona. The ranch encompasses four allotments, including the Turtle Mountain, Morenci and Metcalf Allotments, permitted by the BLM, Freeport McMoran, and Arizona State Land Department. These three allotments have 2 Arizona State Trust Leases and 23,000 private acres leased from Freeport McMoran Copper and Gold Mining Company. The Granville Allotment is permitted by the USFS. **The Granville Allotment Management Plan is incorporated into this CRMP by reference. No new projects, except for fence maintenance and reconstruction, are needed or are proposed for the Granville Allotment.**

Ruskin Lines Sr. (Judge Lines) purchased the Turtle Mountain ranch in the 1920's and it was part of the original Turtle Cattle Co. There were many farms on Eagle Creek from the USFS boundary (North) to the Gila River (South). These farms produced meat, fruit, and vegetables for the miners in the Morenci area. When Phelps Dodge began operation in the area, they purchased all of the land on Eagle Creek in order to secure water rights for the mining operation. When Ruskin Lines Sr. was putting the ranch together, he bid on and received the grazing rights on all of Phelps Dodge's land that wasn't being mined. Judge Lines also purchased the TKH Ranch from Bobby Gomez, which was mostly a USFS permit but also came with some deeded land. The original P Ranch was purchased from Kenyon Udall by Judge Lines in 1979, this ranch contained all the land east of Eagle Creek to the US 191 and across the Gila, and covers a portion of Black Hills that is now operated by Jeff Menges. Jeff Menges worked for Mr. Udall until Udall sold the ranch to Judge Lines. Jeff Menges stayed on with Judge Lines, leased the Eagle Creek Ranch from him and ran the ranch for 15 years. At that time, the ranch was known as the Slash Hook Cattle Co. The ranch was taken over by A.F. Jr. and Dustin (Cash) Noland becoming the Noland Ranch in 1996. Cash and Crystal

Noland purchased the ranch and took over management from A.F. Jr. Noland in 2006, although Jr. still runs about 50 head of cattle on the ranch.

The lessee of record for ASLD (Arizona State Land Department) grazing leases 05-1089 and 05-2190 is: Ruskin Lines, Sr., Ruskin Lines, Jr, Paul Lines and Christopher A. Lines, a joint venture. A.F. Noland, Jr. and Dustin Cash Noland are the subleases of record for these leases, and operate with a yearly sublease with the Lines' and ASLD.

The ranch is run as a cow/calf operation, currently running approximately 650 head of beef cattle. Cattle breeds include Angus, Hereford, and Crossbred. The three BLM/State allotments are grazed yearlong. The USFS grazing permit (Granville) is for winter use only (October 1 thru March 31), and is stocked mostly with yearling cattle. Noland's have requested a change of season of use for Granville allotment. The USFS has agreed to this request and it will be reflected in the Grazing section of this CRMP.

The basic overriding problem with all four allotments is the rugged topography. This makes the development of livestock management and rotation systems problematical. On the Morenci and Metcalf allotments, the vast acreages controlled by the Freeport McMoran Mining interests prevent the development of pasture fences or water sources. Freeport also limits access to much of their private land and each year acreage is removed from grazing for open pit copper mining operations.

### **Land Status (Turtle Mtn., Morenci and Metcalf Allotments Combined) and the Granville Allotment.**

Private controlled	<u>23009.50</u> Acres
BLM	<u>27539</u> Acres
Arizona State Trust Land	<u>11885.48</u> Acres
USFS (Granville Allotment)	<u>8600</u> Acres
Total	<u>71033.08</u> Acres

### **Benchmark Condition**

#### **(See Appendix B for climate information.)**

Benchmark conditions for the three allotments not under USFS administration were determined by NRCS, BLM and the Technical Service Provider contracted by the Arizona Association of Conservation Districts. The field evaluations were made at 7 locations on the ranch in 2011. At each location species composition and production in pounds/acre were estimated. This information was used to calculate a similarity index comparing present vegetation on the site to reference conditions. At each location, range health (RHE or Rangeland Health Evaluation) was evaluated using a subjective rating of 17 factors associated with

the soil stability, hydrologic function and biotic integrity of the present situation compared to reference conditions for the site. A Wildlife Habitat Evaluation Guide (WHEG) for Upland Habitat was also completed. The WHEG evaluates wildlife food, cover, water and habitat fragmentation to determine conditions suitable for wildlife. In addition, data was analyzed from 4 BLM trend study locations. The earliest trend study location was established on Turtle Mountain Allotment in 1970. Utilization mapping conducted in the 1980s and 1990s was also inspected to determine historic use patterns.

The ranch is located mostly in MLRA (Major Land Resource Area) 38 (Mogllon Transition) with some of the southern portions in MLRA 41 (Madrean Basin and Range). This CRMP area is located at the junction of MLRA 38 and MLRA 41. It is difficult to accurately place the sites in the proper MLRA. (Major Land Resource Areas/MLRAs are geographically associated land resource units, usually encompassing several thousand acres. They are characterized by particular patterns of soils, geology, climate, water resources, and land use. A unit may be one continuous area or several separate nearby areas. MLRAs are used with Ecological Site Descriptions to determine the reference plant community). Soils predominately have formed from volcanic rocks. Ecological sites include:

MLRA 38-1--7894 acres

Clayey Slopes 12-16" ppt.

MLRA 38-2--28022 acres

Clayey Hills 16-20" ppt.

Clay Loam Upland 16-20" ppt.

Volcanic Hills, clayey 16-20" ppt.

MLRA 38-3--16039 acres

Volcanic Hills 20-24" ppt.-16039 acres

MLRA 41-3—16038 acres

Clayey Upland 12-16" ppt.

Volcanic Hills 12-16" ppt.

### **Similarity Indices**

Annual production and percent composition of each species are estimated for each transect. Plant species are scored by percent of annual production and a percent of the reference plant community as stated for the Ecological Site Guide for each ecological site. Each plant scored, whether they are grasses, trees, shrubs, or forbs; must be given a percentile which when combined, will total to 100 percent of the plant community. A similarity index is formed from the percent of reference plant community of individual species and conveys the likeness of the current site to its potential. This is compared to the maximum potential or the most diverse community that the site can achieve. Inventory points were

established on each ecological site on the ranch. These inventory points are not permanent sites that are used to monitor vegetation year after year.

The similarity index can be used as an assessment of the current plant community in relationship to the desired or potential plant community. Indices that are collected over time can depict the trend or direction of change the current plant communities are heading in relationship to the desired plant community. Management practices may have to be adjusted or implemented to maintain or improve a site in order to meet management goals. Plant Condition (productivity, health and vigor) is considered a resource concern when the Similarity Index is less than 60 and/or the Rangeland Health Attribute Rating for Biotic Integrity is Moderate or higher departure from the Ecological Site Description.

Major Land Resource Area (MLRA)	Ecological Site	Estimated Similarity Index
38-1	Clayey Slopes	53*
38-2	Clayey Hills	62
	Clay Loam Upland	71
	Volcanic Hills, clayey	69
38-3	Volcanic Hills	50*
41-3	Clayey Upland	89
	Volcanic Hills	25*

\*Indicates a resource concern.

The 38-1 Clayey Slopes site is in a transition area between 38-1 and 41-3 and species common to both ecological sites occur on the Clayey Slopes sites. It has a relatively low similarity index due to increases in prickly pear and shrubs and losses of perennial bunch grasses (e.g. sideoats grama). This is due to historic grazing pressures, drought, and lack of fire periodically which would control the increase of shrubby species.

The 38-2 Clayey Hills also has a lowered similarity index due to losses of desired perennial grasses and increases of shrubby species. The 38-2 Clay Loam upland site has reduced perennial grasses and increased shrubs from historic livestock grazing, lack of periodic fire and drought.

Volcanic Hills, clayey 38-2, lowered similarity index is thought to be due to lack of fire to control shrubby (brush) species and trees and drought in the past decade.

The 38-3 Volcanic Hills ecological site, although the site with the most

precipitation scored only 50. Livestock use has had apparently little to do with this score. Utilization by livestock is light. It is thought this is from lack of fire in the last 100 years. Juniper and pinyon pine show an increase above levels expected for the site. Effects of drought are also evident on the shrub and tree species.

Clayey Upland, 41-3, scored the highest of the ecological sites estimated. This is in spite of the fact the area is near water, relatively level and has had heavy livestock use over the last 30 years. The resiliency of this site is probably due to the large amount of rock and cobble that covers the surface protecting the grasses from overuse and the surface coarse fragments also help to prevent erosion.

The 41-3 Volcanic Hills ecological site has the lowest similarity index, which means that, from an ecological standpoint, it has the lowest plant diversity and deviates farthest from the reference plant community. Heavy livestock use from the 1870s, and the fact that it is relatively close to permanent water have resulted in a site that has been invaded by prickly pear cactus and many of the perennial grasses have been grazed out. Remaining perennial grasses have found refuge in the prickly pear plant as protection from grazing. The last decade of almost continuous drought have also taken a toll.

### Range Trend Analysis

Range trend studies were first initiated on Turtle Mountain allotment in 1970 in three locations with paired plots. A summary of pertinent information from these three locations is shown below: (Bocu is *Bouteloua curtipendula*, Hibe is *Hilaria belangeri*, and Boer is *Bouteloua eriopoda*).

Location	1970 (percent frequency)	1989 (percent frequency)
TM-1 (12S 645510 3647970)*	Bocu-61	Bocu-0
	Hibe-39	Hibe-100
TM-1A (Same as for TM-1)*	Bocu-0	Bocu-16.7
	Hibe-54	Hibe-83
	Boer-46	Boer-0
TM-2 (12 S 343419 3651210)*	Bocu-21	Bocu-1.9
	Hibe-79	Hibe-66
TM-2A (Same as for TM-2)*	No data	No data

TM-3 (12 S 641689 3657605)*	Bocu-42	Bocu-17
TM-3A (Same as for TM- 3)*	Bocu-51	Bocu-7
	Hibe-17	Hibe-56

\* DATUM is NAD27

In brief, these trend plot studies show an increase in curly mesquite (*Hilaria belangeri*), and a decrease in black grama (*Bouteloua eriopoda*) and sideoats grama (*Bouteloua curtipendula*). These plots were read irregularly. The data can be interpreted to show that species damaged by heavy grazing (sideoats and black grama) decreased and species that increase with heavy grazing increased (curly mesquite). This period covered the 1970s when drought was prevalent and through the 1980s when rainfall was generally much higher than normal.

Beginning in 1982, BLM changed from the method of mapping plant cover in a 3 feet by 3 feet quadrat to the pace frequency method to give better picture of all species in a key area instead of just species selected as key species. The pace frequency method gives a better picture of vegetation changes over a larger area with many more data points, thus improving accuracy and repeatability of observations. Pace frequency records species occurring in, generally, a 40cm by 40cm quadrat and 100 quadrats are read, compared to only one 3 X 3 plot in the previous method.

Consequently, two new key areas were designated in 1982 and pace frequency transects were established on these. Pace frequency was also added to the other transect locations.

#### **Pace Frequency Analysis (New Locations TM-4 and TM-6, apparent composition change of selected species)**

Species & Location	1982	1985	1989	2007	
TM-4 (12 S 644962 3652228)*					
Bocu	23.5	11.5	40.5	27	
Hibe	2	0	5.5	0	
TM-6 (12 S 646743 3649478)*					
Himu	30	39	30	60	
Hibe	77	81	79	0	
Bocu	2	0	6	0	

\*NAD27 CONUS Datum

Unsurprisingly, frequency data show that generally grasses increased in the

1980s (during a wet cycle) and decreased from 1989 to 2007 (generally a drought period). Hibe, curly mesquite (a grass) shows a reduction from drought from 1989 to 2007. Himu, tobosa grass, shows an increase at the expense of Hibe. Looking at the species that have a large change in frequency, it appears that these changes were more due to weather than grazing.

### **Rangeland Health Evaluation**

A NRCS Rangeland Health Evaluation assessment was prepared at each location where a similarity index was estimated. The rangeland health evaluations, which evaluate soil and site stability, hydrologic function and biotic integrity, showed a healthy rangeland, except in areas with high density of prickly pear. These sites indicated an impaired biotic integrity due to large increases in prickly pear at the expense of herbaceous vegetation. These two areas are proposed for prickly pear control. Two areas showed a slight to moderate departure from the desired reference state because of low production, reduced plant diversity and reproduction potential due to drought. Other sites showed a slight to moderate departure due to reduced production and reproductive capacity from prolonged drought.

### **Riparian Benchmark**

A comprehensive inventory of the riparian areas on the allotments has not been done by federal agencies. This is primarily because almost all of Eagle Creek and other small riparian areas on the allotments occur on land owned by Freeport McMoran Mining. Limited observations indicate the riparian community as a whole are in the "Functioning at Risk" category.

### **Arizona Wildlife Habitat Evaluation Guides for Upland Habitat**

The Arizona Wildlife Habitat Evaluation Guide for Upland Habitat (WHEG) was prepared for each location where a similarity index and rangeland health evaluation was prepared. In general, upland habitat for wildlife is in functioning condition. The WHEG showed a problem with yearlong water available for wildlife, mainly from lack of yearlong waters and lack of wildlife escape ramps in water troughs.

The Western Association of Fish and Wildlife Agencies, in 2006, published "Habitat Guidelines for Mule Deer, Southwest Deserts Ecoregion". The publication gives basic strategies that should be used on livestock ranches to promote habitat for mule deer. These guidelines include: maintain or increase plant diversity, implement grazing plans, contingency plans when utilization levels are met, management of riparian areas, establishment of proper stocking rates, and correct use of utilization rates and stubble heights.

Implementation of this plan addresses these concerns by: providing yearlong waters, monitoring utilization rates, and fencing off the major riparian area and reducing livestock use to 2 months per year.

Roocky Mountain Bighorn Sheep were first introduced into the San Francisco River area before 1966. This introduction and others have resulted in a "metapopulation" of bighorn sheep that numbered over 750 individuals in Eagle Creek, Bear Canyon, Fotte Creek, Black River and Nantac Rim. This is from the "Long Range Plan for the Management of Rock Mountain Bighorn Sheep in New Mexico, 2005-2014", published by the Wildlife Management Division, New Mexico Department of Game and Fish, Santa Fe, New Mexico, 2005. Subsequent conversations with Arizona Game and Fish Department Wildlife managers have verified the statements in this document and the population continues to increase.

Bighorn Sheep will benefit by implementation of this plan by increased yearlong waters, improved plant diversity and any fences constructed will be to bighorn fence specifications.

Eagle Creek has been listed by the US Fish and Wildlife Service as having critical habitat for the listed endangered loach minnow (*Tiaroga cobitis*). Changes in livestock grazing to be implemented in this plan will have a positive effect on loach minnow habitat because of the proposed exclusion of livestock grazing from Eagle Creek for ten months each year.

The Eagle Creek bat cave occurs on the cliff edge of Eagle Creek. It is thought to be the second largest maternity colony of Mexican free tail bats in the nation. The implementation of this CRMP will have no effect on this bat colony.

## **Resource Concerns**

Major resource concerns are the lack of dependable livestock water, a past oil spill at Guswedt Spring pumping station, and a lack of yearlong wildlife waters. Vegetation conditions, in terms of plant productivity, health and vigor, both in upland and riparian areas, are also a concern.

The utilization inventories conducted in the 1980s and 1990s showed the lack of proper livestock distribution. This was due to two factors, the inherent roughness of the topography of the allotments and the lack of permanent waters. Various projects were completed to provide dependable, yearlong water at many locations on the allotments. Pumping stations were installed in 1980-1981 on State Trust Land. At Guswedt Spring and at Smith Spring, and water was pumped to various higher locations on the Turtle Mountain allotment. These systems are now over 30 years old and need rebuilding. The oil spill at Guswedt Spring was a result of bears destroying the fuel line between the diesel storage tank and the pump. Remediation of the spill is almost complete.



The new waters in locations along the pipeline helped livestock distribution, but due to failures of the pipelines and drought, areas have been overused due to lack of dependable water. Drought conditions, starting in 1995 and continuing through 2011, with only occasional normal or above normal precipitation years within the 16 year period, have exacerbated resource problems. As a result of this long period of drought and failures in the water system, areas near permanent waters have been overused and other areas underused.

Water for wildlife in the upper areas of the allotments have been undependable also for the above reasons.

The two areas identified for brush management are classified as being in an "invaded state" in terms of encroachment/invasion by prickly pear.

Cattle congregating in Eagle Creek yearlong is a resource management concern due to their introduction of fecal material and possible E. coli into a flowing water source. Fencing proposed for Eagle Creek and removal of livestock for much of the year will alleviate much of this problem.

Soil erosion concerns are mainly associated with existing roads, where poor design and maintenance encourage concentration of water and gullyng. Proper maintenance can alleviate much of the problem. This concern is localized near roads.

Issues on the Granville Allotment are T&E species, riparian conditions, infrastructure (fences) and drought mitigation.

## Goals

- Improve livestock distribution on the ranch
- Limit livestock use of riparian corridors in Eagle Creek
- Balance livestock numbers with available forage
- Control livestock from drifting to neighboring ranches
- Improve the sustainability of the livestock operation
- Maintain the ranch for future generations
- Maintain and/or improve wildlife habitat (especially mule deer and Big Horn Sheep).
- Increase the percent calf crop by at least 20% through improved livestock management
- Reduce erosion problems caused by improper proper road establishment and maintenance.
- Granville allotment goals are: limit impacts to T&E species, manage use on riparian areas and maintain or rebuild functioning range improvements.

## Objectives

- Implement prescribed grazing which provides grazing and rest periods that will allow grazed plants to re-grow, regain vigor, produce seed, and establish new plants when climatic conditions are favorable.
- Install fencing and water developments as needed to control timing and distribution of livestock grazing.
- Establish permanent monitoring sites in key areas to detect changes in the plant community.
- Install additional fencing to control livestock use of pastures.
- Install additional watering points to limit use of Eagle Creek riparian areas to support herding/management practices. (This will be done as water systems are rebuilt and/or maintained.)
- Granville allotment objectives are: manage herding of livestock to limit impacts to breeding owls, meet or exceed Forest Plan Standards for riparian areas, repair or reconstruct allotment boundary fences.

## Proposed Improvements

(For a list of existing improvements, see Appendix A.)

The proposed improvements are shown below. The majority of the improvements are to reconstruct or improve existing water sources.

The riparian fencing along Eagle Creek to restrict livestock use in Eagle Creek and a new pasture fence on the the Morenci allotment are the only new fencing proposed. All other fence projects are for major maintenance or reconstruction. The two herbicide treatments proposed are for the control of invading prickly pear cactus.

Allotment	Location	Practice	Comments
Turtle, Morenci	Eagle Creek (various)	Riparian Fencing	Gap fencing to exclude livestock
Turtle	T3S & 4S, R28E, Secs. 5, 8, 17, 20, 29, 31	Western boundary fence reconstruction	Approx. 6 miles
Turtle	Smith Spring T4S, R28E, Secs. 28, 32, 33	Watering develop. Solar pump and pipeline	Use of existing developed spring to near Juan tank
Turtle	Smith, T4S, R28E, sec 29	Water pipeline & trough	Extend pipeline up canyon
Turtle	Horse T4S, R28E, Secs. 27, 28	Water pipeline & trough	Extend pipeline from Smith to Horse Pasture
Turtle	Horse T4S, R28E, Secs. 26, 27	Fence reconstruction	Rebuild horse pasture fence
Turtle	Guswedt water- T5S, R28E, Sec. 2	Solar pump and pump house	Replace diesel pump with solar
Turtle	Virden Pipeline T5S, R28E, secs. 2, 3, 4	Pipeline	Replace pipeline from Guswedt to Virden storage 1.5 miles
Turtle	T4S, R28E, Sec 4	Watering facility	Pipe, storage tank and trough
Turtle	T4S, R28E, Secs. 4, 9	Watering facility	Replace pipeline,

		reconstruction	trough and add storage west of Virden
Turtle	Skeena Abajo T5S, R28E, Secs. 10,16	Water facility reconstruction	Replace pipeline and add storage and trough
Turtle	Dos Alisos T5S, R28E, Sec 24	Solar pump, pipeline, storage and trough	Solar pump at spring pipeline to top of mesa on N.
Turtle	Mesquite T5S, R28E Sec. 12	Dirt tank maintenance	Clean out dirt tank at Mesquite
Turtle	White Mesa pipeline T5S, R28E Secs. 15,22,23,24	Water facility, pipeline reconstruction	Replace existing pipeline and add two troughs
Turtle	Windy T5S, R28E, Secs. 26,27	Dirt tank maintenance	Clean out tanks at Gina and Windy
Morenci	Poor Farm T4S, R28E, Secs. 2,10	Spring Development	Develop spring and add trough
Morenci	Shower Springs T4S, R28E, Secs. 12,13,14,18	Spring Development and pipeline	Pipeline and 3 troughs
Morenci	Cienega T4S, R28E, Sec.11	Spring Development and pipeline	Pipeline and 3 troughs
Morenci	Ridges T5S R28E Secs. 17, 18	Pipeline	Pipeline, storage tank and trough
Morenci	Steer Trap T4S,R28E, Secs. 25,36 T4S R29E , Sec30 T5S R29E, Secs. 5,6	Steer Trap Prickly Pear Herbicide Tmt.	Treat approx. 1800 acres to control Prickly Pear
Morenci	T3S R28E Secs. 3,4,5	Fencing Reconstruction	North boundary fence 2.5miles
Morenci	T4S,R28E Secs. 19,25,30	New Pasture Fence	Pasture fence for livestock control
Morenci	T5S, R29E, Secs. 8,9,16,17,20,21,28,29	Ridges Prickly Pear Herbicide Tmt.	Approx. 1500 acres of Prickly Pear control
Granville	Entire allotment	Boundary fence reconstruction	Reconstruct approx. 10 miles of fence

These projects will be installed in the following general order: (1) water facilities and pipelines, (2) fencing, (3) herbicide treatments.

Water projects on pipelines on the Turtle Mountain Allotment will be constructed so that they can be turned off to facilitate livestock rotation. However, these facilities will have accommodations made to allow wildlife access to water year-round.

Fencing on the Eagle Creek Gap fencing will be built to bighorn sheep specifications, to allow bighorn sheep to move through the fence.

Herbicide application will be the last category of projects to be implemented for prickly pear cactus control and will use Picloram. The ecological sites proposed for this treatment have loam or clay loam surfaces and Picloram will

not move in the soil, as it has been reported to for sandy surfaces. Deferment of grazing for a minimum of two growing seasons will be required immediately after brush treatment management practices.

The volcanic hills (MLRA 38-3) ecological site, in an area of higher precipitation would benefit from prescribed or natural fire to reduce brushy species. The relatively low similarity index (50) is from the increase of tree and brushy species in an area that should be a grassland dominated system. The use of fire will help improve the diversity of the vegetation resource. The use of fire would also be beneficial on MLRA 38-1 and 38-2 ecological sites, but they haven't yet suffered the brush and tree invasion of the higher rainfall site. Prescribed fire boundaries or locations have not been specifically delineated in this plan.

## **Alternatives**

Three alternatives have been considered for this Coordinated Resource Management Plan (CRMP).

**No Action.** This alternative would not allow for needed water improvements, fencing and herbicide treatments. Coordinated Resource Management Planning would not continue. If resource concerns continue to be unaddressed livestock numbers would have to be reduced drastically. Wildlife would lose watering locations as pipelines continue to fail. Eagle Creek would not be fenced out and livestock use would be continuous. Not doing the herbicide treatments would allow prickly pear to continue to increase at the expense of plant diversity. Perennial grasses would continue to decrease on the prickly pear infested areas.

**Partial Implementation of the Rangeland Resource Management System Alternative.** The adoption of this alternative would only include those projects considered critical to the continuation of livestock grazing on the allotments. Boundary fences would be reconstructed, some pipelines would be rebuilt, but neither the Eagle Creek fencing nor the herbicide treatments would be done.

**Full Implementation of the Rangeland Resource Management System Alternative.** Under this alternative: all water facilities would be installed; all boundary fences reconstructed; the Eagle Creek gap fencing would be done; and the herbicide treatments would be implemented. Under this alternative, every feasible improvement would be completed to allow for appropriate use of the rangeland resource.

The ranch operators have selected the full implementation of the Rangeland Resource Management System alternative as their preferred alternative.

## **Prescribed Grazing Plan**

### **Authorized Use**

Current authorized use on the ranch is for a total of **724** Animal Units Yearlong (AU/YL) or **8691** Animal Unit Months (AUMs). This total does not include the Granville Allotment administered by the United States Forest Service. This allotment has been authorized for 200 yearlings for 6 months during the winter. The permittees have requested, and the USFS has agreed, to change this to an operation with yearlong use for a total of **838** AUMS yearlong. This change will make the total authorized use for the ranch for the 2012 grazing year 10 horses, 4 bulls and 51 dry cows yearlong. The USFS uses the following conversion factors: a dry cow for a month equals 1.0 AU, cow/calf 1.3, bull 1.5, yearling 0.7 and horse 1.2 AUS. The USFS has agreed to a "stock and monitor" approach where livestock numbers on the Granville Allotment will be monitored and numbers adjusted according to livestock utilization studies.

The use authorized on controlled private lands (Freeport McMoran lands) is based on the same rate as State Trust Lands. This level of use is determined by the lease agreement with Freeport McMoran.

Controlled Private	3012 AUMs	251 AU Yearlong
National Forest	838 AUMS	Variable AU Yearlong
BLM	4120 AUMs	343 AU Yearlong
State Trust	1561 AUMs	130 AU Yearlong
Total excluding Granville	8691AUMs	724 AU Yearlong

Due to drought over the last 10 years, the ranch was stocked at a much lower rate. Usually 650 cows were run on everything except the Granville allotment. This last year about 500 head were run. Until drought conditions ease in the area, 500 or even less are proper for the ranches, excluding the Granville allotment.

### **Grazing Management**

Once the improved water system is in and functioning, the Turtle Mountain Unit will be run yearlong. However, waters will be shut off to livestock and cattle will be moved to new, ungrazed areas. For example, livestock will be moved to the southern portions of the ranch, with northern waters shut off. When utilization begins to approach 40% in an area, waters in that area will be shut off and livestock will be moved to a new area. As use approaches 40% in a grazed area, livestock will be moved by herding and shutting off waters in grazed areas and turning on water sources in ungrazed areas. Close monitoring of utilization by the operator will be necessary. The specifics of which waters to turn on and off will be left up to the operator's best judgment and it will take time to determine the best rotation sequence.

On the Metcalf, and Morenci allotments, this method may be used to a lesser extent, where possible. Topography makes it difficult to move cattle frequently on the east side of Eagle Creek.

The gap fencing on Eagle Creek will make it possible to exclude livestock from the creek for most of the year. It is planned that Eagle Creek will be used for a maximum of two months of the year, for working cattle and getting them ready for shipment. This will allow riparian vegetation in Eagle Creek to recover and improve and prevent continuous livestock use from adversely impacting the riparian area.

On Granville allotment, the USDA FS will determine if livestock need to be herded to new areas and will work with the permittee to determine how the allotment is used. It is the permittees' responsibility to determine if it is time to move to a new area based on utilization levels and dates described in the Annual Operation Instructions (AOI). The FS, working with the permittee, will be initiating consultation with FWS to get a Biological Opinion.

### **Flexibility**

This plan is very flexible. It has to be flexible due to the extremely rough topography and uncertainty of precipitation on a ranch this big. The planned new water facilities will help the operator be able to plan moves according to rainfall and grazing patterns. It will take close cooperation with the agency personnel and the operator to make the plan work.

### **Monitoring**

**The participants in this coordinated resource management plan agree to participate in monitoring on the ranch. Plan participants will develop and agree to a monitoring schedule that will be suitable to all participants.**

The current monitoring locations on Turtle Mountain allotment should be continued to provide continuity of the studies for further evaluations.

New monitoring sites should be established in the Steer Pasture Spray area and the Ridges Spray area before the herbicide treatments are done. A third monitoring site needs to be established on the Metcalf allotment, near the boundary of the Granville allotment.

Stock and monitoring program with FS will require Implementation monitoring, Effectiveness monitoring, and a Proper Functioning Condition (PFC) analysis. Implementation monitoring is annual monitoring which includes utilization, production, and actual use. Effectiveness monitoring is long term monitoring. Which will utilize the Common Non-Forested Vegetation Sampling Procedures (CNVSP) protocol. A PFC analysis will be done once before any warm season grazing occurs.

## Responsibilities of Plan Participants

Permitee Shall:

1. Participate with ASLD, BLM, FS and NRCS in developing a Coordinated Resource Management Plan (CRMP) where conservation practices are to be installed on the ranch.
2. Participate with ASLD, BLM, FS and NRCS in possible annual reviews of the CRMP by:
  - a. Submitting annual livestock numbers/use documentation to ASLD, BLM, FS and/or NRCS.
  - b. Update plan participants of planned livestock movement.
  - c. Update plan participants of changes in pasture fences, changes in watering sources, management improvements, etc. for plan documentation.
  - d. Notify plan participants of issues concerning vegetation quality in pastures and/or issues with trespass (non-lessee owned) livestock on the ranch.
3. Notify ASLD, FS and/or BLM of any desired planned improvements on agency owned lands to establish needs and allow time for the proper requirements to be met. If financial assistance is sought from NRCS, producer must:
  - a. Submit an application for program assistance to NRCS; discuss justification, placement and time frame of planned improvements desired.
  - b. Notify ASLD, FS and/or BLM of intentions to place improvements and establish possible time frames with agencies.
  - c. File all appropriate paperwork with the Farm Service Agency to assure compliance and program qualification. Annually confirm with FSA to assure paperwork is up to date and complete.
  - d. Submit an Application to Place Improvement for State Trust land where applicable.
  - e. Notify BLM and/or FS of the need to place an improvement on BLM or FS lands before NRCS financial assistance is sought to ensure completion of appropriate documentation and assist in funding of planned practices.
  - f. Participate in appropriate flagging of practices, surveys, clearances, engineering and design of planned practices with ASLD, BLM, FS and/or NRCS.
  - g. Install practices compliant to BLM, FS and/or NRCS standards and specifications in a timely manner. Assist in field visits to modify plans, certify practices and submit all necessary documentation relevant to installed practices to the appropriate agency.
  - h. Submit copies of approved permits and/or documentation to NRCS to assure legal requirements are fulfilled.

- i. Monitor program compliance and timelines. Notify ASLD, BLM, FS and/or NRCS if practice will not be installed within the original timeline planned for practices.
  - j. Submit a Report of Improvement to the necessary agency, ensuring the installed practice will be recorded as installed.
  - k. Maintain practices for efficient use and repair damages from vandalism if applicable.
4. Participate with ASLD, BLM, FS and/or NRCS in conducting status reviews and monitoring of installed practices.
  5. Participate with the plan participants in conduction annual monitoring of key areas established on the ranch.

**ASLD Shall:**

1. Participate with the sublessee, BLM and NRCS in developing a CRMP where conservation practices are to be installed on State land.
2. Participate with the sublessee, BLM and NRCS in possible annual reviews of the CRMP.
3. Provide NRCS with written concurrence that the lessee is in compliance with ASLD lease policies/regulations and authorization to apply selected conservation practices on State land if financial assistance is sought by the sublessee. Authorization will assure NRCS that all legal requirements have been met prior to contract formulation, implementation and practice certification.
4. Accept and review Applications to Place Improvement upon State Trust land submitted by the lessee.
5. Complete necessary clearances for cultural resources, protected native plants and sensitive wildlife species for all projects to be conducted on State Trust land .Notify the lessee in writing that practices applied for may be installed and produce a time table for completion.
6. Participate with NRCS and the sublessee if possible in conducting status reviews and monitoring of planned and installed practices.
7. Participate with the plan participants and the sublessee in conducting annual monitoring of key areas established on the ranch.

**NRCS Shall:**

1. Participate with the producer, ASLD and BLM in developing a CRMP where conservation practices are to be installed on the ranch.
2. Participate with the producer, ASLD and BLM in possible annual reviews of the CRMP.
3. Accept applications for participation in NRCS cost share programs. Where installation of conservation practices on State land, BLM or private lands is indicated, NRCS will coordinate with ASLD and BLM to:
  - a. Insure that the participant has a valid lease and all NEPA requirements are fulfilled before contract formulation.
  - b. Ensure compliance with NRCS program requirements and policies.



- c. Develop or review submitted plans required in development of an NRCS Program contract, with the producer as mutually agreed upon with ASLD and/or BLM.
  - d. NRCS will confirm in writing acceptance of BLM NEPA documentation for any financial assistance on BLM lands.
  - e. Ensure environmental planning requirements for installation of conservation practices on State Trust land, BLM and private lands can be completed within appropriate timeframes established under contract.
  - f. Develop and administer contracts, accept practice certification and make recipient payments in a timely manner.
4. Participate with the producer, ASLD and/or BLM in conducting status reviews and monitor installed practices.
  5. Participate with the plan participants and the producer in conducting annual monitoring of key areas established on the ranch.
  6. Complete and/or review engineering designs for planned practices associated with NRCS financial programs.

BLM Shall:

1. Participate with the producer, ASLD and NRCS in developing a CRMP where conservation practices are to be installed on BLM Lands.
2. Participate with the producer, ASLD and NRCS in possible annual reviews of the CRMP.
3. Oversee and ensure completion of environmental planning process for all projects to be conducted on BLM lands associated either with private funding or NRCS financial assistance programs by:
  - a. Providing biological assessments and/or evaluations, archeological surveys and any other clearances required under applicable laws and regulations.
  - b. Coordinate with the producer and/or NRCS on progress of environmental planning.
  - c. Prepare and approve decision documents and Term Grazing Permit modifications as applicable.
  - d. Prepare all documents and maps necessary for applicable clearances.
  - e. Notify the participants in writing that they may install planned practices.
  - f. Coordinate with the producer and NRCS to determine the format of structural practices design/specification documents where applicable.
  - g. Develop engineering designs for conservation practices that meet BLM standards and NRCS Field Office Technical Guide (FOTG) Section IV standards and specifications. Provide a complete set of practice designs to the producer and NRCS as needed.
  - h. Review structural practice designs with the producer.

- i. Provide NRCS written authorization to apply selected conservation practices on BLM lands. Authorization will assure NRCS that all legal requirements, including NEPA and cultural resource clearances have been met prior to contract development.
  - j. Certify planned practices are installed correctly and that practices meet NRCS standards and specifications for contract item payment if applicable.
4. Participate with the producer, ASLD and/or NRCS in conducting status reviews and monitoring of installed practices.
  5. Participate with the producer and the plan participants in conducting annual monitoring of key areas established on the ranch.

FS Shall:

1. Participate with the producer, ASLD and NRCS in developing a CRMP where conservation practices are to be installed on FS Lands.
2. Participate with the producer, ASLD and NRCS in possible annual reviews of the CRMP.
3. Oversee and ensure completion of environmental planning process for all projects to be conducted on FS lands associated either with private funding or NRCS financial assistance programs by:
  - a. Providing biological assessments and/or evaluations, archeological surveys and any other clearances required under applicable laws and regulations.
  - b. Coordinate with the producer and/or NRCS on progress of environmental planning.
  - c. Prepare and approve decision documents and Term Grazing Permit modifications as applicable.
  - d. Prepare all documents and maps necessary for applicable clearances.
  - e. Notify the participants in writing that they may install planned practices.
  - f. Coordinate with the producer and NRCS to determine the format of structural practices design/specification documents where applicable.
  - g. Develop engineering designs for conservation practices that meet FS standards and NRCS Field Office Technical Guide (FOTG) Section IV standards and specifications. Provide a complete set of practice designs to the producer and NRCS as needed.
  - h. Review structural practice designs with the producer.
  - i. Provide NRCS written authorization to apply selected conservation practices on FS lands. Authorization will assure NRCS that all legal requirements, including NEPA and cultural resource clearances have been met prior to contract development.
  - j. Certify planned practices are installed correctly and that practices meet NRCS standards and specifications for contract item payment if applicable.

- h. Review structural practice designs with the producer.
  - i. Provide NRCS written authorization to apply selected conservation practices on FS lands. Authorization will assure NRCS that all legal requirements, including NEPA and cultural resource clearances have been met prior to contract development.
  - j. Certify planned practices are installed correctly and that practices meet NRCS standards and specifications for contract item payment if applicable.
4. Participate with the producer, ASLD and/or NRCS in conducting status reviews and monitoring of installed practices.
  5. Participate with the producer and the plan participants in conducting annual monitoring of key areas established on the ranch.
  6. Initiate consultation with FWS on ESA species and work with producer during the consultation process.

**Plan Approval**

We, the undersigned, have participated in the development of the Coordinated Resource Management plan, concur with the plan and those responsibilities assigned to us, and will act to implement it to the best of our ability.

Name	Representing	Date
Crystal Duffin	Noland Ranch	3-26-12
Duffin Noland	Noland Ranch	3-26-12

4. Participate with the producer, ASLD and/or NRCS in conducting status reviews and monitoring of installed practices.
5. Participate with the producer and the plan participants in conducting annual monitoring of key areas established on the ranch.
6. Initiate consultation with FWS on ESA species and work with producer during the consultation process.

### Plan Approval - Nolands

We, the undersigned, have participated in the development of the Coordinated Resource Management plan, concur with the plan and those responsibilities assigned to us, and will act to implement it to the best of our ability.

Name	Representing	Date
<del>Stephen M. Williams</del> Ralph Ware	ARIZONA STATE LAND DEPARTMENT USDA-NRCS	5-2-12 4/2/12









# Conservation Plan Map

Date: 11/10/2011

Customer(s): DUSTIN C NOLAND

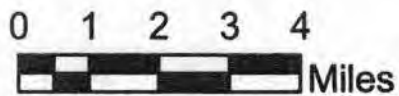
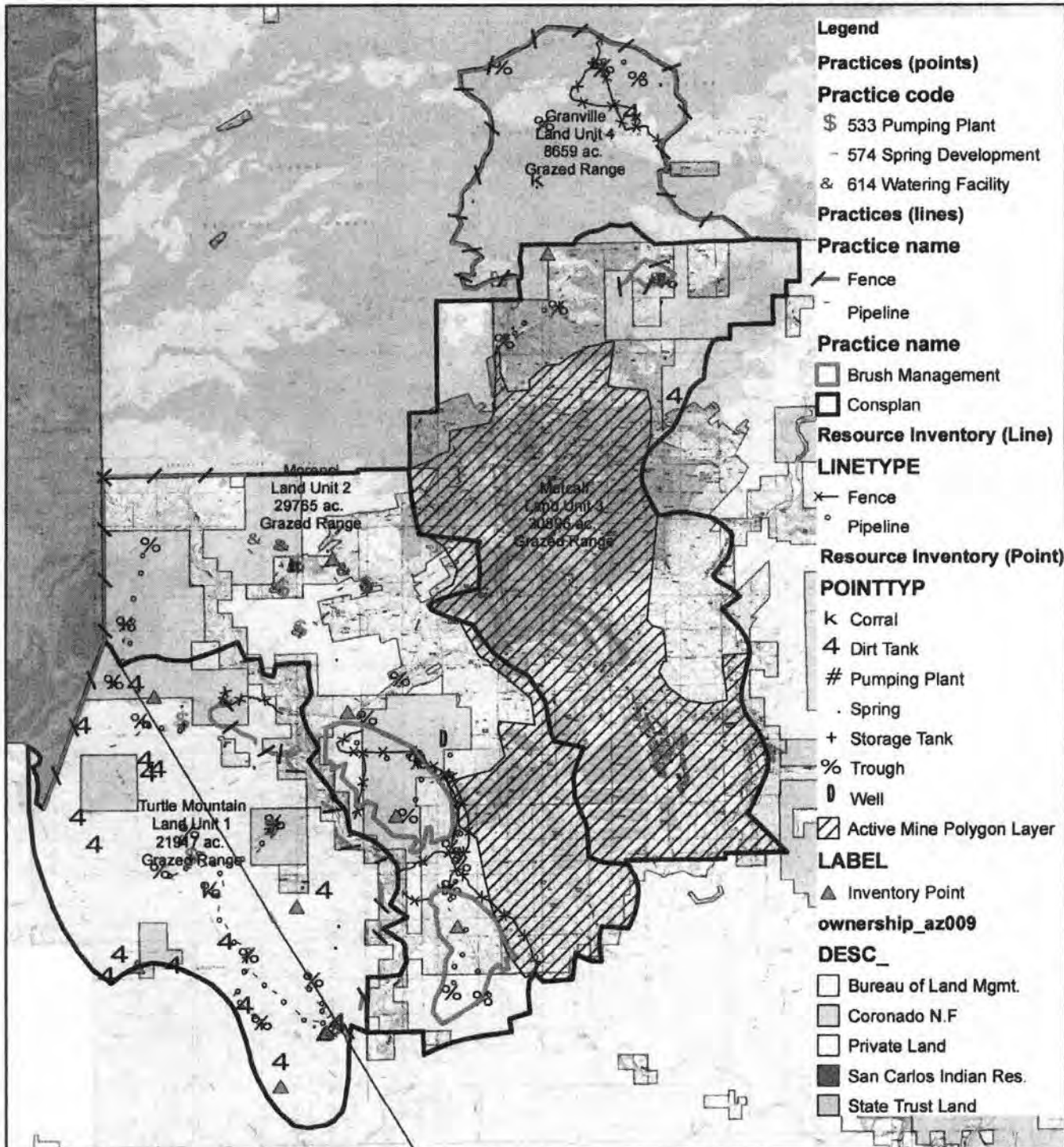
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Field Office: SAFFORD SERVICE CENTER

Agency: USDA-NRCS

Assisted By: SCOTT STRATTON

State and County: AZ, GREENLEE



1:160,000







# Benchmark Inventory Map

Date: 11/10/2011

Customer(s): DUSTIN C NOLAND

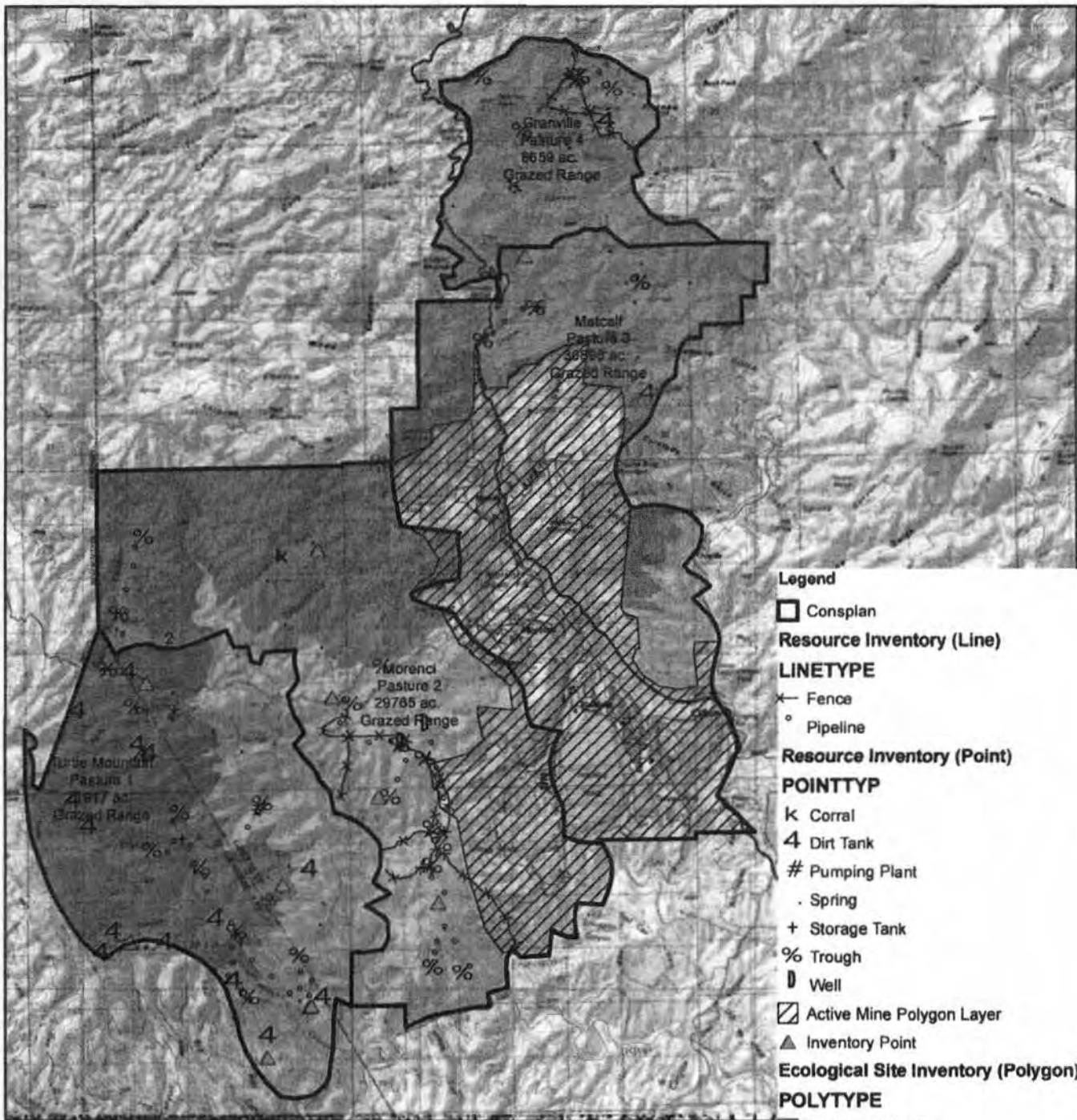
District: GILA VALLEY NATURAL RESOURCES CONSERVATION DISTRICT

Field Office: SAFFORD SERVICE CENTER

Agency: USDA-NRCS

Assisted By: SCOTT STRATTON

State and County: AZ, GREENLEE



NGS USA Topographic Maps