July 21, 2014

P.O. Box 20862
Phoenix, AZ 85036

Mr. Neil Bosworth, Supervisor
Tonto National Forest
2324 E. McDowell Road
Phoenix, AZ 85006

Dear Mr. Bosworth,

I am writing to submit comments in regards to your revision of the Tonto National Forest Land and Resource Management Plan (LRMP). I understand that you are in the initial assessment phase of the plan revision process, so I am requesting that you address the issues described below.

The overriding issue of all of the specific issues I am asking you to consider is the appropriateness of permitting livestock grazing on the forest. The Federal Land Policy and Management Act (FLPMA) of 1976 established the multiple use doctrine under which you operate. This law defined multiple use as the, "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output."

In other words, all activities shouldn't be permitted on all public lands and the objective of public lands management isn't necessarily the maximization of commodity production; it's to establish the appropriate mix of uses in each area. That's just common sense. It also means that you and your staff cannot use the multiple use doctrine as an excuse to avoid having to decide if livestock grazing should be permitted on any part of the forest.

According to the planning documents that you've distributed, you have identified five major potential natural vegetation types (PNVTs) on the Tonto. Two of these ecological units, the Sonoran Desert and the Semi-Desert Grasslands make up almost half of the entire forest, with the Sonoran Desert lands accounting for about 27% of the forest. This ecosystem is an obvious candidate for an assessment of the appropriateness of livestock grazing. I've previously raised the issue of the appropriateness of permitting livestock grazing in the Tonto's Sonoran Desert lands while participating in the National Environmental Policy Act (NEPA) public planning process to implement livestock management plans on specific grazing allotments. Forest Service staff have typically refused to assess the appropriateness of grazing in the desert and claimed the implementation of more intensive livestock management techniques would protect desert resources from livestock damage.

I've been monitoring livestock grazing on the Tonto for more than 20 years, however, and I'm not aware of any real world examples of where cattle were successfully managed on a desert grazing allotment, especially during the hot summer. A claim might be made that they can be successfully managed in the desert by limiting grazing to the cool season only. But the cool season in the desert is only a couple of months long and I doubt there are many grazing permittees who would think putting cattle on an

allotment only to have to remove them in a couple of months is worth the effort and expense. It's my understanding that you are required to use actual data in the analysis of the alternatives that will be considered in the forest plan revision. Please provide some examples of the actual management successes you've had permitting cattle in the desert if you are going to try and justify its continuance.

To summarize this specific issue - please assess the appropriateness of permitting livestock grazing on the Tonto's Sonoran Desert lands.

Riparian areas are another part of the forest where it's obvious that an assessment of the appropriateness of livestock grazing should be conducted. All riparian areas in Arizona are so important that former Arizona Governor Rose Mofford issued Executive Order 91-6 in 1991 to recognize that the protection and restoration of riparian areas are of critical importance to the State. Perennial stream stretches on the arid Tonto National Forest are so scarce, unique and ecologically important that it's difficult to understand why you are permitting livestock in any of them. I realize you already have some forest-wide riparian grazing guidelines on the Tonto, and they are listed below:

- Obligate riparian tree species - limit use to < 50 percent of terminal leaders (top one third of plant) on palatable riparian tree species accessible to livestock (usually < 6 feet tall);
- Deer grass - limit use to < 40 percent of plant species biomass;
- Emergent species (rushes, sedges, cat-tails, horse-tails) - maintain six to eight inches of stubble height during the grazing period;
- Stream banks - limit use to < 20 percent of alterable banks where stream banks are present or forming.
- Once riparian utilization guidelines are met, cattle will be moved from the area, or to the next scheduled pasture regardless of available forage in the uplands. It may become necessary to minimize or remove livestock access to riparian habitat if their overuse becomes a limiting factor in the use of pastures.

These guidelines, however, are more like a disaster prevention strategy than a riparian protection strategy. They allow cattle to consumer up to 50% of the accessible branch tips on riparian trees, up to 40% of the streamside deer grass, chomp aquatic vegetation down to a height of 6 inches, and destroy up to one fifth of the stream banks. Furthermore, they are practically unenforceable. Once cattle enter a riparian area it would take them only a couple of days to reach or exceed these limits, especially during the hot season. You don't have the staff to monitor these areas for compliance, and even with a cooperative grazing permittee it would be very difficult to quickly move the cattle out of the area.

Moreover, the scientific justification for these guidelines is unclear. It's my understanding that Tonto National Forest staff drafted them in 1998. But what were the criteria they used to identify them? Also, were representatives of the Arizona Cattle Growers' Association involved in their creation, and if so, did the method of their involvement comply with the Federal Advisory Committee Act?

As I mentioned previously, it's my understanding that you are required to use scientific data to assess the alternatives that will be considered in the forest plan revision. One of the sources I suggest that you use is the *Riparian Habitat Analysis* of the Tonto National Forest conducted by the Arizona State University Center for Environmental Studies that was published in 1981. This forest-wide assessment of the Tonto's riparian areas documented the ecological condition of most of the forest's perennial stream stretches at that time. One of this report's conclusions was that, "overgrazing by cattle is the single factor most responsible for the continued decline of the quality of riparian habitat in this area." It should

be possible for you to compare the condition of many of these stream stretches today with what they were then. Then you could compare the amount of improvement observed between riparian areas that have been excluded from grazing and those that are still subjected to grazing. In addition, in 1989 you entered into a program with local volunteers to establish and maintain a permanent riparian photo point database. In 2002 it was reported that there were about 700 riparian photo points documented and about 300 site were being re-photographed per year. These photos are another obvious source of useful data. I think you will not be able to find any examples of where your riparian use guidelines have made a difference on the ground, and it will be obvious that the total exclusion of cattle from riparian areas, at least during the warm growing season, is the only effective strategy.

To summarize this specific issue - please assess the appropriateness of permitting livestock grazing in the Tonto's perennial riparian areas.

Thank you for this opportunity to participate in this planning process, and please keep me updated on the progress of the plan revision.

Sincerely,

Jeff Burgess
Email: jeffreydavidburgess@gmail.com

Note: I have attached some photos below that I took on the Tonto which show the outstanding results that can be achieved when cattle are completely excluded from riparian areas.

Pinto Creek, Pinto Creek grazing allotment, Globe Ranger District, Tonto National Forest, AZ.

Photo above taken May 2014 looking upstream on Pinto Creek at the old steel bridge on FR 287. Photo to the left taken from the same spot in May 1992 when the creek was being grazed yearlong by cattle. The creek hasn't been grazed since 1997.

January 3, 2018

7650 S. McClintock Dr., #103-248
Tempe, AZ 85284

Mr. Neil Bosworth, Supervisor
Tonto National Forest
2324 E. McDowell Road
Phoenix, AZ 85006

Dear Mr. Bosworth,

I am writing to submit comments in response to your forest's Preliminary Proposed Land and Resource Management Plan, which was released last November. I have been following livestock management on the Tonto for more than three decades, so I will be focusing my comments on that issue.

But before I address your proposed plan, I want to say that I have seen significant progress on the Tonto in regards to the implementation of improved livestock management. That's especially true when it comes to the protection of perennial riparian areas from the ecological degradation inflicted by cattle. Most of the Tonto, however, is inherently unsuited for livestock grazing. So more remains to be done.

A large portion of the forest, for example, is hot Sonoran Desert. For many years local conservationists, including myself, asked your range staff to consider the suitability of these desert lands for grazing when they conducted National Environmental Policy Act (NEPA) assessments of livestock management alternatives for individual grazing allotments. We were always told, however, that grazing suitability was handled at the forest plan level – not the project level. So, we looked forward to the day when your forest would draft a new management plan so that we could effectively request grazing suitability determinations. We were disappointed, however, when your new plan's initial Needs to Change documents were released in 2016 and they failed to address this issue – even though you were sent multiple comments asking you to do it.

But I was pleased to discover that your subsequent preliminary proposed plan (PPP) includes a proposed measure on page 89 that at least partially addresses the grazing suitability issue, wherein it says:

Allotments comprised of large percentages of Desert Ecological Response Units (Sonora-Mojave 25 Mixed Salt Desert Scrub, Sonoran Paloverde-Mixed Cactus Desert Scrub, and Sonoran Mid-26 Elevation Desert Scrub) should be closed, in whole or in part, as they become vacant.

This clause is displayed in the PPP as an addendum to a proposed common sense measure that says vacant grazing allotments and grazing permits that are waived back to your agency without preference to the buyer of the allotment's base property should be evaluated for closure, in whole or in part.

This is definitely an improvement over the current situation, but I believe the law requires you to conduct grazing suitability evaluations on active grazing allotments too. The Multiple-Use Sustained-Yield Act of 1960 requires you to manage Forest Service lands, "so that they are utilized in the combination that will best meet the needs of the American people," and, "not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." In other words, there's no excuse for continuing to allow grazing in the desert. At the very least, you should end grazing on any pastures that are comprised of desert when you implement new livestock management plans for individual active grazing allotments.

The topic of grazing suitability also raises a question about what it means for an area on the forest to be officially "closed" to livestock grazing. The current Tonto National Forest Plan, issued in 1985, lists multiple areas that are specifically closed to grazing. A rangeland management prescription called Level A is identified wherein livestock grazing is not allowed.

But your PPP fails to list any areas on the forest that are closed, or which you are proposing to close to grazing. Instead, on page 88 there's an odd statement on this matter:

Nearly the entire Tonto National Forest is divided into grazing allotments; however, a few allotments are considered vacant (no current permittee) or closed (no longer authorized for permitted livestock grazing). Status of allotments are dynamic so a list of open, vacant, and closed allotments in this plan would not be useful.

In the past, Tonto staff has told us that the only way to "officially" close an area to livestock grazing is to have the closure included in the forest plan. This, however, doesn't appear to be true. I know, for example, that several grazing allotments in the Superstition Mountains were closed to grazing after 1985. To add to the confusion, at one of the recent public meetings about the PPP hosted by your planning staff we were told that no land on the forest is ever permanently closed to grazing.

I suggest the PPP should be amended to include the following information:

- A description of your administrative process that designates an area as being officially closed to livestock grazing.
- A list and map showing the areas that are currently closed to grazing.
- A new requirement that the NEPA public planning process must be engaged and completed if you are considering reopening a closed area to grazing.

- Furthermore, a new requirement that the NEPA public planning process must be engaged and completed before grazing is permitted to resume on a vacant allotment, especially if the allotment includes desert lands or riparian areas.

In regards to perennial riparian areas, they are arguably the most important natural resources on the arid Tonto National Forest. So it's quite disturbing, even unbelievable, that the PPP is almost totally lacking in any specific livestock management prescriptions intended to protect or rehabilitate streams from the ecological damage caused by cattle. Your 1985 forest plan included specific riparian grazing guidelines:

Riparian areas will be managed to achieve the following conditions:
1. Annual growth by volume in woody species will not be browsed more than 20 percent per year.
2. Crown cover of overstory species will be enhanced to 80 percent of potential for each vegetative type.

But even these very modest standards, that, for example, don't address the trampling of streambanks, are not included in the PPP.

As I mentioned previously, the Tonto has made a lot of progress in reducing the effects of grazing upon the forest's riparian areas. But most of those achievements were accomplished by restricting cattle from streams. They were either totally excluded, the most effective measure, or they were prohibited from grazing riparian areas during the growing season. In the last few years, however, the Tonto seems to have abandoned those proven methods. Instead, you have been implementing allotment management plans that require the construction expensive new livestock watering sites on the uplands that, theoretically, will attract all the cattle to them and thus protect the riparian bottomlands without having to fence cattle out of them. The problem is, there's no proof that it works. (Would you climb a steep hill in hot weather to get a drink of water when you could just stay in the shade of a tree along a stream?)

In fact, recent research found that this strategy doesn't work. In a 2017 edition of *Rangelands*, a periodical publication of the Society for Range Management (SRM), a research article was published titled *Upland Water and Deferred Rotation Effects on Cattle Use in Riparian and Upland Areas* that found building upland livestock watering sites didn't improve the condition of neighboring riparian areas but facilitated more grazing on upland areas that previously lacked drinkable water. Since most of these new livestock waters were funded by Environmental Quality Incentives Program (EQIP) grants, the taxpayers have paid for this failed experiment.

It's reminiscent of all the money public land managers wasted implementing holistic resource management (HRM) grazing schemes before they realized they didn't work because they are based on junk science. The 1985 forest plan says that the Tonto was studying some test implementations of these high-intensity grazing schemes, also referred to as the Savory Grazing Method, in order to formulate a policy about their use on the forest. I know those tests failed, but for some reason there's no mention of that in the PPP. I presume the proposed grazing guideline that prescribes a conservative maximum forage utilization rate of 30 to 40 percent for livestock is one result of those failed experiments? The fact that the PPP specifically identifies a conservative forage utilization rate is very good, but it would be better if it also explicitly denounced HRM.

The PPP's identification of this specific upland grazing guideline also serves to highlight the ridiculousness of the absence of proposed specific riparian grazing guidelines. I suggest that, from the perspective of the general pubic, there's no acceptable level of cattle grazing in perennial riparian areas, at least during the growing season.

Thank you for this opportunity to participate, and please keep me updated on the status of this new forest plan.

Sincerely,

Jeff Burgess
Ph 602-819-0795

March 9, 2020

ATTN: Forest Planner
Tonto National Forest
2324 E. McDowell Road
Phoenix, AZ 85006

Dear Forest Planner,

I am writing to submit comments on the recently released Tonto National Forest Draft Land Management Plan (DLMP). I submitted scoping comments during the early phase of this project on July 21, 2014, and more comments in response to the preliminary LMP on January 3, 2018. I also attended the Forest's Technical Partner Meeting held in Phoenix on January 29.

I am concerned about all of the Forest's natural resource protection issues, but my comments are limited to livestock management, as grazing is the most pervasive commercial use of the Forest, with most of the Forest divided into grazing allotments, in spite of the fact that about 791,284 acres of it are hot Sonoran Desert which are unsuited for grazing.

I have been following livestock management on the Tonto for almost 30 years, so I can say with knowledge and confidence that the proposed livestock management measures included in the DLMP are a significant, and unjustified, step backwards from the existing 1985 LMP, as amended. The DLMP's most glaring inadequacy is the proposed reduction in the protection of the Forest's riparian areas from the ecological degradation caused by livestock. The description of the DLMP, which is the proposed action identified as Alternative B in Volume 1 of the draft EIS (DEIS), claims that it "places a greater emphasis on restoring riparian areas" than alternative A – the existing 1985 LMP. But the arguments used in the planning documents to support this claim are dubious.

REDUCTION IN RIPARIAN PROTECTION

The proposed Desired Conditions for the Forest's riparian areas are listed on page 98 of the DLMP, with more found on page 111. They are admirable, but the specific livestock management measures required to achieve them are sorely lacking. The only hard guidelines are #02 on page 99 of the DLMP:

> *Livestock and wildlife management practices should allow vegetation to recover. Plant development or recovery sufficient to sustain healthy riparian areas should occur following each livestock use period.*

And guideline #05 on page 113:

Annual operating instructions should schedule pasture use to achieve 50 percent utilization of current year's growth on riparian woody/browse species and 50 percent utilization of herbaceous vegetation within the riparian management zone.

Both of these guidelines imply that the proposed livestock management strategy in regards to riparian areas is to allow cattle to use them as much as possible. Guideline #05, for instance, calls for riparian utilization to "achieve" 50 percent, instead of being limited to it. Does this mean that all of the Forest's existing riparian exclosures, which have been tremendously successful at rehabilitating streams, would be opened up to cattle grazing?

Furthermore, would the practice of creating new exclosures to protect streams from cattle be abandoned? The riparian Management Approach #07 listed on page 113 of the DLMP implies that is your intention:

Focus restoration efforts where the potential to restore self-sustaining ecosystems is high versus those that require repeated management actions (e.g., continual planting of vegetation, treating invasive species, or maintaining exclosures).

This question is especially important because in the DLMP's rangelands Management Approaches on page 41, approach #05 states:

Encourage the development of water sources in uplands (including wells) where possible to improve or restore riparian areas.

The theory that building new upland livestock waters can, by themselves, significantly improve or restore riparian areas in the bottomlands in the Southwest is quite popular. It's been used as justification for spending millions of tax dollars from the USDA's Natural Resources Conservation Service's Environmental Quality Incentives Program (EQIP) to build new livestock waters. But just because some cattle might be willing to climb uphill to use the new waters doesn't mean enough of them will quit using the riparian areas to allow the streams to achieve ecological health. In fact, research (Carter 2017) has shown that new upland waters, by themselves, provide inadequate protection for riparian areas. This means that riparian area will still need to be excluded from grazing by the use of exclosures, or with pasture rotations that keep cattle out of the streams during the warm season. Furthermore, the "development" of upland water sources often means converting natural springs into cattle watering sites. This is addressed in the riparian Guideline #01 on page 112 of the DLMP that states:

New spring developments and redeveloped springs (not including maintenance) should leave some water behind to support riparian obligate vegetation and wildlife species.

In other words, it's would be acceptable to divert water from a spring to support cattle grazing, as long as you don't **totally** destroy its natural state.

The disturbing truth is that, despite its widespread use, I am aware of no follow-up research whatsoever which confirms the belief that new upland livestock waters allow riparian areas to achieve full recovery from grazing without concurrent measures to restrict cattle from using them. Can you cite any?

A comparison of the DLMP's proposed riparian protection measures with those in the existing LMP shows their inferiority. To start with, on page 12 of the existing LMP it states that:

> *Management emphasis in riparian areas will feature wildlife needs over recreation and grazing.*

The is no comparable statement in the DLM.

And the following Standard and Guideline for riparian areas is on page 41 of the existing LMP:

> *Coordinate with range to achieve utilization in the riparian areas that will not exceed 20% of the current annual growth by volume of woody species.*

Furthermore, more specific riparian utilization guidelines were subsequently drafted to achieve the desired conditions for riparian areas that are identified in the existing LMP. They were the product of a report titled, *Riparian Area Management Utilization Guidelines, Tonto National Forest,* completed in 2002 by the Forest's Kristen McBride & Janet Grove, who was the Forest's riparian ecologist. This report resulted in the following riparian utilization guidelines being included in every grazing allotment management plan (AMP) completed by the Forest since then:

- *Riparian woody species - Limit browse to 50% of leaders on upper 1/3 of plants up to 6 feet tall;*
- *Riparian herbaceous species - Limit use to 40% of plant species biomass, particularly for Deergrass (Muhlenbergia rigens), in order to help maintain integrity of streambanks;*
- *Emergent species - Maintain 6-8 inches of stubble height for emergent species such as rushes, sedges, cattails, and horsetails;*
- *Once riparian utilization guidelines are met, cattle will be moved to the next scheduled pasture regardless of whether or not there is still available forage in the current pasture's uplands. Further management changes may be required.*

The DRMP and DEIS, however, fail to mention this important Forest report, or the resultant riparian utilization guidelines. Does mean that they would no longer be enforced on the grazing allotments with AMPs that include them? Does it mean they would no longer be included in new AMPs?

As I mentioned before, the description of the DLMP in Volume 1 of the DEIS claims that it is superior to the existing LMP. The DEIS states on page 27 of Volume 1 that this is because it puts greater emphasis on "setting management priorities" by setting "realistic treatment objectives

aimed to address riparian areas that are most impaired." It adds that it provides an "increased focus on restoring spring ecosystems, aquatic habitat restoration, and treating invasive species in riparian areas."

This is reflected in the riparian Objectives listed on page 112 of the DLMP:

> *01 Complete restoration projects on 200 – 500 acres of riparian areas rated as nonfunctioning and functioning-at-risk (Proper Functioning Condition or similar protocol) during each 10-year period, with emphasis on priority 6th code watersheds.*
>
> *02 Improve or maintain 10-15 individual springs during each 10-year period.*

The DLMP's inclusion of springs as being riparian areas that are worthy of protection is a good thing. But the primary cause of riparian habitat degradation on the Forest is cattle grazing. There are some places were human recreation is the cause, but cattle, by far, are more widespread. If the DLMP included specific riparian utilization standards and guidelines to protect them from cattle, then all of the riparian areas across the Forest could be improved simultaneously by enforcing them, and there would be little need for individual projects. It's been repeatedly proven that the most effective livestock management strategy to restore and protect riparian areas in the Southwest is to restrict cattle from using them. In fact, research has shown (Belsky 1999) that there's NO level of livestock use that doesn't negatively impact the ecological health of riparian areas in the arid West.

LACK OF FORAGE UTILIZATION GUIDELINES

Unfortunately, the DLMP is also inferior to the existing LMP in regards to livestock management on the Forest's uplands. The only specific measure in the DLMP is Guideline #04 on page 40 which suggests the use of rotational grazing systems:

> *Livestock rotations should avoid grazing the same areas during the growing season at the same time, year after year.*

In comparison, the existing LMP includes the following specific maximum upland forage utilization standards on page 42:

Allowable Use Guide (Percent) By Range Condition and Management Strategy *

Range Condition**	Continuous Season-long Use	Defer 1 Year in 2	Defer 1 Year in 3	Defer 2 Years in 3	Rest 1 Year in 2	Rest 1 Year in 3	Rest 2 Years in 3	Rest Over 2 Years in 3
Very Poor	0	10	5	15	15	10	20	25
Poor	10	20	15	20	20	15	30	35
Fair	20	25	20	30	30	25	40	45
Good	30	35	35	35	35	35	45	50
Excellent	30	35	35	35	35	35	45	50

* Site-specific data may show that the numbers in this table are substantially high or low. These numbers are purposefully conservative to assure protection in the event that site-specific data is not available.

These maximum utilization standards are science-based (Holechek 1988), with the overall strategy being that conservative utilization standards are necessary in the arid Southwest. These guidelines have resulted in maximum upland forage utilization being set at 30% to 40% in the Forest's AMPs.

During the January 29 Technical Partner Meeting I asked the Forest's Range Program Manager, Chandler Mundy, for the reason why the DLMP lacked something as basic and essential as maximum forage utilization standards. He said they could preclude the Forest from implementing targeted grazing on areas where weeds or invasive plants could be cropped by cattle. But targeted grazing isn't part of a ranch's regular operation, it would be a special project and should be handled as such. Moreover, the lack of maximum forage utilization standards could allow for the implementation of the scientifically discredited (Carter 2014) short-duration, high intensity grazing systems popularly known as holistic resource management (HRM). The bottom line is that nowhere in the DLMP is the word "conservative" mentioned in regards to livestock forage utilization.

The only place allowable forage utilization is discussed is in Volume 3 of the DEIS. Its Resource Assumptions and Methods section addresses the topic of Rangelands, Forage, and Grazing, and on page 10 includes the assumption below:

> *Under all alternatives, allotment-level analysis, including season of use, permitted livestock numbers, and forage use levels occur at the project-level.*

This strategy, however, violates a primary purpose of implementing a Forest management plan. This is shown by the fact that the DLMP states that standards and guidelines provide the sideboards necessary to achieve desired conditions. Despite this, it's argued in the DLMP that, by simply identifying desired resource conditions, they can be achieved through the use of adaptive management without having specific standards and guidelines. This argument might sound good to some, but it crumbles under scrutiny.

To start with, it means that any sort of livestock management plan could be implemented on the Forest, as long as its proponents claim that it could achieve the desired conditions, because

it would supposedly be revised through adaptive management if it fails. This could allow a lot of resource damage to occur before any adjustments are made. But more importantly, it implies that the basics of scientifically sound livestock management systems in the Southwest are some kind of unknown mystery - which isn't true.

ADAPTIVE MANAGEMENT MONITORING

Furthermore, the success of adaptive management is dependent upon robust, scientifically sound monitoring, especially if a livestock management plan is unique. But on page 161 of the DLMP is states that a monitoring guide won't by developed until "after" the new Forest plan is implemented. And, on page 190 of the DLMP it states that a "possible" future management action for rangelands is to:

> *06 Work with partners (e.g., University of Arizona and Friends of the Tonto) to complete rangeland monitoring (e.g., Reading the Range and riparian photo points).*

This confirms that forage utilization monitoring on the Tonto National Forest has been largely delegated to the University of Arizona's Cooperative Extension's Reading the Range Program. Volunteers from Friends of the Tonto National Forest sporadically monitor riparian areas on the Forest by duplicating photo points. But they post their photos online for public review, while the monitoring results collected by the Reading the Range Program are not made public. In fact, the only specific information provided about upland forage utilization monitoring is a sentence on page 66 in Volume 2 of the DEIS that states, "In a coarse review of approximately 265 Reading the Range monitoring sites, most monitoring sites are stable or upward in trend for the time monitored."

In other words, the upland forage utilization monitoring that's vital to the success of adaptive grazing management on the Forest has been outsourced. This arrangement doesn't provide the public with any way to know what's going on. This privatization of what should be public information is exacerbated by the fact that there's little other specific information about the status of livestock management on the Forest's grazing allotments that's readily available to the public. At the start of each calendar year, for example, the Forest issues annual operating instructions (AOI) for each grazing allotment, wherein the number of cattle authorized to graze the allotment that year, along with specific management measures, are identified. They aren't posted online, so the public is forced to submit Freedom of Information Act (FOIA) requests to see them.

IMPORTANCE OF NEPA PROCESS

The only other opportunity for the public to know the situation on specific grazing allotments is when the Forest engages the National Environmental Policy Act (NEPA) public planning process to draft and implement a new AMP. But in recent years it's been obvious that the Forest has tried to minimize the use of the NEPA process, and thus public participation, in its livestock management decisions.

This is reflected in the statement found in the Resource Assumptions and Methods section on page 10 in Volume 3 of the draft EIS that states:

> *Most of the active grazing allotments have been assessed for resource conditions and undergone NEPA analysis to balance permitted livestock numbers with available forage production and to maintain or move toward desired conditions. Management and monitoring are being used to maintain and improve the rangeland resource.*

Reading between the lines, this means that Forest officials want to avoid having to engage the NEPA process. This attitude has been confirmed in recent years by their decisions to revise allotment management plans using NEPA categorical exclusions, which minimize public involvement, and by implementing entirely new grazing plans without public notice, and then using the NEPA process afterwards to essentially rubber stamp plans that are already in place.

The bottom line is that a Forest plan which lacks adequate grazing utilization guidelines, but relies upon adaptive management that's dependent upon privatized monitoring, is a recipe for mischief.

I have little doubt that your agency's intention is to conceal the details of livestock management on the Forest from the public. During the Technical Partner Meeting, for example, I asked Mr. Mundy a question about the proposal to increase allowable riparian utilization to 50%. He expressed surprise that the guideline had been included in the DRMP because, he explained, they had been given instructions from the Forest Service's Southwestern regional office to delete grazing utilization guidelines from the DRMP.

I believe it's inappropriate, legally and ethically, for the DLMP to lack basic grazing utilization guidelines. I suggest that science-based guidelines designed to protect the Forest's natural resources from livestock should be added to the final Forest plan. And a policy statement should be added which state's that riparian areas should not be considered significant source of livestock forage. Riparian protection measures should be driving grazing management, not the other way around.

Without these changes, the DLMP is inferior to the existing LMP. And even with my suggested changes, adaptive management cannot be an honest strategy unless the monitoring data it relies upon is readily available to the public. I suggest that it would be a relatively simple task to post AOIs and grazing utilization monitoring results to your Forest's website. Furthermore, you should embrace the NEPA public planning process, not try to minimize its use.

DESERT GRAZING

Before I conclude my comments, I want to raise several more issues regarding the DLMP. To being with, the preliminary LMP released in November 2017 included the following proposal:

Allotments comprised of large percentages of Desert Ecological Response Units (Sonora-Mojave 25 Mixed Salt Desert Scrub, Sonoran Paloverde-Mixed Cactus Desert Scrub, and Sonoran Mid-26 Elevation Desert Scrub) should be closed, in whole or in part, as they become vacant.

This was a response to numerous requests the Forest had received to address the unsuitability of the Forest's Sonoran Desert lands for livestock grazing. This proposal, however, morphed into the following Objectives listed on page 40 of the DLMP:

02 At least one vacant allotment will be evaluated for one of the following options every two years, until there are no vacant allotments. If additional allotments become vacant (waived without preference) they will be evaluated for one or a combination of the following options within two years:

03 Conversion to forage reserves to improve resource management flexibility.

04 Grant to current or new permitted livestock producer.

05 Closure to permitted grazing, in whole or in part.

During the Technical Partner Meeting I pointed out to Mr. Mundy that, for many years, Tonto range staff have been telling local conservationists that assessing the suitability of desert lands for grazing had to be done at the Forest Plan level, not during allotment level planning. I asked him why the DLMP was now proposing that it be done at the allotment level. He said that the agency planning regulation that required suitability determinations in Forest plans no longer existed. Is that accurate?

I also asked him for the definition of a vacant allotment, versus one that has been closed to grazing. He explained that the only officially closed grazing allotment on the Forest was the Goldfield allotment, in the Mesa Ranger District, located in the desert just east of Apache Junction. I followed up that question by asking him if that meant all of the grazing allotments in the Superstition Mountains which haven't been grazed for many years are considered vacant allotments, and he answered yes. This was disturbing, but he assured me that the NEPA process would be engaged for the evaluation of vacant allotments.

But if that's the case, why isn't the Forest doing it already when a rancher wants to obtain the grazing permit for an allotment that's been vacant? For example, I recently spoke with an existing Forest grazing permittee who wanted to resume grazing on the long-vacant Brushiest grazing allotment in the eastern Superstitions. He told me the only reason it didn't happen was because he decided he didn't want to do it. Can you please clarify the circumstances under which the NEPA process is engaged **before** a new grazing permit is issued for a vacant allotment?

This highlights the issue of why you are only willing to consider officially closing an allotment to grazing if it's vacant. Shouldn't more factors be considered than just whether or not a rancher wants to use it? Just because an allotment can be grazed doesn't mean it should be grazed. There are several active allotments on the Forest comprised mostly of Sonoran Desert that are considered "browse" allotments, where herbaceous forage has been practically extirpated by grazing and the cattle rely upon browsing the desert brush, such as jojoba bushes, and eating mesquite bean pods. Cattle can be produced this way, but is this really an ecologically sustainable use of the Forest?

GRAZING RIPARIAN AREAS AFTER FLOODS

Another issue I have with the DLMP pertains to assessing the appropriateness of grazing in areas that have suffered disturbances, such as fires or floods. The Forest Service Handbook, Southwestern Region, FHS 2209.13, Chapter 10 in section 19.2 addresses livestock management after such disturbances, but it says almost nothing about responding to the damage caused by floods.

Damaging floods are a natural disturbance in the Southwest's riparian areas, and they will probably become more frequent and severe with climate change. Livestock grazing, however, is not a natural disturbance of riparian areas. This means it will become even more important to protect streams from livestock damage and ensure their health so they are better able to endure floods. Extremely violent floods last fall washed out the Apache Trail between Tortilla Flat and Apache Lake, but they also tore up important riparian areas on the Forest. I personally visited several riparian areas on the Forest after the floods and found them severely damaged compared to my earlier visits. (I have before and after photos.) They include Campaign Creek on the Campaign grazing allotment, Sycamore Creek and Hidden Water Spring on the Sunflower allotment, and Cave Creek on the Cartwright allotment. I've also been told that Red Creek on the Red Creek allotment was seriously damaged. Obviously, livestock grazing should be prohibited in flood-damaged riparian areas until they've recovered, so I suggest that this requirement should be added to the final Forest plan.

NEW LIVESTOCK WATERS

Another issue with the DLMP is raised by the Desired Condition on page 40 of the DLMP that states:

> *04 Livestock management and range improvements sustain or improve other resource.*

This touches on the popular belief that all livestock waters, especially new ones, are inherently beneficial to local wildlife. But that's not true, because there's more to wildlife habitat than surface water. Animals also need food and cover, and grazing reduces both of those. This needs to be considered when the construction of a new livestock water is proposed. Furthermore, livestock waters don't do local wildlife much good if they are turned off after cattle are moved

to another pasture. I suggest that a requirement to keep livestock waters operational yearlong should be added to the final Forest plan.

DROUGHT STRATEGY

Another big issue, and it will likely become bigger with our ongoing climate change, is managing livestock grazing on the Forest during droughts. Drought wasn't even mentioned in 1985 LMP, however the DLMP includes this Desired Condition on page 39:

> *02 Rangelands are resilient to disturbances, fluctuations, and extremes in the natural environment (e.g., fire, flooding, drought, climate variability).*

There's also this Guideline on page 40:

> *03 Drought preparedness should be emphasized in Allotment Management Plans and may include flexible stocking rates/livestock classes, flexible rotation schedules, and other strategies for dealing with climate variability.*

The Forest Service Handbook, Southwestern Region, FHS 2209.13, Chapter 10 in section 19.1 provides some drought guidelines. Section 3, Stocking During and After Drought, lists several measures, all of which involve some level of reductions in the number of cattle on the land during and after a drought. But I have to wonder if these common sense measures are actually being implemented on the Tonto National Forest. One of the Forest's primary strategies during the recent severe drought was to authorize the construction of numerous new livestock waters, often with public monies, using NEPA categorical exclusions. This made it appear that the Forest's drought strategy was to try and keep as many cattle on the land for as long as possible by creating new waters that allowed them to access forage in more areas. Since there was little new vegetative growth because of the drought, this meant cattle were consuming existing vegetation, which further reduced the amount of vegetation available for wildlife.

During the Technical Partner Meeting I asked Mr. Mundy if the existing maximum upland forage utilization standards were still enforced during the drought, and he replied vehemently that they were. But it's difficult to understand how appropriate forage utilization levels can be identified when there's been little plant growth because of drought. Furthermore, according to the Environmental Working Group's online Farm Subsidy Database, Gila County applicants received have received more than $3.53 million in Livestock Forage Disaster Program payments from the program since it began in 2008.These payments are supposed to provide feed assistance to ranchers during severe drought. Since the Tonto National Forest comprises 56% of Gila County, and 38% of the County is Apache tribal lands, it's obvious that most of these payments went to Tonto National Forest grazing permittees. So, did these ranchers use the money to feed their cattle while keeping them on drought-stricken Forest lands? Also, were any Forest grazing permittees allowed to use excluded riparian areas during the drought? I suggest the final LMP should include a livestock management policy statement which states that the protection of the Forest's publicly owned natural resources should be the primary objective during drought.

VEGETATIVE MANIPULATIONS

Another issue pertaining to public subsidies for grazing permittees is the manipulation of vegetation on the Forest, sometimes using poisonous herbicides, for the purpose of increasing herbaceous forage for cattle. These very expensive efforts to remove woody vegetation, such as junipers and mesquites, are often described as landscape "restoration" projects. But increases in woody vegetation don't necessarily mean there's something wrong. Some increases, for example, are the result of the regeneration of the natural vegetation that existed before settlers conducted extensive woodcutting. And some increases are the inevitable result of climate change.

According to the DLMP, the Forest Service's Watershed Condition Framework will be used to identify areas for watershed "improvement" projects, and page 107 of the DLMP includes the following proposed Objectives:

> *02 Implement at least one project identified in the Watershed Restoration Action Plan for each priority watershed every year.*
>
> *03 Improve or maintain watershed condition class (as defined in the Watershed Condition Framework or other acceptable method) of at least on 6th code (HUC12) watershed every 5 years.*

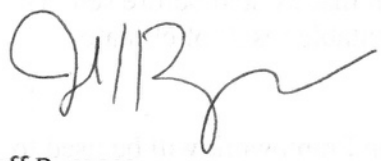
I suggest that the primary purpose of any publicly funded watershed improvement projects on the Forest should not be to increase forage production for cattle. Research (Germano 1983) has shown, for example, that there is more wildlife in areas with mesquite trees, and juniper trees are some of the oldest living organisms on Earth.

ECONOMIC CONTRIBUTION OF GRAZING

Finally, I must address the issue of the economic contribution of grazing livestock on the Forest. According to page 127 of Volume 1 of the DEIS, there are 85 grazing permits on the Forest, while in 2015 about 11,000 head of cattle were authorized to graze the Forest. That averages out to about 129 head per permit - not enough to generate much net annual income. According to the online Farm Subsidy Database, from 1995 to 2019 Gila County applicants received more than $6.26 million in Livestock Subsidies, and more than $2.46 million in EQIP payments -for a total in excess of $8.72 million. Since only 2% of the County's land is privately owned, most of these subsidies were likely received by Tonto grazing permittees. If you divide $8.72 million by 85 permittees you get about $102,588 per permittee. I'm not saying this is the amount each permittee received, although I know some who received more than that, but this rough calculation shows that ranching on the Tonto National Forest, much of which is unsuited for grazing because it's hot desert, would probably be unsustainable without public subsidies. This means the claims that the Tonto supports a thriving ranching industry aren't accurate. And it also means that finding ways to equitably phase out grazing on the Tonto make more sense than looking for ways to increase it by reinitiating grazing on vacant allotments.

Thank you for this opportunity to participate, and please keep me updated on the status of this planning project.

Sincerely,



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References

Belsky, A.J., A. Matzke, and S. Uselman. 1999. *Survey of Livestock Influences on Stream and Riparian Ecosystems in the Western United States*. Journal of Soil and Water Conservation 54(1): 419-431.

Carter, J., A. Jones, M. O'Brien, J. Ratner, and G. Wuerthner. 2014. *Holistic Management: Misinformation on the Science of Grazed Ecosystems*. International Journal of Biodiversity Volume 2014, Article ID 163431.

Carter, J., J.C. Catlin, N. Hurwitz, A.L. Jones, and J. Ratner. 2017. *Upland Water and Deferred Rotation Effects on Cattle Use in Riparian and Upland Areas*. Rangelands 39(3-4): 112-118.

Germano, D.J., R. Hungerford, and S.C. Martin. 1983. *Responses of Selected Wildlife Species to the Removal of Mesquite from Desert Grassland in Southeastern Arizona, Prosopis juliflora*. Journal of Range Management 36(3) 309-311.

Holechek, J.L. 1988. *An Approach for Setting the Stocking Rate.* Rangelands 10(1):10-14.

Holechek, J.L., H. Gomes, F. Molinar, D. Galt, and R. Valdez. 1999. *Short-Duration Grazing: The Facts in 1999*. Rangelands 22(1):18-22.

McBride, K., and J. Grove. 2002. *Riparian Area Management Utilization Guidelines*. Tonto National Forest, Phoenix, AZ.

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TNF Plan Revision

4 messages

Jeff Burgess <jeffreydavidburgess@gmail.com> Tue, Aug 25, 2020 at 1:37 PM
To: "Belsky, Kenna M -FS" <kenna.belsky@usda.gov>

Dear Kenna,

I recently obtained the attached study, which isn't widely available.

I think it's very relevant to the issue of livestock grazing in the desert, especially since one of the study areas was on the Tonto National Forest.

Here's the citation:
Smith, E.L., P.R. Ogden, J.G.G. Soares, R.A. de Luna, and D.D. Young. 1993. Seasonal diets of cattle on hot desert rangelands. Pages 129-143 in Symposium on Vegetation Management of Hot Desert Rangeland Ecosystems, July 28-30, 1993.

Thanks

Jeff Burgess

SeasonalDietsCattleHotDesert-Smith.1993.pdf
8254K