Lauren M. Rule (OSB # 015174), *pro hac vice*
ADVOCATES FOR THE WEST
3115 NE Sandy Blvd. #223
Portland, OR 97232
(503) 914-6388
lrule@advocateswest.org

Erik B. Ryberg (AZB # 023809)
Attorney at Law
P.O. Box 2013
Tucson, AZ 85702
(520) 784-8665
ryberg@seanet.com

Attorneys for Plaintiff

UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

WESTERN WATERSHEDS PROJECT and SIERRA CLUB, Plaintiffs, vs. BUREAU OF LAND MANAGEMENT, Defendant.	Case No.: 2:13-cv-1028-PGR **PLAINTIFFS' OPENING BRIEF IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

INTRODUCTION

Plaintiffs Western Watersheds Project and Sierra Club (hereafter "WWP") challenge the portion of Defendant Bureau of Land Management's (BLM) new resource management plan (RMP) for the Sonoran Desert National Monument that authorized continued livestock grazing on much of the Monument. WWP challenges BLM's decision regarding management of livestock grazing on the Monument because it was not adequately explained or supported by the administrative record, and did not comply with the National Environmental Policy Act (NEPA).

Specifically, the 2001 Presidential Proclamation establishing the Monument identified the diverse plant communities, wildlife species, and historical sites that occur

in the area and were the reason the Monument was established; and it stated that livestock grazing could continue on the Monument only if it was compatible with protecting these special resources. BLM conducted an analysis to determine if grazing was compatible with protecting the plants and animals identified in the Proclamation, and determined that grazing was incompatible with protecting these objects on only 3.4% of the area available to grazing. BLM relied on this determination in its Environmental Impact Statement (EIS) and Record of Decision for the new Monument management plan.

However, BLM's grazing analysis was flawed in many ways. The agency altered standards, excluded data, and changed conclusions without a reasoned explanation or supporting data, and failed to show how its analysis satisfied the Proclamation's requirement to protect all of the biological and ecological objects named therein. Thus, its grazing compatibility determination was arbitrary and capricious, and failed to comply with the requirements under NEPA to ensure accurate scientific analysis and disclose the methodology and scientific sources relied upon. BLM also failed to consider a reasonable range of alternative actions and take a hard look at all relevant impacts with regard to livestock grazing management on the Monument, also in violation of NEPA. Thus, this Court should remand the Sonoran Desert National Monument EIS and RMP to BLM and require the agency to complete a proper and lawful analysis of livestock grazing on the Monument.

FACTUAL BACKGROUND

The Sonoran Desert National Monument was established by Presidential Proclamation in 2001, and covers more than 486,000 acres in southwest Arizona. Statement of Facts (SOF) ¶ 1; AR 3886-89. The Monument was set aside to protect the Sonoran desert landscape and the diverse plant communities, animals, and historical sites found there. SOF ¶¶ 2-8; AR 3886-87. The Proclamation discussed the "spectacular diversity of plant and animal species" found on the Monument, such as woodland communities, saguaro cactus forests, the paloverde/mixed cacti community, the creosote-bursage plant community, desert grasslands and ephemeral washes that support mesquite,

ironwood, paloverde and desert willow trees as well as a variety of herbaceous plants, more than 200 species of birds, several bat species, reptiles—including the Sonoran desert tortoise and red-backed whiptail, desert bighorn sheep, and other mammals such as mule deer, javelina, mountain lion, gray fox, and bobcat. *Id.* The Proclamation noted in particular the rich diversity, density, and distribution of plants in the Sand Tank Mountains on the Monument, which is due to the management regime in place in that area that has excluded livestock grazing for more than fifty years. SOF ¶ 5; AR 3886. It stated that adjacent Monument lands should be subject to similar management regime to the fullest extent possible to extend the extraordinary diversity and overall ecological health of the Sand Tank Mountains area. *Id.*

The Sonoran Desert National Monument was created "for the purpose of protecting the objects identified above," and thus the Proclamation prohibited or restricted numerous activities on the Monument. SOF ¶¶ 9-11; AR 3887-88. One such restriction related to livestock grazing: BLM could not renew grazing permits for allotments south of Highway 8 at the end of their term, and could allow grazing north of Highway 8 to continue "only to the extent that the Bureau of Land Management determines that grazing is compatible with the paramount purpose of protecting the objects identified in this proclamation." SOF ¶ 11; AR 3888. The Proclamation required BLM to prepare a management plan that addressed the actions necessary to protect the objects identified in the Proclamation. SOF ¶ 12; AR 3888. As noted by Secretary Babbitt when the Monument was designated, "grazing is subordinated to biological restoration." SOF ¶ 13; AR 3636, 55039.

Six grazing allotments occur north of Highway 8 on the Monument: Bighorn, Conley, Beloat, Hazen, Lower Vekol, and Arnold. SOF ¶ 31; AR 74588-89. Five are perennial-ephemeral, where grazing occurs year-round at a permitted level and also can be authorized for additional ephemeral use if winter rains allows for production of annual forbs and grasses. SOF ¶¶ 31-32; AR 74588, 74601. The Arnold allotment is ephemeral only, where grazing occurs just during seasons of high vegetation production. *Id.*

BLM began the management planning process in 2002, but did not complete the plan until 2012, under deadline of a Court settlement. SOF ¶¶ 14, 104; *Western Watersheds Project v. BLM,* case no. 08-cv-1472-MHM (D. Ariz.) (Docket nos. 95, 97, 98, 100). In the beginning stages of the planning process, BLM contracted with The Nature Conservancy (TNC) and Pacific Biodiversity Institute (PBI) as primary partners and experts to conduct studies on ecological conditions of natural communities within the Monument. SOF ¶ 15; AR 38181, 39950, 40016. PBI collected data starting in 2002, and produced five reports for BLM that mapped, characterized, and assessed the condition of natural communities on the Monument and the adjacent Sand Tank Mountains. SOF ¶¶ 16-23; 39866-934, 42964-3477, 82196-394, 62583-85.

The results of the PBI study indicated that the lower elevation communities on the Monument, including several of the plant communities mentioned in the Proclamation, had the most evidence of disturbance in the form of low vegetation cover, low native species diversity, high levels of non-native species, and soil erosion and compaction. SOF ¶ 18; AR 43078, 43095-151. These lower elevation plant communities, particularly the creosote-bursage community, were the most impacted by livestock grazing. SOF ¶ 20; AR 42969, 43078. The report also documented that areas around water sources or other livestock congregation areas had the most severe degradation, with highly altered vegetation and soil surfaces. SOF ¶ 21; AR 43078-79. A map of the ecological conditions on the Monument showed localized congregation areas as "highly altered," most of the lower elevation communities as "moderately altered," and the higher elevation communities as "mostly unaltered." SOF ¶ 22; AR 40047. Other reports by PBI, which BLM did not even mention in its compatibility analysis, found that grazing was degrading grasslands on the Monument, reducing native grass cover and increasing exotic grasses. SOF ¶ 23; AR 82196-394, 62583-84.

The Nature Conservancy also completed several reports for BLM between 2003 and 2005, including a thorough literature review of scientific research on impacts of livestock grazing in the Sonoran desert and its implications for grazing management on

the Monument. SOF ¶¶ 24-27; AR 41482, 47982, 46719. This report described livestock impacts to vegetation, saguaros, rare plants, soils, wildlife, and cultural resources in the Sonoran desert and current grazing management strategies, and concluded that "no currently described approach, including continuous grazing and each of the specialized grazing systems, is completely applicable to or appropriate for the Sonoran Desert ecosystem within the current formulations." SOF ¶¶ 25-27; AR 46723, 46799-908.

In addition to the biological data PBI collected to characterize and assess the condition of the natural communities on the Monument, BLM collected its own data. SOF ¶ 28; AR 42552. BLM collected vegetation and soils data in 2003-2004 at key area monitoring plots, which it placed approximately one mile from water sources to prevent collecting data in areas with the heaviest livestock impacts. SOF ¶¶ 28-29; AR 44496-537, 46188-263, 46265-499, 52034-107, 74612. The only data BLM had on file prior to the 2003/2004 data was ecological site data from 1981. SOF ¶ 28; AR 74612. BLM used this data for a land health evaluation (LHE). AR 50491.

In 2007, BLM considered information from the PBI study, the TNC report, its own observations and the 2005 LHE to conclude that grazing was not compatible with protection of the Monument objects, noting in particular the heavy impacts in livestock concentration areas, over-utilization of annual and perennial grasses and forbs that are especially important for the Sonoran desert tortoise, and reduction of saguaro recruitment. SOF ¶¶ 74-78; AR 54089-101. Thus, the initial determination was that the Monument should be closed to grazing. AR 54089.

BLM collected more data in 2007 and 2009 and revised its LHE. SOF ¶ 30; AR 54015-17, 54045-47, 54050-53, 54116-17, 54851-53, 58322-38, 54826-32, 54836, 54839-42, 54844, 54846, 54849, 54855, 54869-96, 54899-907, 54914-20, 55485-96, 58316-21, 58339-70 (data); 54282 (LHE).

In October 2009, using the more recent LHE data as well as the PBI study, information from literature, and observations on near-by federal lands, BLM again concluded that grazing was not compatible with protecting the Monument objects and

thus all lands north of Highway 8 must be closed to grazing. SOF ¶¶ 79-83; AR 55038-60. Like before, it noted in particular the heavy impacts in livestock concentration areas and reduction of saguaro regeneration. SOF ¶ 83; AR 55060.

Although BLM did not collect any data after 2009, it continued to revise its LHE before including the final report as an Appendix to the EIS. SOF ¶ 38; AR 55094, 56364, 58683, 70420, 74582, 83695, 83949. The purpose of the LHE was to gauge whether the three Arizona Standards for Rangeland Health were being achieved. SOF ¶ 33; AR 74607. Standard Three for "desired resource conditions" looked at production and diversity of native plant communities by assessing plant composition, structure, and cover. SOF ¶ 34; AR 74607.

To assess Standard Three, BLM first established desired plant community objectives for each of the seven ecological sites on the monument. SOF ¶ 35; AR 74608, 74591. The objectives related to vegetation canopy cover, vegetation composition, and for some ecological sites, recruitment of saguaros. SOF ¶ 35; AR 74608-11. To determine the objectives for each ecological site, BLM used data from corresponding sites on the Barry Goldwater Range and Area A ("BGR/Area A"), which had been officially closed to livestock grazing since the 1940's or 50's, as well as information from Natural Resource Conservation Service ecological sites descriptions. SOF ¶ 36; AR 38610, 74608, 74621. The data from BGR/Area A ecological sites came from the 2002 PBI plots as well as data BLM collected at three plots in 2009. SOF ¶ 41; AR 74608, 74615, 74621, 74686-87. Then BLM compared the vegetation data collected at plots on allotments north of Highway 8 to the desired plant community objectives to determine if the allotments were meeting objectives and hence achieving Standard Three. SOF ¶ 42; AR 50522-47, 54310-39, 55127-41, 56400-26, 58719-47, 70459-80, 74622-42.

Between the initial draft LHE and final LHE, BLM changed many of the plant community objectives, some multiple times. SOF ¶¶ 38-39 (*see* Table at ¶ 39); AR 50514-17, 54303-06, 83718-22, 55116-20, 56386-92, 74608-11. The majority of these changes eliminated or lowered objectives, making it easier to achieve Standard Three.

See SOF ¶ 39. BLM's only explanation for the multiple changes to objectives was that they were based on new information, but did not describe what that information was. SOF ¶ 40; AR 74333, 74334-35, 78492. The only new information in the record related to the plant community objectives that arose between the first draft and final LHE was the one-time collection of data in 2009 at three ecological sites. SOF ¶ 41; AR 74608, 74686-87. No new information was presented for the other four ecological sites. SOF ¶ 41; AR 74686-87.

In the early drafts of the LHE report, BLM included all of its own data. SOF ¶ 44; AR 50520, 55127-41. In the final report, however, it excluded data from earlier years and used just the 2009 data, except for some unexplained reason it used just 2004 data for the Beloat allotment despite having data from 2007 and 2009.[1] SOF ¶ 44; AR 74666-83, 58313-38. It also used data from 48 of the 320 PBI plots assessed in 2002. SOF ¶ 43; AR 74615, 74691-707. BLM excluded PBI data from any plots that were close to livestock congregation areas. SOF ¶ 43; AR 74616. BLM determined that the plot "met" the objective if the data value was within 80% of the objective. SOF ¶ 50; AR 74620. It also used a preponderance of the evidence approach to determine if an ecological site was achieving Standard Three: if more than half of the plots within the site met all objectives, the whole ecological site was achieving Standard Three, even though BLM never assessed what proportion of the site was represented by each plot. SOF ¶ 52; AR 74620-21.

Even after lowering many of the objectives, excluding data, and using the 80% threshold and preponderance of the evidence approaches, the final LHE report still concluded that 127,550 acres of the Monument north of Highway 8—or 50.5% of that area—were not achieving Rangeland Health Standard Three, with the most non-achieving acres found on the Conley allotment, the Bighorn allotment, and the Beloat

[1] One of BLM's internal reviewers noted that selecting the 2004 data for the Beloat allotment but using 2009 data for the other allotments amounted to "cherry-picking" of data, but BLM did not change the data in the final LHE. AR 74672-75, 83853, 83921.

allotment. SOF ¶¶ 53-54; AR 74625, 74630, 74634, 74638, 74641, 74642, 74574.

The final step in the LHE process was to determine if current livestock grazing was the significant causal factor in the failure to achieve "desired resource conditions" under Standard Three. SOF ¶ 65; AR 74625, 74630, 75634-35, 74638, 74641, 74642. BLM based the causality conclusions on one year of utilization information that assessed livestock use levels for the 2008 grazing season. SOF ¶ 55; AR 74619. If livestock use of perennial shrubs was greater than 40% in an area that was not achieving the standard, BLM assumed that current livestock grazing was the causal factor for the non-achievement; if livestock use was 40% or less, BLM assumed that current grazing was not the causal factor. SOF ¶ 66; AR 74618.

Livestock utilization for the 2008 season was assessed using two methods. SOF ¶ 56; AR 74615, 74619. BLM conducted utilization transects at four sites on the Bighorn allotment and ten sites on the Conley allotment in spring 2009 to estimate percent use of certain shrub species. SOF ¶ 56; AR 74619-20. For the remainder of the area on those allotments and for the other four allotments, BLM conducted use pattern mapping in March 2009. SOF ¶ 57; AR 74615. This is a qualitative method that maps the proportion of vegetation production that has been consumed or destroyed by animals. *Id.*

For this method, BLM drove along roads on the northern portion of the Monument and stopped every ½ to 1 mile to assess utilization classes (negligible to very severe) for livestock use of key perennial forage species. SOF ¶ 58; AR 74615, 75151. It also marked boundaries between use classes. *Id.* Data points having the same use level were linked together as a polygon and the use polygons were mapped. *Id.* The original map produced in March 2009 showed classes of use as negligible use, slight use, light use, moderate use, heavy use, severe use and very severe use based on the documented levels of use observed along roads. SOF ¶¶ 59-62; AR 83693, 75151. It also showed areas that were "unsuitable" for grazing because they were too steep, areas that were "unsurveyed," and areas that had no key forage species to monitor. SOF ¶¶ 59, 61; AR 83693, 75151. Much of the original map was designated as "unsurveyed." SOF ¶ 61; AR 83693. A

digitized version of this same map showed the same use classes as well as "unsurveyed" and "unsuitable" areas but removed the notations from specific survey points. AR 83691.

The final version of the use pattern map changed the classifications such that areas on the Beloat, Bighorn, Conley, and Lower Vekol allotments that had been shown as "unsurveyed" on the original map, as well as the area on much of the Conley allotment and parts of other allotments that were marked as no forage species, now were classified as "negligible use" or "slight use" on the final map. SOF ¶ 63; *compare* AR 83693 and 83691 to AR 84023. Areas that had been marked as "unsuitable" on the original map were now called "unsurveyed or inaccessible." *Id.* Only areas that were classified as moderate, heavy, or severe use (greater than 40% utilization) resulted in the determination that grazing was a causal factor in non-achievement of Standard Three. SOF ¶ 66; AR 74618.

Because BLM classified most of the final use pattern map as negligible, slight, or light use, it concluded that livestock grazing was the causal factor for non-attainment of Land Health Standards on only 8,498 of the 127,550 acres that were failing Standard Three in the northern portion of the Monument. SOF ¶¶ 70-71; AR 84023, 74644.

In contrast to the earlier compatibility determinations, BLM used just the LHE as the basis of its final determination as to whether grazing is compatible with protecting the Monument objects. SOF ¶ 89; AR 74551-70, 74574-75. At first it concluded that no areas would be closed to grazing but the Department of Interior Solicitor's Office disagreed with that conclusion because it was not in conformance with the Monument Proclamation. SOF ¶¶ 85-86; AR 56461-63, 58244. Thus, BLM changed the determination again by closing the area—8,498 acres—that did not meet Land Health Standard Three where grazing was the causal factor. SOF ¶ 87; AR 58261. This conclusion remained the same in the final compatibility determination, which was attached as Appendix E to the EIS. SOF ¶ 89; AR 74535.

The final determination discussed some of the scientific literature on grazing impacts in the Sonoran desert, but did not discuss The Nature Conservancy literature

review that had been prepared for BLM. SOF ¶¶ 24-27, 95; AR 46719-7022, 74546-51. It also did not refer to any of the five reports prepared by PBI that discussed the ecological conditions of natural communities on the Monument and effects of livestock grazing and other disturbance factors. SOF ¶ 92; AR 74536-81. The determination did refer to some of PBI's data to conclude that "the results of the PBI saguaro study" indicated that recruitment of saguaros was occurring at appropriate rates even though PBI's lead scientist made clear that PBI never conducted a "saguaro study" and his conclusion based on his observations was that livestock were having an adverse effect on saguaros. SOF ¶¶ 91, 94; AR 74569, 62581. The determination also concluded that grazing was compatible with protecting species diversity based solely on a comparison of average number of perennial plant species per plot between areas north of Highway 8 and BGR/Area A. SOF ¶ 91; AR 74557, 74569. The final determination concluded that only the 8,498 acres found in the LHE report to be violating Land Health Standard Three due to current livestock grazing were not compatible, and all remaining acres were deemed compatible, with protection of all Monument objects. SOF ¶ 89; AR 74575.

The final EIS for the Monument used the compatibility determination conclusion as the baseline for the range of alternative actions that applied to livestock grazing management. AR 73208-09. The alternatives varied in amount of land closed to grazing, ranging from closing just the 8,500 acres that were deemed incompatible, closing additional area around those 8,500 acres to use topography and feasible fencing boundaries, closing that area plus the remainder of the Conley allotment, and closing the entire area north of Highway 8. *Id.* The range of alternatives also varied in the amount of use permitted (Animal Unit Months) per allotment, and one alternative changed all use to perennial use only, with no ephemeral use. *Id.* BLM had originally also included an alternative that changed all use to ephemeral use only, but dropped that alternative from its analysis. SOF ¶ 97; AR 46667, 47754, 55084.

The proposed alterative in the final EIS was the alternative that closed the incompatible area, surrounding area, and Conley allotment for a total of 95,289 acres

closed to grazing, leaving 157,167 acres available for grazing. SOF ¶¶ 100; 73208-09. The proposed alternative also changed grazing to 65% use in fall/winter/spring and 35% use in summer. SOF ¶ 101; AR 73214. BLM selected the proposed alternative in its Record of Decision for the RMP. SOF ¶ 104; AR 78000. It noted that the LHE and grazing compatibility determination formed the basis of the decision in the RMP with regard to continued livestock grazing on the Monument. SOF ¶ 104; AR 78012-13.

ARGUMENT

I. LEGAL STANDARDS

A. Standard of Review

Review of agency decision-making is governed by the judicial review provision of the Administrative Procedure Act (APA), which requires a Court to hold unlawful an agency decision that was "arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with law," or was adopted "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D); *Native Ecosystems Council v. U.S. Forest Serv.,* 418 F.3d 953, 960 (9th Cir. 2005). An agency's decision is arbitrary and capricious if it did not articulate a satisfactory explanation for its action, including a rational connection between the facts found and the choice made. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 43 (1983) (internal quotation omitted).

When reviewing an agency's action, a court's inquiry must be "searching and careful." *Marsh v. Or. Natural Res. Council,* 490 U.S. 360, 378 (1989). This in-depth review must occur to determine whether the agency's conclusions are rationally supported and adequately explained. *Northwest Coalition for Alternatives to Pesticides v. U.S. E.P.A.*, 544 F.3d 1043, 1052 & n.7 (9th Cir. 2008) (citing *Center for Auto Safety v. Peck,* 751 F.2d 1336, 1373 (D.C.Cir. 1985)). Where the agency's reasoning is irrational, unclear, or not supported by the data it purports to interpret, courts must disapprove the agency's action. *Id*. Thus, a court should not uphold an agency's conclusions that are not supported by scientific evidence in the record. *Western Watersheds Project v. Kraayenbrink,* 632 F.3d 472, 493 (9th Cir 2011); *Earth Island Institute v. Hogarth,* 494

F.3d 757, 763-64, 766 (9th Cir. 2007); *Sierra Club v. Bosworth,* 510 F.3d 1016, 1028-29 (9th Cir. 2007); *Native Ecosystems Council,* 418 F.3d at 963-64 (court must be able to ascertain from the record that agency is in compliance with the law).

B. NEPA Standards

NEPA's twin goals are "(1) to ensure that agencies carefully consider information about significant environmental impacts and (2) to guarantee relevant information is available to the public." *Northern Plains Resource Council, Inc. v. Surface Transp. Bd.,* 668 F.3d 1067, 1085 (9th Cir. 2011) (citing *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 349 (1989), *N. Idaho Cmt. Action Network v. U.S. Dep't of Transp.,* 545 F.3d 1147, 1153 (9th Cir. 2008)). NEPA requires an agency to take a hard look at all of the direct, indirect, and cumulative effects of a proposed action. 42 U.S.C. § 4332(2)(C). To fulfill those duties, the CEQ regulations that implement NEPA require that: (1) environmental information is available to the public before decisions are made, the information is of high quality, and the scientific analysis is accurate; and (2) the agency has ensured the professional integrity, including the scientific integrity, of the discussion and analyses in an EIS, and has identified the methodology and scientific sources relied upon for the agency's conclusions. 40 C.F.R. §§ 1500.1(b), 1502.24.

Thus, an agency's conclusions about the impacts of a project must be supported by correct assumptions and accurate information. *Native Ecosystems Council v. Tidwell,* 599 F.3d 926, 937 (9th Cir. 2010) (citing *Native Ecosystems Council,* 418 F.3d at 964-65). An EIS that relies on incorrect assumptions or data, or that is so incomplete or misleading that the decision-maker and the public cannot make an informed decision, violates NEPA. *Earth Island Institute v. U.S. Forest Serv.,* 442 F.3d 1147, 1159-73 (9th Cir. 2006) (holding unlawful EIS that presented misleading information and did not explain its conclusions), *overruled on other grounds by Winter v. NRDC,* 555 U.S. 7 (2008); *Native Ecosystems Council,* 418 F.3d at 964-66 (same). Furthermore, "NEPA requires that the agency provide the data on which it bases its environmental analysis." *Northern Plains Resource Council,* 668 F.3d at 1083; *see also Idaho Sporting Congress v. Thomas,*

137 F.3d 1146, 1150 (9th Cir. 1998) (holding that NEPA requires that the public receive the underlying data from which an agency expert derived her opinion), *overruled on other grounds by Lands Council v. McNair,* 537 F.3d 981 (9th Cir. 2008); *Wild West Institute v. Bull,* 547 F.3d 1162, 1174 n.6 (9th Cir. 2008) (same). If data is not available to the public for comment during the EIS process, that process cannot serve its larger informational role, and the public is deprived of their opportunity to play a role in the decision-making process. *Northern Plains Resource Council*, 668 F.3d at 1085; *Center for Biological Diversity v. Provencio,* 2012 WL 966031, at *19 (D. Ariz. 2012).

NEPA also mandates that an agency consider a reasonable range of alternative actions in an EIS. 40 C.F.R. § 1502.14. The existence of a viable alternative that the agency dismisses without detailed analysis renders the analysis inadequate. *Western Watersheds Project v. Abbey,* 719 F.3d 1035, 1050-53 (9th Cir. 2013); *Westlands Water Dist. v. U.S. Dep't of Interior,* 376 F.3d 853, 868 (9th Cir. 2004).

II. BLM'S GRAZING COMPATIBILITY ANALYSIS WAS ARBITRARY AND CAPRICIOUS.

BLM relied extensively on the LHE and compatibility determination in its final EIS with regard to livestock grazing management on the Monument, and thus, if the LHE or compatibility determination is arbitrary and capricious, the grazing analysis within the EIS is also arbitrary and capricious and violates NEPA.

WWP's challenges to the LHE and compatibility determination are not based on a difference of opinion about methodology or minor details that had no impact on the conclusions. Rather, WWP's challenges relate to serious flaws: BLM's failure to provide underlying data or explain how the data supported its conclusions, BLM's exclusion of relevant information and inconsistent or inadequate explanations for that exclusion, and BLM's failure to provide a rational connection between the facts and its conclusions. In sum, the question this Court must ask is whether BLM has adequately supported and explained its conclusions in the record. With regard to the LHE and compatibility determination, it has not, rendering those analyses arbitrary and capricious.

A. BLM'S Land Health Evaluation Was Flawed in Many Ways.

The LHE was the foundation of BLM's entire grazing analysis, and because its inconsistencies and unexplained conclusions render it arbitrary and capricious, the rest of the BLM's decisions that rely on the LHE come tumbling down as well.

1. Changing Objectives

The first significant problem with the LHE stems from the identification of desired plant community objectives to assess achievement of Rangeland Health Standard Three. The objectives represented the "desired" plant cover, plant composition, or saguaro recruitment values for each type of ecological site. AR 74608-11. If the data from the allotments north of Highway 8 were meeting the objectives, then that area was achieving the "desired resource condition" for Standard Three. AR 74608. Accordingly, the objectives were a key component of BLM's analysis, and the lower the objective, the easier it was to meet the objective and therefore achieve Standard Three.

BLM stated in the final LHE that the objectives were derived from plot data from BGR/Area A as well as information from National Resources Conservation Service Ecological Site Descriptions and reference sheets. *Id.* It did not explain how those two sources of information were combined to produce the selected objectives. *Id.* BLM also did not explain the numerous changes to the objectives that occurred between various drafts and the final LHE report or provide support for those changes.

As shown in the table presented in WWP's Statement of Facts, ¶ 39, BLM removed or changed many of the objectives, some multiple times, between the first draft LHE in 2005 and the final LHE. SOF ¶¶ 38-39; *compare* AR 50514-17, 54303-06, 83718-22, 55116-20, 56386-92, 74608-11. While a few changes raised the objective, the majority lowered it, making the standard less stringent and easier to meet. *See* SOF ¶ 39.[2] BLM altered these objectives, which were supposed to be based on science and

[2] For example, Sandy bottom, Limy fan, and Limy upland deep saguaro recruitment objectives were removed, Sandy bottom CFPO canopy cover objective went from 50% to 40%, Loamy swale perennial grass composition went from 25% to 10%, Limy fan vegetation canopy cover went from 10% to 7%, Limy fan shrub composition went from

formed the basis of its entire analysis, yet did not explain or support the changes.

For example, why did BLM lower the desired vegetation canopy cover in the limy fan, limy upland, and sandy loam deep ecological sites? SOF ¶ 39; AR 54304-05, 83720-22, 55119, 56392. The LHE draft reports all simply state that vegetative cover levels will prevent accelerated erosion of ecological sites and provide for wildlife habitat, citing to NRCS Ecological reference worksheets, without explaining how they arrived at the desired level or the reason the objective changed from the previous level. AR 54304-06, 83720-21, 55119, 56392. These changes meant the sites could more easily meet this objective—for instance, 13% vegetation cover in the limy upland site was enough to meet the final objective of 12% but would not have met the prior 20% or 16% objectives—but no explanation is provided for why the desired conditions in those sites changed.

Likewise, why did BLM remove the saguaro recruitment objective from the sandy wash, limy fan, and limy upland deep sites and change that objective multiple times in the limy upland and granitic hills sites? AR 54303-05, 83718-22, 56391-92. BLM stated that the highest densities of saguaros are found primarily within the limy upland and granitic hills ecological sites, but never stated that saguaros are not found in the sandy wash, limy fan, or limy upland deep sites or provided any other information to justify removing the saguaro recruitment objective from those sites entirely. AR 54303-05, 83718-21. Indeed, it had specifically noted that saguaros are necessary to maintain nesting habitat for cactus-ferruginous pygmy owls in sandy wash sites. AR 54303, 81579. For the limy upland and granitic hills sites, BLM did not explain why it changed objectives for saguaro recruitment several times, or how it arrived at the final objective of .96 and .83 young saguaros per plot for each site respectively, especially when it

---

10% to 9%, Limy upland vegetation canopy cover went from 20% to 16% to 12%, Limy upland shrub composition went from 20% to 5%, Sandy loam deep vegetation canopy cover went from 20% to 15%, Sandy loam deep shrub composition went from 17% to 16%, and saguaro recruitment in Limy upland went from +1 new recruit to 1 young saguaro per 12.5 meter plot to .96 young saguaro per 12.5 meter plot while recruitment in Granitic hills went from +1 new recruit to 1 young saguaro per 12.5 meter plot to .83 young saguaro per 12.5 meter plot. SOF ¶¶ 38-39.

acknowledged that the data from BGR/Area A showed recruitment of saguaros at a rate of 1.26 young saguaros per plot. AR 54304-05, 83720-22, 56391-92.

When WWP raised concerns about the numerous changes to objectives in its comments on the draft EIS, BLM stated the changes were based on "new information."[3] AR 74333, 74334-35. WWP raised the same point in its protest to the RMP, and BLM's response was similar. AR 78492. BLM stated that changes between the draft LHE and final version were based on new information and in response to internal reviews (including peer review). *Id.* It explained that the objectives for four of the ecological sites were based on average values from data collected at plots in BGR/Area A or potential vegetation described in ecological site descriptions. *Id.* In the very next paragraph, it stated that the objectives for these four ecological sites were based on the average vegetation values collected in BGR/Area A, without mentioning the ecological site descriptions. *Id.* Thus, it is still unclear when and how the ecological site descriptions were used to help form objectives. Neither paragraph mentioned the other three ecological sites at issue (loamy swale, limy upland, and sandy loam deep). *Id.* And BLM did not explain what the "new information" was that formed the basis of the changes in objectives. *Id.*

Indeed, the only "new information" in the record that was related to the desired plant community objectives was from three plots BLM visited in 2009 in BGR/Area A. As stated in the final LHE and in the protest response discussed above, the data that formed the basis of the plant community objectives came from BGR/Area A. AR 74608, 78492. BLM averaged the data within an ecological site to form the objective for that site. *Id.* The majority of the data from BGR/Area A came from the PBI data collected in 2002, three years before the very first draft of the LHE was prepared. AR 74615, 74621, 74687-90, 50491. That data remained the same for all versions of the LHE. The only

[3] BLM also stated in its response to the draft EIS comments that baseline information was collected through 2010. AR 74333. However, as revealed later in the record, that statement was incorrect, and no new data was collected after 2009. AR 78004.

additional data collected in BGR/Area A was from three plots BLM monitored in April and May 2009. AR 74621, 74686-87, 54876, 54885, 54892. These three plots occurred in the Sandy wash, Limy fan, and Limy upland deep ecological sites. AR 74621.

This "new information" cannot account for all of the changes to the objectives that occurred in the various versions of the LHE. First, the 2009 data was collected at three ecological sites, and thus no new information from BGR/Area A exists for the other four ecological sites (loamy swale, limy upland, granitic hills, or sandy loam deep) to account for any changes in those site objectives. AR 74686-87. Second, the data was collected in spring 2009, which was in between the LHE draft from August 2008 and the draft from September/October 2009. AR 54876, 54885, 54892 (data); 54282 (2008 LHE); 83695 (fall 2009 LHE). Thus, that new data could account for changes to objectives in the September/October 2009 draft, but would not account for changes before or after that.

This Court cannot simply defer to BLM's assertions and conclusions when BLM has not explained or supported those conclusions. *Kraayenbrink,* 632 F.3d at 493 (no data or other scientific evidence to support conclusions); *Native Ecosystems Council,* 418 F.3d at 963-64 (overturning decision where agency did not rationally explain its changes in scientific analysis); *Sierra Club,* 510 F.3d at 1028-29 (no hard data provided to support agency's assertions and conclusions); *Center for Biological Diversity v. Salazar,* 791 F.Supp.2d 687, 703 (D. Ariz. 2011) (cannot rely on unsupported assertions by experts). If the agency's reasoning is unclear or irrational, it cannot be upheld. *Northwest Coalition for Alternatives to Pesticides*, 544 F.3d at 1052 & n.7. Furthermore, NEPA requires that agencies disclose information to the public and provide the data to support its experts' conclusions. 40 C.F.R. § 1500.1(b); *Northern Plains Resource Council,* 668 F.3d at 1083, 1085; *Provencio,* 2012 WL 966031, at *19; *Sierra Club,* 510 F.3d at 1028-29; *Idaho Sporting Congress,* 137 F.3d at 1150; *Wild West Institute,* 547 F.3d at 1174 n.6.

Here, BLM has not provided an adequate or clear explanation as to how the objectives were established or the reasons for the many changes in objectives, nor data to support them; and BLM certainly did not disclose adequate information to the public to

allow for informed participation in the decision-making. Because the objectives formed the basis of the entire analysis in the LHE, the lack of explanation for the objectives renders the whole LHE arbitrary and capricious.

2. Excluding Data

The second significant flaw with the LHE was the omission of relevant data when BLM assessed whether conditions on the Monument allotments north of Highway 8 met the objectives. BLM's explanations for these omissions were contradictory and inconsistent, and failed to justify the exclusion of that information.

To assess whether ecological sites were achieving Standard Three, BLM compared data collected on the Monument allotments north of Highway 8 to the desired plant community objectives. AR 50522-47, 54310-39, 55127-41, 56400-26, 58719-47, 70459-80, 74622-42. In the early versions of the LHE, BLM included all of the data it had collected from 1981, 2004, 2007, and 2009 to assess whether ecological sites on the allotments met the objectives. SOF ¶ 44; AR 50520, 55127-41. In the final report, BLM removed the prior data and used only the most recent 2009 data from the allotments, except for some unexplained reason it used 2004 data from the Beloat allotment. AR 74666-83, 83853. BLM used some of the PBI data collected on the allotments in 2002 as well, but excluded most of that data, using only 48 of 320 plots. AR 74615. BLM then compared the allotment data to the objectives to assess whether ecological sites were achieving Standard Three. AR 74622-42. BLM also stated in the LHE report that virtually no change in vegetation production had occurred since 1981 by comparing the 1981 data to the 2009 data. AR 74612.

BLM's reasoning for excluding its older data and much of the PBI data was inconsistent and contradictory and thus does not provide a rational explanation to support its conclusions. BLM stated that it used only one year of its data (2009, or 2004 for Beloat allotment) because it had used different methods or transects to collect the prior data and thus could not compare data from different years to establish trends. AR 74347. Yet, at the same time, the LHE compared the 2009 data to the 1981 data to conclude that

"virtually no change in vegetation production" had occurred in that 28 year period. AR 74612. Moreover, BLM stated that one of the primary reasons it excluded the PBI study from its analysis was because one year of data was not enough to support sound conclusions. AR 74107. In other words, BLM stated that one year of data was not enough to support sound conclusions, yet relied on just one year of its own data in its analysis; and also stated that it could not rely on the older data to establish trends because of differences in methods, yet relied on some of that very same previous data to conclude that vegetation production had not changed in 28 years. These contradictory statements do not provide a rational explanation for BLM's methods.

BLM also stated that the PBI study was of limited use because it did not address important factors needed to assess effects of current grazing practices, such as livestock intensity, frequency, timing, season of use, or precipitation patterns. AR 74108, 74348-49. Yet BLM's analysis did not incorporate those factors either. BLM's plot data did not include any such information, and neither did BLM incorporate that information into its LHE analysis. AR 55485-96, 74666-83, 74622-42. While the LHE report contained data about actual livestock use and precipitation, that data was not used to determine whether ecological sites met objectives. AR 74616-18, 74622-42.[4] That determination was simply based on comparing the plot data to the objectives for plant cover and composition, which did not incorporate information on livestock intensity, frequency, timing, season of use, or precipitation.

In addition, BLM determined whether current livestock grazing caused the failure to achieve Standard Three using 2009 utilization information, but that also did not factor into consideration the intensity, frequency, timing, or season of use by livestock, or precipitation patterns. AR 74614-15, 74619-20, 54392-96, 54636-41, 54716-21, 75151. The utilization monitoring simply estimated the amount of vegetation used by livestock

[4] The actual use data went through 2007 and thus could not possibly have informed BLM about the actual livestock use that occurred in 2009 when it collected plot data and utilization data. AR 74616.

in the 2008 season but nothing in the record shows that BLM took into account the number of livestock, the timing or season of use, or precipitation when determining the use levels or whether livestock were the cause of the Standard Three failures. AR 74614-15, 74618-19, 74625, 74630, 75634-35, 74638, 74641, 74642. BLM simply looked at whether use was greater than 40% based on the 2009 utilization monitoring, and if so it assumed livestock were the causal factor for not achieving Standard Three. AR 74618.

In fact, 2008 had slightly above average precipitation and moderate ephemeral production that allowed for use of annual plants, which "confound[ed] the survey results." AR 55055, 74618-19; AR 54150-51, 54159-63 (discussing use of annual plants in March 2008 on Bighorn and Conley allotments). Thus, there was likely less use of perennial species in 2008 than in drier years, calling into question the reliability of using just that one year of data to determine causality, but BLM did not take that into account in its analysis. AR 74614-15, 74619-20; *see also* AR 83942 (peer review). In sum, BLM's analysis did not take into account the same factors that it relied on to dismiss use of the PBI study. AR 74108, 74348-49.

Moreover, by excluding data from any PBI plots within 1000 meters (.62 miles) of livestock congregation areas, and locating its own plots 1 mile from congregation areas, BLM's analysis did not consider any data from heavy cattle impact areas. AR 74612, 74616. BLM explained that it excluded PBI plots located less than 1000 meters from livestock congregation areas because those sites did not resemble BLM key areas as they were not representative of what was occurring within the larger area. AR 74616. BLM did not explain, however, why it could not consider this information separately from its key area analysis to take into account the heavy impacts near water sources across the allotments. *Id.* As noted by one of the peer reviewers as well as PBI's lead scientist, omitting the data from disturbed areas biased the analysis because the plots that had the most livestock impacts were purposefully removed from consideration. AR 83942, 62581-82. BLM never addressed this concern and thus never took the heavy impact areas into consideration in its LHE. Thus, it failed to consider an important aspect of the

problem, resulting in an arbitrary and capricious decision. *Northern Plains Resource Council,* 668 F.3d at 1085.

Finally, BLM also did not provide support for its use of the 80% threshold and preponderance of the evidence approach when determining if ecological sites were achieving Standard Three. SOF ¶¶ 50, 52; AR 74620-21. BLM noted that peer reviewers had suggested using a range around the objective rather than an absolute value to judge achievement of objectives due to the variability within ecological sites. AR 74336. However, BLM did not explain how it derived the 80% threshold other than to state it was based on professional judgment that such a threshold captures the variability that occurs within the Monument for plant canopy cover and plant abundance. AR 74333. BLM provided no data to support this assertion or show that this single threshold was appropriate to capture the variability of plant cover and abundance for each of the different ecological sites when the sites varied considerably in characteristics and desired objectives. *Id.*; AR 74591-92, 74608-11, 74620. Indeed, one of BLM's senior planning officials from the Washington Office stated that the 80% threshold was arbitrary and capricious because BLM did not explain from where that figure came. AR 59180. BLM also did not explain why it needed to account for ecological site variability twice: first by averaging the BGR/Area A plot data to form the objectives, AR 74608, and then by using the 80% threshold to determine if a plot met the objective. AR 74620.

Likewise, BLM did not explain how it came up with the preponderance of the evidence approach. AR 74620-21. BLM explained that there were too few plots to statistically analyze each ecological site, but did not explain why it chose a method where only 51% of the plots needed to meet objectives to achieve Standard Three. AR 74621. In other words, even if 2 of 5 plots did not meet all objectives, the ecological site was still deemed to be achieving Standard Three. BLM provided no support for this approach or explanation as to how allowing almost half of the plots to not meet objectives was still sufficient to show grazing was compatible with protecting the plant communities and wildlife on the Monument. Again, BLM's reasoning is unclear and unsupported by the

record, and thus is arbitrary and capricious and violates NEPA. *Northwest Coalition for Alternatives to Pesticides*, 544 F.3d at 1052 & n.7; *Kraayenbrink,* 632 F.3d at 493; *Native Ecosystems Council,* 418 F.3d at 963-64; *Sierra Club,* 510 F.3d at 1028-29; *Northern Plains Resource Council,* 668 F.3d at 1083, 1085.

3. Utilization to Determine Causality

The third, and possibly most significant, flaw in the LHE was the use of the 2009 utilization monitoring as the sole factor to determine whether current livestock grazing was the causal factor for not achieving Land Health Standard Three. Despite lowering many of the objectives, excluding data from heavy impact areas, and using the 80% threshold and preponderance of the evidence approaches, BLM still found that 127,550 acres—or 50.5% of the area—north of Highway 8 was not achieving Standard Three. Yet it concluded that only 8,498 acres failed the standard due to current livestock grazing. AR 74644. This conclusion was irrational and unsupported.

BLM explained in the LHE that it assumed current livestock grazing was the causal factor for non-achievement of Standard Three if the utilization monitoring showed that livestock use during the 2008 season was more than 40% (moderate or heavy use). AR 74615, 74618-19. Relying on just the 2009 utilization data to determine causality was irrational, as explained by one of the peer reviewers: using only that year's data cannot account for long-term effects to vegetation, or use patterns that might occur in non-ephemeral years when livestock are grazing more perennial plants. AR 83942.

BLM's own staff recognized the limitation of relying on just the 2009 data, noting that because utilization data was collected during a season of abundant precipitation that allowed for ephemeral livestock grazing, it confounded the monitoring results. AR 55055. *See also* AR 54150-51, 54159-63 (discussing use of annual plants, and not much use of perennials, in March 2008 on Bighorn and Conley allotments). If 2008 was a drier year, as many years are, cattle would likely have used more perennial plants and thus utilization monitoring would have shown higher use levels. AR 74618 (showing that 2008 had more precipitation than at least half of the years since 1999), 74619-20

(showing BLM monitored utilization only of key perennial shrub species), 75151, 83693-94 (showing monitoring of key perennial forage species in use pattern mapping).

BLM staff, like the peer reviewer, also commented that using utilization as the only indicator of livestock as a causal agent may be too simplistic, and questioned whether repeated low use in a particular area can also cause changes to the vegetation that could result in sites not meeting the standard. AR 55530, 55531. As noted above, BLM stated that it could not rely on the PBI study, in part, because "one year of PBI data, in itself, is not enough to support sound conclusions." AR 74107. Yet, here BLM relied solely on one year of utilization data to support its conclusion that 93.2% of the area that was not achieving Standard Three was *not* due to current livestock grazing and thus was compatible with protecting the Monument objects. AR 74574-75. The LHE never addressed the problems raised in the peer reviews and by BLM's own staff of relying on just the 2009 utilization data for its causality determination.

To compound the problem of relying on just one year of data, BLM altered the results of the use pattern mapping to make it appear that much of the Monument land north of Highway 8 was found to be negligible or slight livestock use. In fact, BLM had not surveyed those lands and thus had insufficient data to support its use pattern map.

As explained above, BLM conducted utilization monitoring on four transects on the Bighorn allotment and ten on the Conley allotment, and relied on use pattern mapping to assess livestock use on the remainder of the allotment area north of Highway 8. AR 74615, 74619-20. For the use pattern mapping, BLM monitored along roads, stopping every ½ to 1 mile to assess utilization classes (negligible, slight, light, moderate, heavy, severe, or very severe) for livestock use of key perennial forage species. AR 74615, 75151. It connected data points having the same use level to form polygons, which it then mapped. *Id.* For areas that were classified as heavy or severe use, BLM returned and conducted utilization transects to verify if the classification was accurate. AR 75152. It did not verify classification of other use levels. *Id.*

The original field survey map produced in March 2009 showed different classes of

use in areas that were surveyed along roads based on use of key forage species. AR 75151, 83693-94. It also showed areas that were "unsuitable" for grazing because they were too steep and rocky, and areas that were "unsurveyed." *Id.* The unsuitable areas were shown in orange while the unsurveyed areas were shown in brown cross-hatching. *Id.* BLM digitized the field map, which showed the "unsuitable" areas in orange with diagonal lines and the "unsurveyed" areas in brown cross-hatching. AR 83691. The unsuitable areas were located in the upper elevation mountains of the allotment while the unsurveyed areas covered large expanses outside of the unsuitable areas that were not close to roads and had no use levels documented. AR 83691, 83693. The map also showed that much of the Conley allotment and parts of other allotments did not have key forage species and thus were not classified with use levels. AR 83691, 83693.

However, with no explanation, BLM changed the areas that had been identified as "unsurveyed" or "no forage species" in the original map to negligible use or slight use in the final version of the use pattern map that accompanied the LHE. AR 84023. Upon a close look at the two maps, areas on the Beloat, Bighorn, Conley, and Lower Vekol allotments that had been shown with brown cross-hatching on the original map, as well as areas shown as having no key perennial forage species, appeared as light or dark blue on the final map, which constituted "negligible use" or "slight use." *Compare* 83691 & 83693 *to* 84023. In other words, BLM converted areas it had not surveyed into negligible or slight use without any explanation or additional data in the record.

For example, upon zooming in on the original map at AR 83693, much of the Beloat allotment within the Monument was shown with brown cross-hatching as unsurveyed, yet the final map showed that same area in blue as negligible or slight use. AR 83693, 84023. Likewise, much of the northern and southeast portions of the Bighorn allotment were shown with cross hatching as unsurveyed on the original map, but were shown in blue as slight use on the final map. *Id.* And on the Conley allotment, areas in the southern portion of the allotment shown as unsurveyed and areas farther north that were shown as having no forage species all became slight use in the final map. *Id.*

In response to WWP's RMP protest regarding this point, BLM did not address the problem. AR 78490-91. BLM's planning coordinator recognized that "areas we show as Unsurveyed on the field map are reported in the EIS as Slight or Negligible use." AR 75359. Yet in the protest response, BLM incorrectly asserted that "unsurveyed" areas on the field map were the same as the steep, rocky "unsurveyed and inaccessible" areas in the final map. AR 78491. The legend for the original field map, however, clearly shows that the "unsurveyed" areas were distinct from the steep, rocky "unsuitable" areas. AR 83691, 83693, 75151. The protest response did not explain why unsurveyed areas became slight or negligible use, or provide any data to support that change. AR 78491. An agency has not taken a hard look at a project's effects if it relies on incorrect assumptions or data, and it has thwarted the public's understanding of the environmental impacts of an action if it offers contradictory statements about the effects. *Native Ecosystems Council,* 418 F.3d at 964, 965; *Provencio,* 2012 WL 966031, at *18-20.

The change in the use pattern map had significant ramifications because for areas that were classified as negligible, slight, or light use, it was assumed that livestock grazing was not the causal factor for non-achievement of Land Health Standard Three. AR 74618. The original use pattern map showed that large expanses of areas were "unsurveyed," but in the final map these large expanses were now classified as negligible or slight use. AR 83691, 83693, 84023. A number of key areas that failed to meet the ecological site objectives, particularly on the Bighorn and Beloat allotments, occurred within unsurveyed areas that were converted to slight use areas. *Compare* AR 74649 *with* 84023. Because BLM did not provide any data or explanation to support the conversion of lands from unsurveyed to negligible or slight use, its conclusion about livestock not being a causal factor for failing land health standards, and thus its grazing compatibility conclusion, was arbitrary and capricious and violated NEPA. *Kraayenbrink,* 632 F.3d at 493; *Sierra Club,* 510 F.3d at 1028-29; *Native Ecosystems Council,* 418 F.3d at 963-65; *Tidwell,* 599 F.3d at 937; *Northern Plains Resource Council,* 668 F.3d at 1083; *Idaho Sporting Congress,* 137 F.3d at 1150.

The LHE was the foundation upon which the compatibility determination and grazing portion of the EIS were built, and thus the serious flaws in the LHE analysis render those subsequent decisions arbitrary and capricious as well.

B. BLM's Compatibility Determination Was Not Supported by Sound Science or a Reasoned Explanation.

Beyond relying on the flawed LHE, BLM's compatibility determination was also arbitrary and capricious because it lacked adequate explanation and support for several additional conclusions necessary to show that grazing was compatible with protecting the objects of the Monument.

In light of the Monument Proclamation's language, BLM recognized from the start that protecting biological diversity within and among plant communities, including diversity of both native plants and animals and connectivity between communities, was an important factor for protecting the Monument objects. AR 42168, 42176-77, 44296, 45894, 50787-90, 54648-49. BLM also noted early on the importance of annual and perennial grasses and forbs for wildlife, particularly Sonoran desert tortoise, and the heavy impacts cattle were having on this vegetation, especially in livestock concentration areas. AR 54089-93. In fact, BLM's first draft of the compatibility determination concluded that grazing was not compatible with protecting the objects of the Monument due to these and other impacts. SOF ¶¶ 74-78; AR 54089-90.

In the first proposed determination, which was written in 2007 by BLM's wildlife biologist for the Monument Manager, BLM looked at more than just the LHE and range data; it also considered scientific literature, outside sources, and personal observations. AR 54089. The proposed determination discussed "clear evidence" of over-utilization of forage by livestock, which decreased forage availability for wildlife, particularly desert tortoise. *Id.* It reported that areas of the Monument accessible to cattle had been denuded of annual and perennial grasses and forbs, and the only forage available to tortoises was in areas inaccessible to cattle. AR 54092-93. In contrast, the Hazen allotment, which had not been grazed for several years, still had abundant annual grass and forb ground

cover important in providing forage for tortoises and other wildlife. AR 54093.

The proposed determination noted that none of the allotments met all the rangeland health standards, and 8-13% of the area north of Highway 8 would not be expected to ever meet standards due to proximity to livestock concentration areas, citing the PBI study. AR 54089, 54092. It explained that livestock introduce and spread weeds and invasive species, which is occurring on the Monument, and that continuous pressure from perennial grazing causes long-term changes in the diversity and composition of vegetative communities. AR 54089, 54095. Grazing during continued drought has increased stress and decreased vigor of perennial forage plants, contributing to reductions in wildlife populations. AR 54090, 54097. Based on the preponderance of the evidence, the determination stated that perennial grazing is not appropriate for the area, and ephemeral grazing would still cause adverse effects, including spread of invasive species, changes to the composition and diversity of plant communities, and impacts to saguaro recruitment. AR 54090. Thus, the proposed determination was that grazing was not compatible with protecting Monument objects. AR 54089, 54090.

The next draft compatibility determination in October 2009 likewise concluded that continued livestock grazing north of Highway 8 was not compatible with protection of Monument objects. AR 55060. Again, the proposed determination relied on more than just the LHE to reach its conclusion, considering literature on grazing impacts in arid areas as well as observations of impacts on near-by federal lands. AR 55043-53. Like the first draft, it noted in particular the heavy impacts from livestock near congregation areas like water sources documented in the PBI study, which would prevent those areas from ever attaining the characteristic composition, structure, and function of dominant vegetation communities in the presence of livestock grazing. AR 55050-51. And the most recent version of the LHE found only one allotment met both land health standards. AR 55054.

Based on the scientific literature, observations on adjacent federal lands, and the draft LHE, the proposed determination stated that livestock grazing was not compatible

with certain objects of the Monument, including saguaros, bighorn sheep, functioning desert ecosystems, creosote-bursage plant community, desert wash community, and the Anza National Historic Trail Corridor. AR 55059. It stated specifically that all available evidence indicated that cattle reduce saguaro regeneration, affect the distribution of bighorn sheep, prevent attainment of natural ecosystem function near livestock congregation areas, and degrade the historic character of the Anza National Historic Trail. AR 55060. Because there was no feasible alternative grazing management strategy that would substantively reduce those impacts, the Monument Manager found that continued livestock grazing north of Highway 8 was not compatible with protection of Monument objects. *Id.*

In the final compatibility determination, however, BLM relied on just the results of the LHE analysis to conclude that grazing on 96.6% of the land north of Highway 8 was compatible with protection of Monument objects. AR 74551-70, 74574-75. Unlike the prior proposed determinations, the final determination did not reference the PBI reports or discuss the adverse impacts occurring around livestock congregation areas on the Monument. AR 74539-78. The compatibility determination also failed to include the literature review conducted for BLM by TCN that discussed numerous livestock impacts to vegetation and wildlife resources. AR 74546-51, 46799-824, 46828-31, 46836, 46844-54, 46855-80. BLM's much shorter review still acknowledged that livestock can have negative effects on annual and perennial vegetation and saguaro cactus by reducing plant species diversity and presence of young saguaros, and can cause displacement of bighorn sheep. AR 74551. Yet BLM ignored all of this information, and relied solely on the LHE data to make its conclusion about compatibility. AR 74551-70, 74574-75. Because the LHE was not sufficient to assess compatibility with all Monument objects, reliance on that alone for the compatibility determination was arbitrary and capricious.

The LHE collected data for just two or three attributes for each ecological site: vegetative canopy cover, composition of palatable shrubs (or for one site perennial grass), and for two sites saguaro recruitment. AR 74608-11. During the analysis process,

questions were frequently raised as to whether these standards alone could represent, and show protection of, all Monument objects in the Proclamation, especially with regard to plant diversity and wildlife species. *See* AR 50784, 50787-90, 55024-27, 55387, 55514-19, 55530-31, 55543-46, 58068-72, 59180-81. BLM did not adequately answer those questions in the compatibility determination for many of the Monument objects.

As noted in the Proclamation, BLM could only allow grazing to continue if the agency determined it is compatible with the paramount purpose of protecting the objects identified in the Proclamation. AR 3888. The proclamation identified numerous objects, including functioning desert ecosystem, diversity of plant and animal species, saguaro cactus forests, various vegetation communities, and many different wildlife species. AR 3886-87. BLM identified the Monument objects, and then assumed that meeting Land Health Standards One and Three for the ecological sites within a plant community showed grazing was compatible with protecting *all* biological and ecological objects in that community, including all wildlife species identified in the Proclamation. AR 74544-45, 74558-63, 74568-70. BLM made this assumption even though almost half of the plots within an ecological site could be failing one of the standards. AR 74554.

Moreover, BLM provided no explanation to connect the dots between the land health standards and the wildlife mentioned in the Proclamation. The compatibility determination provided no discussion about the habitat needs of the various wildlife species identified, and the LHE contained very little information either for most species. AR 74539-75, 74592-94. The LHE provided no information about habitat needs in the form of cover and food for Sonoran desert tortoise, or for many of the birds and mammals listed in the Proclamation. AR 74592-94. In fact, it lumped all but five species together in one short paragraph that simply stated a variety of wildlife species populate the various vegetation communities within the allotments on the Monument, with no discussion at all of the habitat needs of these species. *Id.* Thus, there is no way to discern whether the different plant cover and composition objectives meet the needs of the various species identified in the Proclamation, or whether additional attributes other

than plant cover and composition of certain shrubs are important for these species.

For instance, for species that inhabit the creosote-bursage plant community, which consists of the limy fan, limy upland deep, and sandy loam deep ecological sites, the canopy cover objectives ranged from 7% to 10% to 15%, and shrub composition objectives ranged from 9% to 12% to 16%, yet BLM did not explain or provide support as to whether these varying objectives could all adequately protect each of the species found within the creosote-bursage community. AR 74555, 74569, 74609, 74611. Likewise, the palo verde-mixed cacti community contains the limy upland and granitic hills ecological sites, which varied in objectives—12% and 16% canopy cover, .96 young saguaros per plot and .83 young saguaros per plot respectively—but BLM did not explain whether those varying objectives could each adequately protect all the wildlife that inhabit that community. AR 74555, 74568, 74610. And finally for the desert wash community, which consists of the sandy wash and loamy swale ecological sites, canopy cover objectives were 34% and 20% respectively. AR 74556, 74608-09. Again, there was no explanation or support for how these widely varying objectives in canopy cover are each sufficient to protect the many species that inhabit desert washes. AR 74570, 74608-09.

BLM also did not provide support to show that these are the only variables important for protection of wildlife. As noted by wildlife biologists in the record here, other attributes are important to wildlife, such as annual grasses and forbs, prevention of non-native species, plant recruitment, structure, and vigor, protection from trampling, and connectivity of habitats for movement, but the LHE did not have objectives for those variables. *See* AR 50789, 54089-93, 55023-27. Without any information about particular needs of the various wildlife and bird species on the Monument, there was no support for BLM's assumption that meeting Land Health Standards One and Three will protect all of these species. In other words, BLM never connected Standards One and Three to the needs of wildlife that were identified in the Proclamation.

This flaw is particularly true for the Sonoran desert tortoise, which is mentioned

specifically in the Proclamation. As discussed by BLM's wildlife biologist, annual and perennial grasses and forbs are important for desert tortoise. AR 54089-90, 54092-93. The TNC literature review explained that desert tortoise are dependent upon annual plants because female tortoises emerge from hibernation in the spring to forage on spring ephemerals and build up energy reserves necessary for reproduction, and thus grazing of ephemeral plants may be particularly detrimental to tortoises. AR 83519, 83529. Replacement of native forage plants with invasive non-native species also is a concern for tortoises. AR 83529. Yet BLM monitoring methods did not look at impacts to annual plants and BLM did not assess the spread of invasive non-native species in the LHE. AR 74608-11 (objectives used), 74156 (discussing why BLM did not monitor annual vegetation). BLM's assessment of plant diversity simply compared the number of different perennial plant species in plots at key areas on the allotments to BGR/Area A plots to conclude that the average number of plant species in each plant community was similar in grazed and ungrazed plots. AR 74557. However, BLM did not assess whether the plant species were native or non-native species. *Id.*

In fact, evidence in the record shows that livestock were having a detrimental impact on annual and perennial grasses and forbs, and were contributing to the spread of non-native species. An evaluation of desert tortoise habitat after winter monsoons by the wildlife biologist prior to the first proposed determination found that areas accessible to livestock were denuded of annual and perennial grasses and forbs. AR 54092. The only forage available for tortoises was in areas inaccessible to livestock. AR 54093. Allotments that had been grazed repeatedly had almost no ground cover. *Id.* In contrast, an allotment that had not been grazed for several years still had an abundance of annual grasses and forbs. *Id.* In addition, livestock were contributing to spread of buffelgrass and other invasive species, which was rapidly overtaking some areas of the Monument and changing the composition and diversity of plant communities. AR 54089-90.

Similar evidence was provided by the PBI study, which found that livestock had reduced native grass cover in the lower elevation communities on the Monument and

increased abundance of exotic grasses and other invasive species, particularly around water sources. AR 62582-84, 82195-342. Livestock impacts were particularly evident throughout the lower elevation creosote-bursage plant community, and most of the lower elevation areas on the Monument were classified as highly or moderately altered compared to the natural composition, structure, or function of the community. AR 62582, 62584, 43078, 40047. BLM did not consider any of this information when concluding that grazing was compatible with protecting plant diversity, Sonoran desert tortoise, and all other wildlife species. AR 74557, 74561. Instead, it simply ignored the information about heavy impacts in livestock congregation areas and other adverse effects found in the PBI study—and discussed in the first two proposed compatibility determinations—without explaining why those impacts were no longer important.

The same flaw applies to BLM's conclusion for saguaros. BLM admitted repeatedly that cattle can impact recruitment of young saguaros by trampling saguaro seedlings or crushing or eating nurse plants that provide cover and shade for the seedlings. AR 54090, 55060, 74547, 74551; *see also* 83492-95. BLM's assessment of impacts to saguaros relied on the "results of the PBI saguaro study" to conclude that recruitment of saguaros is occurring at appropriate rates. AR 74556, 74569. Yet, as explained by the lead scientist who collected the data, there was no "PBI saguaro study." AR 62581. In fact, based on his own observations, he concluded that grazing was having an adverse effect on small saguaros. *Id.* BLM never addressed this comment in its compatibility determination. AR 74556, 74569.

Furthermore, BLM did not explain how it arrived at the objectives for saguaro recruitment in the limy upland and granitic hills ecological sites. It admitted that the PBI data showed recruitment of 1.26 young saguaros per plot in BGR/Area A, but then used objectives of .96 young saguaros per plot in the limy upland ecological site and .83 young saguaros per plot in the granitic hills ecological site. AR 74610. BLM did not explain why the objectives were not the same as the BGR/Area A data when it used the BGR/Area A data to set other desired plant community objectives, nor did it explain how

it arrived at the .96 and .83 figures for the objectives to show "appropriate rates" of saguaro recruitment. *Id.*, AR 74556. Thus, BLM did not explain or provide the data to support its conclusion that grazing was compatible with protecting saguaros.

In sum, BLM did not provide a rational connection between the facts in the record and its conclusions about grazing being compatible with protecting all Monument objects, particularly when it previously considered these facts and came to the opposite conclusion. Accordingly, the compatibly determination was arbitrary and capricious. *Motor Vehicle Mfrs. Ass'n.,* 463 U.S. at 43; *Humane Society v. Locke,* 626 F.3d 1040, 1050-51 (9th Cir. 2010) (when presenting a conclusion inconsistent with a prior finding, agency must examine the relevant data, including the earlier assessments, and articulate a satisfactory explanation for its decision in light of the earlier findings).

III. BLM'S EIS VIOLATED NEPA.

Finally, BLM's final EIS violated NEPA in three ways: (1) it relied on the arbitrary and capricious LHE and compatibility determination; (2) it did not consider all reasonable alternative actions with regard to livestock grazing management; and (3) it did not take a hard look at all effects of its grazing management decision.

First, the EIS relied on the flawed compatibility determination conclusion, which had relied on the flawed LHE, as the baseline of each of its alternative actions for livestock grazing management, and attached those documents as appendices to the EIS. AR 73212-13, 74536, 74582. BLM's proposed alternative action—which became the RMP decision—closed more than just the incompatible acres by closing areas surrounding those incompatible acres as well as the entire Conley allotment. AR 73208, 73213. However, if BLM had conducted a proper LHE and compatibility determination, many more acres would have been closed to grazing to protect the Monument objects. For instance, even with the flawed LHE, more than half of the Beloat allotment was not meeting Land Health Standard Three, but none of those acres were closed in the proposed alternative. AR 74630, 73213. Likewise, almost 30% of the Bighorn allotment and about 20% of the Hazen allotment were not achieving Standard Three under the flawed

LHE, but much of that area remained open under the proposed alternative. AR 74625, 74638, 73213. Under a proper LHE and compatibility analysis, far more acres on the Monument would have been closed under all alternatives in the EIS. By relying on the flawed LHE and compatibility determination, the EIS itself was arbitrary and capricious.

Second, BLM did not analyze all reasonable alternative actions for grazing management when it removed the ephemeral only alternative. As the Ninth Circuit recently held, a monument proclamation changes the legal landscape, and BLM must consider both the terms of the proclamation and the objects to be protected before taking actions that can affect monument objects. *Abbey,* 719 F.3d at 1053. By rejecting without analysis other reasonable grazing management alternatives that might better protect monument objects, BLM did not consider a reasonable range of alternatives, in violation of NEPA. *Id.* at 1052-53. The same is true here, where BLM first included perennial only and ephemeral only grazing alternatives but later removed the ephemeral only alternative from analysis. AR AR46667, 47754, 55084, 55599, 55769-70, 73098-99.

BLM claimed that the ephemeral only alternative was removed because it would make the determination whether to convert allotments to ephemeral use only on an individual allotment basis based on the LHE process. AR 73098. Then it stated that the LHE for the Monument was used just for the compatibility determination and was not used to determine if allotments should be converted to ephemeral use. AR 73099. This explanation does not demonstrate that BLM was prohibited from converting all allotments to ephemeral use as part of a management plan decision if it thought that such an alternative might better protect the Monument's objects. *Abbey*, 719 F.3d at 1053. In fact, BLM included an ephemeral only alternative in several drafts of the EIS, indicating it believed it could take such an action, because it recognized that year-long perennial use may not be appropriate. AR AR46667, 47754, 55084 (draft EIS alternatives); 41798, 83389-90, 47820, 54089 (problems with year-long grazing). By removing from detailed analysis a feasible alternative that might better protect the Monument objects, BLM violated NEPA. *Abbey*, 719 F.3d at 1052-53.

Third, BLM did not take a hard look at all direct and indirect effects of its proposed grazing management, as required by NEPA, because it ignored effects to wildlife, particularly Sonoran desert tortoise, from changing the season of use. 43 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.8.

As part of the proposed action, BLM changed the season of use for grazing so that 65% of use would occur from October 1 to April 30 and 35% of use would occur from May 1 to September 30 each year. AR 73214. BLM asserted that this change would reduce competition with wildlife during critical hot summer months, but it did not assess what impacts it might have on wildlife by increasing grazing of annual ephemeral plants that arise in winter and spring as a result of the monsoon rains. *Id.* The EIS discussion of effects from the proposed grazing alternative to vegetation resources did not mention the increased use of winter/spring annual plants due to the changed season of use nor did the discussion of effects to wildlife. AR 73608, 73739, 74059-60, 74073. BLM also did not discuss this effect in the LHE or compatibility determination. AR 74645, 74575. As discussed above, various wildlife species in the Sonoran desert, particularly the desert tortoise, rely heavily on annual grasses and forbs for habitat. AR 54089-90, 54092-93, 83519, 83529. By failing to consider the effect of shifting more livestock use to the October to April timeframe, and the resulting increased use of annual plants that emerge during that time, BLM failed to take a hard look at the effects of the action on wildlife, especially the Sonoran desert tortoise, in violation of NEPA.

CONCLUSION

For the foregoing reasons, Plaintiffs respectfully request that the Court grant summary judgment in their favor, and order BLM to redo the LHE, compatibility determination, and livestock grazing management portion of the Sonoran Desert National Monument EIS and RMP.

Dated: April 4, 2014

/s/Lauren M. Rule
Lauren M. Rule (OSB # 015174)
ADVOCATES FOR THE WEST
3115 NE Sandy Blvd. #223
Portland, OR 97232
(503) 914-6388
lrule@advocateswest.org

/s/Erik B. Ryberg
Erik B. Ryberg (AZB # 023809)
Attorney at Law
P.O. Box 2013
Tucson, AZ 85702
(520) 784-8665
ryberg@seanet.com

Attorneys for Plaintiffs

CERTIFICATE OF SERVICE

I hereby certify that on this 4th day of April 2014, I caused a true and correct copy of the foregoing PLAINTIFFS' OPENING BRIEF IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT to be electronically filed with the Clerk of the Court using the CM/ECF System which sent notification of such filing to the following counsel of record in this matter:

Rachel K. Roberts
rachel.roberts@usdoj.gov

Jeffrey W. McCoy
jmccoy@mountainstateslegal.com

Erik B. Ryberg
ryberg@seanet.com

s/Lauren M. Rule
Lauren M. Rule