Hickey Allotment
Allotment Management Plan

Apache-Sitgreaves National Forest
Clifton Ranger District

September, 2023

Permittee Review / Agreement

Reviewed by/ agreed to Jesse Van Gron FOR GH CATTLE Date SEPT. 22, 2023
Permittee

Forest Officer Approval

Approved By _____ Date 22Sept. 2023
Vincent Voelker,
Clifton District Ranger

Introduction

An Environmental Assessment (EA) was conducted to assess management of livestock grazing on 14 allotments, including the Hickey allotment as part of the Stateline Range NEPA project. A Decision Notice (DN) and Finding of No Significant Impact (FONSI) was signed on January 27, 2020 with Alternative 2 – Proposed Action being the selected alternative.

The purpose of the Hickey Allotment Management Plan (AMP) is to provide direction regarding the management of livestock grazing on the Hickey allotment consistent with the January 27, 2020 NEPA Decision. This AMP will become a part of Part 3 of the Term Grazing Permit. This AMP describes how the selected alternative will be implemented.

Per the NEPA Decision Notice, the allotment boundary is changed to add the Hamilton Mesa, Pleasant Valley, and Johnnie pastures from the Pleasant Valley allotment to the Hickey allotment. Red Tank Trap will be shared between the Hickey and Blackjack allotments.

The allotment boundary is also be changed to remove the San Francisco pasture and Bird Trap from the Hickey allotment.

With the allotment boundary changes, the size of the Hickey allotment is increased from approximately 24,172 acres to 26,455 acres.

Goals and Objectives of Management

Desired conditions are aspirational. They are descriptions of goals to be achieved at some time in the future and expressed in general terms and are timeless in that they do not have a specific date to be completed. The desired conditions for the Hickey allotment are to move towards and eventually achieve the following:

- Watershed and soil conditions are either being maintained at or are improving towards a satisfactory rating where the potential exists. A satisfactory condition rating denotes soils and watershed attributes are functioning properly and normally. Resource values that depend on soil and watershed functionality are being adequately maintained and desired vegetative outputs are being produced within the natural range of variability for the potential vegetation type.
- Rangeland and watershed conditions that are stable or improving. Rangeland conditions are considered stable or improving when species composition and site protection indicators (such as ground cover) are similar to what is expected for the site based on the current understanding of plant community dynamics or are trending upward.
- Habitat conditions contribute to the recovery of federally listed species.
- Riparian zones are maintained at or improving to properly functioning condition.
- Cultural resources are not negatively impacted by livestock grazing and associated activities.
- Livestock grazing activities contribute to the social, economic, and cultural diversity and stability of rural communities.

Grazing Management Strategy

Permitted Numbers and Period of Use

Permitted numbers on the Hickey allotment will remain at 405 cattle and 8 horses for up to 4,975 animal unit months (AUMs). Permitted season of use will continue to be yearlong utilizing a deferred-rest-rotation system among the various pastures and traps.

Adaptive Management

The allotment will be managed using adaptive management principles. Adaptive management provides flexibility to adapt management to changing circumstances. It uses monitoring results to make adjustments. If monitoring indicates that resource objectives are not being achieved, management may be modified in cooperation with the permittee.

Adaptive management allows the Forest Service to adjust the timing, intensity, frequency and duration of grazing; the grazing management system, and livestock numbers. Except on a trial basis, actual numbers, timing, intensity, duration, and frequency of use will stay within the permitted sideboards and not exceed the limits authorized in the January 27, 2020 NEPA decision.

Minor changes to range improvements may occur as needed, such as a short fence or pipeline extension or the addition of a tough or storage tank to an existing water system. Any new structural improvements will have heritage and biological clearances completed prior to implementation and all forest plan standards and guidelines will be followed.

Planned management activities, annual authorized livestock numbers, grazing schedules and adjustments will be described and approved in the Annual Operating Instructions.

Grazing Timing, Frequency and Duration

Season of use will be year-long, using a deferred-rest-rotation schedule.

The Hamilton Mesa pasture from the Pleasant Valley allotment will not be used until an approximate 0.8-mile allotment boundary fence between the Blackjack and Hickey allotments is installed along Red Tank Canyon.

The duration and season of grazing use may vary annually to provide periodic growing season rest or deferment for plant recovery. Typically, pastures will be used for a few months at a time, followed by longer rest periods with livestock not reentering a pasture until after the grass has time to set seed or adequately recover.

The timing of grazing may also vary to provide sufficient rest, particularly following drought or fire events. Sufficient rest is typically the amount of time needed for grasses to fully grow and set seed following a grazing or fire event. However, under some circumstances, longer rest periods may be needed depending on the weather, level of use, fire severity, or other disturbance event.

Timing and frequency of pasture use may be determined by, but not limited to, utilization levels, forage conditions, water availability, herd management, previous season of use, expected future use and management objectives.

Pasture moves will be planned with the permittee's input each year through the development of annual operating instructions. Annual operating instructions may be modified as needed during the year to address changing conditions.

Grazing Intensity

Grazing intensity is measured by the utilization of palatable herbaceous forage plants. It is not a management objective but may be used with other information to make management adjustments and decisions. Utilization is expressed in terms of the current year's production removed and therefore is measured at the end of the growing season. Seasonal utilization measurements may be useful as one indicator, along with consideration of other factors, for moving livestock to another pasture.

Utilization of key forage species may be monitored through a pasture-wide reconnaissance or measured in key areas or critical areas. Grazing intensity on woody browse is typically measured by percent leaders browsed below 6 feet on trees and shrubs.

Upland key areas are to represent management effectiveness over the entire pasture and are generally not located near water, roads, or bed grounds but should be in areas that receive substantial use. Upland key areas are usually at least ¼ mile from water and located on productive soils where grazing use would occur.

The following utilization standards apply to the Hickey allotment:

- Conservative use (31 to 40%) on upland and riparian herbaceous and browse species.
- Conservative use (31 to 40%) on riparian woody species in areas that are properly functioning. Light to non-use (0 to 30%) on riparian woody species in areas that are not functioning properly.
- Within southwestern willow flycatcher and western yellow-billed cuckoo suitable habitat, average utilization would not exceed 35 percent of palatable, perennial grasses and grass-like plants in uplands and riparian habitats. Woody utilization would not exceed 40 percent on average.

Stubble height standards may be used. Targeted stubble heights will correspond to the light and conservative intensity levels described above.

Consistent patterns of utilization in excess of utilization standards would be used as a basis to modify management practices or take administrative actions necessary to reduce utilization in subsequent grazing seasons.

Livestock Distribution Aids and Animal Husbandry

Salt or supplement will be placed at least ¼ mile from all water sources and riparian areas, away from roads, high-use recreation areas, or other known livestock concentration areas except for land and resource treatment purposes. Salt or supplement should be placed and moved to less utilized areas. No salting will occur within or adjacent to identified heritage resources.

Corrals and traps are for sorting cattle and animal husbandry purposes and by definition are intended to be used as needed throughout the year but for short durations of time.

Feeding of hay or other feed is limited to feeding livestock temporarily confined to corrals and holding facilities or in emergency situations as approved by the Line Officer. Forage certified to be weed free or commercially processed should be used.

Biological Opinion Terms and Conditions

For the Chiricahua leopard frog, approx. 245 acres occur on the Hickey allotment in the Hamilton pasture and around the Rattlesnake pasture tanks.

Per Biological Opinion (AESO/SE 02EAAZ00-2019-0975) dated December 12, 2019, the incidental take limit is the loss of all Chiricahua leopard frogs in one stocktank. Incidental take will be considered exceeded and re-initiation of consultation required if more than one stock tank population (current or newly established) is lost for three consecutive years as a result of the implementation of this AMP. Surveys are to be conducted twice each year between March and October to determine presence or infer absence of Chiricahua leopard frogs. (BO pg. 31).

The Biological Opinion lists eight terms and conditions for Chiricahua leopard frogs (BO pg. 33-34) as follows:

Terms and Conditions:

1. Live fish, crayfish, leopard frogs, salamanders, or other aquatic organisms shall not be moved among earthen stock tanks or other aquatic sites on the allotment.
2. Prior to stock tank cleaning, the US Fish and Wildlife Service (USFWS) and the Arizona Game & Fish Department (AGFD) shall be given at least 60 days prior.
3. The Forests shall continue to work with USFWS, AGFD, and the permittee regarding installation of erosion control structures, or other measures needed to improve soil and vegetative conditions around stock tanks or other suitable habitats to minimize indirect effects to Chiricahua leopard frogs (CLF).
4. Water shall not be hauled to any occupied leopard frog habitat or potentially suitable stock tanks from another aquatic site or tank that supports leopard frogs, crayfish, or fish. If water is needed to address drought concerns for the frog or livestock, the Forests must seek USFWS approval prior to adding any water to a stock tank occupied by CLFs.
5. If nonnative aquatic species are detected within occupied CLF habitat or habitat that connects to occupied CLF habitat, the Forests shall notify UFSWS immediately (within 48 hours) and then initiate a multi-stakeholder planning effort with the USFWS and AGFD to remove the nonnative species from the stock tank as quickly as possible.
6. The Forests shall submit an annual summary report to our Phoenix Office by January 31 of each year. This annual report shall summarize the livestock grazing management that occurred (e.g., livestock numbers, pastures used, timing of use, etc.), a summary of situations (and corrective actions) that pertain to the above items, relevant frog or other aquatic species survey information, and any other pertinent information about the project's effects on the CLF. The report shall also make recommendations for modifying or refining these terms and conditions to enhance leopard frog protection.

7. The Forests shall notify the USFWS as soon as practicable of the observed occurrence or the discovery of aquatic nonnative species in any stock tank on the allotment.
8. The Forests shall notify the USFWS within 48 hours of any observation of any pasture boundary or exclusion fence line failure or fence line disrepair that is adjacent to known occupied habitat within the allotment and the corrective actions implemented.

Annual Operating Instructions

On an annual basis, the Forest Service personnel and permittees will jointly prepare annual operating instructions prior to each grazing year. Annual operating instructions authorize the actual season of use and number of livestock that will use the allotment for that given year, up to the permitted numbers. They also disclose the planned sequence of pastures moves, improvements to construct or maintain, utilization levels and other guidelines. Since livestock numbers are anticipated to fluctuate on a year-to-year basis using adaptive management, a reduced level of grazing for resource protection will be within permitted numbers and non-use agreements will not be necessary.

Range Improvements

The following additional improvements are to help with the more effective management of the resource with no proposed increase in permitted livestock numbers. In addition minor changes may be implemented as needed, such as a short fence or pipeline extension or the addition of a tough or storage tank to an existing water system. They are not required to be installed but may be installed as time and funding allows and may be contingent upon additional biological or cultural clearances.

Pasture	Improvement Name	Cultural Resource Survey and Clearance	Hickey Allotment Description and Location
Hamilton Mesa	Boundary fence		Install an approximate 0.8-mile allotment boundary fence along Red Tank Canyon between the Hamilton Mesa and Lightning Mesa pastures in T3N, R31E, Sections 21 and 28. This fence must be installed prior to using the Hamilton Mesa pasture and is included for the Blackjack allotment above.
Sunset and Silver Basin	Cave Spring and Silver Basin Tank		Install a water lot fence around two water sources: 1. Cave Spring (#3246) in T4S, R 30 E., Section 11 NE, between the Sunset and Silver Basin pastures. 2. Silver Basin Tank (#3241) in T4S, R 30 E., Section 12 SE.
Sunset	Limestone Gulch Spring, Sunset Spring, and Hickey Spring.		Install a water lot fence around three water sources: 1. Limestone Gulch Spring (#3103) in the southwest corner of the allotment in T4S, R30E, Section 16 SW. 2. Sunset Spring (#3713) in the Sunset pasture in T3S, R30E, Section 35. This fence may cross Trail #311. 3. Hickey Spring (#3245) in T3S, R30E, Section 26 NW.
Rattlesnake Gap and Hamilton	Rattlesnake Tank #1.		A portion of Rattlesnake Tank #1 (#3254) may be partially fenced or otherwise modified; for example, completely fencing it and installing a stand pipe and pipeline to a nearby trough to provide water and habitat for frogs and other wildlife.

Pasture	Improvement Name	Cultural Resource Survey and Clearance	Hickey Allotment Description and Location
Hamilton	Red Tank Well pipeline extension #1		Install a trough at Hamilton Corrals (#3453) and extend the pipeline 0.25 miles to Hamilton Tank (#3438) in Section 28 SW; continue south approximately 1.25 miles and install a storage tank and trough at the pasture division fence in T3S, R31 East, Section 32 SE.
Johnnie and Hickey	Red Tank Well pipeline extension #2		Extend a pipeline from Red Tank Well (#3457), west approximately 2 miles, following the two-track road to Johnnie Tank (#3456) and Curly Tank (#3440) and continuing to the ridge top in T3S, R31E, Section 19 NE with solar panels, and pumps to accommodate the elevation change. From Section 19, extend two lateral lines: one to the northwest approximately 0.75 miles to a trough at Snake Ridge Tank (#3251) and corrals (#3938) in the adjacent Section 18 and one north approximately 1.7 miles to a trough at Piñon Salt Ground Tank #1 (#3252) and corrals in Section 8 SE. It is estimated there will be 2 storage tanks and 5 troughs on this system.
Pleasant Valley	Red Tank Well pipeline extension #3		Extend a pipeline from the existing storage tank along National Forest System Road 215 in T3S, R31E, Section 29 NW approximately 1.2 miles southwest to an open ridge in Section 30 SW to a storage tank and trough in the Pleasant Valley pasture.

Range improvements will be maintained by the permittee. Livestock will not be placed on the allotment or moved into pastures if range improvement maintenance requirements are not met. Forest Officers will periodically inspect assigned improvements for compliance with maintenance standards. Failure to properly maintain range improvements may be cause for suspension or cancellation action to be taken against Term Grazing Permit privileges.

A permit modification will be prepared for new range improvements and/or reconstruction. Normal fence and water system maintenance does not require prior approval. Stock tanks need to be surveyed by a Wildlife Biologist prior to being cleaned or repaired.

Permittee maintenance responsibilities of improvements is listed in the Term Grazing Permit and illustrated on the allotment map.

Maintenance of Improvements

A. Fences:

1. All allotment boundary fences are to be maintained to standards prior to livestock entering National Forest Lands. Each permittee is responsible for the maintenance of a portion of his/her allotment boundary fence. A permittee will not place livestock on the allotment if the neighboring permittee does not maintain their assigned allotment boundary fence.
2. Pasture fences will be maintained prior to moving livestock.
3. Old wire and steel fence posts will be removed from the Forest. Old wooden posts will be pulled from the ground and utilized at permittee discretion.
4. Broken wire will be spliced with good quality double strand, 12 gauge barbed or smooth wire.

5. Wire spacing will be similar to original spacing. The top wire height will not exceed 42". The bottom wire will be smooth wire and will be at least 16" from the ground.
6. Wire will not be over tightened and will be stretched to remove slack.
7. Broken or rotted posts will be replaced with a steel post or a juniper or treated wood post greater than 5" diameter.
8. Brace posts will be maintained in tight and serviceable condition.
9. Steel posts which have settled may need to be jacked up and possibly moved. Leaning steel posts will be straightened.
10. Gates will be maintained so they can be opened and closed easily. Gate posts will be greater than 3" diameter. Use smooth wire for gate loops. Gates will have alternating wire and wooden stays spaced 12" apart.
11. Fence stays will be wire twist stays or of good quality wood of sufficient diameter. The bottom of each stay will rest on the ground and will not extend more than 4" above the top wire fence strand. All fence wires must be attached to stays.
12. Missing staples and fence clips will be replaced.
13. All trees which have fallen across the fence line will be cut and removed for the fence right-of-way.

B. Water/Springs:

1. Fences to protect springs will be maintained to standards.
2. Collection boxes and inlet pipes will be clean of sediment and debris.
3. Unserviceable pipe will be repaired or replaced. Material not usable will be removed from the Forest.
4. Troughs that leak will be repaired or replaced. Overflow pipes should be placed to avoid creating boggy areas at trough locations.
5. Float valves will be cleaned and set to prevent overflow.

C. Water/Wells and Pipelines:

1. Water storage tanks, troughs, and pipelines will be inspected for water leaks and will be clean of sediment and debris annually, or prior to use.
2. Unserviceable pipe, troughs, and storage tanks will be repaired or replaced. Material not usable will be removed from the Forest.
3. Overflow pipes will be placed at all water storage locations and overflow will be drained away from the water source location to avoid creating boggy areas at trough locations.
4. All pump systems and float valves will be inspected and maintained periodically during system use.
5. All pipelines not in use will be drained prior to winter freeze, unless otherwise specified for wildlife water needs.
6. All troughs directly adjacent to storage tanks will be left operational when the system is not in use for livestock. These water points will provide yearlong water for wildlife populations.

D. Water/Stock Tanks:

1. Fences around stock tanks to aid in livestock distribution patterns will be maintained to standards.
2. Check stock tanks for seepage and spillway blockage.
3. Tanks will be cleaned to their original capacity. Special care will be taken during cleaning to prevent future water loss. Eroded portions will be repaired. All heavy equipment work on tanks will be coordinated with the District Ranger.

Monitoring

The objective of monitoring is to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions. Permittees will be encouraged to participate in monitoring activities. There are two types of monitoring: implementation and effectiveness.

Implementation Monitoring

Per handbook direction, implementation monitoring will occur on an ongoing yearly basis and may include, but not be limited to, such items as 1) actual use in each pasture; 2) condition of range improvements; 3) seasonal utilization, annual utilization, or stubble heights; or 4) other annual monitoring that may be important in site-specific situations (R3 supplement, Forest Service Handbook 2209.13, chapter 90, 2016).

- Utilization measurements will be made by following, but not limited to, procedures found in:
- Rangeland Analysis And Management Training Guide (USDA Forest Service 2013)
- Interagency Technical Reference (ITR) 1734-3: Utilization Studies And Residual Measurements
- Principles of Obtaining and Interpreting Utilization Data on Rangelands (Smith et al. 2007)

Utilization will be monitored on key forage species that are palatable to livestock and whose use serves as an indicator of the degree of use of associated species. They are species which, because of their importance, are considered in the management program. Utilization of key forage species may be monitored through a pasture-wide reconnaissance or measured in key areas. Utilization on non-grass species (forbs, shrubs, and trees) may also be measured if appropriate for the site, such as monitoring use on riparian browse.

Over time, changes in resource conditions or management may result in changes in livestock use patterns. As livestock use patterns change, new key areas may be established and existing key areas may be modified or abandoned.

Effectiveness Monitoring

Long-term monitoring documents whether management actions are having the expected maintenance of, or progress towards, achieving resource management objectives and may be both qualitative and quantitative. Effectiveness monitoring will typically occur at 5-year to 10-year intervals but may occur more often as needed.

Examples of effectiveness monitoring include, but are not limited to, dry weight rank, pace transects, line intercept, pace quadrat frequency, cover frequency, terrestrial ecosystem surveys, riparian surveys, soil and watershed condition assessments and repeat photography. Effectiveness monitoring will typically occur at established permanent monitoring points.

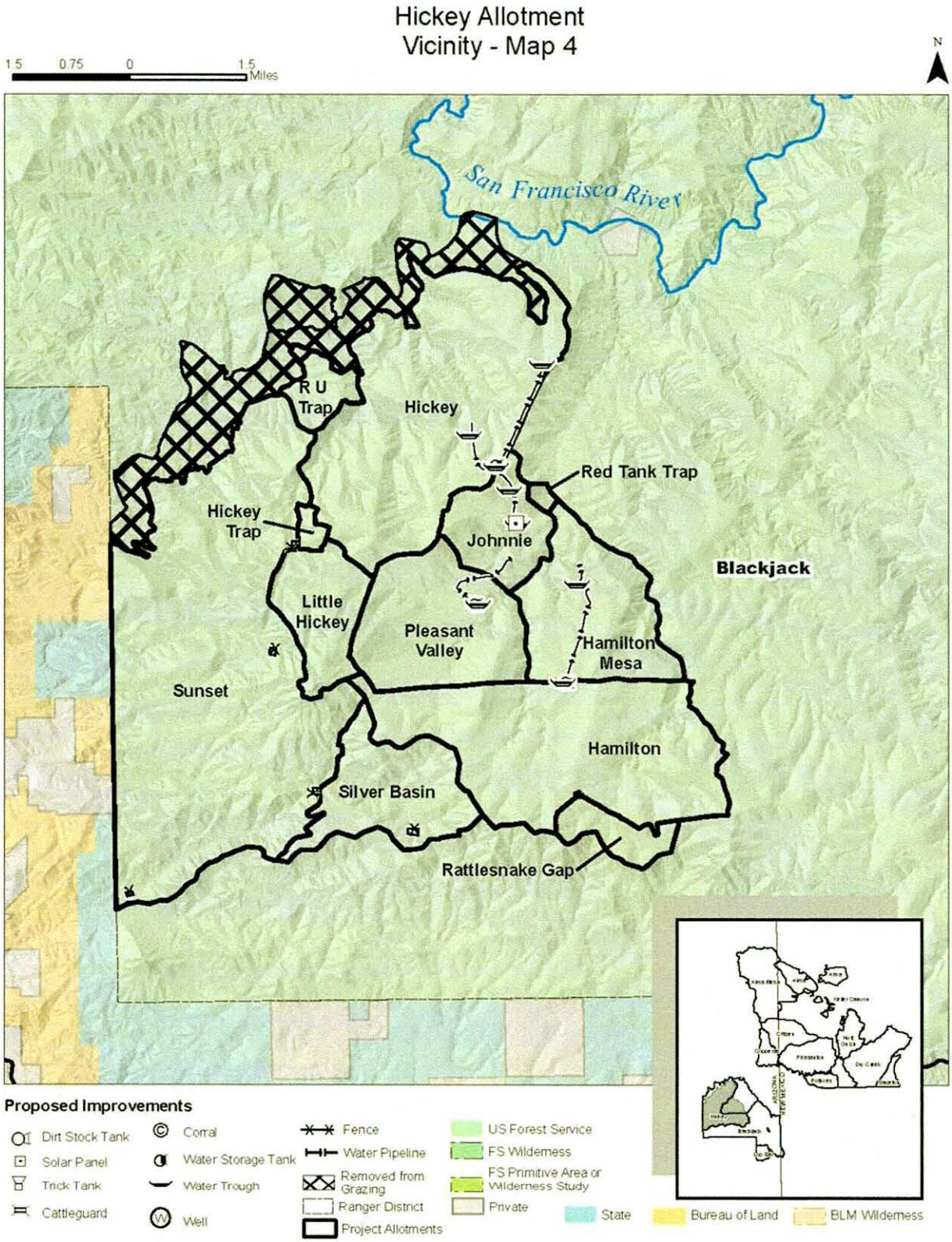
Monitoring may follow procedures described in, but not be limited to, the following:

- Interagency Technical Reference (ITR) 1734-4: Sampling Vegetation Attributes
- Some Methods for Monitoring Rangelands, University of Arizona Extension Report # 9043, 1997.
- Rangeland Analysis and Management Training Guide (USDA Forest Service 2013)
- Monitoring Manual for Grassland, Shrubland and Savanna Ecosystems- USDA/ARS Jornada Experimental Range
- Interpreting Indicators of Rangeland Health TR 1734-6
- Region 3 Stream Inventory Handbook and the Riparian Area Survey and Evaluation System (RASES)
- Region 3 Stream Inventory Handbook. 2003.
- Monitoring the Vegetation Resources in Riparian Areas. GTR – 47. 2000
- Rapid Assessment Methodology RITF Report # 58
- A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas. TR 1737-15 1998
- Process for Assessing Proper Functioning Condition for Lentic Riparian – Wetland Areas. TR 1737-11 1994

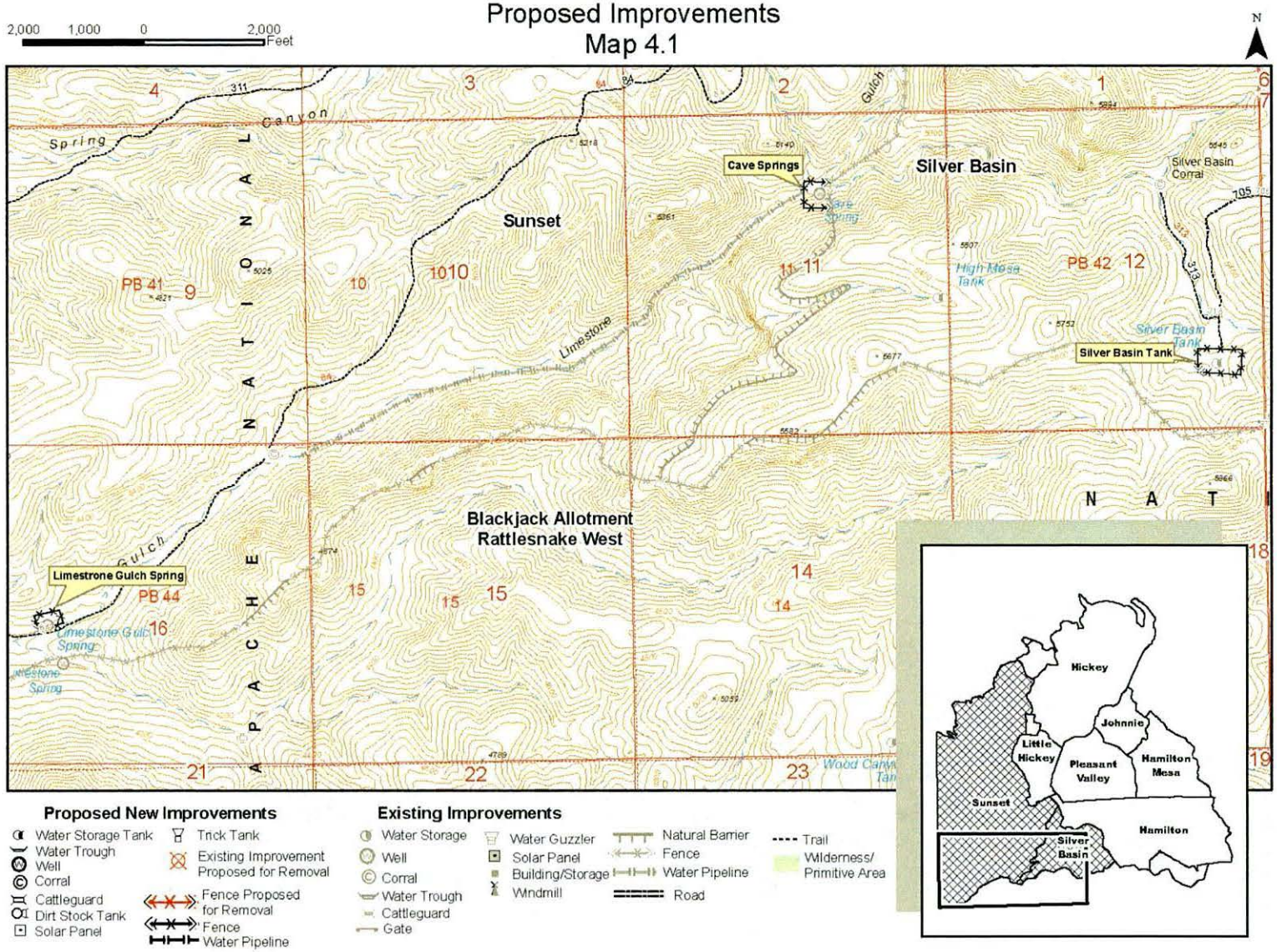
References:

- Principles of Obtaining and Interpreting Utilization Data on Rangelands AZ1375 05/2007.
- The Grazing Response Index: A Simple and Effective Method to Evaluate Grazing Impacts. *Rangelands* 21(4) 3-6,1999.
- Grazing Management Processes and Strategies for Riparian – Wetland Areas. TR 1737-20 2006
- Terrestrial Ecological Unit Inventory Technical Guide: Landscape and Land Unit Scales GTR Report WO-68. 2005.
- Terrestrial Ecosystems Survey of the Apache Sitgreaves National Forests.
- Existing Vegetation Classification and Mapping Technical Guide Version 1.0. GTR Report WO-67. 2005.
- Rangeland Management Before, During and After Drought AZ1136 07/1999.
- Appendix H of the Region 3 cultural resources programmatic agreement (USDA Forest Service 2007)

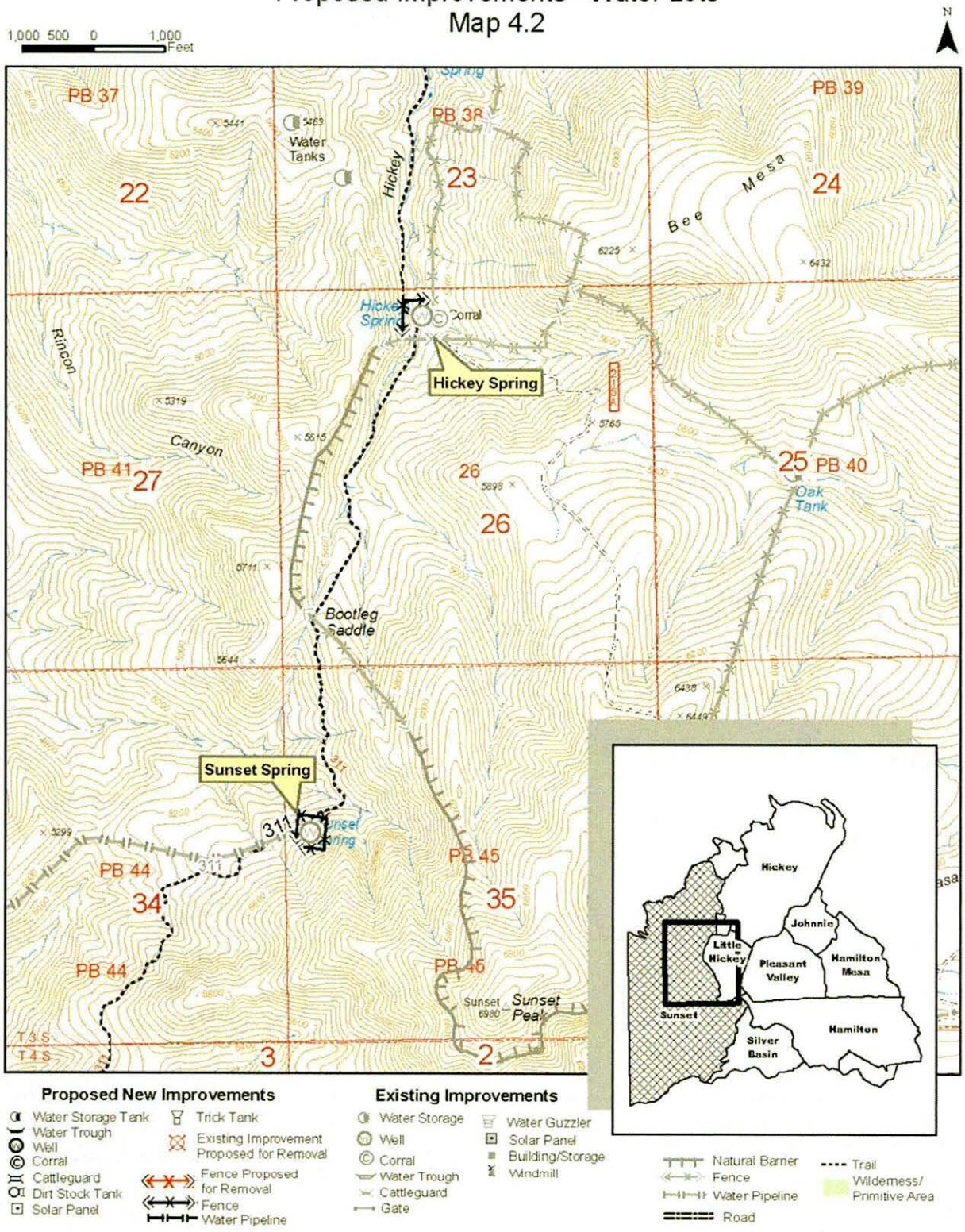
Maps


Hickey Allotment
Vicinity - Map 4
1.5 0.75 0 1.5 Miles
N
San Francisco River
R U Trap
Hickey
Red Tank Trap
Hickey Trap
Johnnie
Blackjack
Little Hickey
Pleasant Valley
Hamilton Mesa
Sunset
Hamilton
Silver Basin
Rattlesnake Gap
Proposed Improvements
Dirt Stock Tank
Solar Panel
Trick Tank
Cattleguard
Corral
Water Storage Tank
Water Trough
Well
Fence
Water Pipeline
Removed from Grazing
Ranger District
Project Allotments
US Forest Service
FS Wilderness
FS Primitive Area or Wilderness Study
Private
State
Bureau of Land
BLM Wilderness

Hickey Allotment
Proposed Improvements
Map 4.1



Hickey Allotment
Proposed Improvements - Water Lots
Map 4.2



Blackjack & Hickey Allotments
Proposed Improvements
Map 3.2