USDA

United States
Department of
Agriculture

Forest Service

November 2016

Allotment Management Plan

Millsite Allotment

Mesa Ranger District
Tonto National Forest
Arizona

This Allotment Management Plan implements direction established in the October 1985 Tonto National Forest Plan and 2010 Decision and April 29, 2011 appeal resolution of Millsite Allotment. This Allotment Management Plan is made part of your Term Grazing Permit in accordance of that permit.

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Millsite Allotment Management Plan

Allotment Description

Millsite allotment consists of approximately 44,573 acres and is located approximately 20 miles east of Apache Junction, Arizona, on the southern end of Mesa Ranger District. Six pastures make up this allotment: Bear Tank, Hewitt, Millsite, Cottonwood, South Woodbury, and Red Tanks. Lower elevations are by Sonoran Desert scrub with semi-desert grasslands in transition and chaparral in higher elevations. Riparian vegetation occurs in drainages. Topographical features range from nearly level valleys and elevated plains in the southern end to steep mountains to the north in and near the Superstition Wilderness. Elevations range from 2,100 to 6,000 feet. Mean annual precipitation ranges from approximately 10 inches at lower elevations to 22 inches at highest elevations.

Goals and Objectives

Allotment management will ensure:

- Maintain or improve range condition to fair or better levels, or demonstrate an upward trend towards this objective in key areas.
- Improve livestock distribution to allow increased uniform allowable utilization of forage resources and diminish concentration areas.
- Maintain satisfactory watershed conditions and effective groundcover.
- Maintain or improve riparian resources and hydrologic functioning in selected key areas.

Allotment Management

Permitted Use

Permitted stocking rates up to 307 adult livestock yearlong and 197 Yearlings, of natural increase, from January to May. Baseline will be 110 cow/calf, 15 bulls and carryover. Livestock numbers may change based on various factors: Reading the Range or similar monitoring and successful implementation of management practices. Other considerations include development of range improvements, forage utilization patterns, economic factors, and climate forecasts. Permittee will either carry over of ½ yearlings or add equivalent number to herd based on monitoring analysis, until herd reaches permitted numbers. Annual livestock numbers will be determined with District Ranger, Range Staff and permittee.

Grazing System

Deferred and/or Rest Rotation

Deferment refers to offsetting dates so they do not overlap in a given 2 year system. For example, if one pasture is grazed from May to June, the following year will not be grazed until after June. To

incorporate a rest into this system, in a 2 year system, a pasture in year one is grazed in May to June, deferred a second year, and fully rested in the last year. One herd will rotate every 3 months in a 5 pasture system. At least one pasture will receive a full year rest.

Red Tanks will be utilized every other year, during dormant season which is riparian leaf drop to lead set. Hewitt pasture contains a poorly constructed willow flycatcher enclosure. Further fence reconfiguration is required through NEPA to avoid heavy recreational user impact and continue to protect unoccupied southwestern willow flycatcher habitat. Until a remedy is in place, pasture will remain in non-use. North Woodbury pasture is in non-use for riparian and wildlife concerns. Holding pastures may be utilized in pasture rotations if monitoring dictates and approved by District Ranger.

Table 1: Generic Pasture Rotation Schedule to identify a deferred and/or rest rotation scheme.

Time	Year A	Year B	Year C	Year D	Year E
First	Bear Tanks	Millsite	Red Tanks (before leaf set)	S.Woodbury	Cottonwood
Second	Cottonwood	Bear Tanks	Millsite	S.Woodbury	Red Tanks (before leaf set)
Third	S.Woodbury	Cottonwood	Bear Tanks	Millsite	S.Woodbury
Fourth	Red Tanks (after leaf drop)	S.Woodbury	Cottonwood	Bear Tanks	Millsite
Rest	Millsite	Red Tanks	S.Woodbury	Cottonwood, Red Tanks	Bear Tanks

Schedule may be altered for resource or management reasons by authorized officer. For example, lack of rain or wildfire may augment pasture rotations, at which time an AOI modification will authorize changes. Seasonal herd movements would be determined by utilization levels, forage conditions and water availability and will be specified in annual operating instructions.

Range Improvements

Responsibilities

Permittee is responsible for maintenance of all range improvements for course of their usable life. Improvements will be maintained to standards and practices each year. When range improvements are beyond point of normal maintenance, heavy maintenance or reconstruction is required, they will be authorized by separate term grazing permit modification. Any maintenance or reconstruction of improvements throughout allotment will need to meet Forest Plan standards and management for Management Area 3B and 3I (1985 TNF Plan, as amended). At least an archeological and biological clearance may be required for reconstruction of existing improvements.

A schedule of maintenance of all improvements in your Term Grazing Permit requires normal maintenance to maintain a usable, sound condition. If range improvements deteriorate beyond normal maintenance repairs, improvement will be considered a new project. A permit modification will authorize reconstruction of range improvements.

Specific improvement maintenance will be discussed, on a case by case basis, with permittee and Forest Range Staff at AOI meetings. A schedule of maintenance will serve as a guideline to bring all improvements up to the following standards and practices.

Permit modifications will require all vehicles or heavy equipment to be clean equipment of all mud, dirt, and plant parts before entering Millsite allotment. Ensure equipment is not passing through or working in areas of noxious weed infestation. If equipment goes through noxious weed infestations on the forest, thoroughly clean equipment before it moves from the infested site. Avoid working in areas of infestation during seed production and dispersal phases.

Existing improvements may be relocated or redesigned to protect historic properties being impacted by grazing.

Water Development Standards and Practices: Troughs, Water Systems, and Stock tanks

1. All spring source facilities should be adequately protected (i.e. buried or encased) or fenced and fences maintained to prevent livestock from getting into the source box, unless otherwise stated.
2. Any open top storage tanks are potential traps for wildlife and wildlife ramps (see #23 for full description of ramps) are also required, otherwise will have a top placed.
3. Head box lids or covers shall be in place to prevent dirt, rodents, or other refuse from getting into the head box. Head boxes will be of concrete, metal, treated wood or other durable material. The start of the pipeline, inside the box, should be fitted with a tee to prevent debris from entering the pipe.
4. All outlet pipes and valves from head boxes should be functioning and any leaking should be kept to a very minimum.
5. All pipes should be large enough to carry the flow of the water development but not less than 1" diameter.
6. Water troughs will be kept at heights that make them useable to livestock. Troughs which become elevated from trampling livestock should be periodically backfilled to maintain a useable height, authorization may be needed.
7. Troughs which become uneven due to settling should be reset and leveled, authorization may be needed.
8. Bottoms of metal troughs should be kept clear of the ground, when possible, with at least 2" to 4" of clearance under the bottom of the trough to prevent rusting or decomposition.
9. Water should overflow trough side. Overflow pipes must be kept clear. Overflow water will be piped away from troughs at least 50 feet. End of overflow pipe must be protected from trampling by livestock. Water from overflow pipe must be directed away from trough area.
10. Inlet and outlet pipe shall be protected by anchoring to trough with a single post next to the vertical pipe and a brace or pole supporting the horizontal pipe. Inlet and outlet pipeline will be buried as much as possible for their protection.
11. All troughs should be equipped with a wildlife escape and access ramps from which wildlife can escape or drink from trough. Ramp must be fixed to one side of trough (see #23 for full ramp description). Troughs will meet bat standards.

12. Troughs, storage tanks, and pipelines will be drained and cleaned periodically to prevent moss and debris buildup and damage from freezing.
13. Poles, posts, and metal trough framing materials used in water development construction will be maintained, repaired, or replaced as needed. Materials must not be taller than the trough and wires should not be placed over trough to allow for watering avian species.
14. All above ground pipeline supported structures will be maintained to keep pipe at gradient and prevent sagging. Support structures should be utilized for entire above ground pipeline.
15. Horizontal wells must contain a shut off valve and reducer. Entire exterior of the well can be earth covered to prevent freezing.
16. Pipelines with air relief and drain valves will be covered with fine screen to prevent rodents and dirt from entering pipeline. Screens must be replaced as needed.
17. Pipeline leaks will be repaired or damaged section will be replaced with materials similar to materials from original construction.
18. Pipelines with valve covers boxes will be kept covered and repaired when needed.
19. Stock tanks will be kept clear of debris, floating logs, dead animals, etc. Spillways will be cleaned and maintained to prevent washing out or becoming plugged. Rodent damage and damaging vegetation on dams will be reported to Forest officer.
20. Water development components (e.g., rusted out troughs, broken sections of pipe, etc.) replaced during maintenance or reconstruction will be removed from Forest and properly disposed of.
21. New water developments will be constructed in uplands to encourage livestock use out of the bottoms.
22. Permittee will not haul water on a regular basis. If required for emergency, authorization is required by District Ranger.
23. All existing or future water developments that have open tops (i.e. troughs, open top storage tanks) must have escape and access ramps. All ramps will be built of expanded metal or similar materials and extend to bottom of trough and sides. Ramp will be firmly secured to trough rim so it will not be knocked loose by animals. Ramps will be constructed of durable material such as concrete or metal. Slope will not exceed 45 degrees. Further design specifications may be required from "Water for Wildlife" by Taylor and Tuttle 2007.

Fence and Corral Standards and Practices

1. All broken wire will be spliced and repaired in such a manner that tension on a wire can be maintained. Wire splices will be made with 12 gauge size tie wire or type of wire used in initial construction.
2. Broken or rotten posts, broken braces and missing staples will be replaced where and when needed to maintain the fence.
3. Wires will be re-stretched where needed.
4. Broken or missing stays will be replaced where needed.
5. Top wire on all range fences should be kept at 42 inches in height, and bottom wire should be smooth and 18 inches above ground. General maintenance will adhere to original construction. Reconstruction will be constructed, under permit modification, with these standards.

6. Staples should not be driven so deep into the post that they scar or create a weak spot in the wire.
7. All gates are closed before livestock enter new pastures.
8. Wire gate tension should be sufficient to prevent gate from sagging and still be easily opened and closed. Gate loops are made of smooth wire, not barbed wire.
9. Trees which fall on fences will be cut and removed when and where needed; wire if broken will be spliced and re-stretched; poles if broken will be replaced.
10. Broken or rotten sections of log or pole fences and corrals will be replaced as needed.
11. Corrals are kept clean of litter, in good repair, and in useable condition.
12. Fences are maintained at, or near as possible to, the standards needed to turn livestock.
13. Metal components of range fences and corrals (e.g., wire, stays, t-posts, gates, etc.) replaced during maintenance or reconstruction will be removed from Forest and properly disposed of.
14. Any maintenance or reconstruction of improvements throughout allotment will need to meet Forest Plan standards and management for Management Area 2D (1985 TNF Plan, as amended).
15. Existing water lots around dirt tanks will be maintained in satisfactory condition to control livestock access to water.

All existing improvements are listed below. Benson spring is a joint venture with Arizona Game and Fish department, only livestock trough and maintenance to spring will be slated for permittee responsibility.

Table 2: Improvement List, those struck from list are no longer responsibility of permittee for maintenance.

Name of Improvements	Type	Improvement Number	Units
Millsite – Superstition	Allotment Boundary Fence	R02029	3.0
Millsite – Tortilla	Allotment Boundary Fence	002053	6.3 miles from Coffee Flat Mtn., SW ¼, Sec. 13, T. 1N, R.10E, to La Barge Mtn., SE 1/4., Sec. 8, T.1N, R.11E.
Millsite – Reavis	Allotment Boundary Fence	002054	3.5 miles from White Mtn., SW ¼, Sec. 1, T. 1N, R.11E, east to the district boundary fence.

Name of Improvements	Type	Improvement Number	Units
Millsite – Superior	Allotment Boundary Fence	002056	6.3 miles from SW ¼, Sec. 19, T. 1S, R.12E, south to highway 60 R.O.W. fence.
Forest Boundary Fence	Forest Boundary Fence	002057	11.0 miles from NW ¼, Sec. 36, T. 1N, R.10E, South to Highway 60 R.O.W. fence.
~~Pilot Plot Fence~~	~~Allotment Interior Fence~~	~~000714~~	~~1.7 DELETED~~
JF Drift Fence	Allotment Interior Fence	000732	1.5
Sand Wash Drift fence	Allotment Interior Fence	000733	1.5
Trough Drift Fence	Allotment Interior Fence	000735	2.0
Hewitt Station Pasture	Allotment Interior Fence	002058	3.5
JF Pasture	Allotment Interior Fence	002059	3.0
Millsite Drift Fence	Allotment Interior Fence	002060	8.0
Superior Drift Fence	Allotment Interior Fence	002061	8.0
Roblas Pasture	Allotment Interior Fence	002063	2.0
Quail Spring Drift fence	Allotment Interior Fence	002091	0.5
Headquarters Drift Fence	Allotment Interior Fence	002364	2.0
Hewitt Drift Fence	Allotment Interior Fence	002343	0.5
Muskhog Spring	Spring Development	000707	1.0
Little Indian Spring	Spring Development	000734	1.0
Eagle Spring	Spring Development	002075	1.0
Peacock Spring	Spring Development	002076	1.0
Rattlesnake Spring	Spring Development	002077	1.0
Maverick Spring	Spring Development	002078	1.0
Dripping Spring	Spring Development	002079	1.0
Canyon Spring	Spring Development	002080	1.0
Hackberry Spring	Spring Development	002081	1.0
Milk Ranch Spring	Spring Development	002037	1.0
Mesquite Spring	Spring Development	002082	1.0
Angel Spring	Spring Development	002083	1.0
Pope Spring	Spring Development	002084	1.0
Spencer Spring	Spring Development	002085	1.0
~~Benson Spring*~~	~~Spring Development~~	~~002086~~	~~1.0 DELETED~~
Rogers Trough Spring	Spring Development	002087	1.0
Government Spring	Spring Development	002090	1.0
Randolph Spring	Spring Development	000720	1.0
Goldwater Stock Tank	Dam/Reservoir	000709	1.0
Johnson Stock Tank	Dam/Reservoir	000710	1.0
Maverick Stock Tank	Dam/Reservoir	000711	1.0
Pilot Stock Tank	Dam/Reservoir	000713	1.0
Highway Stock Tank	Dam/Reservoir	000731	1.0
JF Stock Tank	Dam/Reservoir	000749	1.0
Roblas Stock Tank #1	Dam/Reservoir	002038	1.0
Mesquite Stock Tank	Dam/Reservoir	000750	1.0
Milk Ranch Stock Tank	Dam/Reservoir	002095	1.0
Saguaro Stock Tank	Dam/Reservoir	002096	1.0

Name of Improvements	Type	Improvement Number	Units
Hardt Stock Tank	Dam/Reservoir	002098	1.0
Roblas Stock Tank #2	Dam/Reservoir	002099	1.0
Gonzales Stock Tank	Dam/Reservoir	002100	1.0
Randolph Stock Tank	Dam/Reservoir	002101	1.0
Basin Stock Tank	Dam/Reservoir	002354	1.0
Montana Stock Tank	Dam/Reservoir	004576	1.0
Mahogany Stock Tank	Dam/Reservoir	000954	1.0
East Fork Stock Tank	Dam/Reservoir	005199	1.0
Hackberry Stock Tank	Dam/Reservoir	005217	1.0
Queen Stock Tank	Dam/Reservoir	000963	1.0
Hewitt Stock Tank	Dam/Reservoir	000955	1.0
Whitlow Stock Tank	Dam/Reservoir	000961	1.0
Millsite Stock Tank	Dam/Reservoir	000968	1.0
Palo Verde Stock Tank	Dam/Reservoir	005218	1.0
Hewitt Station Well	Well, Windmill	002064	1.0
Valles Well No.1	Well, Windmill	002065	1.0
Reeds Water Well	Well	002067	1.0
Roblas Well	Well	002066	1.0
Woodbury Well	Well	002069	1.0
Valles Well No. 2	Well, Storage Tank	002070	1.0
Cottonwood Well	Well	002071	1.0
Nobel Well	Well	002072	1.0
Preston Well	Well	002073	1.0
Byous Well	Well	002074	1.0
Queen Well	Well	000729	1.0
Angel Springs Corral	Corral	002088	1.0
Rogers Trough Corral	Corral	002089	1.0
JF Ranch Corral	Corral	002092	1.0
Valles Well No. 2 Corral	Corral	002093	1.0
Valles Well No. 1 Corral	Corral	002094	1.0
Hewitt Corral	Corral	000717	1.0
JF Ranch Cabin	Cabin	002102	1.0
JF Ranch Barn	Barn	002369	1.0
Woodbury Pipeline	Solar Pump, Storage Tank, Pipeline, Troughs	002500	1 pump, 1 storage tank, 2 miles pipeline, 3 troughs
JF Cabin Well	Solar Pump, Storage Tank, Pipeline, troughs	2501	1 pump, 2 storage tanks, 1.5 miles pipeline, 1 trough
Byous Spring	Spring Development, pipeline and trough. Alternative supplement from Valles No.2 Well	2502	1 mile pipeline and trough
Hewitt Water	Storage Tank, Pipeline, Troughs	2503	1 storage tank, 1.5 miles pipeline, 2 troughs
Cottonwood pipeline and trough	Pipeline, Trough	2504	Fed from Valles Well #2, ~6,600 feet pipeline and trough

House pipeline and trough	Pipeline, Trough	2505	Fed from PVT Well, ~2,700 feet pipeline and trough
Millsite pipeline and trough	Pipeline, Trough	2506	Fed from Valles Well #1, ~8,000 feet pipeline, 2 troughs
Noble storage tank and pipeline	Storage tank, pipeline, trough	2507	Fed from Noble well, ~3/4 mile pipeline, 3,000 gallon storage tank, 600 gallon trough

*Benson spring was fenced off, with a 3 pipe metal, by Arizona Game and Fish Department. Water was piped to a livestock trough. Maintenance for improvement is issued to Arizona Game and Fish Department. If in future it is returned to a sole livestock trough with no fencing, permittee will be willing to continue maintenance.

New Improvements

Range infrastructure identified below will play a key role in moving current conditions toward desired conditions and will help achieve objectives. Several improvements have been completed after August 24, 2010 Decision Notice for Millsite Allotment. Current status of the improvements are included below.

All new improvements will be authorized by District Ranger, separately, in a permit modification which will include materials, time frames, and other requirements based on location and needs. Once completed, a letter will modify permit to include constructed improvement as part of maintenance responsibility.

Remaining projects to be implemented must be constructed to avoid direct and indirect impacts to historic properties.

Table 3: New Improvements

Pasture	Improvement(s)	Purpose and Need	Status
Bear Tank	Install a solar pump and 10,000 gallon water storage tank to Noble windmill. Water will be piped to two troughs located ~ 1 mile south of the windmill.	Provide a reliable water source in the central portion of the pasture and lessen dependency on Bear Tank spring.	Clearances complete. Permit modification needed.
Bear Tank	Install pipe fencing around Bear Tank spring excluding livestock access.	Provide protection for riparian resource; provide wildlife habitat.	Project cancelled
Cottonwood	Install storage tank and trough from Woodbury pipeline, #2500.	Provide reliable water at old stock tank for livestock distribution.	Clearances completed. Permit modification needed.

Travel Management Guidelines

As directed by the Travel Management Rule (36 CFR Part 212), the Tonto National Forest has issued a draft Record of Decision on its Travel Management Plan. The final decision will designate a system of motorized routes and areas open for motor vehicle use. The travel management decision will be followed by the permittee.

Under the terms and conditions of your term grazing permit you are authorized to conduct livestock grazing activities on National Forest lands within the Tonto National Forest as authorized within your term grazing permit. Motor vehicle use that is specifically needed, authorized, and directly related to the terms and conditions of your grazing permit may be exempted, from the prohibitions applied to the general public.

Road maintenance that is required to access range improvements or livestock management must receive a road use permit or modification for any road work. In emergencies, such as a flash flood, District Ranger may authorize road work to clear debris or temporarily fix road. Documentation of this emergency must be filed. If access is needed to enter a motor vehicle restricted area, you must have special authorization through an Off-Road Vehicle Permit or special authorization through Annual Operating Instructions. If long term use is requested, permit may be modified to include roadways.

Allotment Management Practices

Livestock Management

Livestock management, such as herding and salting, is critical to livestock to control cattle in appropriate pastures. Permittee will furnish sufficient riders or herders for proper distribution, protection, and management of cattle on the allotment. Tonto National Forest Grazing Practices are as follows:

- Salt, protein and other nutritional supplement will be used to support livestock health and improvement distribution, but should not be placed any closer than ¼ mile from developed or live water, recreation sites or designated trails, concentration areas such as drainages and saddles. No salting will occur within or adjacent to identified/known heritage sites. Salt will be removed from units when cattle have left an area. Salt should not be placed in a pasture until cattle are moved into pasture. Supplement locations will be rotated periodically.
- Cattle should be drifted instead of trailed wherever possible. Eliminate livestock trailing in riparian areas through herding techniques or hauling livestock.
- When entering next scheduled pasture, all livestock shall be removed from previous pasture within two weeks.
- Time spent in each pasture may vary depending on weather and when seasonal utilization standards are met. It is permittees' responsibility to monitor the utilization and move the cattle before utilization standards are exceeded.
- Permittees will make sure enough time is allowed to remove livestock to meet the pasture move date(s) and avoid unauthorized and excess use.

- Permittee may be asked to provide the Forest Service with an Actual Use Record, and/or Improvement Maintenance Record.
- Provide alternative water sources away from riparian areas, when necessary.
- If approved by Forest Official, feeding hay on Millsite allotment must be certified weed-free by a State-authorized or State-designated official.

Monitoring

Practices

Following monitoring activities will be carried out by grazing permittee and Forest Service either during or at the end of grazing season. However, not all types of monitoring practices need to be conducted during this time frame. Forest Service monitoring results will be shared with permittees to improve livestock management. All monitoring information collected by permittees and Forest Service will be included in district allotment file. Monitoring of forage availability and utilization, range readiness and resource conditions will be used to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions.

Allotment Inspections/Compliance monitoring

Compliance monitoring ensures livestock are distributed in correct pastures and areas authorized for grazing. It also includes but is not limited to, improvement maintenance inspections, forage utilization and livestock counts. These inspections will occur throughout grazing year.

Utilization measurements are followed by procedures found in the Sampling Vegetation Attributes (1999), Utilization Studies and Residual Measurements (1999). Possible data monitoring could include browse utilization measurements, perennial grass stubble height measurements, photo points, and or height/weight relationships for certain perennial grass species. Utilization would be monitored on key forage species, which are native perennial grasses along with native perennial shrubs that are palatable to livestock.

At a minimum, monitoring would include use in key areas and locations selected outside of key areas. Data collection procedures and interpretation would consider guidance contained in the Principles of Obtaining and Interpreting Utilization Data on Southwest Rangelands (Smith et al. 2005) publication.

Indicators of grazing intensity will be important for systems without strong grass presence, especially Sonoran Desert, and will be incorporated with jojoba utilization studies. Grazing Intensity classes have been adapted from the Interagency Technical Reference 1734-3 "Utilization Studies and Residual Measurements" (1996), the Forest Service Region 3 Rangeland Analysis and Management Training Guide (June 1997), "Grazing Intensity Guidelines" by Jerry L. Holechek and Dee Galt (June 2000, Rangelands 22-3), and from the Forest Service Grazing Permit Administration Handbook: Region 3 Supplement to Chapter 90 (September 2007).

Visual Indicators of Conservative Grazing Intensity

- Rangeland may be topped, skimmed, or grazed in patches;
- Areas greater than 1 mile from water show little use;
- There is no evidence of livestock trailing to forage;
- Good forage plants have abundant seed stalks , roughly 60-80% of stalks remain;
- 1/3 to ½ of good forage plants have been grazed in key areas;
- Most young plants are not damaged;
- Poor forage plants are not grazed at all.

Visual Indicators of Moderate Grazing Intensity

- Most of the accessible range shows some use;
- Areas between 1 mile to 1 ½ miles from water show some use;
- There is little evidence of livestock trailing to forage;
- Good forage plants have some seed stalks left , roughly 15-25% of stalks remain;
- About ½ to 2/3 of the good forage plants show some use;
- Some young plants show damage;
- Less than 10% of the poor forage plants are utilized.

Noxious Weed monitoring

Noxious weeds located in these allotments would be treated as necessary. Permittee and Forest Service will coordinate weed inventory and treatment. Noxious weed monitoring may be carried out simultaneously with allotment inspections are conducted. As noxious weed populations are found they are mapped, monitored, and treated. Treatment methods would follow guidelines established in "Final Environmental Assessment for Integrated Treatment of Noxious or Invasive Weeds".

Riparian monitoring

Red tanks pasture contains riparian vegetation and Forest Service will continue utilization monitoring. Rogers Canyon in North Woodbury will be rested and monitoring will ensure no livestock use. Burro Basin contains riparian vegetation that qualifies for full Tonto National Forest Riparian Area Management Utilization Guidelines protocol.

Once riparian vegetation has become re-established in other key reaches, at a density sufficient for monitoring, riparian utilization measurements following the Interagency Technical Reference (1996), McBride and Grove (2002), and Cowley and Burton (2005) or the most current acceptable method, will be made.

Changes in riparian vegetation and stream channel geomorphology condition and trend will be measured at 5 to 10 year intervals (effectiveness monitoring) using protocols described in the Interagency Technical Reference (1996), Cowley and Burton (2005), and Harrelson et al (1994), or the most current acceptable method. If riparian vegetation establishes, permit will be modified to include specific monitoring protocol.

Wildlife monitoring

In conjunction with wildlife biologist, project related monitoring may occur on Millsite allotment. However, no effect to threatened or endangered species or its habitats have been determined. Current management will not alter or impact habitat conditions, nor will it create a disturbance.

Heritage Resources monitoring

In conjunction with Forest Archaeologist special care will be carried out to protect heritage resources (historic and prehistoric sites) from impacts caused by range construction projects or livestock concentrations. An archaeological survey will be conducted prior to construction of any new range improvements and/or location selection where impacts to heritage resource sites are avoided.

Existing range facilities, such as water troughs, corrals, where cattle regularly congregate are periodically inspected to determine whether or not livestock are causing damage to heritage resource sites. Periodic monitoring will also assess site condition and to ensure that protection measures are effective.

Key Areas

A key area is a portion of rangeland selected because of its location, grazing or browsing value, or use. It serves as a monitoring and evaluation point for range condition, trend, or degree of grazing use. Annual monitoring in key areas is for short-term data collection. These key areas are properly selected to reflect the overall acceptability of current grazing management over the rangeland condition.

These monitoring methods could include, but are not limited to utilization and stubble height monitoring, annual riparian monitoring, and photo point protocols.

Data will be used, along with supporting information to determine when livestock must be moved from one pasture to another and to make any necessary adjustments to livestock numbers and/or season of use (determined in AOI).

Final utilization and stubble height readings will be taken at the end of pasture use, along with end of growing season use of each year. Annual monitoring will follow accepted Forest Service protocols set by the monitoring handbook.

Key areas include but are not limited to:

- Benchmark locations: reading the range plots and parker 3 step locations
- Additional locations that meet definition above

Benchmarks

Condition and long-term trend monitoring will be conducted in some of the key areas used for annual monitoring. Information will be used to determine if the area is meeting or moving towards desired conditions. Long-term trend data will be used to measure changes in plant community composition, cover, structure, soil conditions, frequency, and management of grazing in a trend status. Annual adjustments may be conducted in order to meet long-term desired conditions.

Periodic monitoring, on decade intervals, for vegetation trend will include cover and frequency, in which Parker 3 Step Clusters, "reading the range" or other similar procedures will be used.

Indicators of downward trend for vegetation include:

- Desirable and intermediate species decreasing in vigor
- Lack of young plants from desirable and intermediate species
- Invasion by undesirable species.
- Hedged and highlined shrubs. Dead branches, may indicate that shrubs are dying back.

Indicators of downward trend in soil stability include:

- Rill marks, which are small but conspicuous water channels around vegetation.
- Active gullies are raw, actively downcutting, and may have headcuts. This type of gully may vary from a few inches to several feet deep.
- Alluvial deposits; soil material transported and laid down as small fans in headwater drainages.
- Soil remnants; original topsoil held in place by vegetation or roots.
- Active terraces; usually caused by hooves of animals; stair step in appearance on side-slopes
- Pedestalled plants; exposed plant crown or roots.
- Wind-scoured depressions between plants, or wind deposits of soil
- Soil buildup behind plants, logs, and trees on upslope side.

Long-term monitoring will follow accepted Forest Service protocols determined by the Forest Service Monitoring Handbook, including documents listed above.

Forest Plan Standards and Guidelines

Forest Plan

Land and Resource Management Plan (Forest Plan) defines long-term direction for managing Tonto National Forest. Forest Plan provides for multiple use and sustained yield of goods and services from lands in a way that maximizes long-term net public benefits in an environmentally sound manner [36 Code of Federal Regulations (CFR) 219.1(a)]. In October of 1985 the Tonto National Forest implemented Forest Management Plan with direction related to livestock grazing and Range Management Program Criteria (Forest Plan pg. 24).

Forest Plan Management Practices

Management Criteria are as follows:

- While invasive species are spread in a variety of ways, it is certain that presence of grazing livestock will increase their spread. This can be minimized by timing grazing in infested pastures prior to seed set. This is very difficult with buffelgrass, which flowers and sets seed throughout much of the year.
- Any seed used for re-vegetation on Millsite allotment should be tested according to Tonto Forest policy, Manual Supplement 2081.2, effective April 2009. Any straw mulch used on the

National Forest should be certified as weed-free by a State-authorized or State-designated official.

- Incorporate measures from the Forest Service "Guide to Noxious Weed Prevention Practices" into the allotment management plan.
- A livestock enclosure, in Hewitt pasture, surrounding unoccupied Southwestern willow flycatcher habitat extends a wash and is near to heavy recreation use. Current fence strategy is not easily maintained. Further development of fencing, to avoid wash and heavy user impact, will be considered in further NEPA. Until then, pasture will remain in non-use. Once fence is reconfigured, pasture can be included in normal allotment rotation.
- Fencing or exclosure of livestock from individual sensitive historic properties or areas containing multiple sensitive historic properties being impacted by grazing.
- Other mitigation measures involving data recovery, for example, may be developed and implemented in consultation with the SHPO as the need arises. The appropriate tribes will be consulted if the mitigation is invasive or it affects a Traditional Cultural Property or other property of concern for them.

Allowable Forest Utilization & Stubble Height Standards

Grazing will be managed to achieve long-term goals in pasture key areas. It is the responsibility as permittee to take action so that livestock grazing does not exceed vegetative use thresholds. Please arrange for an allotment inspection if seasonal vegetative use of available forage approaches these thresholds.

Table 4: Allowable Use

Vegetation	Use Threshold
Upland Herbaceous	30-40% of current year's growth
Upland Browse Species, such as jojoba	Less than 50% of current year's growth
Obligate palatable riparian tree	Less than 50 % of terminal leaders, top 1/3 of plant, which equates to 20% growth by volume. Plants must be accessible to livestock, less than 6 feet tall.
Deergrass	Less than 40% of plant biomass
Emergent Species, such as rushes, sedges, cattails, horsetails	6 – 8 inches of stubble height during grazing period
Burro Basin obligate riparian and deergrass	Less than 30% of deergrass biomass. Less than 30% on terminal leaders, top 1/3 of plant, which equates to 20% growth by volume. Plants must be accessible to livestock, less than 6 feet tall.

Administrative Actions

Management is designed to provide sufficient flexibility to adapt management to changing circumstances. Monitoring of forage availability and utilization, range readiness and resource conditions will be used to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions. These actions will be implemented through AOI and may be occur at any time throughout grazing season in response to unforeseen environmental or management concerns.

If livestock are reaching allowable use limits on current production or causing other undesirable efforts, livestock will be moved to next pasture. At end of year, determinations will be made to attempt to resolve concern. Follow-up monitoring will be completed to determine if changes in carrying capacity is necessary. If Burro Basin riparian area consistently exceeds use levels, and other techniques to reduce impacts to area is not working, exclusion of area will be considered.

If the following occur it may necessitate changes in management of this allotment:

- Through monitoring, management objectives are not being achieved, or trend toward desired conditions are not occurring;
- Annual indicators of grazing use or guidelines are or are not met;
- Climatic events, fire, flood, or uses and activities detrimentally impacting resource conditions;
- Consistent use in excess of allowable use standards;
- Changes in impact of recreation use to allotment;

Then the following actions may be enacted:

- Extending or shortening time in pastures based on utilization levels in uplands and riparian areas;
- Assessing pasture readiness and changing its position in the seasonal rotation;
- Time or season of pasture use;
- Resting a pasture for one or more growing seasons;
- High intensity, short duration or other grazing strategies;
- Complete removal of livestock in event of extended drought, severe fire, or depleted rangelands until rangelands have recovered;
- Decrease or increase herd size within limits of permitted numbers;
- Temporarily close off water in a portion of pasture to manipulate grazing pressure and intensity of use;
- Herding livestock;
- Excluding livestock from specific areas temporarily or permanently for other resource objectives; or
- Changing or limiting season of use to minimize impacts to riparian vegetation and water quality;
- Potential new improvements to offset impacts by recreation.

AD-107 (11/89)

United States Department of Agriculture

REPORT OF TRANSFER OR OTHER DISPOSITION OR CONSTRUCTION OF PROPERTY

Report No.

Date 7/6/2016

1. Type of Transaction *(Report Each Type Separately)*

☒ Transfer ☐ Sale ☐ Trade In ☐ Donation
☐ Construction ☐ Temporary Loan Record

2. Authorization Reference

3. Proceeds Received $

4. Reporting Agency	5. Receiving Agency *(Or Name of Purchaser or Donee)*
	Lynn / George Martin
A. Organizational Unit: Mesa RD	A. Organizational Unit *(Or Address of Purchaser)*: Millsite Allot. Devils Cyn
B. Location: Mesa, AZ	B. Location: Superior, AZ
C. Signature: [signature]	C. Signature: [signature]
D. Title: Range Staff	D. Title: E. Date: 7/6/2016

6. Property Items

Quantity *(Or Property No.)*	Item Description *(Give Full Details Including Serial Number, If Any, and Condition Code)*	Inventory Value
16	8- Devils Canyon Allotment 8- Millsite Allotment "Please close gate" Signs	

Certification of Property and Fiscal Officers

7. Property Officer: This transaction is completed and the necessary entries have been made to adjust the Property Records. Proceeds, if any, are to be deposited to:

Signature	Date

8. Fiscal Officer

A. ☐ The sum indicated below has been received in payment for the property disposed of.

B. ☐ The necessary entries have been made to adjust accounting records.

Amount ($)	Schedule No.

Signature	Date

USDA

United States Department of Agriculture

Forest Service

November 2016

Allotment Management Plan

Millsite Allotment

Mesa Ranger District
Tonto National Forest
Arizona

This Allotment Management Plan implements direction established in the October 1985 Tonto National Forest Plan and 2010 Decision and April 29, 2011 appeal resolution of Millsite Allotment. This Allotment Management Plan is made part of your Term Grazing Permit in accordance of that permit.

Prepared by: Andrea Jamie Wages Date: 10/26/2016
Andrea Jamie Wages
Range Management Staff

Agreed to by: Lynn A Mart William G. Martin Date: 11/2/2016
William G. and Lynn A. Martin
Millsite Allotment Permittee

Approved by: Gary Hanna Date: 10/26/2016
Gary Hanna
Mesa District Ranger

Contents

Millsite Allotment Management Plan

Allotment Description

Millsite allotment consists of approximately 44,573 acres and is located approximately 20 miles east of Apache Junction, Arizona, on the southern end of Mesa Ranger District. Six pastures make up this allotment: Bear Tank, Hewitt, Millsite, Cottonwood, South Woodbury, and Red Tanks. Lower elevations are by Sonoran Desert scrub with semi-desert grasslands in transition and chaparral in higher elevations. Riparian vegetation occurs in drainages. Topographical features range from nearly level valleys and elevated plains in the southern end to steep mountains to the north in and near the Superstition Wilderness. Elevations range from 2,100 to 6,000 feet. Mean annual precipitation ranges from approximately 10 inches at lower elevations to 22 inches at highest elevations.

Goals and Objectives

Allotment management will ensure:

- Maintain or improve range condition to fair or better levels, or demonstrate an upward trend towards this objective in key areas.
- Improve livestock distribution to allow increased uniform allowable utilization of forage resources and diminish concentration areas.
- Maintain satisfactory watershed conditions and effective groundcover.
- Maintain or improve riparian resources and hydrologic functioning in selected key areas.

Allotment Management

Permitted Use

Permitted stocking rates up to 307 adult livestock yearlong and 197 Yearlings, of natural increase, from January to May. Baseline will be 110 cow/calf, 15 bulls and carryover. Livestock numbers may change based on various factors: Reading the Range or similar monitoring and successful implementation of management practices. Other considerations include development of range improvements, forage utilization patterns, economic factors, and climate forecasts. Permittee will either carry over of ½ yearlings or add equivalent number to herd based on monitoring analysis, until herd reaches permitted numbers. Annual livestock numbers will be determined with District Ranger, Range Staff and permittee.

Grazing System

Deferred and/or Rest Rotation

Deferment refers to offsetting dates so they do not overlap in a given 2 year system. For example, if one pasture is grazed from May to June, the following year will not be grazed until after June. To

incorporate a rest into this system, in a 2 year system, a pasture in year one is grazed in May to June, deferred a second year, and fully rested in the last year. One herd will rotate every 3 months in a 5 pasture system. At least one pasture will receive a full year rest.

Red Tanks will be utilized every other year, during dormant season which is riparian leaf drop to lead set. Hewitt pasture contains a poorly constructed willow flycatcher enclosure. Further fence reconfiguration is required through NEPA to avoid heavy recreational user impact and continue to protect unoccupied southwestern willow flycatcher habitat. Until a remedy is in place, pasture will remain in non-use. North Woodbury pasture is in non-use for riparian and wildlife concerns. Holding pastures may be utilized in pasture rotations if monitoring dictates and approved by District Ranger.

Table 1: Generic Pasture Rotation Schedule to identify a deferred and/or rest rotation scheme.

Time	Year A	Year B	Year C	Year D	Year E
First	Bear Tanks	Millsite	Red Tanks (before leaf set)	S.Woodbury	Cottonwood
Second	Cottonwood	Bear Tanks	Millsite	S.Woodbury	Red Tanks (before leaf set)
Third	S.Woodbury	Cottonwood	Bear Tanks	Millsite	S.Woodbury
Fourth	Red Tanks (after leaf drop)	S.Woodbury	Cottonwood	Bear Tanks	Millsite
Rest	Millsite	Red Tanks	S.Woodbury	Cottonwood, Red Tanks	Bear Tanks

Schedule may be altered for resource or management reasons by authorized officer. For example, lack of rain or wildfire may augment pasture rotations, at which time an AOI modification will authorize changes. Seasonal herd movements would be determined by utilization levels, forage conditions and water availability and will be specified in annual operating instructions.

Range Improvements

Responsibilities

Permittee is responsible for maintenance of all range improvements for course of their usable life. Improvements will be maintained to standards and practices each year. When range improvements are beyond point of normal maintenance, heavy maintenance or reconstruction is required, they will be authorized by separate term grazing permit modification. Any maintenance or reconstruction of improvements throughout allotment will need to meet Forest Plan standards and management for Management Area 3B and 3I (1985 TNF Plan, as amended). At least an archeological and biological clearance may be required for reconstruction of existing improvements.

A schedule of maintenance of all improvements in your Term Grazing Permit requires normal maintenance to maintain a usable, sound condition. If range improvements deteriorate beyond normal maintenance repairs, improvement will be considered a new project. A permit modification will authorize reconstruction of range improvements.

Specific improvement maintenance will be discussed, on a case by case basis, with permittee and Forest Range Staff at AOI meetings. A schedule of maintenance will serve as a guideline to bring all improvements up to the following standards and practices.

Permit modifications will require all vehicles or heavy equipment to be clean equipment of all mud, dirt, and plant parts before entering Millsite allotment. Ensure equipment is not passing through or working in areas of noxious weed infestation. If equipment goes through noxious weed infestations on the forest, thoroughly clean equipment before it moves from the infested site. Avoid working in areas of infestation during seed production and dispersal phases.

Existing improvements may be relocated or redesigned to protect historic properties being impacted by grazing.

Water Development Standards and Practices: Troughs, Water Systems, and Stock tanks

1. All spring source facilities should be adequately protected (i.e. buried or encased) or fenced and fences maintained to prevent livestock from getting into the source box, unless otherwise stated.
2. Any open top storage tanks are potential traps for wildlife and wildlife ramps (see #23 for full description of ramps) are also required, otherwise will have a top placed.
3. Head box lids or covers shall be in place to prevent dirt, rodents, or other refuse from getting into the head box. Head boxes will be of concrete, metal, treated wood or other durable material. The start of the pipeline, inside the box, should be fitted with a tee to prevent debris from entering the pipe.
4. All outlet pipes and valves from head boxes should be functioning and any leaking should be kept to a very minimum.
5. All pipes should be large enough to carry the flow of the water development but not less than 1" diameter.
6. Water troughs will be kept at heights that make them useable to livestock. Troughs which become elevated from trampling livestock should be periodically backfilled to maintain a useable height, authorization may be needed.
7. Troughs which become uneven due to settling should be reset and leveled, authorization may be needed.
8. Bottoms of metal troughs should be kept clear of the ground, when possible, with at least 2" to 4" of clearance under the bottom of the trough to prevent rusting or decomposition.
9. Water should overflow trough side. Overflow pipes must be kept clear. Overflow water will be piped away from troughs at least 50 feet. End of overflow pipe must be protected from trampling by livestock. Water from overflow pipe must be directed away from trough area.
10. Inlet and outlet pipe shall be protected by anchoring to trough with a single post next to the vertical pipe and a brace or pole supporting the horizontal pipe. Inlet and outlet pipeline will be buried as much as possible for their protection.
11. All troughs should be equipped with a wildlife escape and access ramps from which wildlife can escape or drink from trough. Ramp must be fixed to one side of trough (see #23 for full ramp description). Troughs will meet bat standards.

12. Troughs, storage tanks, and pipelines will be drained and cleaned periodically to prevent moss and debris buildup and damage from freezing.
13. Poles, posts, and metal trough framing materials used in water development construction will be maintained, repaired, or replaced as needed. Materials must not be taller than the trough and wires should not be placed over trough to allow for watering avian species.
14. All above ground pipeline supported structures will be maintained to keep pipe at gradient and prevent sagging. Support structures should be utilized for entire above ground pipeline.
15. Horizontal wells must contain a shut off valve and reducer. Entire exterior of the well can be earth covered to prevent freezing.
16. Pipelines with air relief and drain valves will be covered with fine screen to prevent rodents and dirt from entering pipeline. Screens must be replaced as needed.
17. Pipeline leaks will be repaired or damaged section will be replaced with materials similar to materials from original construction.
18. Pipelines with valve covers boxes will be kept covered and repaired when needed.
19. Stock tanks will be kept clear of debris, floating logs, dead animals, etc. Spillways will be cleaned and maintained to prevent washing out or becoming plugged. Rodent damage and damaging vegetation on dams will be reported to Forest officer.
20. Water development components (e.g., rusted out troughs, broken sections of pipe, etc.) replaced during maintenance or reconstruction will be removed from Forest and properly disposed of.
21. New water developments will be constructed in uplands to encourage livestock use out of the bottoms.
22. Permittee will not haul water on a regular basis. If required for emergency, authorization is required by District Ranger.
23. All existing or future water developments that have open tops (i.e. troughs, open top storage tanks) must have escape and access ramps. All ramps will be built of expanded metal or similar materials and extend to bottom of trough and sides. Ramp will be firmly secured to trough rim so it will not be knocked loose by animals. Ramps will be constructed of durable material such as concrete or metal. Slope will not exceed 45 degrees. Further design specifications may be required from "Water for Wildlife" by Taylor and Tuttle 2007.

Fence and Corral Standards and Practices

1. All broken wire will be spliced and repaired in such a manner that tension on a wire can be maintained. Wire splices will be made with 12 gauge size tie wire or type of wire used in initial construction.
2. Broken or rotten posts, broken braces and missing staples will be replaced where and when needed to maintain the fence.
3. Wires will be re-stretched where needed.
4. Broken or missing stays will be replaced where needed.
5. Top wire on all range fences should be kept at 42 inches in height, and bottom wire should be smooth and 18 inches above ground. General maintenance will adhere to original construction. Reconstruction will be constructed, under permit modification, with these standards.

6. Staples should not be driven so deep into the post that they scar or create a weak spot in the wire.
7. All gates are closed before livestock enter new pastures.
8. Wire gate tension should be sufficient to prevent gate from sagging and still be easily opened and closed. Gate loops are made of smooth wire, not barbed wire.
9. Trees which fall on fences will be cut and removed when and where needed; wire if broken will be spliced and re-stretched; poles if broken will be replaced.
10. Broken or rotten sections of log or pole fences and corrals will be replaced as needed.
11. Corrals are kept clean of litter, in good repair, and in useable condition.
12. Fences are maintained at, or near as possible to, the standards needed to turn livestock.
13. Metal components of range fences and corrals (e.g., wire, stays, t-posts, gates, etc.) replaced during maintenance or reconstruction will be removed from Forest and properly disposed of.
14. Any maintenance or reconstruction of improvements throughout allotment will need to meet Forest Plan standards and management for Management Area 2D (1985 TNF Plan, as amended).
15. Existing water lots around dirt tanks will be maintained in satisfactory condition to control livestock access to water.

All existing improvements are listed below. Benson spring is a joint venture with Arizona Game and Fish department, only livestock trough and maintenance to spring will be slated for permittee responsibility.

Table 2: Improvement List, those struck from list are no longer responsibility of permittee for maintenance.

Name of Improvements	Type	Improvement Number	Units
Millsite – Superstition	Allotment Boundary Fence	R02029	3.0
Millsite – Tortilla	Allotment Boundary Fence	002053	6.3 miles from Coffee Flat Mtn., SW ¼, Sec. 13, T. 1N, R.10E, to La Barge Mtn., SE 1/4., Sec. 8, T.1N, R.11E.
Millsite – Reavis	Allotment Boundary Fence	002054	3.5 miles from White Mtn., SW ¼, Sec. 1, T. 1N, R.11E, east to the district boundary fence.

Name of Improvements	Type	Improvement Number	Units
Millsite – Superior	Allotment Boundary Fence	002056	6.3 miles from SW ¼, Sec. 19, T. 1S, R.12E, south to highway 60 R.O.W. fence.
Forest Boundary Fence	Forest Boundary Fence	002057	11.0 miles from NW ¼, Sec. 36, T. 1N, R.10E, South to Highway 60 R.O.W. fence.
~~Pilot Plot Fence~~	~~Allotment Interior Fence~~	~~000714~~	~~1.7 DELETED~~
JF Drift Fence	Allotment Interior Fence	000732	1.5
Sand Wash Drift fence	Allotment Interior Fence	000733	1.5
Trough Drift Fence	Allotment Interior Fence	000735	2.0
Hewitt Station Pasture	Allotment Interior Fence	002058	3.5
JF Pasture	Allotment Interior Fence	002059	3.0
Millsite Drift Fence	Allotment Interior Fence	002060	8.0
Superior Drift Fence	Allotment Interior Fence	002061	8.0
Roblas Pasture	Allotment Interior Fence	002063	2.0
Quail Spring Drift fence	Allotment Interior Fence	002091	0.5
Headquarters Drift Fence	Allotment Interior Fence	002364	2.0
Hewitt Drift Fence	Allotment Interior Fence	002343	0.5
Muskhog Spring	Spring Development	000707	1.0
Little Indian Spring	Spring Development	000734	1.0
Eagle Spring	Spring Development	002075	1.0
Peacock Spring	Spring Development	002076	1.0
Rattlesnake Spring	Spring Development	002077	1.0
Maverick Spring	Spring Development	002078	1.0
Dripping Spring	Spring Development	002079	1.0
Canyon Spring	Spring Development	002080	1.0
Hackberry Spring	Spring Development	002081	1.0
Milk Ranch Spring	Spring Development	002037	1.0
Mesquite Spring	Spring Development	002082	1.0
Angel Spring	Spring Development	002083	1.0
Pope Spring	Spring Development	002084	1.0
Spencer Spring	Spring Development	002085	1.0
~~Benson Spring*~~	~~Spring Development~~	~~002086~~	~~1.0 DELETED~~
Rogers Trough Spring	Spring Development	002087	1.0
Government Spring	Spring Development	002090	1.0
Randolph Spring	Spring Development	000720	1.0
Goldwater Stock Tank	Dam/Reservoir	000709	1.0
Johnson Stock Tank	Dam/Reservoir	000710	1.0
Maverick Stock Tank	Dam/Reservoir	000711	1.0
Pilot Stock Tank	Dam/Reservoir	000713	1.0
Highway Stock Tank	Dam/Reservoir	000731	1.0
JF Stock Tank	Dam/Reservoir	000749	1.0
Roblas Stock Tank #1	Dam/Reservoir	002038	1.0
Mesquite Stock Tank	Dam/Reservoir	000750	1.0
Milk Ranch Stock Tank	Dam/Reservoir	002095	1.0
Saguaro Stock Tank	Dam/Reservoir	002096	1.0

Name of Improvements	Type	Improvement Number	Units
Hardt Stock Tank	Dam/Reservoir	002098	1.0
Roblas Stock Tank #2	Dam/Reservoir	002099	1.0
Gonzales Stock Tank	Dam/Reservoir	002100	1.0
Randolph Stock Tank	Dam/Reservoir	002101	1.0
Basin Stock Tank	Dam/Reservoir	002354	1.0
Montana Stock Tank	Dam/Reservoir	004576	1.0
Mahogany Stock Tank	Dam/Reservoir	000954	1.0
East Fork Stock Tank	Dam/Reservoir	005199	1.0
Hackberry Stock Tank	Dam/Reservoir	005217	1.0
Queen Stock Tank	Dam/Reservoir	000963	1.0
Hewitt Stock Tank	Dam/Reservoir	000955	1.0
Whitlow Stock Tank	Dam/Reservoir	000961	1.0
Millsite Stock Tank	Dam/Reservoir	000968	1.0
Palo Verde Stock Tank	Dam/Reservoir	005218	1.0
Hewitt Station Well	Well, Windmill	002064	1.0
Valles Well No.1	Well, Windmill	002065	1.0
Reeds Water Well	Well	002067	1.0
Roblas Well	Well	002066	1.0
Woodbury Well	Well	002069	1.0
Valles Well No. 2	Well, Storage Tank	002070	1.0
Cottonwood Well	Well	002071	1.0
Nobel Well	Well	002072	1.0
Preston Well	Well	002073	1.0
Byous Well	Well	002074	1.0
Queen Well	Well	000729	1.0
Angel Springs Corral	Corral	002088	1.0
Rogers Trough Corral	Corral	002089	1.0
JF Ranch Corral	Corral	002092	1.0
Valles Well No. 2 Corral	Corral	002093	1.0
Valles Well No. 1 Corral	Corral	002094	1.0
Hewitt Corral	Corral	000717	1.0
JF Ranch Cabin	Cabin	002102	1.0
JF Ranch Barn	Barn	002369	1.0
Woodbury Pipeline	Solar Pump, Storage Tank, Pipeline, Troughs	002500	1 pump, 1 storage tank, 2 miles pipeline, 3 troughs
JF Cabin Well	Solar Pump, Storage Tank, Pipeline, troughs	2501	1 pump, 2 storage tanks, 1.5 miles pipeline, 1 trough
Byous Spring	Spring Development, pipeline and trough. Alternative supplement from Valles No.2 Well	2502	1 mile pipeline and trough
Hewitt Water	Storage Tank, Pipeline, Troughs	2503	1 storage tank, 1.5 miles pipeline, 2 troughs
Cottonwood pipeline and trough	Pipeline, Trough	2504	Fed from Valles Well #2, ~6,600 feet pipeline and trough

House pipeline and trough	Pipeline, Trough	2505	Fed from PVT Well, ~2,700 feet pipeline and trough
Millsite pipeline and trough	Pipeline, Trough	2506	Fed from Valles Well #1, ~8,000 feet pipeline, 2 troughs
Noble storage tank and pipeline	Storage tank, pipeline, trough	2507	Fed from Noble well, ~3/4 mile pipeline, 3,000 gallon storage tank, 600 gallon trough

*Benson spring was fenced off, with a 3 pipe metal, by Arizona Game and Fish Department. Water was piped to a livestock trough. Maintenance for improvement is issued to Arizona Game and Fish Department. If in future it is returned to a sole livestock trough with no fencing, permittee will be willing to continue maintenance.

New Improvements

Range infrastructure identified below will play a key role in moving current conditions toward desired conditions and will help achieve objectives. Several improvements have been completed after August 24, 2010 Decision Notice for Millsite Allotment. Current status of the improvements are included below.

All new improvements will be authorized by District Ranger, separately, in a permit modification which will include materials, time frames, and other requirements based on location and needs. Once completed, a letter will modify permit to include constructed improvement as part of maintenance responsibility.

Remaining projects to be implemented must be constructed to avoid direct and indirect impacts to historic properties.

Table 3: New Improvements

Pasture	Improvement(s)	Purpose and Need	Status
Bear Tank	Install a solar pump and 10,000 gallon water storage tank to Noble windmill. Water will be piped to two troughs located ~ 1 mile south of the windmill.	Provide a reliable water source in the central portion of the pasture and lessen dependency on Bear Tank spring.	Clearances complete. Permit modification needed.
Bear Tank	Install pipe fencing around Bear Tank spring excluding livestock access.	Provide protection for riparian resource; provide wildlife habitat.	Project cancelled
Cottonwood	Install storage tank and trough from Woodbury pipeline, #2500.	Provide reliable water at old stock tank for livestock distribution.	Clearances completed. Permit modification needed.

Travel Management Guidelines

As directed by the Travel Management Rule (36 CFR Part 212), the Tonto National Forest has issued a draft Record of Decision on its Travel Management Plan. The final decision will designate a system of motorized routes and areas open for motor vehicle use. The travel management decision will be followed by the permittee.

Under the terms and conditions of your term grazing permit you are authorized to conduct livestock grazing activities on National Forest lands within the Tonto National Forest as authorized within your term grazing permit. Motor vehicle use that is specifically needed, authorized, and directly related to the terms and conditions of your grazing permit may be exempted, from the prohibitions applied to the general public.

Road maintenance that is required to access range improvements or livestock management must receive a road use permit or modification for any road work. In emergencies, such as a flash flood, District Ranger may authorize road work to clear debris or temporarily fix road. Documentation of this emergency must be filed. If access is needed to enter a motor vehicle restricted area, you must have special authorization through an Off-Road Vehicle Permit or special authorization through Annual Operating Instructions. If long term use is requested, permit may be modified to include roadways.

Allotment Management Practices

Livestock Management

Livestock management, such as herding and salting, is critical to livestock to control cattle in appropriate pastures. Permittee will furnish sufficient riders or herders for proper distribution, protection, and management of cattle on the allotment. Tonto National Forest Grazing Practices are as follows:

- Salt, protein and other nutritional supplement will be used to support livestock health and improvement distribution, but should not be placed any closer than ¼ mile from developed or live water, recreation sites or designated trails, concentration areas such as drainages and saddles. No salting will occur within or adjacent to identified/known heritage sites. Salt will be removed from units when cattle have left an area. Salt should not be placed in a pasture until cattle are moved into pasture. Supplement locations will be rotated periodically.
- Cattle should be drifted instead of trailed wherever possible. Eliminate livestock trailing in riparian areas through herding techniques or hauling livestock.
- When entering next scheduled pasture, all livestock shall be removed from previous pasture within two weeks.
- Time spent in each pasture may vary depending on weather and when seasonal utilization standards are met. It is permittees' responsibility to monitor the utilization and move the cattle before utilization standards are exceeded.
- Permittees will make sure enough time is allowed to remove livestock to meet the pasture move date(s) and avoid unauthorized and excess use.

- Permittee may be asked to provide the Forest Service with an Actual Use Record, and/or Improvement Maintenance Record.
- Provide alternative water sources away from riparian areas, when necessary.
- If approved by Forest Official, feeding hay on Millsite allotment must be certified weed-free by a State-authorized or State-designated official.

Monitoring

Practices

Following monitoring activities will be carried out by grazing permittee and Forest Service either during or at the end of grazing season. However, not all types of monitoring practices need to be conducted during this time frame. Forest Service monitoring results will be shared with permittees to improve livestock management. All monitoring information collected by permittees and Forest Service will be included in district allotment file. Monitoring of forage availability and utilization, range readiness and resource conditions will be used to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions.

Allotment Inspections/Compliance monitoring

Compliance monitoring ensures livestock are distributed in correct pastures and areas authorized for grazing. It also includes but is not limited to, improvement maintenance inspections, forage utilization and livestock counts. These inspections will occur throughout grazing year.

Utilization measurements are followed by procedures found in the Sampling Vegetation Attributes (1999), Utilization Studies and Residual Measurements (1999). Possible data monitoring could include browse utilization measurements, perennial grass stubble height measurements, photo points, and or height/weight relationships for certain perennial grass species. Utilization would be monitored on key forage species, which are native perennial grasses along with native perennial shrubs that are palatable to livestock.

At a minimum, monitoring would include use in key areas and locations selected outside of key areas. Data collection procedures and interpretation would consider guidance contained in the Principles of Obtaining and Interpreting Utilization Data on Southwest Rangelands (Smith et al. 2005) publication.

Indicators of grazing intensity will be important for systems without strong grass presence, especially Sonoran Desert, and will be incorporated with jojoba utilization studies. Grazing Intensity classes have been adapted from the Interagency Technical Reference 1734-3 "Utilization Studies and Residual Measurements" (1996), the Forest Service Region 3 Rangeland Analysis and Management Training Guide (June 1997), "Grazing Intensity Guidelines" by Jerry L. Holechek and Dee Galt (June 2000, Rangelands 22-3), and from the Forest Service Grazing Permit Administration Handbook: Region 3 Supplement to Chapter 90 (September 2007).

Visual Indicators of Conservative Grazing Intensity

- Rangeland may be topped, skimmed, or grazed in patches;
- Areas greater than 1 mile from water show little use;
- There is no evidence of livestock trailing to forage;
- Good forage plants have abundant seed stalks , roughly 60-80% of stalks remain;
- 1/3 to ½ of good forage plants have been grazed in key areas;
- Most young plants are not damaged;
- Poor forage plants are not grazed at all.

Visual Indicators of Moderate Grazing Intensity

- Most of the accessible range shows some use;
- Areas between 1 mile to 1 ½ miles from water show some use;
- There is little evidence of livestock trailing to forage;
- Good forage plants have some seed stalks left , roughly 15-25% of stalks remain;
- About ½ to 2/3 of the good forage plants show some use;
- Some young plants show damage;
- Less than 10% of the poor forage plants are utilized.

Noxious Weed monitoring

Noxious weeds located in these allotments would be treated as necessary. Permittee and Forest Service will coordinate weed inventory and treatment. Noxious weed monitoring may be carried out simultaneously with allotment inspections are conducted. As noxious weed populations are found they are mapped, monitored, and treated. Treatment methods would follow guidelines established in "Final Environmental Assessment for Integrated Treatment of Noxious or Invasive Weeds".

Riparian monitoring

Red tanks pasture contains riparian vegetation and Forest Service will continue utilization monitoring. Rogers Canyon in North Woodbury will be rested and monitoring will ensure no livestock use. Burro Basin contains riparian vegetation that qualifies for full Tonto National Forest Riparian Area Management Utilization Guidelines protocol.

Once riparian vegetation has become re-established in other key reaches, at a density sufficient for monitoring, riparian utilization measurements following the Interagency Technical Reference (1996), McBride and Grove (2002), and Cowley and Burton (2005) or the most current acceptable method, will be made.

Changes in riparian vegetation and stream channel geomorphology condition and trend will be measured at 5 to 10 year intervals (effectiveness monitoring) using protocols described in the Interagency Technical Reference (1996), Cowley and Burton (2005), and Harrelson et al (1994), or the most current acceptable method. If riparian vegetation establishes, permit will be modified to include specific monitoring protocol.

Wildlife monitoring

In conjunction with wildlife biologist, project related monitoring may occur on Millsite allotment. However, no effect to threatened or endangered species or its habitats have been determined. Current management will not alter or impact habitat conditions, nor will it create a disturbance.

Heritage Resources monitoring

In conjunction with Forest Archaeologist special care will be carried out to protect heritage resources (historic and prehistoric sites) from impacts caused by range construction projects or livestock concentrations. An archaeological survey will be conducted prior to construction of any new range improvements and/or location selection where impacts to heritage resource sites are avoided.

Existing range facilities, such as water troughs, corrals, where cattle regularly congregate are periodically inspected to determine whether or not livestock are causing damage to heritage resource sites. Periodic monitoring will also assess site condition and to ensure that protection measures are effective.

Key Areas

A key area is a portion of rangeland selected because of its location, grazing or browsing value, or use. It serves as a monitoring and evaluation point for range condition, trend, or degree of grazing use. Annual monitoring in key areas is for short-term data collection. These key areas are properly selected to reflect the overall acceptability of current grazing management over the rangeland condition.

These monitoring methods could include, but are not limited to utilization and stubble height monitoring, annual riparian monitoring, and photo point protocols.

Data will be used, along with supporting information to determine when livestock must be moved from one pasture to another and to make any necessary adjustments to livestock numbers and/or season of use (determined in AOI).

Final utilization and stubble height readings will be taken at the end of pasture use, along with end of growing season use of each year. Annual monitoring will follow accepted Forest Service protocols set by the monitoring handbook.

Key areas include but are not limited to:

- Benchmark locations: reading the range plots and parker 3 step locations
- Additional locations that meet definition above

Benchmarks

Condition and long-term trend monitoring will be conducted in some of the key areas used for annual monitoring. Information will be used to determine if the area is meeting or moving towards desired conditions. Long-term trend data will be used to measure changes in plant community composition, cover, structure, soil conditions, frequency, and management of grazing in a trend status. Annual adjustments may be conducted in order to meet long-term desired conditions.

Periodic monitoring, on decade intervals, for vegetation trend will include cover and frequency, in which Parker 3 Step Clusters, "reading the range" or other similar procedures will be used.

Indicators of downward trend for vegetation include:

- Desirable and intermediate species decreasing in vigor
- Lack of young plants from desirable and intermediate species
- Invasion by undesirable species.
- Hedged and highlined shrubs. Dead branches, may indicate that shrubs are dying back.

Indicators of downward trend in soil stability include:

- Rill marks, which are small but conspicuous water channels around vegetation.
- Active gullies are raw, actively downcutting, and may have headcuts. This type of gully may vary from a few inches to several feet deep.
- Alluvial deposits; soil material transported and laid down as small fans in headwater drainages.
- Soil remnants; original topsoil held in place by vegetation or roots.
- Active terraces; usually caused by hooves of animals; stair step in appearance on side-slopes
- Pedestalled plants; exposed plant crown or roots.
- Wind-scoured depressions between plants, or wind deposits of soil
- Soil buildup behind plants, logs, and trees on upslope side.

Long-term monitoring will follow accepted Forest Service protocols determined by the Forest Service Monitoring Handbook, including documents listed above.

Forest Plan Standards and Guidelines

Forest Plan

Land and Resource Management Plan (Forest Plan) defines long-term direction for managing Tonto National Forest. Forest Plan provides for multiple use and sustained yield of goods and services from lands in a way that maximizes long-term net public benefits in an environmentally sound manner [36 Code of Federal Regulations (CFR) 219.1(a)]. In October of 1985 the Tonto National Forest implemented Forest Management Plan with direction related to livestock grazing and Range Management Program Criteria (Forest Plan pg. 24).

Forest Plan Management Practices

Management Criteria are as follows:

- While invasive species are spread in a variety of ways, it is certain that presence of grazing livestock will increase their spread. This can be minimized by timing grazing in infested pastures prior to seed set. This is very difficult with buffelgrass, which flowers and sets seed throughout much of the year.
- Any seed used for re-vegetation on Millsite allotment should be tested according to Tonto Forest policy, Manual Supplement 2081.2, effective April 2009. Any straw mulch used on the

National Forest should be certified as weed-free by a State-authorized or State-designated official.

- Incorporate measures from the Forest Service "Guide to Noxious Weed Prevention Practices" into the allotment management plan.
- A livestock enclosure, in Hewitt pasture, surrounding unoccupied Southwestern willow flycatcher habitat extends a wash and is near to heavy recreation use. Current fence strategy is not easily maintained. Further development of fencing, to avoid wash and heavy user impact, will be considered in further NEPA. Until then, pasture will remain in non-use. Once fence is reconfigured, pasture can be included in normal allotment rotation.
- Fencing or exclosure of livestock from individual sensitive historic properties or areas containing multiple sensitive historic properties being impacted by grazing.
- Other mitigation measures involving data recovery, for example, may be developed and implemented in consultation with the SHPO as the need arises. The appropriate tribes will be consulted if the mitigation is invasive or it affects a Traditional Cultural Property or other property of concern for them.

Allowable Forest Utilization & Stubble Height Standards

Grazing will be managed to achieve long-term goals in pasture key areas. It is the responsibility as permittee to take action so that livestock grazing does not exceed vegetative use thresholds. Please arrange for an allotment inspection if seasonal vegetative use of available forage approaches these thresholds.

Table 4: Allowable Use

Vegetation	Use Threshold
Upland Herbaceous	30-40% of current year's growth
Upland Browse Species, such as jojoba	Less than 50% of current year's growth
Obligate palatable riparian tree	Less than 50 % of terminal leaders, top 1/3 of plant, which equates to 20% growth by volume. Plants must be accessible to livestock, less than 6 feet tall.
Deergrass	Less than 40% of plant biomass
Emergent Species, such as rushes, sedges, cattails, horsetails	6 – 8 inches of stubble height during grazing period
Burro Basin obligate riparian and deergrass	Less than 30% of deergrass biomass. Less than 30% on terminal leaders, top 1/3 of plant, which equates to 20% growth by volume. Plants must be accessible to livestock, less than 6 feet tall.

Administrative Actions

Management is designed to provide sufficient flexibility to adapt management to changing circumstances. Monitoring of forage availability and utilization, range readiness and resource conditions will be used to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions. These actions will be implemented through AOI and may be occur at any time throughout grazing season in response to unforeseen environmental or management concerns.

If livestock are reaching allowable use limits on current production or causing other undesirable efforts, livestock will be moved to next pasture. At end of year, determinations will be made to attempt to resolve concern. Follow-up monitoring will be completed to determine if changes in carrying capacity is necessary. If Burro Basin riparian area consistently exceeds use levels, and other techniques to reduce impacts to area is not working, exclusion of area will be considered.

If the following occur it may necessitate changes in management of this allotment:

- Through monitoring, management objectives are not being achieved, or trend toward desired conditions are not occurring;
- Annual indicators of grazing use or guidelines are or are not met;
- Climatic events, fire, flood, or uses and activities detrimentally impacting resource conditions;
- Consistent use in excess of allowable use standards;
- Changes in impact of recreation use to allotment;

Then the following actions may be enacted:

- Extending or shortening time in pastures based on utilization levels in uplands and riparian areas;
- Assessing pasture readiness and changing its position in the seasonal rotation;
- Time or season of pasture use;
- Resting a pasture for one or more growing seasons;
- High intensity, short duration or other grazing strategies;
- Complete removal of livestock in event of extended drought, severe fire, or depleted rangelands until rangelands have recovered;
- Decrease or increase herd size within limits of permitted numbers;
- Temporarily close off water in a portion of pasture to manipulate grazing pressure and intensity of use;
- Herding livestock;
- Excluding livestock from specific areas temporarily or permanently for other resource objectives; or
- Changing or limiting season of use to minimize impacts to riparian vegetation and water quality;
- Potential new improvements to offset impacts by recreation.