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' SEPARATE STATEMENT OF UNDISPUTED MATERIAL FACTS**

Pursuant to Local Rule 56 of this Court, Plaintiffs hereby submit the following separate statement of undisputed material facts to support their Motion for Summary Judgment.

A. Sonoran Desert National Monument

1. In 2001, President Clinton established the Sonoran Desert National Monument pursuant to his authority under the Antiquities Act. AR 3886. In Presidential Proclamation 7397, President Clinton set aside more than 486,000 acres in southwest Arizona to protect the resources there from development and degradation. AR 3887.

2. The proclamation begins by noting that the Monument is a "magnificent example of untrammeled Sonoran desert landscape." AR 3886. This desert ecosystem

has "an extraordinary array of biological, scientific, and historic resources. *Id.* The most biologically diverse of the North American deserts, the Monument consists of distinct mountain ranges separated by wide valleys, and includes large saguaro cactus forest communities that provide excellent habitat for a wide range of wildlife species." *Id.*

3. The proclamation continues by discussing the "spectacular diversity of plant and animal species" here. *Id.* The higher peaks on the Monument contain unique woodland communities, while lower elevation lands "offer one of the most structurally complex examples of paloverde/mixed cacti association in the Sonoran Desert." *Id.* The proclamation highlights the saguaro cactus forests, stating that these forests, with their signature saguaro plants together with a wide variety of other trees, shrubs, and herbaceous plants, are "an impressive site to behold" and "a national treasure." *Id.*

4. In discussing the lower elevation, flatter areas of the Monument, the proclamation notes the creosote-bursage plant community, which thrives in open expanses between mountain ranges and acts as a connector to other plant communities. *Id.* The Monument also contains desert grasslands and ephemeral washes, which support denser vegetation such as mesquite, ironwood, paloverde, and desert willow trees, as well as a variety of herbaceous plants. *Id.* This vegetation provides dense cover for bird species for nesting, foraging, and escape, and "birds heavily use the washes during migration." AR 3887.

5. Of particular relevance here, the proclamation remarks on the rich diversity, density, and distribution of plants in the Sand Tank Mountains area on the Monument, which is due to the management regime in place in that particular area that has excluded livestock grazing there for more than fifty years.[1] AR 3886. The proclamation stated that in order to extend the extraordinary diversity and overall ecological health of the Sand Tank Mountains area, adjacent Monument lands with similar biological resources

[1] This area was withdrawn for military purposes in 1941. Pursuant to the proclamation, the military withdrawal terminated on November 6, 2001 and BLM has assumed management responsibility.

should be subject to similar management regime to the fullest extent possible. *Id.*

6. Wildlife diversity is also a focal point of the proclamation. "The diverse plant communities present in the Monument support a wide variety of wildlife, including the endangered Sonoran pronghorn, a robust population of desert bighorn sheep, especially in the Maricopa Mountains area, and other mammalian species such as mule deer, javelina, mountain lion, gray fox, and bobcat." AR 3887.

7. The proclamation makes note of other mammals, birds, reptiles, and amphibians on the Monument. It mentions several bat species found here, including the endangered lesser long-nosed bat. *Id.* More than 200 species of birds are found on the Monument as well as many raptors and owls. *Id.* Reptiles such as the red-backed whiptail and the Sonoran desert tortoise inhabit the Monument, and 25,000 acres of land in the Maricopa Mountains has been designated as critical habitat for the desert tortoise. *Id.* Because of its declining numbers, the U.S. Fish and Wildlife Service has determined that the Sonoran desert tortoise is warranted for listing under the Endangered Species Act. 75 Fed. Reg. 78094 (Dec. 14, 2010).

8. In addition to the biological resources on the Monument, the proclamation also stresses the importance of the "many significant archaeological and historic sites, including rock art sites, lithic quarries, and scattered artifacts." AR 3887. The Monument contains remains of prehistoric travel corridors and villages as well as remnants of several important historic trails, including the Juan Bautista de Anza National Historic Trail, the Mormon Battalion Trail, and the Butterfield Overland Stage Route. *Id.*

9. In light of these biologic and historic values, President Clinton used his authority under the Antiquities Act to create the Sonoran Desert National Monument "for the purpose of protecting the objects identified above." *Id.*

10. To further this purpose, the proclamation prohibited motorized and mechanized vehicle use off roads and withdrew the land from any form of entry, sale, leasing, or other disposition, including for mining or mineral development. AR 3887-88.

11. The proclamation also prohibited BLM from renewing grazing permits for all allotments within the Monument south of Highway 8 at the end of their term; and stated that grazing north of Highway 8 "shall be allowed 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."[2] AR 3888.

12. According to the proclamation, the BLM was required to prepare a management plan that addresses the actions necessary to protect the objects identified in the proclamation. *Id.* In light of the proclamation designating this area as a national Monument, BLM no longer manages this area simply on a multiple use basis but instead must manage it primarily for the protection of the objects of interest identified in the proclamation. AR 55040.

13. When making remarks on the new Sonoran Desert National Monument, Secretary of Interior Bruce Babbitt stated that conservation is the objective, and that "grazing is subordinated to biological restoration." AR 3636, 55039.

B. Collection of Information for the Management Plan

14. BLM began the management planning process for the Monument in 2002, with the expectation of completing a Resource Management Plan (RMP) in 2005. AR 37922, 37964, 38013. BLM knew that its existing data on ecological conditions in the Monument and grazing impacts to rangelands was limited and out of date and thus collection of new data was necessary to make the determination of whether grazing was compatible with protecting the Monument objects. AR 38118.

15. 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. AR 40016. BLM coordinated with these groups on the sampling methods to use for their data collection. AR 38181, 39950.

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[2] Highway 8 crosses the Monument from east to west. Slightly more than half of the Monument occurs north of the Highway. AR 74933 (map).

16. These contracts resulted in several reports by PBI and TNC. The PBI reports mapped, characterized, and assessed the condition of natural communities on the Monument and in the adjacent Sand Tank Mountains. AR 39873. Fieldwork for these studies occurred from 2002 to 2006, with data collected at 320 plots. AR 40336-1334 (rescanned at 82395-3379), 50554-781, 51134-205.

17. The first PBI reports, completed in 2003, included maps of the various natural communities on the Monument as well as assessments of the ecological condition of each community and the stressors that affected each community. AR 39866-934, 42964-3477. Livestock grazing impacts were quantified at some of these plots. AR 82395-3379.

18. The results of this study indicated that the lower elevation communities on the Monument had the most disturbance in the form of low vegetation cover, low native species diversity, high levels of non-native species—especially in herb and grass cover, and soil erosion and compaction. AR 43078. These communities consisted of creosote-bursage desert scrub, paloverde-mixed cacti-mixed scrub on bajadas, mesquite woodlands, valley xeroriparian areas, and braided channel floodplains. AR 43095-151.

19. The study found that the higher elevation communities of paloverde-mixed cacti-mixed scrub on rocky slopes, mountain uplands, and rocky outcrops had less disturbance than the lower elevation communities. AR 43069.

20. The report documented that the vegetation composition of the lower elevation communities was the most impacted by livestock grazing. AR 42969. The creosote-bursage desert scrub community, one of the primary communities on the Monument, is where most of the livestock grazing occurs and likewise is one of the most disturbed communities. AR 43078. As noted by the report, "[t]he influence (stresses) of livestock extends throughout most of the community, as few of the regions we visited within the study area are without some indication of livestock influence." *Id.*

21. The report also documented that within communities most affected by grazing, the areas around livestock congregation areas, such as water sources and other

range developments as well as cattle trails, had the most severe degradation, with highly altered vegetation composition and structure and altered soil surfaces. AR 43078-79.

22. PBI mapped the ecological conditions on the Monument, with condition classes representing the degree of departure from the estimated natural range of variation in the composition, structure, or function of the natural community. AR 40047. Condition class I was highly altered, condition class II was moderately altered, and condition class III was mostly unaltered. *Id.* The map showed many localized areas and trails as highly altered and a significant amount of area as moderately altered, which primarily consisted of the lower elevation communities. *Id.* The mostly unaltered areas largely occurred in the higher elevation, mountainous communities. *Id.*

23. PBI provided BLM three more reports in 2004 and 2006 that focused on native grasses. AR 62583-85, 82196-394. These studies showed a contrast between grazed and ungrazed areas, with the grazed grasslands on the Monument showing significant disturbance and poor conditions while ungrazed grasslands on adjacent property were in much better condition and had much higher levels of native grasses. AR 62583-84. The studies noted that grazed valley riparian areas had a high abundance of exotic grasses and very low abundance of native grasses, and that the native grass cover was being reduced by livestock activity. *Id*.

24. The Nature Conservancy also completed several reports for BLM between 2003 and 2005. The first report proposed planning criteria for the RMP. AR 41482-500. Another discussed conservation and biodiversity elements to incorporate into the RMP. AR 47982-8340.

25. A third report by TNC thoroughly discussed the Sonoran desert ecosystem and plant communities, as well as existing scientific research on impacts of livestock grazing in the Sonoran desert and its implications for grazing management on the Monument. AR 46719-7022 (also found at 83381). This report considered the prior PBI studies on the Monument as well as dozens of other studies of livestock grazing systems and impacts conducted in desert ecosystems. *Id.*

26. Based on the synthesis of all existing research, this third report described livestock grazing impacts to vegetation, saguaros, rare plants, soils, wildlife, and cultural resources in the Sonoran desert. AR 46799-824, 46828-31, 46836, 46844-54, 46855-80, 46881-82. It then assessed current grazing management strategies used by BLM and other land managers. AR 46883-908.

27. The report concluded that:

> The unique ecological characteristics of the Sonoran Desert require specific attention when considering development and implementation of a grazing management strategy. Current approaches to grazing in the Sonoran Desert mostly seem to follow the conceptual thinking underlying grazing management strategies developed and tested for ecosystems typically of higher productivity and of significantly different ecosystem dynamics. As a result, **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.**

AR 46723 (emphasis added).

28. In addition to the biological data PBI collected to characterize and assess the condition of the natural communities on the Monument, BLM was collecting data for its rangeland assessment. AR 42552. Because it had not collected ecological site data since 1981, BLM collected plant cover and composition data in 2003 and 2004 at key areas on the Monument allotments north of Highway 8. AR 44496-537, 46188-263, 46265-499, 52034-107.

29. A key area is a long-term monitoring plot located within a single ecological site and plant community, is representative of the community in which it is located, and represents where livestock grazing pressure is occurring across the management area. AR 74612. BLM placed the key areas at a distance of approximately one mile from water sources to prevent collecting data in areas with the heaviest impacts. *Id.*

30. BLM collected additional vegetation and soils data at key areas in 2007, and again in 2009. 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.

C. Land Health Evaluation

31. All or parts of six allotments occur north of Highway 8 on the Monument: Bighorn, Conley, Beloat, Hazen, Lower Vekol, and Arnold. AR 74588-89. Five of these allotments are perennial-ephemeral, and the Arnold allotment is ephemeral only. AR 74588.

32. Perennial grazing occurs on rangelands that consistently produce perennial forage to support a year-round livestock operation. AR 74601. Ephemeral grazing occurs just during seasons of high forage production, usually after winter rains. *Id.* Perennial-ephemeral allotments produce perennial forage every year and periodically provide additional ephemeral vegetation when winter precipitation allows for production of annual forbs and grasses. *Id.*

33. As part of its process to determine whether livestock grazing was compatible with protecting the objects of the Monument on the six allotments north of Highway 8, BLM completed a Land Health Evaluation (LHE). AR 74551. This evaluation gauged whether the Arizona Standards for Rangeland Health were being achieved on the Monument allotments north of Highway 8, and if not, whether livestock grazing was the causal factor. AR 74587. The three Arizona Standards pertained to upland sites, riparian-wetland sites, and desired resource conditions. AR 74607.

34. Standard One for upland sites looked at soil infiltration, permeability, and erosion rates by assessing ground cover as well as signs of erosion. *Id.* BLM determined that Standard Two for riparian-wetland sites was not applicable because no riparian areas or wetlands occurred on any of the allotments. *Id.* Standard Three for desired resource conditions looked at production and diversity of native plant communities by assessing plant composition, structure, and cover. *Id.*

1. Desired Plant Community Objectives

35. To assess Standard Three, BLM first established desired plant community

objectives for each of the ecological sites on the Monument. AR 74608. Ecological sites are distinctive kinds of soil and topographic features that result in a characteristic natural plant community. AR 74591. The Monument contains the following ecological sites: sandy wash, loamy swale, limy fan, limy upland deep, limy upland, granitic hills, and sandy loam deep. AR 74608-11. The objectives related to vegetation canopy cover, vegetation composition, and for some ecological sites, recruitment of saguaros. *Id.*

36. To establish the desired plant community objectives, BLM looked at data from corresponding ecological sites on the Barry Goldwater Range and Area A ("BGR/Area A") as well as information from Natural Resources Conservation Service ecological site descriptions and reference sheets. AR 74601, 74608. The BGR/Area A had historically been grazed by livestock until the early 1950's, and continued to have use by trespass livestock, especially along the edges of the area. AR 3751, 3755, 38610, 62581.

37. To account for variability within ecological sites, BLM averaged the plot data from BGR/Area A plots to quantify the desired plant community objectives. AR 74608, 78492.

38. BLM completed numerous drafts of the LHE report before including the final report as an Appendix to the EIS. AR 50491, 54282, 55094, 56364, 58683, 70420, 74582, 83695, 83949. Between the initial draft LHE report and the final report, BLM changed numerous desired plant community objectives. *See* AR 50514-17, 54303-06, 83718-22, 55116-20, 56386-92, 74608-11. These changes included varying the desired percent of vegetation cover or composition for an ecological site, changing the desired recruitment of young saguaros for certain ecological sites, and removing objectives for perennial grass composition or saguaro recruitment at certain sites. *Id.*

39. The following table shows the changes that occurred in desired plant community objectives in the LHE reports:

Ecological Site and objectives	2005 Doc 731	2008 Doc 907	2009 Supp. Doc 11	2009 Doc 990	2010 Doc 1068	Final LHE
Sandy wash veg can cover	30%	30%	34%	34%	34%	34%
Sandy wash composition shrubs/browse	-	-	14%	14%	14%	14%
Sandy wash saguaro recruitment	+1 new	+1 new	-	-	-	-
Sandy wash perennial grass composition	0-5%	0-5%	-	-	-	-
Sandy wash CFPO can cov	50%	50%	50%	50%	40%	40%
Sandy wash CFPO perennial grass comp	0-5%	-	-		-	-
Sandy wash CFPO comp shrubs/browse	-	-	14%	14%	14% browse	14%
Loamy swale veg can cover	-	-	20%	20%	20%	20%
Loamy swale per grass comp	25 %	25 %	10%	10%	10%	10%
Limy fan veg can cover	10%	10%	7%	7%	7%	7%
Limy fan composition rat-bur shrub	10%	10%	9%	9%	9%	9%
Limy fan saguaro recruitment	+1 new	+1 new	-	-	-	-
Limy Upland Deep veg can cover	10%	10%	10%	10%	10%	10%
Limy upland deep rat-bur comp	6%	6%	12%	12%	12%	12%
Limy Upland Deep saguaro recruitment	+1 new	+1 new	-	-	-	-
Limy upland veg can cover	20%	20%	16%	12%	12%	12%
Limy upland comp shrub	20%	20%	5%	5%	5% browse	5%
Limy upland saguaro recruit	+ 1 new	+1 new	1/12.5m	1/12.5m	.96/12.5m	.96/12.5m
Granitic hills veg can cover	15%	15%	16%	16%	16%	16%
Granitic Hills saguaro recruitment	+1 new	+1 new	1/12.5m	1/12.5m	.83/12.5m	.83/12.5m
Granitic Hills shrub comp	-	10 %	-	-	-	-
Sandy loam deep veg can cover	-	-	20%	20%	15%	15%
Sandy loam deep comp shrubs	-	-	17%	16%	16% browse	16%

40. When WWP raised questions about the change in objectives in its comments on the draft EIS and protest of the final EIS, BLM responded that the objectives changed in light of new information. *See* e.g. AR 74333, 74334-35, 78492. BLM did not explain what the new information was. *Id.*

41. The only new information in the record related to the objectives that arose between the first draft and final LHE was data BLM collected at three plots in BGR/Area A in 2009. AR 74608, 74686-87. All of the data from PBI plots in BGR/Area A were collected in 2002. AR 74615. The three 2009 BLM plots were in limy upland deep, limy fan, and sandy wash ecological sites. AR 74686-87. No new information was presented for the loamy swale, limy upland, granitic hills, or sandy loam deep ecological sites. *Id.*

2. Allotment Data

42. To assess whether ecological sites were meeting 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.

43. For plant cover, plant composition, and saguaro recruitment data, BLM relied on its own data as well as a subset of the 2002 PBI data. BLM used data from 48 of the 320 PBI plots. AR 50519, 74615. It did not use any data from plots that were close to livestock congregation areas and thus excluded PBI data from the heaviest impact areas. AR 50520 (first LHE draft, excluding PBI plots within ½ mile of congregation areas), 74616 (final LHE, excluding PBI plots within 1000 meters, or .62 miles, of congregation areas).

44. In the early versions of the LHE reports, BLM considered all of the data it had collected to that point to assess whether sites met the objectives. AR 50520 (1981, 2004 data), 55127-41 (1979, 1980, 1981, 2004, 2007, 2009 data). The final report, however, compared only the 2009 data to objectives for five allotments, and compared only 2004 data to objectives for the Beloat allotment. AR 74666-83. BLM used 2004 data for the Beloat allotment even though it had 2007 and 2009 data, and an internal reviewer questioned this "cherry-picking" of data. AR 58313-38, 83853, 83921. Because BLM relied on only one year of data for each allotment, it did not consider any prior data in the final LHE report. AR 74666-83.

45. In response to WWP's draft EIS comment about not using all of the BLM data in the LHE analysis, BLM responded that it used only one year of data because it used different methods or transects to collect the prior data and thus could not compare data from different years to establish trends. AR 74347.

46. In response to comments on the draft EIS by PBI's lead scientist as well as WWP about excluding much of the PBI plot data from the LHE analysis, BLM responded that one year of data was not enough to support sound conclusions, and the

data did not address important factors needed to address effects of current grazing practices on the objects of the Monument, such as intensity, frequency, timing, season of use, or precipitation patterns. AR 62582, 74107-8, 74348-49.

47. Earlier in the final LHE report, BLM did compare the 1981 data to the 2009 data to state that virtually no change in vegetation production had occurred over the 28-year period. AR 74612.

48. BLM used data from 36 key areas in the final LHE. AR 74613. Because BLM's key areas were approximately one mile from livestock congregation areas, and BLM excluded PBI data from plots within 1000 meters of congregation areas, the analysis did not consider any data from heavy impact areas. AR 74612, 74616.

49. One of the peer reviewers of the draft LHE commented that excluding data from disturbed areas biased the analysis because the plots that had the most livestock impacts were purposefully removed from consideration. AR 83942. The lead scientist for the PBI study raised the same concern. AR 62581-82.

50. When comparing the 2009 or 2004 plot data to the desired plant community objective, BLM considered the plot to be meeting the objective if the data value was within 80% of the objective. AR 74620. Thus, the data could be 20% below the objective and deemed to be meeting the objective. *Id.* This was to account for variability within ecological sites. *Id.*

51. BLM did not explain in the LHE why it chose the 80% value. *Id.* In its response to comments, BLM stated that peer reviewers had suggested using a range around the absolute value rather than the absolute value itself to judge achievement of objectives to better represent real conditions on the ground, and the 80% figure was based on best professional judgment. AR 74336.

52. The final determination of whether an ecological site within an allotment was achieving Standard Three was based on a preponderance of the evidence approach. AR 74620. If more than half of the plots within an ecological site were meeting all objectives, then the whole ecological site was considered to be achieving Standard Three.

AR 74620-21. This approach was used because there were not enough plots to complete a valid statistical analysis for each ecological site. AR 74621.

53. In the final LHE, BLM came to the following conclusions for Standard Three: (1) on the Bighorn allotment, 29,384 of the 92,204 acres on the allotment were not achieving the standard; (2) on the Beloat allotment, 17,969 of the 33,600 acres on the allotment were not achieving the standard; (3) on the Conley allotment, 73,278 of the 77,708 acres on the allotment were not achieving the standard; (4) on the Hazen allotment 5,699 of the 31,926 acres on the allotment were not achieving the standard; (5) on the Lower Vekol allotment, 583 of the 15,409 acres on the allotment were not achieving the standard; and (6) on the Arnold allotment, all of the 1,609 acres of this allotment were not achieving the standard. AR 74625, 74630, 74634, 74638, 74641, 74642.

54. This equaled 127,550 acres on the Monument north of Highway 8 that were determined not to be achieving Rangeland Health Standard Three. AR 74574.

3. 2008 Livestock Use to Establish Causality

55. In 2009, BLM collected information to determine livestock use levels during the 2008 grazing season on allotments north of Highway 8. AR 74619. 2008 had slightly above average precipitation and moderate ephemeral production that allowed for use of annual plants. AR 74618-19; AR 54150-51, 54159-63 (discussing use of annual plants in March 2008 on Bighorn and Conley allotments).

56. To assess livestock use, BLM used two methods. AR 74615, 74619. One method was to conduct utilization transects on the Bighorn and Conley allotments in spring and summer 2009 to estimate percent use of certain perennial shrub species. AR 74619-20, 54392-96, 54636-41, 54716-21. BLM did not collect data on utilization of annual ephemeral species, only key perennial forage species. AR 74619-20, 75151.

57. The second method was to conduct use pattern mapping on the Monument in March 2009. AR 74615. This is a qualitative method that maps the proportion of vegetation production that has been consumed or destroyed by animals. *Id.*

58. To map use patterns, 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. *Id.*; AR 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.*

59. The map showed different classes of use as negligible use, slight use, light use, moderate use, heavy use, severe use and very severe use. AR 75151. It also showed areas that were "unsuitable" for grazing because they were too steep, and areas that were "unsurveyed." *Id.*

60. 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. BLM did not verify classification of other use levels. *Id.*

61. In the original map produced in March 2009, the unsurveyed areas were shown with brown cross-hatching (xxxx) and marked "not surveyed" while the unsuitable areas were shown in solid orange/brown, as noted in the map legend identifying the use categories. AR 75151, 83693 (hand-annotated map), 83691 (digitized map). The unsuitable areas were located primarily in the upper elevation, mountainous areas on the Monument, while the unsurveyed areas covered large expanses outside of the unsuitable areas that were not close to roads. AR 83693, 84857, 84865. The original map also showed hand-drawn polygons around areas of similar use levels that were color-coded according to the legend.

62. The original hand-annotated map showed where the surveyors documented the level of use on forage species—*e.g.* KRGR-5 for heavy use of white ratany (*Krameria grayii*) or KRGR-4 for moderate use of that species—and these survey sites were all along roads. AR 83693, 75151. The map also showed that much of the Conley and Arnold allotments and some portions of the Beloat, Bighorn, and Lower Vekol allotments did not have key forage species present. AR 75151, 83693, 83691.

63. The final version of the use pattern map changed many of the

classifications. AR 84023. 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 the Conley allotment that was marked as no forage species, appeared in light or dark blue as "negligible use" or "slight use" on the final map. *Compare* AR 83693 and 83691 to AR 84023. The high elevation areas that previously were "unsuitable" were now called "unsurveyed or inaccessible." *Id*.

64. WWP raised the issue about these changes to the use pattern map in its protest, but BLM did not explain or provide information to support the change of areas that were originally designated unsurveyed or no key forage species to negligible or slight use. AR 78476, 78490-91.

65. BLM used the 2009 use pattern map and 2009 utilization transects to determine whether current livestock grazing was a significant causal factor in the failure to achieve Rangeland Health Standard Three. AR 74625, 74630, 75634-35, 74638, 74641, 74642.

66. BLM assumed that in areas that had greater than 40% shrub utilization (moderate, heavy, or severe use), livestock grazing was the causal factor in not achieving rangeland health standards. AR 74618. In contrast, if areas had negligible to light livestock use (<40%), BLM assumed that livestock grazing was not the causal factor for non-achievement of standards. *Id.*

67. BLM stated that ephemeral grazing does not appear to influence achievement of Land Health Standards but conducted no monitoring of ephemeral use for the LHE. AR 74643, 74619 (utilization results showing % use of perennial shrub species).

68. Where BLM determined that current grazing was not the causal factor for non-achievement of Standard Three, it attributed the failure to other factors such as historic livestock grazing, livestock use patterns, fire, drought, OHV use, or general recreation. AR 74542, 74569. It did not distinguish "livestock use patterns" from the use pattern mapping it relied upon to determine causality. *Id.*

69. One of the peer reviewers commented that using only data collected in 2009 was not sufficient for the causality determination. AR 83942. He noted that using only that year's utilization 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. *Id.* BLM did not address that comment in the final LHE. 74615, 74619.

70. In the final LHE, BLM concluded that of the 29,384 acres not meeting Standard 3 on the Bighorn allotment, livestock grazing was a significant causal factor on 2,974 acres. AR 74625-26. Of the 73,278 acres not meeting Standard 3 on the Conley allotment, livestock grazing was a significant causal factor on 5,517 acres. AR 74634. Of the 583 acres not meeting Standard 3 on the Lower Vekol allotment, livestock grazing was likely a factor on 7 acres. AR 74641. For the 17,969 acres not meeting Standard 3 on the Beloat allotment, the 5,699 acres not meeting Standard 3 on the Hazen allotment, and the 1,609 acres not meeting Standard 3 on the Arnold allotment, livestock grazing was not the causal factor. AR 74630, 74638, 74642.

71. In sum, BLM determined that livestock were the causal factor for the non-attainment of Land Health Standards on 8,498 of the 128,500 acres that were failing standards in the northern portion of the Monument. AR 74644.

72. For the remaining acreage within each allotment that was deemed compatible, the LHE contained recommendations for the amount of AUMs permitted on each allotment as well as changing the season the use so that 65% of the grazing would occur from October 1 to April 30 and 35% would occur from May 1 to September 30. AR 74643-45.

D. Compatibility Determination

73. From the start of the planning process, BLM noted that protecting biological diversity within and among plant communities, including diversity of native plants and animals and connectivity between communities, was an important factor for protecting Monument objects. AR 42168, 42176-77, 44296, 45894, 50787-90, 54648-49.

74. Like the LHE, BLM wrote numerous drafts of the compatibility determination before the final determination was included as an appendix to the final EIS. The first draft was written in 2007 after the initial LHE report. AR 54089. It was written by BLM's wildlife biologist for the Monument Manager, and determined that grazing was not compatible with protecting the Monument objects. AR 54089-90.

75. This proposed determination considered the draft LHE results as well as BLM range files, literature reviews, outside sources—including the PBI study, and personal observations. AR 54089, 54092. It 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. *Id*.

76. It also stated, "there is clear evidence of over-utilization by livestock of forage and therefore decreased forage availability for wildlife, and particularly desert tortoise, a special status species." AR 54089. Recent visits to the Monument showed that areas accessible to livestock had been denuded of annual and perennial grasses and forbs, and the only forage available for tortoises was sparsely vegetated, recently leafed out perennial species in areas inaccessible to livestock. AR 54092-93. In contrast, the Hazen allotment, which had not been grazed for four years, still had an abundance of annual grass and forb ground cover important in providing forage for wildlife, including tortoises, and soil stability. AR 54093.

77. The proposed determination discussed literature that showed livestock grazing in arid environments is detrimental to vegetation communities and wildlife, and explained that livestock introduce and spread invasive species, which can lead to wholesale changes in composition and diversity of vegetation communities. AR 54089-95. "Continuous pressure from perennial grazing causes long-term changes in the diversity and composition of vegetation communities, particularly in arid environments where rainfall and production are unpredictable." AR 54089.

78. The proposed determination also stated that due to the continuing drought, ongoing livestock grazing has increased stress and decreased vigor of perennial forage

plants and contributed to reductions in wildlife populations. AR 54090. The preponderance of the evidence showed that perennial grazing is not appropriate for the area. *Id.* The determination further discussed each of these factors to support the conclusion that livestock grazing was not compatible with protecting Monument objects. AR 54089-101.

79. BLM continued to recommend closing the allotments north of Highway 8 due to incompatibility between grazing and protecting Monument objects through 2009. AR 54199, 55060. In a second draft determination, BLM again noted the heavy impacts from livestock around congregation areas like water sources, 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 55051.

80. The second draft determination discussed the literature on grazing impacts in arid areas that related to the objects of the Monument, and also observations of impacts on near-by federal lands. AR 55043-53. It reported that only one of the allotments met both land health standards. AR 55054.

81. The draft determination also stated that the utilization data was collected during a season of abundant precipitation that allowed for ephemeral livestock grazing authorization, confounding the survey results. AR 55055.

82. Based on scientific literature, observations on adjacent federal lands, and the draft LHE, livestock grazing did not meet criteria for compatibility with certain objects of the Monument, specifically saguaros, bighorn sheep, functioning desert ecosystems, creosote-bursage plant community, desert wash community, and the Anza National Historic Trail Corridor. AR 55059.

83. The draft determination stated that all available evidence indicated 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.*

84. Further drafts of the determination were prepared. The next draft conclusion was that the areas found to be not fully achieving standards were not compatible with protection of Monument objects and areas that were fully meeting standards were compatible. AR 56277-78.

85. In the next determination, BLM concluded that the whole area could remain open to grazing but recommended adjustments to permitted use. AR 56461-63.

86. The Department of Interior Solicitor's Office reviewed that latest draft determination and did not believe it was in conformance with the Monument proclamation. AR 58244. The Solicitor's Office stated that grazing should not be allowed based on their analysis. *Id*.

87. To address the concerns of the Solicitor's Office, BLM changed the determination by closing areas that did not meet LHE Standard Three where grazing is the contributing factor. AR 58261. Thus, grazing was made unavailable on 8,498 acres north of Highway 8. AR 58413.

88. During the compatibility determination process, questions were raised numerous times as to whether the LHE standards could represent all of the Monument objects related to plant communities and wildlife such that meeting the two standards was enough to show that all biological and ecological objects mentioned in the proclamation were protected. *See* AR 50784-86, 55024-27, 55387, 55514-19, 55530-31, 55543-46, 58068-72, 59180-81.

89. BLM's final compatibility determination was attached as Appendix E to the final EIS. AR 74535. In the final version, BLM used the LHE as the basis of its determination about whether livestock grazing is compatible with protecting the Monument objects. AR 74551-70, 74574-75. The conclusion was that the 8,498 acres found to be violating land health standards due to livestock grazing in the LHE were not compatible with protection of Monument objects. AR 74575. Livestock grazing on the

remaining acres on the Monument north of Highway 8 were deemed compatible with protection of all Monument objects. *Id.*

90. Of the 8,498 acres not compatible, 7,980 acres occurred in the creosote-bursage community, 511 acres occurred in the paloverde-mixed cacti vegetation community, and 42 acres occurred within desert washes. AR 74568-70. The LHE conclusions were deemed sufficient to assess compatibility with protecting these plant communities and all wildlife species within these communities. AR 74558-63, 74569-70.

91. BLM assessed grazing compatibility with protecting saguaros based on the results of the "PBI saguaro study" indicating that recruitment of saguaros was occurring at appropriate rates. AR 74569. It assessed compatibility with protecting species diversity by comparing the average number of perennial species per plot in areas north of Highway 8 with plots in BGR/Area A, which showed similar average number of species per plot between the two areas. AR 74557, 74569.

92. In the compatibility determination, BLM did not refer to any of PBI's five reports that discussed the ecological conditions of natural communities on the Monument and effects of livestock grazing and other disturbance factors. AR 74536-81. The lead scientist on the PBI studies expressed concerns about the exclusion of that information. AR 62580.

93. He noted the various conclusions from the PBI studies that BLM ignored, including detrimental impacts from livestock to the grassland community and the mesquite bosque community, changes in vegetation communities due to long-term grazing effects, severe impacts in close proximity to water sources, widespread impacts in the low elevation creosote-bursage desert scrub community, loss of native grass cover in areas that experienced livestock grazing, and an increase in non-native grass species near livestock water sources. AR 62582-85. He stated that, by using just a subset of the PBI data within BLM's own methods, BLM misused the data to reach invalid conclusions. AR 62585.

94. He also disagreed with BLM's conclusion that the "results of the PBI

saguaro study" indicate that recruitment of saguaros was occurring at appropriate rates. AR 62581. He stated that PBI never conducted a "saguaro study," the observations he did make during his study showed that distribution of small saguaros was influenced by the level of livestock activity, and BLM's conclusion that grazing was not having an adverse effect on small saguaros was the opposite of the conclusion he reached based on his four years of study and observations on the Monument. *Id.*

95. BLM also did not discuss the TNC literature review report when summarizing the literature on effects of livestock grazing in the Sonoran desert. AR 74546-51.

D. EIS and RMP

96. BLM's EIS covered the Monument as well as other areas in the Lower Sonoran Field Office outside of the Monument. AR 72966.

97. BLM included five alternative actions in the EIS that applied to management of the Monument. AR 73020. Initially, with regard to management of grazing allotments, BLM included perennial use only and ephemeral use only alternatives in the draft EIS. AR46667, 47754, 55084. Later, BLM removed the ephemeral use only alternative from its analysis but retained an alternative that converted all allotments to perennial use only. AR 55599, 55769-70, 73095, 73098.

98. BLM claimed that it did not include the ephemeral use only alternative in the EIS analysis because the agency would make that decision on an individual allotment basis using the LHE process. AR 73098. For allotments on the Monument, it stated that the LHE process it had completed was to determine compatibility with protecting Monument objects and it had not used the LHE analysis to determine if the allotments met the ephemeral use criteria. AR 73099.

99. BLM noted elsewhere that if it changed allotments to ephemeral use, that would require changing the authorized perennial AUMs to zero and such an action would need an RMP amendment. AR 64269.

100. The preferred alternative in the EIS would make 95,289 acres of the

Monument north of Highway 8 unavailable for grazing. AR 73209, 73213. These acres would include the roughly 8,500 acres determined to be incompatible with the objects of the Monument due to grazing, 36,300 acres surrounding the incompatible acres that would be within the closure area based on fencing and topographical boundaries, and the remainder of the Conley allotment. *Id.* There would be 157,167 acres available for grazing. AR 73209.

101. The preferred alternative also changed grazing to 65% use in fall/winter/spring and 35% use in summer. AR 73214.

102. The EIS discussed the current conditions of various resources on the Monument in the Affected Environment section and then discussed the impacts of the alternative actions on those resources in the Environmental Consequences section. AR 73351-74073. The EIS attached the compatibility determination as Appendix E and the LHE report as Appendix F. AR 74536, 74582.

103. WWP and Sierra Club each provided comments on the draft EIS, and both also submitted a protest on the final EIS. AR 71642-55, 72151-373, 75829-909.

104. BLM issued the Record of Decision (ROD) and Final RMP for the Monument on September 13, 2012. AR 77986. The ROD selected Alternative E, the preferred alternative from the Final EIS, as the planning decision for managing the Monument. 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. AR 78012-13.

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/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' SEPARATE STATEMENT OF UNDISPUTED MATERIAL FACTS 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