



United States Department of the Interior



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In Reply Refer To:
4160 (AZP010)
#03095

CERTIFIED MAIL: 7018 3090 0001 1156 9252

RETURN RECEIPT REQUESTED

Sand Arroyo Ranch INC
27162 US Hwy 287
Springfield, CO 81073

NOTICE OF FINAL DECISION

*For the Proposed Grazing Permit Renewal for the Vulture Complex Grazing Authorization
Renewal EA
(DOI-BLM-AZ-P010-2020-0005-EA)*

Mr. Rosengrants:

In 2018, you were notified that the Garcia (#03095) and Jones (#3045) allotments would be assessed and evaluated to determine if resource conditions are meeting the Arizona Standards for Rangeland Health, land use plan objectives, allotment-specific objectives, and to determine if the terms and conditions of the permit are in conformance with the Arizona Guidelines for Grazing Administration in order to fully process the reissuance of the grazing permits on the allotments. On June 16, the Notice of Proposed Decision (NOPD) was signed to renew the grazing permit, and issued to you, cooperating agencies, and the interested publics list. On July 10, the NOPD was protested by the Center for Biological Diversity (CBD). After consideration of the protest, this Notice of Final Decision has been issued to address the protest points. No changes to the final environmental assessment (EA) or finding of no significant impact (FONSI) were made.

BACKGROUND

The Hassayampa Field Office initiated the allotment evaluation process in 2018 for the Garcia and Jones allotment permits. Monitoring data was collected for the evaluation between 1984 and

2018. The evaluation area is located in Maricopa County, south and southwest of Wickenburg, AZ within the Phoenix District of the Bureau of Land Management (BLM). The allotments are within the Wickenburg Management Unit of the Bradshaw-Harquahala planning area of the Hassayampa Field Office, with intermingled state lands throughout the allotments. The Garcia allotment is approximately 51,846 acres in size; 37,705 acres are federally managed, 12,339 acres are managed by the state, and 1,802 acres are private lands. The Jones allotment is approximately 27,504 acres in size; 26,998 acres are federally managed, and 506 acres are private lands.

Following the analysis, interpretation, and evaluation of monitoring data, it was determined that land use plan objectives, allotment specific objectives, and Standards 1 (Upland Sites) and 3 (Desired Resource Conditions) of the Arizona Standards for Rangeland Health have been met on the upland portions of the allotments. The rangeland health assessments and evaluation indicates that the upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to the soil type, climate and landform. Standard 2 (Riparian-Wetland Sites) does not apply to this allotment, as no riparian areas are present.

As part of the draft Vulture Complex Rangeland Health Evaluation (RHE), technical recommendations were developed to ensure that the allotment would continue meeting and/or make significant progress towards meeting the Arizona Standards for Rangeland Health, land use plan objectives and allotment specific objectives. The RHE was issued to the public to solicit comments on the data analysis and the Proposed Action for the grazing permit renewal. Comments on the RHE were received from Western Watersheds Project. As a result, the BLM has prepared the Vulture Complex Grazing Permit Renewal Environmental Assessment (EA) (DOI-BLM-AZ-P010-2020-0005-EA) to analyze a range of alternatives for reissuing the grazing permit.

The NOPD based on the Vulture Complex RHE and EA was issued on June 16, 2020, via certified mail to the permittee, cooperating agencies, and the interested publics. On July 10, the BLM received a comment letter from the CBD.

The BLM would note that the comments submitted by the CBD were received during the protest period following publication of the Proposed Grazing Decisions. The EA, approved FONSI, and three Proposed Grazing Decisions were published on the BLM's national "NEPA Register" known as ePlanning on June 18, 2020. The webpage displayed the protest period dates, and a button labeled as "Protest Now!." The BLM has considered these comments submitted by CBD as protests to the Proposed Grazing Decisions. CBD had been provided the opportunity to comment as an Interested Party on the draft RHE when it was published as a part of public scoping on January 30, 2020. The scoping period closed on February 15, 2020; the BLM did not receive any comments from CBD during the scoping period. This Final Decision responds to the points of protest given in the comment letter and will initiate the appeal period for the decision.

The Final EA, FONSI, as well as Final Decisions may be viewed or downloaded from the BLM Land Use Planning and NEPA Register Page under the following link:

<https://go.usa.gov/xph4X> (this link is case sensitive)

RESPONSE TO PROTEST STATEMENTS OF REASONS

Protest Point 1: “Cattle Exclusion from Critical Habitat”

The Cactus Garden allotment is adjacent to occupied habitat for the endangered southwestern willow flycatcher (SWWF, *Empidonax traillii extimus*) and the threatened yellow-billed cuckoo (YBC, *Coccyzus americanus occidentalis*) along the Hassayampa River. SWWF are listed as endangered by the U.S. Fish and Wildlife Service (USFWS) and are a Forest Service Sensitive Species and Species of Special Concern in Arizona. YBC are listed as threatened by the USFWS and are a Species of Special Concern in Arizona.

Concern: The EA states “Small portions of critical habitat for southwestern willow flycatcher, specifically a single 0.9-acre patch of critical habitat on the Cactus Garden Allotment... There are two patches of yellow billed cuckoo proposed critical habitat on the Garcia allotment (a 2.8-acre patch, and a 1.3-acre patch) and a single 3.1-acre patch of proposed critical habitat on the Cactus Garden Allotment” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 20). In addition, “Livestock trampling and herbivory in this patch of critical habitat could reduce the extent and density of vegetation in the patch, thus reducing foraging habitat and habitat availability for insects that could provide forage for willow flycatchers” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 25). Similar discussion is held for YBC: “Livestock trampling and herbivory could limit or reduce the density and extent of vegetation used as foraging habitat” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 26).

Although recognizing and briefly addressing the obvious potential for negative impacts and ecological damages brought about by cattle grazing, the EA consistently downplays potential for adverse modification to proposed and designated critical habitat for both federally protected avian species. For example, “Since the allotment contains such a small percentage of available foraging habitat in the area, birds could disperse to nearby habitat to forage, and potentially return once the livestock had left the area” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 25). Statements such as this deflect from the issue of adverse modification, as birds will not return to an area to forage if the area has been trampled, browsed, and devastated by cattle and adequate foraging habitats are degraded. If cattle are actively altering the available resource, the issue is more complex than one defined as an immediate spatiotemporal behavioral interaction between federally protected birds and domestic livestock.

In fact, the above cited statement is fundamentally misleading. The Cactus Garden Allotment actually contains over 60 acres of proposed or designated critical habitat for YBC and SWWF respectively (Figs. 1 & 2). The EA only provides discussion of the small acreage of proposed and designated critical habitat that falls on BLM land within the allotment. Directly abutting this small acreage is over 60 additional acres of proposed and designated critical habitat that falls on private land but is still contained within the Cactus Garden Allotment. The EA does not, in any capacity, discuss the Cumulative Impacts of cattle grazing in this sizeable area of riparian corridor, where it appears that cattle may have ample access to the Hassayampa River, its associated riparian habitat (including proposed and designated critical habitat), and to abundant water resources. As the BLM has limited the scope of their analyses to only those areas over which they have direct authority, they have fundamentally failed to address the extent of cattle grazing effects to the most important area of concern in the Cactus Garden Allotment. BLM must consider all direct, indirect, and cumulative environmental impacts of the proposed action¹, and this failed cumulative effects analysis alone constitutes a violation of NEPA. We request that any subsequent NEPA document discuss the cumulative impacts of cattle grazing and activity that

occurs near the Hassayampa River riparian corridor on private and State Trust land within Species and Species of Special Concern in Arizona. YBC are listed as threatened by the USFWS and are a Species of Special Concern in Arizona.

The EA offers inadequate solutions to prevent adverse modifications to proposed and designated critical habitat. We acknowledge the effort to stage supplements and mineral licks at a two-mile distance from designated and proposed critical habitats, i.e. “these supplements must be placed a minimum of two miles from southwestern willow flycatcher critical habitat and yellow-billed cuckoo proposed critical habitat” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 9). However, cattle will still be attracted and drawn to these dense patches of mesquite (*Prosopis* sp.) thickets, especially if they have access to these areas through the large tracts of public and State Trust land within the allotment boundaries that were not discussed in the EA in any capacity. Increased soil moisture in these areas support patches of vegetation that are denser than the surrounding upland habitat. These patches are relatively cooler, are shaded, and have potentially more palatable vegetation for browse. These conditions will still result in disproportionate amount of cattle use in the most important areas of the allotment for federally protected species.

In addition, the EA states that “Livestock water sources on BLM land are not located near these patches of proposed critical habitat (located approximately two miles away from proposed critical habitat), so livestock waters would not contribute to concentration of livestock use in these patches of proposed critical habitat” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 26). Firstly, while there may be no water sources on BLM land within the two-mile buffer, are there alternative water sources on nearby private and State land that will influence cattle behavior on BLM lands? Do cattle have access to water in the riparian corridor on private land within Cactus Garden Allotment? We recommend that this concern be addressed in subsequent NEPA documents. If new fence construction on State lands is within the scope of the EA (DOI-BLM-AZ-P010-2020-0005-EA, pg. 9), so too should be an analysis of livestock water sources on such land parcels as they may influence cattle movement and behavior near designated and proposed critical habitat on BLM-managed lands. Cattle only need to drink once per day², and routinely travel distances of >4 miles per day^{3 4}, so it is our contention that even the narrowly focused proposed solutions to minimize adverse modifications of proposed and designated critical habitat are insufficient.

The EA also states that “The proposed action would have no effect on dynamic riverine processes” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 26). However, we disagree with the assessment because 1.) a cumulative analysis that includes private and State Trust land was not undertaken, and 2.) there are indirect effects on riparian systems from cattle grazing in adjacent mesquite bosques, even if cattle are excluded from adjoining riparian corridors. In reference to riparian-adjacent mesquite bosques: “Soil stability and quality also often deteriorate with heavy grazing (Donnelly and Shane 1986). Grazing can result in reduced soil nutrient levels and reduced water penetration and can transform depositional environments to erosional environments. Increased susceptibility to erosion exacerbates the destructive effects of large floods on bosques, which can result in increased loss of riparian acreage.”⁵

Concurrent with listing a species, the ESA requires the designation of critical habitat.⁶ Critical habitat means “the specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection;” and

unoccupied areas “essential for the conservation of the species.”⁷ “Conservation” is defined as all methods that can be employed to “bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary.”⁸ As such, “the purpose of establishing ‘critical habitat’ is for the government to carve out territory that is not only necessary for the species’ survival but also essential for the species’ recovery.”⁹ Any such designation must be based on the “best scientific data available”¹⁰

“The heart of the ESA is section 7(a)(2),” which requires each federal agency, in consultation with the U.S. Fish and Wildlife Service (FWS), ensure that any proposed action is not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of their critical habitat.¹¹ Section 7(a)(2) imposes both a procedural and a substantive obligation on federal agencies.¹² Substantively, each federal agency must ensure that no proposed action jeopardizes the continued existence of a species or destroys or adversely modifies its critical habitat.¹³

Recommendation: Prevention of further degradation of mesquite bosques, which in this case included proposed and designated critical habitat, requires elimination of threatening factors, including livestock grazing⁵. “In riparian mesquite habitats, as well, cattle have caused much ecological change. Presence of large herds of ungulates is unnatural in the Sonoran biotic province, and may be a primary cause behind the replacement of the native understory vegetation in many bosques by a relatively small number of disturbance-adapted exotic species...”⁵. Recovery of mesquite bosques from cattle damage can take decades.⁵ The EA should include an Alternative Action that requires permanent cattle exclusion from SWWF critical habitat and from proposed YBC critical habitat areas. Complete exclusion of livestock from critical habitat is needed to avoid Adverse Modifications, as well as to protect and ensure the recovery and viability of a full range of native species and natural conditions.

Importantly, claims that the Proposed Action will have no deleterious effects are fully dependent on an analysis of the cumulative impacts of cattle grazing and activity that occurs near the Hassayampa River riparian corridor on private and State Trust land within the Cactus Garden allotment, directly adjacent to the proposed and designated critical habitat discussed in the EA.

Furthermore, removal of livestock from sensitive ecosystems such as arid-lands riparian areas is a critical component of adapting to climate change¹⁴. Astonishingly, the EA does not even mention climate change. Climate change is likely to exacerbate drought, stress vegetation, and lead to more uncharacteristic fire behavior. The cumulative effects of climate change interacting with grazing are significant, but not discussed in any capacity in the EA. Any subsequent NEPA document must address the synergistic effects of livestock grazing interacting with multiple other ecological stressors, especially the overarching issue of climate change.

Response to Protest Point 1:

Section 3.2.4 of the Final EA describes the potential impacts to proposed and designated critical habitats. On September 4, 2019, the BLM received concurrence from the U.S. Fish and Wildlife Service (USFWS) that the project “may affect, but is not likely to adversely affect” critical habitats. Stocking rates on the allotments are designed to allow for sustained, multiple use objectives in these areas while meeting Standards for rangeland health. Additionally, while the BLM boundary for the allotment includes the Hassayampa River, the private land within much

of the river bottom is fenced from livestock and public access. The majority of the habitat within the Garcia allotment is separated from BLM managed lands by the railroad right-of-way fence, preventing livestock access. Based on the concurrence from the USFWS and the mitigation measures such as livestock supplement distance to habitat, the proposed action adequately provides for maintenance of proposed and designated critical habitat.

Utilization levels measured on the allotments (Appendix B) are not indicative of heavy grazing. Permanent exclusion of cattle from the BLM portions of proposed and designated critical habitat was dismissed from analysis as infeasible. Due to the distance to livestock waters, mitigation measures such as salt placement, and economic infeasibility of constructing small enclosure areas in these generally remote locations, an alternative to fence these areas was dismissed during internal scoping.

The Final EA includes consideration for state and private leases that the BLM does not have control over. BLM grazing permits incorporate State and, where applicable, private land leases within the allotment through the "%PL" column in the mandatory terms and conditions of the permit. Analysis of grazing activities on the allotment, specifically utilization levels, are compared to BLM stocking rates. Where necessary, BLM stocking rates are reduced to bring utilization levels in compliance with Standards. Additional cumulative analysis of the same state and private leases that are analyzed indirectly through the alternatives was unnecessary.

In Table 8 of the Final EA, the BLM acknowledged that ruminants including livestock through consumption of vegetation produce methane, a greenhouse gas. There are no thresholds and methodology to assess the impacts from climate change in the allotments, nor are there thresholds and methodology to assess the incremental and negligible contributions from methane to climate change as a result of this grazing permit authorization.

Protest Point 2: “Sonoran Desert Tortoise Concerns”

The vast majority of <Sonoran desert tortoise> SDT habitat within the Vulture Complex Allotments is CAT II Habitat, defined as: 1) habitat that may be essential to the maintenance of viable populations; 2) habitat where most conflicts are resolvable; and 3) habitat that contains medium to high densities of tortoises or low densities contiguous with medium or high densities.

For some species, like the desert tortoises, management occurs at the level of individual populations¹⁵, and distinct populations are located within the Project Area. BLM offers no baseline population estimates for tortoises and is insufficiently monitoring tortoise densities and population trends. It appears that the only tortoise surveys in the Vulture Complex occurred as clearance surveys for new water infrastructure. These surveys were conducted on November 15 and December 9, 2019 (BLM-AZ-P010-2020-0005-EA, pg. 27), astonishingly during the SDT inactive season. Thus, we are still left wondering if this site is an important area for seasonal SDT activities and foraging. We therefore recommend BLM collect SDT survey data in the Project Area before renewing grazing permits.

Aside from a lack of population surveys, there was inadequate discussion on tortoise browse requirements and availability within the Vulture Complex. The EA states “The Bradshaw-Harquahala Resource Management Plan (2010) contains additional desired future condition

objectives for wildlife special status species. For the Vulture Complex, the desired future condition objectives for Sonoran desert tortoise are applicable. These objectives are given below:

“TE-3. In Category I and II areas, vegetation will consist of at least 5 percent native perennial grasses, at least 10 percent native perennial forbs or subshrubs, at least 30 percent native trees and cacti, by dry weight, as limited by the potential of the ecological site as described by the Natural Resource Conservation Service (NRCS) ecological site guides.”¹⁶ (DOI-BLM-AZ-P010-2020-0005-EA, pg. 15)

The problem is that the focus is entirely on perennial vegetation. The EA also states, “Perennial grasses are an important year-round food source for desert tortoises (Oftedal 2002)” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 27). While this may be an accurate statement, SDT are more dependent on spring annual plants and the highest percentage component of SDT diet by percentage is annual forbs.¹⁷ Indeed, as also cited in the Project EA, the highest percentage dietary component for SDT are annual forbs (30.1 percent) (BLM-AZ-P010-2020-0005-EA, pg. 23). A more comprehensive analysis of SDT diet, which also includes both citations used in the EA to describe SDT diet (BLM-AZ-P010-2020-0005-EA, pg. 23, 27), determined that all grasses account for only 17.6 percent of SDT diet ¹⁷, a lower percentage than annual forbs alone.

The rangeland evaluation fails to assess annual plant species, the most important plant community component on which tortoises forage. Instead, BLM claims that because annual species production is variable, they are not used to make determinations of stocking rates (Appendix A, Comments and Comment Responses). It appears that BLM’s primary objective was to describe cattle forage in the Project Area and to use that as a primary indicator of ecosystem health. In other words, if landscape health evaluation methodologies are not directly applied to inform livestock stocking rates, they simply aren’t considered. Instead, it is apparent that BLM has settled for an analysis of common-denominator food sources for all herbivorous wildlife on the landscape (namely perennials and woody shrubs) and has failed to look at tortoise specific habitat components, particularly annual plants. For example, “The recommended palatable shrub and grass compositions will provide for adequate wildlife forage on the site for species such as Sonoran desert tortoise, mule deer, quail, and other non-game wildlife species.” (DOI-BLM-AZ-P010-2020-0005-EA, pg. 17).

Thus, the scope of the EA is not congruent with Standard 3: Desired Resource Conditions Guidelines; 3-2. Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by the maintenance or restoration of their habitats.¹⁸ How is the Proposed Action consistent with maintaining or restoring SDT habitat, as explicitly expressed in the “Purpose and Need” of the Project in regard to the aforementioned Standard (DOI-BLM-AZ-P010-2020-0005-EA, pg. 3), with no monitoring of vegetation conditions specific to SDT physiological and ecological needs? Such an omission would point to tortoise conservation not being an objective in this analysis, which would be required under 43 CFR 4180.1(d).¹⁹

Through the rangeland health evaluation procedures, BLM should specify how it is ensuring that there is adequate forage quantity and nutritional quality for STD, so that growth, reproduction, and recruitment will occur for this species following grazing rotations. This would logically require an analysis of STD’s primary food source, which is currently lacking. As a signatory to the Candidate Conservation Agreement for the STD, BLM is expected to evaluate SDT habitat

conditions relative to established objectives when considering livestock grazing permit renewal and adjust use to insure achievement or progress toward objectives.

Response to Protest Point 2:

The Final EA deals exclusively with the reauthorization of livestock grazing on the Garcia and Jones allotments. Sonoran desert tortoise population surveys are outside the scope of the analysis aside from where they are required for new infrastructure. The RHE is a stand-alone document used to show current land health conditions on the allotment on which the reauthorization of livestock grazing is based. The draft RHE was sent out for public review on January 30, 2020 and specifically requested if there was any additional information or data the BLM should be aware of prior to the preparation of the EA. This scoping letter was sent out to the permittee, cooperating agencies, and the interested public. Comments received based on this scoping were incorporated into both the final RHE and the alternatives in the Final EA. See Appendix A.

The Bradshaw-Harquahala Resource Management Plan (2010) (RMP) is the guiding document for all projects undertaken within the Hassayampa Field Office outside of the Agua Fria National Monument. RMP decision TE-3, as cited above, outlines the minimum habitat requirements for SDT and the limitations to those requirements, as given by the NRCS Ecological Site Descriptions (ESDs). This RMP decision is the standard to which Standard and Guidelines Standard 3-2 is evaluated against when considering maintenance or improvement of habitat. Standard 3 was met on all sites which were within SDT habitat on the Complex (Appendix B Section 7) by meeting or exceeding these SDT habitat requirements, or by being partially exempt from some of these requirements as dictated by NRCS site potentials given in the ESDs (Appendix B Section 4.2). There are no requirements to evaluate annual vegetation as part of SDT habitat.

While the RHE does list livestock palatable plants in the data appendix (Appendix B), all Standards discussions are based around wildlife forage requirements and the maintenance of those requirements. As noted in this comment and the LHE, annual forage on these allotments is highly variable due to weather conditions. As the weather conditions on the allotments are outside control of the BLM, desired plant community objectives must be designed around perennial vegetation, which has less variation in composition on a yearly basis. This provides for a forage source regardless of annual species production values. The high variability in annual vegetation production prevents any long term trend data analysis on the vegetation community if included in composition measurements, as described in the Technical Reference (TR-1734-4). Collection of Frequency data has been added for annual species, and this data is in the data appendix for sites where it has been collected (Appendix B). Appendix A, and the referenced comment response regarding annual vegetation and stocking rates, is clearly not a blanket statement that the BLM is using livestock forage to ascertain land health. The comment specifically requested information about livestock use, and BLM responded to that comment.

Protest Point 3: “Unclear and inadequately explained baseline conditions”

The final Rangeland Health Evaluation of the Vulture Complex states, “Rangeland Inventory was completed on the Vulture Complex in 1981... this data was not used in this analysis due to the non-repeatability of its study design” (pg.24).¹⁶ What exactly does this mean, and why/ how is the study design non-repeatable? Presuming survey methodologies have since evolved, it is

still hard to believe that no useful data can be extrapolated for discussion on baseline conditions within the Vulture Complex.

The Project EA goes on to state “Key Areas were established in 1983, 2009 and 2018 to determine whether indicators of ecological processes conform to the Land Health Standards” (BLM-AZ-P010-2020-0005-EA, pg. 17). However, the Rangeland Health Evaluation of the Vulture Complex appears to only discuss data collected since 2009. If some of the Key Areas were established in the early 1980s, why are those data not included in the discussion? A dataset that is almost 40 years old, as opposed to 11 years, would be more appropriate to establish baseline conditions and trends for the Vulture Complex. Therefore, all Key Areas discussed in the final Rangeland Health Evaluation of the Vulture Complex appear to have inadequately established baseline conditions and trends. There is no way to compare grazing impacts to environmental baselines, as such baseline conditions are not established without some comparison to older rangeland health conditions. It is difficult to accept that all previous datasets can be scrapped simply because survey methodologies have changed (presumably in 2009, but that is still unclear in the EA).

The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process, because an inadequate environmental baseline precludes an accurate assessment of project impacts.²¹ “In analyzing the affected environment, NEPA requires the agency to set forth the baseline conditions.”²² The regulations implementing NEPA require agencies to “describe the environment of the areas to be affected or created by the alternatives under consideration.”²³ The Ninth Circuit Court of Appeals has stated that “without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA.”²⁴ The court further held that “[t]he concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.”²⁵

In a separate case, the court stated that “The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process . . . Once a project begins, the pre-project environment becomes a thing of the past and evaluation of the project’s effect becomes simply impossible.”²⁶ “[W]ithout [baseline] data, an agency cannot carefully consider information about significant environment impacts. Thus, the agency fails to consider an important aspect of the problem, resulting in an arbitrary and capricious decision.”²⁷

“Defendants [BLM and Forest Service] and Ascot [mining company applicant] cite no cases holding that baseline information is not required in cases involving an EA as opposed to an EIS. An agency is required to take a “hard look” at environmental consequences for either an EA or an EIS and this must be done “before, not after, the environmentally-threatening actions are put into effect.”²⁸

The duty to fully analyze baseline conditions applies to EAs and well as EISs. We request that a harder look is given to baseline conditions, for we cannot accept that there are no presentable or comparable data for these Key Areas, or other equivalent areas, prior to 2009. A change in survey methodology should not equate to wiping the slate clean for establishing baseline conditions.

Response to Protest Point 3:

The Rangeland Inventory completed in 1981 was used to inform the 1985 Lower Gila North Grazing Environmental Impact Statement (EIS). The baseline conditions at that time were used to determine the stocking rates on the allotments. This Final EA evaluates the effects of continuing grazing at the levels authorized in that RMP, using current and trend data collected at the Key Area monitoring points on the allotments. Inventory data collected on these allotments was conducted using the SVIM methods as described in TR-1734-7 (Ecological Site Inventory). As the transect locations were randomized during the inventory, and their approximate locations on historic maps are unverifiable, repeating these transects is not feasible.

All Key Area data that has been collected on the Vulture Complex since 1982 has been included in the data appendix to the RHE (Appendix B). The Key Areas on the allotments in the complex were originally composed of different monitoring methods, with Key Areas being a mix of frequency, composition, photoplots, utilization, or just one of those methods. When data collection began in 2009, it was decided to include additional data collection methods so that all Key Areas had the same data methods across the complex. This is explained in Section 5.2 of Appendix B, as well as in the data appendix for the same appendix. All Key Area data was used in this analysis and was included in the data appendix. Where data does not show frequency or composition prior to 2009, it is indicative that the Key Area in question was either a utilization or photo plot prior to 2009, or that it is a new monitoring point established in 2009, not that data has been omitted.

Baseline vegetation conditions on the allotments in the complex are shown and discussed in the RHE (Appendix B). This data was used directly in the Final EA (Section 3) to give the environmental conditions and how those would be affected by the proposed action and alternatives. Because grazing has been an ongoing action on these allotments, there is no feasible way to present a baseline vegetation condition on these allotments prior to the introduction of livestock, nor would that be appropriate, because the baseline conditions at the time of this Final EA included livestock use.

Protest Point 4: “A Range of Reasonable Alternatives”

The EA did not explore a range of alternatives that proposes significantly fewer cattle than is being proposed. This would represent a strategy to offset the negative ecological impacts resulting from opening new areas to construction and concentrated grazing activities. The proposed refurbishing and relocating of livestock water sources, as well as the construction and maintenance of new fence-line barriers in the Project Area, will result in increased vehicular traffic, increased vegetation destruction resulting from opening relatively undisturbed areas to concentrated cattle activity, and increased risk of fire due to invasive plant species and human activity which will directly increase disturbances on site. Spread of invasive species cannot be reduced by developing new livestock facilities and subsequently increasing motorized vehicle use.

Grazing by cattle and anthropogenic vehicular activity are fundamental drivers for the spread of invasive species. As new areas are opened to the detrimental impacts of grazing, Key Areas, even while being rested, are reasonably expected to continue to show little to no signs of ecological stability and recovery. To offset these negative impacts, as well as to mitigate against

climate change, a reduction in AUMs is a reasonable alternative to ensure and retain Standards of Desired Resource Conditions. While we support construction activities being conducted outside of nesting bird and active SDT seasons, we recommend an Alternative Action that better mitigates proposed ecological stressors.

Based on the points of discussion in this comment letter, we recommend a reasonable Alternative Action that requires:

- 1.) Reduced AUMs to offset construction activities and mitigate climate projections.
- 2.) Assessing cumulative impacts of the 60+ acres of proposed and designated critical habitat and riparian areas within the Cactus Garden allotment that are not discussed in the current EA, required to substantiate BLM's FONSI.
- 3.) Assessing water sources on private and State Trust land that will influence cattle behavior on BLM lands, required to substantiate BLM's FONSI.
- 4.) Assessing cumulative impacts of climate change projections on the resource.
- 5.) Better explanations of rangeland baseline conditions, using all available data prior to 2009.
- 6.) Construction of barriers to exclude cattle from proposed and designated critical habitat.
- 7.) Survey data on local SDT populations.
- 8.) A SDT-specific habitat assessment, per the Candidate Conservation Agreement for the Sonoran Desert Tortoise. This assessment should not be lumped together with other herbivorous wildlife and domestic ungulates that don't require the special attention SDT does as a BLM sensitive species.

The EA must thoroughly analyze all of the aforementioned negative impacts²⁹ as well as address soil, vegetation, and watershed conditions a site-specific level, and furthermore explain how continued livestock grazing, whether kept the same under the No Action Alternative, or coupled with construction of new water facilities under the Proposed Action, will move progress towards Standards of Desired Resource Conditions. In addition, creating new water structures will only pave the way for future rises in stocking levels; it is supplying infrastructure needed to restock the land to overcapacity.

Subsequent NEPA documents should include analysis of a full range of alternatives, including one or more enhanced conservation alternatives which includes continued/expanded rest and permanent exclusion from identified critical areas, reduced or eliminated stocking in areas not meeting Standards, a robust monitoring plan with at least one sizable upland enclosure per pasture for comparison/control, and an inventory of forage quality and quantity for SDT. We request that any subsequent version of the EA include any applicable and available information regarding details of the Sonoran Desert Tortoise Candidate Conservation Agreement, including management plans, habitat quality assessments, and population levels and trends. All alternatives should be rigorously explored and objectively evaluated per 43 CFR § 46.310(c) and 40 CFR § 1502.14.

The Ninth Circuit has explicitly held for decades that the alternatives requirement applies equally to EAs and EIS's. "Any proposed federal action involving ... the proper use of resources triggers NEPA's consideration of alternatives requirement, whether or not an EIS is also required."^{30 29}

Courts have concluded that to ensure that the agency has taken the required "hard look," the agency must utilize "public comment and the best available scientific information."²⁹ The Ninth Circuit has ruled that government land management agencies violated NEPA when they "neither

responded to [or] considered comments "objectively and in good faith" nor made responsive changes to the proposed regulations."²⁹ The Ninth Circuit similarly ruled that government land management agencies violated NEPA when they dismissed issues raised in comments, and "did not provide the 'full and fair discussion' of the issue required by NEPA, and also did not properly respond to [public] comments."^{29 30} *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1229 (9th Cir. 1988), cert denied, 489 U.S. 1066 (1988). See also *W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to all reasonable alternatives" (emphasis added) (internal quotation and citation omitted)); *Te-Moak Tribe v. Interior*, 608 F.3d 592, 601-602 (9th Cir. 2010) ("Agencies are required to consider alternatives in both EISs and EAs and must give full and meaningful consideration to all reasonable alternatives."); *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1245 (9th Cir. 2005) ("alternatives provision" of 42 U.S.C. § 4332(2)(E) applies whether an agency is preparing an EIS or an EA and requires the agency to give full and meaningful consideration to all reasonable alternatives); *Gifford Pinchot Task Force v. Perez*, 2014 U.S. Dist. Lexis 90631, No. 03:13-cv-00810-HZ (D. Or. July 3, 2014) (finding agency failed to consider range of reasonable alternatives in an EA); *Env'tl. Prot. Info. Ctr. v. Blackwell*, 389 F. Supp. 2d 1174, 1199 (N.D. Cal. 2004) (stating that "an EA must consider a reasonable range of alternatives"); *Or. Natural Desert Ass'n v. Singleton*, 47 F. Supp. 2d

Other courts agree. Federal courts require agencies consider alternatives to recommended actions whenever those actions "involve unresolved conflicts concerning alternative uses of available resources."³¹ The issue of cattle use of riparian areas in the arid southwest is a serious unresolved conflict. "NEPA's requirement that alternatives be studied, developed, and described both guides the substance of the environmental decisionmaking and provides evidence that the mandated decisionmaking process has actually taken place."³²

We greatly appreciate the opportunity to comment on proposed management activities in this important ecosystem. The Center is an interested party to this action and wishes to continue its involvement at all stages of the decision-making process. Please send me all subsequent environmental documentation for this particular project as it becomes available.

Response to Protest Point 4:

The BLM assesses reductions in livestock stocking rates based on a "Desired Stocking Rate Analysis". Section 2.4 of the Final EA discusses why a reduced stocking rate alternative was not analyzed. Based on utilization rates and the desired stocking rate analysis, there was no cause to reduce stocking rates on the allotments without doing so arbitrarily. Reductions in stocking rate are based on the requirement to meet Standards and Guidelines for Rangeland Health. In the case where Standards are met, a reduction in livestock numbers is not warranted. Similarly, an arbitrary reduction in animal unit months (AUMs) relating to construction activities in small areas of these allotments was not considered because construction would be along established, existing routes, and in the case of fence construction would be along a paved road, and because livestock are unlikely to congregate in active construction areas.

An assessment of water sources on State or private lands is unnecessary. The Key Areas are established within the service areas of water, regardless of the surface ownership of the water. Multiple Key Areas on these allotments are within the service areas of water located on State or

private lands. The upland data from these key areas indicated cattle behavior on BLM lands, and satisfies this request.

In Table 8 of the Final EA, the BLM acknowledged that ruminants including livestock through consumption of vegetation produce methane, a greenhouse gas. There are no thresholds and methodology to assess the impacts from climate change in the allotments, nor are there thresholds and methodology to assess the incremental and negligible contributions from methane to climate change as a result of this grazing permit authorization.

Requests for additional data that does not exist on Key Areas within the Vulture Complex is covered in Protest Point 3, above. All data on Key Areas on the allotments have been included in Appendix B. It is economically infeasible to retroactively collect additional historic monitoring data at Key Areas.

Construction of livestock barriers around proposed and designated critical habitat was considered and dismissed as infeasible. Due to the distance to livestock waters, mitigation measures such as supplement placement, and economic infeasibility of constructing small enclosure areas in these generally remote locations, an alternative to fence these areas was dismissed during internal scoping.

Performing an additional SDT assessment was unnecessary, as it would not have informed the range of alternatives for the Final EA. Habitat requirements for SDT were met based on the Standards and the data given in Appendix B. Please review responses to Protest Point 2.

The Final EA considered the direct, indirect, and cumulative effects from the Proposed Action and a range of alternatives in Sections 3 and 4. Public scoping was conducted on the RHE, including requests for an additional available data. This scoping was concluded on February 23, and comments raised during this scoping period were incorporated into the EA.

DECISION

After reviewing the analysis presented in the Final EA, protest points submitted during the Protest Period, and making a FONSI, it is my decision to implement the Proposed Action described in the Final EA to authorize livestock grazing use on the Jones and Garcia allotments with terms of 10-years beginning March 1, 2021, upon acceptance of the permit. A new grazing permit will be offered upon issuance of this decision.

Through the allotment evaluation process, it was determined that the following management actions are appropriate to ensure meeting land use plan objectives, Arizona Standards for Rangeland Health, and allotment specific objectives for the allotments. In accordance with Title 43 Code of Federal Regulations (CFR) 4100 and based upon the allotment RHE your permit is adjusted as follows:

Proposed Permitted Livestock Use:

Permittee	Allotment	Livestock Number and Kind	Grazing Period	Percent Public Land	Type of Use	Animal Unit Months (AUMs)
Sand Arroyo Ranch, INC	Garcia	302 Cattle	3/1-2/28	87%	Active	3150
	Garcia	Sheep	3/1-2/28	87%	Ephemeral	0
	Jones	75 Cattle	3/1-2/28	100%	Active	900

Other Terms and Conditions:

In accordance with 43 Code of Federal Regulations (CFR) 4110.3-2 the following terms and conditions of your Garcia allotment permit (Authorization #0200194) will be adjusted as follows:

- Supplemental feeding is limited to salt, mineral, and/or protein in block, granular, or liquid form. If used, these supplements must be placed at least one-quarter (1/4) mile from livestock water sources, one-eighth (1/8) mile away from major drainages and washes and sensitive wildlife habitat, and a minimum of 2 miles from designated critical habitat along the Hassayampa River.
- The lessee must properly complete, sign and date an Actual Grazing Use Report Form (BLM Form 4230-5) annually. The completed form(s) must be submitted to the BLM, Hassayampa Field Office(HFO) within 15 days from the last day of authorized annual grazing use (43 CFR 4130.3-2 9d).
- If in connection with allotment operations under this authorization, any human remains, funerary objects, sacred objects or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104 Stat. 3048; 25 U.S.C. 3001) are discovered, the permittee shall stop operations in the immediate area of the discovery, protect the remains and objects, and immediately notify the authorized officer of the discovery. The permittee shall continue to protect the immediate area of the discovery until notified by the authorized officer that operations may resume.
- When forage conditions warrant, ephemeral grazing may be authorized upon application to utilize an ephemeral forage crop pursuant to federal grazing regulations, special management requirements, and other guidance.

In accordance with 43 Code of Federal Regulations (CFR) 4110.3-2 the following terms and conditions of your Jones allotment permit (Authorization #0200194) will be adjusted as follows:

- Supplemental feeding is limited to salt, mineral, and/or protein in block, granular, or liquid form. If used, these supplements must be placed at least one-quarter (1/4) mile from livestock water sources, one-eighth (1/8) mile away from major drainages and washes and sensitive wildlife habitat.
- The lessee must properly complete, sign and date an Actual Grazing Use Report Form (BLM Form 4230-5) annually. The completed form(s) must be submitted to the BLM, Hassayampa Field

Office (HFO) within 15 days from the last day of authorized annual grazing use (43 CFR 4130.3-2 9d)).

3. If in connection with allotment operations under this authorization, any human remains, funerary objects, sacred objects or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104 Stat. 3048; 25 U.S.C. 3001) are discovered, the permittee shall stop operations in the immediate area of the discovery, protect the remains and objects, and immediately notify the authorized officer of the discovery. The permittee shall continue to protect the immediate area of the discovery until notified by the authorized officer that operations may resume.
4. When forage conditions warrant, ephemeral grazing may be authorized upon application to utilize an ephemeral forage crop pursuant to federal grazing regulations, special management requirements, and other guidance.

In addition to the above Terms and Conditions, the BLM will implement the following administrative actions:

- A water facility will be constructed in T6N R6W Section 12 NESW. This facility is to replace the Garcia Well facility located within the Vulture R&PP lease approximately one mile to the east. The facility will include a solar powered water well, a 10,000 gallon storage tank, corral, and wildlife compatible drinkers. The water well is to be located on a previously disturbed mining site.
- Pasture fencing will be installed along Vulture Mine Road and Aguila Road. This will split the larger Garcia pasture into three pastures, facilitating orderly management of the range, and reducing livestock and traffic interaction along these roads. Construction of this fence is contingent on permission from the Arizona State Land Department, where the fence would lie on their lands.
- All water troughs and tanks with open tops that are located on public lands within the allotments must have wildlife escape ramps installed to reduce risk of wildlife drowning. Examples of appropriate wildlife escape ramps can be found in BLM Technical Bulletin 89-4, and *Wildlife Escape Ramps for Livestock Watering Troughs* (NRCS 2012). These are available online or on request.

RATIONALE

Based on the data compiled and analyzed for this RHE, the allotments are achieving Standards 1 and 3 of the Arizona Standards for Rangeland Health on uplands within the majority of the allotments. Vegetation attributes such as vigor, recruitment and composition are appropriate for the area under current environmental conditions and grazing management, and soils are stable across the majority of the allotments. Species composition and structure were typical of the ecological communities within the allotment.

Adjustments to terms and conditions and management practices are necessary in order to continue to meet and/or make significant progress towards meeting Standards for Rangeland Health and Guidelines for Grazing Administration and other Land Use Plan multiple use objectives. The proposed changes in terms and conditions and management practices are in

conformance with Arizona Guidelines for Grazing Administration and will provide for forage on a multiple use sustained yield basis and support wildlife habitat requirements.

The RHE determined utilization levels within the allotments have been below or at acceptable levels throughout the evaluation. Modifications to current grazing management such as requiring placement of nutritional supplement at least one-quarter (1/4) mile from livestock water sources and one-eighth (1/8) mile away from sensitive wildlife habitat, and two miles from listed species habitat are necessary to improve livestock distribution across the allotment, better utilize areas that are lightly used, and avoid livestock concentration in sensitive wildlife habitat. Relocation of the Garcia Well improvement will reduce public and livestock interaction within the Vulture Mountains Recreation & Public Purposes Act lease.

AUTHORITY

The authority for this decision is contained in Title 43 of the Code of Federal Regulations, as amended, effective July 11, 2006, which states in pertinent subparts and sections:

§ 4100.0-8 The authorized officer shall manage livestock grazing on public lands under the principle of multiple use and sustained yield, and in accordance with applicable land use plans...Livestock grazing activities and management actions approved by the authorized officer shall be in conformance with the land use plan as defined at 43 C.F.R. 1601.0-5(b).

§4110.3 The authorized officer shall periodically review the permitted use specified in a grazing permit or lease and shall make changes in the permitted use as needed to manage, or improve rangeland productivity, to assist in restoring ecosystems to properly functioning condition, to conform with land use plans or activity plans, or comply with the provisions of subpart 4180 of this part. These changes must be supported by monitoring, field observations, ecological site inventory, or other data acceptable to the authorized officer.

§4120.3-1(a) Range improvements shall be installed, used, maintained, and/or modified on the public lands, or removed from these lands, in a manner consistent with multiple-use management.

§4120.3-2(a) The Bureau of Land Management may enter into a cooperative range improvement agreement with a person, organization, or other government entity for the installation, use, maintenance, and/or modification of permanent range improvements or rangeland developments to achieve management or resource condition objectives. The cooperative range improvement agreement shall specify how the costs or labor, or both, shall be divided between the United States and cooperator(s).

§4120.3-2(b) Subject to valid existing rights, title to permanent range improvements such as fences, wells, and pipelines where authorization is granted after August 21, 1995 shall be in the name of the United States. The authorization for all new permanent water developments such as spring developments, wells, reservoirs, stock tanks, and pipelines shall be through cooperative range improvement agreements. A permittee's or lessee's interest in contributed funds, labor, and materials will be documented by the Bureau of Land Management to ensure proper credit for the purposes of §§ 4120.3-5 and 4120.3-6(c).

§4130.2(b) The authorized officer shall consult, cooperate and coordinate with affected permittees or lessees, the State having lands or responsible for managing resources within the area, and the interested public prior to the issuance or renewal of grazing permits and leases.

§4130.3 Livestock grazing permits and leases shall contain terms and conditions determined by the authorized officer to be appropriate to achieve the management and resource condition objectives for the public lands and other lands administered by the Bureau of Land Management, and to ensure conformance with the provisions of subpart 4180 of this part.

§4110.3-2(b) When monitoring or field observations show grazing use or patterns of use are not consistent with the provisions of subpart 4180, or grazing use is otherwise causing an unacceptable level or pattern of utilization, or when use exceeds the livestock carrying capacity as determined through monitoring, ecological site inventory, or other acceptable methods, the authorized officer shall reduce permitted grazing use or otherwise modify management practices.

§4110.3-3(a) After consultation, cooperation, and coordination with the affected permittee or lessee, the State having lands or managing resources within the area, and the interested public, reductions of permitted use shall be implemented through a documented agreement or by decision of the authorized officer. Decisions implementing §§ 4110.3-2 shall be issued as proposed decisions pursuant to 4160.1 of this part, except as provided in paragraph (b) of this section.

§4130.3 Livestock grazing permits and leases shall contain terms and conditions determined by the authorized officer to be appropriate to achieve the management and resource condition objectives for the public lands and other lands administered by the Bureau of Land Management, and to ensure conformance with the provisions of subpart 4180 of this part.

§4130.3-1(a) The authorized officer shall specify the kind and number of livestock, the period(s) of use, the allotment(s) to be used, and the amount of use in animal unit months, for every grazing permit or lease. The authorized livestock grazing use shall not exceed the livestock carrying capacity of the allotment.

§4130.3-1(c) Permits and leases shall incorporate terms and conditions that ensure conformance with subpart 4180 of this part.

§4130.3-2 The authorized officer may specify in grazing permits or leases other terms and conditions which will assist in achieving management objectives, provide for proper range management or assist in the orderly administration of the public rangelands. These may include but are not limited to: ... **(d)** A requirement that permittees or lessees operating under a grazing permit or lease submit within 15 days after completing their annual grazing use, or as otherwise specified in the permit or lease, the actual use made; ... **(f)** Provisions for livestock grazing temporarily to be delayed, discontinued or modified to allow for the reproduction, establishment, or restoration of vigor of plants ... or for the protection of other rangeland resources and values consistent with objectives of applicable land use plans...

§4130.3-3 Following consultation, cooperation, coordination with the affected lessees or permittees, the State having lands or responsible for managing resources within the area, and the interested public, the authorized officer may modify terms and conditions of the permit or lease

when the active use or related management practices are not meeting the land use plan, allotment management plan or other activity plan, or management objectives, or is not in conformance with the provisions of subpart 4180 or this part. To the extent practical, shall provide to affected permittees or lessees, States having lands or responsibility for managing resources within the affected area, and the interested public an opportunity to review, comment and give input during the preparation of reports that evaluate monitoring and other data that are used as a basis for making decisions to increase or decrease grazing use, or to change the terms and conditions of a permit or lease.

§4160.2 Any applicant, permittee, lessee or other interested public may protest the proposed decision under 4160.1 of this title in person or in writing to the authorized officer within 15 days after receipt of such decision.

§4180.2(c) The authorized officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines that are made effective under this section. Appropriate action means implementing actions pursuant to subparts 4110, 4120, 4130, and 4160 of this part that will result in significant progress toward fulfillment of the standards and significant progress toward conformance with the guidelines.

RIGHT OF APPEAL

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal and petition for stay of the final decision pending final determination on appeal under 43 CFR §4160.4, §4.21 and must follow the requirements set forth in §§ 4.470 through 4.480 of this title. The appeal and petition for stay must be filed in the office of the authorized officer, as noted above, within 30 calendar days following receipt of the final decision.

The appeal shall comply with the provisions of 43 CFR 4.470 and state the reasons, clearly and concisely, why the appellant thinks the final decision is in error. When filing a petition for stay, the appellant must show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted, and
4. Whether the public interest favors the stay.

43 CFR 4.471(d) provides that the appellant requesting a stay bears the burden of proof to demonstrate that a stay should be granted.

As noted above, the petition for stay must be filed in the office of the authorized officer and additionally to: (1) All other parties named in the CC section of this Decision, (2) The appropriate Office of the Solicitor as follows, in accordance with 43 CFR 4.413(a) and (c): US Department of Interior, Office of the Field Solicitor, Sandra Day O'Connor U.S. Courthouse, 401 W Washington St. SPC 44 Suite 404, Phoenix, Arizona, 85003-2151

In accordance with 43 DFR 4.472(b), any person named in the decision from which an appeal is taken (other than the appellant) who wishes to file a response to the petition for stay may file with the Hearings Divisions a motion to intervene in the appeal, together with the response, within 10 calendar days after receiving the petition. Within 15 calendar days after filing the motion to intervene and respond, the person must serve copies on the appellant, the appropriate Office of the Solicitor in accordance with Sec 4.413(a) and (c), and any other person named in the decision.

LANE COWGER Digitally signed by LANE COWGER
Date: 2020.08.20 15:50:07 -07'00'

Lane Cowger
Field Manager, Hassayampa Field Office

8/20/2020_____
Date

1 Attachment

cc:

Arizona Game and Fish Department Region 6
Arizona Game and Fish Department Region 4
Arizona Game and Fish Department Region 2
Arizona Game and Fish Department Project Evaluation Program
Center for Biological Diversity
Arizona Cattlemen's Association
Arizona State Land Department
United States Fish and Wildlife Service
Western Watersheds Project

Attachment 1: List of References from CBD protest

- 1 40 CFR §§ 1502.16, 1508.8, 1508.25(c)
- 2 Rouda, R.R., Anderson, D.M., Wallace, J.D. and Murray, L.W., 1994. Free-ranging cattle water consumption in southcentral New Mexico. *Applied Animal Behaviour Science*, 39(1), pp.29-38.
- 3 Malechek, J.C. and Smith, B.M., 1976. Behavior of range cows in response to winter weather. *Rangeland Ecology & Management/Journal of Range Management Archives*, 29(1), pp.9-12.
- 4 Anderson, D.M. and Urquhart, N.S., 1986. Using digital pedometers to monitor travel of cows grazing arid rangeland. *Applied Animal Behaviour Science*, 16(1), pp.11-23.
- 5 Stromberg, J.C., 1993. Riparian mesquite forests: a review of their ecology, threats, and recovery potential. *Journal of the Arizona-Nevada Academy of Science*, pp.111-124.
- 6 16 U.S.C. § 1533(a)(3)(A)(i); see also id. § 1533(b)(6)(C).
- 7 Id. § 1532(5) (emphasis added).
- 8 Id. § 1532(3).
- 9 *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004).
- 10 16 U.S.C. § 1533(b)(2).
- 11 *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011) citing 16 U.S.C. § 1536(a)(2); see also 50 C.F.R. § 402.1(a) (implementing Section 7).
- 12 Nat'l Ass'n of Home Builders, 551 U.S. at 667; *N.M. ex rel. Richardson v. Bureau of Land Mgmt*, 565 F.3d 683, 700 (10th Cir. 2009).
- 13 16 U.S.C. § 1536(a)(2).
- 14 Beschta, R.L., D.L. Donahue, D.A. DellaSala, J.J. Rhodes, J.R. Karr, M.H. O'Brien, T.L. Fleischner, and C.D. Williams. 2013. Adapting to climate change on western public lands: addressing the ecological effects of domestic, wild, and feral ungulates. *Environmental Management* 51: 474-491.
- 15 Tuma, M.W., C. Millington, N. Schumaker, and P. Burnett. 2016. Modeling Agassizi's desert tortoise population response to anthropogenic stressors. *Journal of Wildlife Management* 80:414-429.
- 16 BLM 2019. Rangeland Health Evaluation. Vulture Complex. Phoenix, Arizona. November.
- 17 Ranching and Sonoran Desert Tortoise Working Group. Draft. Best Management Practices for Ranching in Sonoran desert tortoise (*Gopherus morafkai*) habitat in Arizona. 40 pp. plus appendices.
- 18 BLM 1997. Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. United States Department of the Interior, Bureau of Land Management, Arizona State Office.
- 19 "Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal proposed or candidate threatened and endangered species, and other special status species."
- 20 [USFWS] U. S. Fish and Wildlife Service. 2015. Candidate Conservation Agreement
- 21 *Oregon Nat. Desert Ass'n v. Jewell* 823 F.3d 1258 (9th Cir. 2016) (without accurate baseline information the agency cannot accurately assess project impacts); *N. Plains Resource Council v. Surface Transp. Board*, 668 F.3d 1067 (9th Cir. 2011) (reversing decision due to inadequate baseline information).
- 22 See *Western Watersheds Project v. BLM*, 552 F.Supp.2d 1113, 1126 (D. Nev. 2008)
- 23 40 C.F.R. § 1502.15
- 24 *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988)
- 25 Id.
- 26 See *Northern Plains v. Surf Transp. Brd.*, 668 F.3d 1067, 1083 (9th Cir. 2011)

27 *Id.* at 1085

28 *Gifford Pinchot*, 2014 WL3019165 at *30, citing *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 730, 733 (9th Cir.2001) (EA violated NEPA).

1182, (D. Or. 1998) (“The requirement of considering a reasonable range of alternatives applies to an EA as well as an EIS” (citing 40 C.F.R. § 1508.9(b)).

31 42 U.S.C. § 4332(2)(E). See also 40 C.F.R. § 1501.2(c) (agencies must “study, develop, and describe appropriate alternatives to the recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act.”).

32 *Bob Marshall Alliance*, 852 F.2d at 1228 (citation omitted).