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Via e-mail (cacarrizormp@ca.blm.gov**) and U.S. Mail (with attachments)**

Carrizo Plain National Monument RMP
Bureau of Land Management
Bakersfield Field Office
3801 Pegasus Drive
Bakersfield, California 93308

Re: Comments on Draft RMP/EIS

Thank you for the opportunity to comment on the Draft Resource Management Plan/Draft Environmental Impact Statement (RMP/EIS) for the Carrizo Plain National Monument (Monument). We appreciate your efforts in involving the public in this important process.

These comments are being submitted on behalf of The Wilderness Society, Sierra Club California/Nevada Desert Committee, Los Padres Forest Watch, Natural Resources Defense Council, Center for Biological Diversity, Western Watersheds Project, Sierra Club Santa Lucia Chapter, Desert Survivors, Californians for Western Wilderness and Defenders of Wildlife. We appreciate the agency's commitment to protection of this National Monument and the impressive efforts associated with this RMP/EIS. We are submitting these comments to support the most preferable management approaches for maintaining and enhancing the values of this Monument and to identify additional areas for improvement. We submit these comments as a complement to any comments submitted individually by our organizations and members, and emphasize that our intent in preparing them is to facilitate not only the protection of the Carrizo Plain National Monument, but the entire National Landscape Conservation System (Conservation System).

In addition to the comments submitted below, we incorporate by reference the following comments submitted by experts in their respective fields as follows:

- The comments of *Larry Spanne*, identifying inadequacies in the cultural resources assessment and management in the Draft RMP/EIS;
- The comments of *Dr. Paula Schiffman*, PhD, identifying inadequacies in the assessment of impacts and management of biological resources and grazing; and
- The comments of *Dr. Elizabeth Painter,* PhD, identifying inadequacies in assessment of impacts, protection of biological resources and management of grazing.

The comments of these experts also identify important deficiencies in the Draft RMP/EIS that must be addressed in order to provide the BLM with an adequate basis for its decisions.

Our comments address the following issues:

I. MANAGEMENT FRAMEWORK

The Carrizo Plain National Monument was established by Presidential Proclamation issued in 2001 under the Antiquities Act of 1906, which authorizes the President to designate National Monument status to areas possessing significant historical, scenic, and/or scientific values. The Proclamation No. 7393 for the Carrizo Plain National Monument identifies the significant resources that merit National Monument status and calls for their protection. Referred to as "objects of interest," these resources include the landscapes of the area as well as numerous sensitive and endangered species, and many archaeological, geological, historic, cultural, and scientific attributes. The establishment of the Monument requires special management consideration, which also affects the application of other law and policy.

Cultural resources associated with the Monument's long and rich human history spanning more than 11,000 years are further described as "bedrock mortar milling features, village middens, and elaborate pictographs." Painted Rock and Sulphur Springs rock art sites are "recognized as world class."

The species, communities and ecosystems found within the Carrizo Plain National Monument are extremely rare and imperiled. The Monument "offers a refuge for endangered, threatened, and rare animal species such as the San Joaquin kit fox, the California condor, the blunt-nosed leopard lizard, the giant kangaroo rat, the San Joaquin antelope squirrel, the longhorn fairy shrimp, and the vernal pool fairy shrimp." The Monument is also "home to many rare and sensitive plant species, including the California jewelflower, the Hoover's woollystar, the San-Joaquin [sic] woolly-threads," among many others. The Monument's "size, isolation, and relatively undeveloped nature of the area make it ideal for long-term conservation of the dwindling flora and fauna characteristic of the San Joaquin Valley region."

The Monument encompasses Soda Lake, "the largest remaining natural alkali wetland in southern California," which is "important to migratory birds" and during the winter "fills with

water and teems with thousands of beautiful lesser sandhill cranes, long-billed curlews, and mountain plovers."

The Proclamation also emphasizes the Monument's geologic processes. The area is "world-famous for its spectacular exposures of fault-generated landforms." The area is also distinguished by its "significant fossil assemblages." The Caliente Formation is home to "abundant and diverse terrestrial fossil mammal remains of the Miocene Epoch (from 13 million to 25 million years ago)." In addition, the "terrestrial fossil remains are interlaced with marine sedimentary rocs bearing fossils of mollusks, pectens, turitellas, and oysters."

Importantly, the Proclamation recognizes that landscapes are a significant aspect of protecting the Monument's objects. The Proclamation states: "Full of natural splendor and rich in human history, the majestic grasslands and stark ridges in the Carrizo Plain National Monument contain exceptional objects of scientific and historic interest . . . **providing crucial habitat for the long-term conservation of the many endemic plant and animal species that still inhabit the area**. The monument offers a refuge for endangered, threatened, and rare animal species" (emphasis added). The Proclamation clearly states that the Monument is created "for the **purpose of protecting the objects identified above**." To accomplish this purpose, the Proclamation establishes specific management requirements, including prohibiting all off-road use of motorized and mechanized vehicles (except for emergency or administrative purposes) and withdrawing the Monument lands from mineral leasing and mining (subject to valid existing rights).

We appreciate BLM's statement that the Mission and Vision for management of the Monument are based on the Proclamation. Draft RMP at 1-13. The stated Mission is consistent with the Proclamation:

> to protect and enhance the indigenous species and natural communities, within a dynamic and fully functioning ecosystem; conserve the unique geologic, paleontologic, and cultural resources; and provide opportunities for compatible scientific, cultural, educational, and recreational activities.

Draft RMP at 1-14. Similarly, the Vision appropriately encompasses the need to "employ management strategies that conserve the integrity of the CPNM [Carrizo Plain National Monument] as an ecological system and natural landscape with its full array of natural and cultural features" and to employ management to "protect and enhance the full spectrum of physical and chemical processes necessary to support indigenous species, biological diversity, and ecological function and processes within the natural range of variation." Id. We are providing additional detail regarding management of these lands to clarify the manner in which the Proclamation must take precedence and will refer to the laws and policy set out in this section throughout these comments.

The Federal Land Policy and Management Act (FLPMA) requires BLM to manage public lands under multiple-use principles unless an area has been designated by law for specific uses, in which case BLM must manage the land for those specific uses. 43 U.S.C. § 1732(a). Pursuant to the legal authority granted by Congress in the Antiquities Act of 1906 (16 U.S.C. §§ 431-433),

the President designated Carrizo Plain National Monument for the explicit purpose of protecting and preserving identified historic and scientific objects. Proclamation No. 7393. Accordingly, the standard approach to multiple-use management does not apply to this Monument, and any effort to adopt such a management approach to the detriment of its natural and cultural values would be in violation of the Presidential Proclamation and the mandates of FLPMA. BLM must manage the Monument for the protection and preservation of its natural, historic and scientific values, and only allow uses other than those needed for protection of Monument objects when those uses do not conflict with the directives of the Proclamation.

Because of its significance, which merited designation as a National Monument and inclusion in the Conservation System, the Carrizo Plain National Monument requires different management from other BLM lands. The Conservation System, comprised of lands created by both presidential and congressional directive, is the largest and most far-reaching conservation initiative in the history of the BLM. The designation of National Monuments, together with the establishment of the Conservation System itself, including its recent codification in the National Landscape Conservation System Act, represents the cornerstone of land stewardship on BLM lands. The Act reiterates that the Conservation System is established to "conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations" and that the BLM has a special obligation to manage these lands "in a manner that protects the values for which the components of the system were designated."

The BLM's obligation to manage Monument lands for protection of the Monument objects above all other concerns has been recognized by the Interior Board of Land Appeals, which upheld the BLM's denial of grazing applications for lands that were incorporated into the Cascade-Siskiyou National Monument when it was created in 2000. Even though a final RMP had not been completed, the IBLA emphasized that: "**BLM has no authority to ignore the Proclamation**, and as Judge Sweitzer recognized, 'the lands within the Monument are now to be **managed primarily for the protection of the objects of interest** identified in the Proclamation.'" Jennifer J. Walt, 172 IBLA 300, 313 (2007) (emphasis added).

In addition to the obligations imposed by the Proclamation, other applicable laws affect the BLM's management of the lands within the Monument. FLPMA imposes a duty on BLM to identify and protect the many natural resources found in the public lands within the Monument. FLPMA requires BLM to inventory its lands and their resource and values, "including outdoor recreation and scenic values." 43 U.S.C. § 1711(a). FLPMA also obligates BLM to take this inventory into account when preparing land use plans, using and observing the principles of multiple use and sustained yield. 43 U.S.C. § 1712(c)(4); 43 U.S.C. § 1712(c)(1). Through management plans, BLM can and should protect wildlife, scenic values, recreation opportunities and wilderness character in the public lands through various management decisions, including by excluding or limiting certain uses of the public lands. See 43 U.S.C. § 1712(e). This is necessary and consistent with FLPMA's definition of multiple use, which identifies the importance of various aspects of wilderness characteristics (such as recreation, wildlife, natural scenic values) and requires BLM's consideration of the relative values of these resources but "not necessarily to the combination of uses that will give the greatest economic return." 43 U.S.C. § 1702(c).

Further, FLPMA requires that: "In managing the public lands the [Secretary of Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C. §1732(b). In this context, when the imperative language "shall" is used, "Congress [leaves] the Secretary no discretion" in how to administer FLPMA. NRDC v. Jamison, 815 F.Supp. 454, 468 (D.D.C. 1992). BLM's duty to prevent unnecessary or undue degradation (UUD) under FLPMA is mandatory, and BLM must, at a minimum, demonstrate compliance with the UUD standard. *See*, Sierra Club v. Hodel, 848 F.2d 1068, 1075 (10th Cir. 1988) (the UUD standards provides the "law to apply" and "imposes a definite standard on the BLM.").

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq*., dictates that the BLM take a "hard look" at the environmental consequences of a proposed action and the requisite environmental analysis "must be appropriate to the action in question." Metcalf v. Daley, 214 F.3d 1135, 1151 (9th Cir. 2000); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989). In order to take the "hard look" required by NEPA, BLM is required to assess impacts and effects that include: "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, **whether direct, indirect, or cumulative**." 40 C.F.R. § 1508.8. (emphasis added). The NEPA regulations define "cumulative impact" as:

> the impact on the environment which results from the **incremental impact of the action when added to other past, present, and reasonably foreseeable future actions** regardless of what agency (Federal or non-Federal) or person undertakes such other actions. **Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time**.

40 C.F.R. § 1508.7. (emphasis added). A failure to include a cumulative impact analysis of actions within a larger region will render NEPA analysis insufficient. *See, e.g.,* Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1078 (9th Cir. 2002) (analysis of root fungus on cedar timber sales was necessary for entire area).

In the context of evaluating impacts of management decisions in the Monument, the BLM should also acknowledge the benefits that can arise from protecting Monument objects, as required in the Proclamation. As discussed in more detail below, protecting the wilderness values of the Monument will also benefit wildlife habitat and cultural resources. Further, there are important economic benefits that managing the Monument to protect its "natural splendor," addressed in detail in a report prepared by The Wilderness Society entitled "The Carrizo Plain National Monument: A Stunning Natural Landscape Sustaining Vibrant Local Communities," attached and available on-line at: http://wilderness.org/content/carrizo-plain-sustaining-communities .

NEPA also requires that the BLM consider a range of management alternatives, which is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. *See* 40 C.F.R. §§ 1502.14(a) and 1508.25(c). "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." Northwest Envtl Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997). An

agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. *See, e.g.,* Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein). For this Draft RMP, the consideration of more environmentally protective alternatives is consistent with both the requirements of the Monument Proclamations and FLPMA's requirement BLM to "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §1732(d)(2)(a).

NEPA requires that an actual "range" of alternatives be considered, such that the Act will "preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (*i.e.* the applicant's proposed project)." Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999), citing Simmons v. United States Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997). This requirement prevents the EIS from becoming "a foreordained formality." City of New York v. Department of Transp., 715 F.2d 732, 743 (2nd Cir. 1983). *See also*, Davis v. Mineta, 302 F.3d 1104 (10th Cir. 2002).

NEPA further requires that BLM discuss mitigation measures in an EIS. 40 C.F.R. §§ 1502.14, 1502.16. In general, in order to show that mitigation will reduce environmental impacts to an insignificant level, BLM must discuss the mitigation measures "in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Communities, Inc. v. Busey*, 956 F.2d 619, 626 (6th Cir. 1992). Simply identifying mitigation measures, without analyzing the effectiveness of the measures, violates NEPA. Agencies must "analyze the mitigation measures in detail [and] explain how effective the measures would be . . . A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." *Nw. Indian Cemetery Protective Ass'n v. Peterson*, 764 F.2d 581, 588 (9th Cir. 1985), *rev'd on other grounds*, 485 U.S. 439 (1988). NEPA also directs that the "possibility of mitigation" should not be relied upon as a means to avoid further environmental analysis. Council on Environmental Quality, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, available at http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm ; *Davis v. Mineta*, 302 F.3d at 1125. Further, general statements that BLM will conduct monitoring are also not an appropriate form of mitigation. Simply monitoring for expected damage does not actually reduce or alleviate any impacts.

Under the Proclamation and the Antiquities Act cited above, **all** of the alternatives must conserve Monument resources **first** (and in particular, those resources that are "objects of interest"), and **then** make other management decisions that do not interfere with the conservation of Monument resources. Thus, in order to comply with these requirements, the range of alternatives cannot include management decisions that will undermine protection of Monument objects in favor of other resources or uses, such as commercial use and recreation.

In addition, in order to fulfill the goals and the directives of the Proclamation, as set out in the Mission and Vision, the final management alternative adopted by the BLM can and should incorporate aspects of the different alternatives set out in the Draft RMP/EIS.

***Recommendations*:** The BLM should analyze the impacts of proposed management on Monument objects and ensure that protection of Monument objects is given priority over other uses of these lands, as described in detail above. The BLM must also consider other opportunities to protect natural and cultural resources, in accordance with FLPMA and NEPA, although the range of alternatives must still prioritize protection of Monument objects.

II. WILDERNESS CHARACTER

A. Protection and enhancement of wilderness characteristics

1. *BLM should manage all areas found to have wilderness characteristics for protection, as is proposed in Alternative 1*.

The Draft RMP acknowledges that the BLM can manage lands within the Monument to protect wilderness characteristics, which are defined to include naturalness, opportunities for solitude, primitive and unconfined recreation, and other associated qualities. Draft RMP at 2-80. We appreciate that the BLM inventoried the Monument to identify lands with wilderness characteristics. BLM found 65,218 acres in the Monument outside of the Caliente Wilderness Study Area (WSA) to have wilderness characteristics, but the preferred alternative proposes to manage only 36,480 acres to protect these values. That is barely more than half of the Monument's inventoried wilderness-quality lands. Grassland ecosystems are generally underrepresented in the Conservation System, and the Carrizo Plain National Monument contains some of the last remaining intact desert grasslands in California. The Carrizo Plain National Monument Proclamation specifically addresses the importance of preserving this endangered ecosystem; the Proclamation identifies the Monument's "natural splendor" and its "size, isolation, and relatively undeveloped nature of the area" as part of the Monument objects to be protected. Furthermore, BLM recognizes that protecting all 65,218 acres for wilderness characteristics is a viable option by proposing to do so in Alternative 1.

Protecting lands with wilderness characteristics has the added benefit of protecting other values in the Monument that BLM is charged with managing. For instance, in BLM's Malta (Montana) Field Office, the Bitter Creek WSA is also designated as an Area of Critical Environmental Concern because of the important grassland ecosystem values, managed with the threefold goal to: "(1) maintain the natural grassland vegetation; (2) limit visual change to the undisturbed scenic landscape; and (3) encourage understanding of, and appreciation for, the prairie grassland ecosystem." *See,* Plan Amendment and Environmental Assessment, p. 1, available at: http://www.blm.gov/pgdata/etc/medialib/blm/mt/blm_programs/planning/jvp_rmp/bittercreek.Par.66473.File.dat/bittercreekDR.pdf . Similarly, wilderness values are identified as a planning theme in the Draft RMP for the Carrizo Plain National Monument because managing lands to maintain wilderness characteristics "would help to reduce habitat fragmentation, protect a wide range of natural and cultural resources, and allow for greater ecological resilience to habitat

degradation across both space and time." Draft RMP at 1-3. Management actions and alternatives for the preservation of cultural and historic resources are addressed in the Draft RMP in great detail. However, the Draft RMP acknowledges that "cultural resource inventories completed on public and nonfederal lands in the Monument to date encompass nearly 9.7 percent of the 250,000 acres." Draft RMP at 3-66. With less than 10% of the Monument inventoried for cultural resources, BLM should specifically acknowledge the potential benefits to undiscovered, or as yet un-inventoried, cultural resources that would result from protectively managing wilderness-quality lands. Additionally, lands with wilderness characteristics are an important source of undisturbed wildlife habitat, as well as corridors and linkages, but these benefits are not specifically acknowledged in the impact analysis set out in Chapter 4 of the Draft RMP. The Proclamation specifically acknowledges that "the size, isolation, and relatively undeveloped nature of the area make it ideal for long-term conservation of the dwindling flora and fauna characteristic of the San Joaquin Valley region." Giving maximum protections to wilderness-quality lands is the best way for BLM to ensure that it will be able to meet its wildlife management goals.

Recommendations: BLM should manage all 65,218 acres outside of the Caliente WSA found to have wilderness characteristics to protect these values, and formally recognize the benefits to other Monument objects derived from protecting wilderness-quality lands.

2. *BLM should manage lands with wilderness characteristics to enhance these values*.

BLM Instruction Memoranda (IM) Nos. 2003-274 and 2003-275 formalized the agency's policies concerning wilderness study and consideration of wilderness characteristics in the wake of the Utah Settlement. In the IMs and subsequent public statements, BLM has claimed that its abandonment of previous policy on WSAs would not prevent protection of lands with wilderness characteristics. The IMs contemplate that BLM can continue to inventory for and protect land "with wilderness characteristics," such as naturalness or providing opportunities for solitude or primitive recreation, through the planning process. The IMs further provide for management that emphasizes "the protection of some or all of the wilderness characteristics as a priority," even if this means prioritizing wilderness over other multiple uses. This guidance does not limit its application to lands suitable for designation of WSAs; for instance, the guidance does not include a requirement for the lands at issue to generally comprise 5,000-acre parcels or a requirement that the lands have all of the potential wilderness characteristics in order to merit protection.

Thus, the wilderness-quality lands on the valley floor considered for management of wilderness characteristics in Alternative 1, meet the agency's guidance for protection of lands with wilderness characteristics. Further, management can focus on protecting and enhancing some or all of their other wilderness characteristics, such as naturalness, opportunities for primitive recreation, or opportunities for solitude. Although smaller parcels, such as those on the valley floor, may permit individuals to see other activities outside the parcels, this view will not affect wilderness qualities within the parcel and people may still experience solitude in connection with the open landscape and views, as well as the naturalness of the parcels – providing additional

justification to manage these areas to both protect existing qualities and enhance their wilderness values.

In addition to protecting all of the wilderness-quality lands in the Monument, BLM should work to restore and enhance the wilderness values of Carrizo Plain. The disappearance of grasslands in California and across North America gives special importance to restoring the grasslands found in the monument. Furthermore, studies cited by the BLM recognize the damage to Carrizo's grassland that has occurred from grazing, obligating the BLM to actively restore damaged areas in order to fulfill the Proclamation, Mission and Vision. Draft RMP, pp. 3-35- 3-37. Dr. Elizabeth Painter, an expert on plant resources, provided BLM with detailed comments on restoration of native ecosystems in Carrizo Plain. BLM should utilize the scientific literature and recommendations included in Dr. Painter's comments, affording her due consideration as an expert in the field.

Restoration efforts that can enhance wilderness characteristics include fence removal, road closures, active revegetation of native species, and removal and restoration of other sites such as communication facilities and guzzlers. Taking these steps to enhance lands with wilderness characteristics will have the added benefit of helping BLM to meet its goals for other resources. The Draft RMP addresses closing and restoring roads and removing fences as possible management action for meeting population goals for pronghorn and tule elk, in addition to restoring habitat in general for these species. Draft RMP, pp. 2-137 – 2-139. Therefore, enhancing wilderness-quality lands will increase the opportunity for BLM to meet its species targets. Enhancement of wilderness characteristics would also enhance visual resources and improve management and enforcement of ORV use by closing and restoring roads.

Recommendation: BLM should not only protect all of the wilderness-quality lands in the monument, but also actively restore these areas to enhance wilderness characteristics.

3. *Protecting and enhancing lands with wilderness characteristics provides important economic benefits*.

The recreation opportunities provided by wilderness quality lands also yield direct economic benefits to local communities. According to the U.S. Fish & Wildlife Service, in 2006 state residents and non-residents spent $8 billion on wildlife recreation in California. (USFWS 2006, *National Survey of Hunting, Fishing and Wildlife-associated Recreation* - http://www.census.gov/prod/2008pubs/fhw06-ca.pdf). In addition, local communities that protect wildlands reap measurable benefits in terms of employment and personal income. For instance, a report by the Sonoran Institute (Sonoran Institute 2004, *Prosperity in the 21st Century West -The Role of Protected Public Lands -* www.sonoraninstitute.org) found that:

> Protected lands have the greatest influence on economic growth in rural isolated counties that lack easy access to larger markets. From 1970 to 2000, real per capita income in isolated rural counties with protected land grew more than 60 percent faster than isolated counties without any protected lands.

These findings confirm earlier research, showing that wilderness is in fact beneficial for local economies. Residents of counties with wilderness cite wilderness as an important reason why they moved to the county, and long-term residents cite it as a reason they stay. Recent survey results also indicate that many firms decide to locate or stay in the West because of scenic amenities and wildlife-based recreation, both of which are strongly supported by wilderness areas. (Morton 2000, *Wilderness: The Silent Engine of the West's Economy*). Other "non-market" economic values arise from the ability of wildlands to contribute to recreation and recreation-related jobs, scientific research, scenic viewsheds, biodiversity conservation, and watershed protection. (Morton 1999, *The Economic Benefits of Wilderness: Theory and Practice*; Loomis 2000, *Economic Values of Wilderness Recreation and Passive Use: What We Think We Know at the Turn of the 21st Century*). All of these economic benefits are dependent upon adequate protection of the wilderness characteristics of the lands.

The specific benefits associated with managing the Monument to protect and enhance its wilderness qualities and desert ecosystem are described in more detail in the attached report, entitled "*The Carrizo Plain National Monument: A Stunning Natural Landscape Sustaining Vibrant Local Communities."*

Recommendations: In evaluating management alternatives, BLM should recognize the substantial economic benefits derived from protecting lands with wilderness characteristics, and manage all of its wilderness-quality lands to promote these economic benefits.

B. Wilderness Study Areas

1. *BLM should consider designating new Wilderness Study Areas*.

We are aware of the April 2003 settlement agreement (Utah Settlement) between Secretary of the Interior Norton and the State of Utah (in which BLM abdicated its authority to designate any additional WSAs, and we maintain that this agreement is invalid and will ultimately be overturned in pending litigation.

The federal court in Utah revoked its approval of the Utah Settlement, stating that its approval of the initial settlement was never intended to be interpreted as a binding consent decree. Recognizing that the court's decision undermined the legal ground for the Utah Settlement, the State of Utah and the Department of Interior have now formally withdrawn the settlement as it was originally submitted. This casts serious doubt upon BLM's current policy not to consider designating new WSAs. Because the State of Utah and the Department of Interior have withdrawn their settlement and do not intend to seek a new consent decree, there is currently no binding consent decree and the BLM has not even issued any updated guidance seeking to continue applying this misguided, and illegal, policy.

Even if the Utah Settlement is reinstated, not as a consent decree, it is illegal. The Utah Settlement is based on an interpretation of FLPMA §§ 201, 202, and 603 that is contrary to FLPMA's plain language. Section 603 did not supersede or limit BLM's authority under § 201 to undertake wilderness inventories, but rather relies explicitly on BLM having exactly that authority under § 201. Nor did § 603 in any way limit BLM's discretion under § 202 to manage its lands as it sees fit, including managing areas as § 202 WSAs in accordance with the Interim

Management Policy (IMP). Every prior administration has created WSAs under § 202 and they plainly had authority to do so. This administration has such authority as well, making this a reasonable alternative deserving of consideration in this NEPA process.

The Utah Settlement is also illegal because the court in Utah lacked jurisdiction to prohibit designation of new WSAs nationwide, including in California.

Accordingly, the BLM should consider designating additional WSAs in this Draft RMP/EIS. Carrying out this responsibility is also consistent with the agency's duties under NEPA.

In defining what is a "reasonable" range of alternatives, NEPA requires consideration of alternatives "that are practical or feasible" and not just "whether the proponent or applicant likes or is itself capable of carrying out a particular alternative"; in fact, "[a]n alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable." Council on Environmental Quality, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, *Questions 2A and 2B*, available at http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm; 40 C.F.R. §§ 1502.14, 1506.2(d).

Recommendation: In light of the most recent ruling and subsequent action of the parties, we emphasize that the BLM can and should continue to designate new WSAs in this planning process. BLM's current policy also does not justify excluding creation of new WSAs from consideration in one or more management alternatives.

2. *BLM should close all motorized routes in WSAs to motorized public use*.

We appreciate BLM's proposal to keep the way up Caliente Mountain in this WSA closed to public motorized use. We reiterate that this is the proper course of action for a WSA, and expect BLM will maintain this management for the road.

Travel management planning within WSAs must minimize motorized routes, which can impair wilderness characteristics. BLM is obligated to manage the WSAs in accordance with the Interim Management Policy (IMP) for Lands Under Wilderness Review (BLM Manual H-8550-1), which requires that WSAs be managed to protect their wilderness values. The IMP requires management of the WSA in the Carrizo Plain National Monument in accordance with the nonimpairment standard, such that no activities are allowed that may adversely affect the WSAs' potential for designation as wilderness. As stated in the IMP, the "overriding consideration" for management is that:

> . . . preservation of wilderness values within a WSA is paramount and should be the primary consideration when evaluating any proposed action or use that may conflict with or be adverse to those wilderness values. (emphasis in original)

In order to fulfill the mandates of the IMP, BLM's preferred alternative should cause the least harm and provide the most benefits to the wilderness characteristics in the Caliente WSA. In addition, any motorized routes left open in the WSA must meet the criteria of the IMP, showing

that they do not impair wilderness suitability. BLM must vigilantly monitor the conditions of these routes and their impact on wilderness suitability, and ensure that they are closed if use of the routes impairs wilderness values.

Recommendations: The RMP must acknowledge the possible damage from permitting public motorized access in the Caliente WSA and the benefits to wilderness values from limiting such access. For the road that will be maintained, the RMP should show a compelling reason as to why it is necessary for the way to be open, even if it is solely for administrative purposes. BLM must also monitor the WSA to ensure illegal motorized routes are not being created and maintained by users. Closure and restoration of all motorized ways in the Caliente WSA is most consistent with the IMP and with protection of the other natural and cultural resources in the Carrizo Plain National Monument.

III. LIVESTOCK GRAZING

A. The preferred alternative for livestock grazing is not supported by the best available science.

As we stated in our scoping comments (submitted June 12, 2007), the ecological benefits of cattle grazing in the western United States and specifically on Carrizo Plain National Monument are controversial. The Draft RMP specifically acknowledges that "given the uncertainty of how Carrizo Plain grasslands might respond to livestock grazing over the long run, successful management requires thoughtful implementation and monitoring of any grazing activities." (pp. 3-35). In addition thus far, there is no scientific evidence indicating that livestock grazing accomplishes management objectives at the Carrizo Plain (pp. 3-34 to 3-36). In fact, the RMP/EIS explains that the two studies done at the Carrizo that specifically address grazing effects (Christian *et al.* in prep and Kimball and Schiffman [2003]) both demonstrated that grazing negatively affects native plant diversity and cover, bunchgrass cover, and does not negatively impact undesirable invasive non-native plant species. Kimball and Schiffman (2003) found that livestock grazing "harms native species and promotes alien plant growth." They state that "the native California grassland community assembled in the absence of grazing herds, whereas invasive European species have been exposed to grazing for centuries. It may be that these invaders have adaptations that better enable them to recover from grazing. In the grassland we studied, [Carrizo Plain National Monument], the strategy of livestock grazing for restoration is counterproductive." In addition, Christian *et al.* found that grazing did not positively affect endangered giant kangaroo rat populations.

In her review of grazing issues in the Draft RMP, Dr. Paula Schiffman, a terrestrial ecologist in the Cal State Northridge biology department, states "at this point, the best available science conducted at Carrizo [Plain National Monument] indicates that livestock grazing is not 'required' to promote management goals."

We also reference and support comments submitted to the BLM by Dr. Elizabeth Painter on livestock grazing and its contribution to the proliferation of alien plants (including "weeds" and pest plants). Chief among Dr. Painter's concerns is the fact that the Draft RMP offers no

scientifically sound justification for allowing livestock grazing in parts of the monument. She also notes the benefits to scientific research that would result from eliminating grazing in the monument, such as understanding rates of recovery from livestock grazing and the impacts of native ungulates on vegetation. BLM should carefully review her comments, and give them appropriate consideration given her professional expertise.

The level of attention to grazing undervalues the wilderness qualities of the grassland areas identified in Alternative 1. In addition to benefiting native species, the end of grazing on the valley floor would: allow removal of fences, allow removal of other range improvements, make access roads unnecessary and permit restoration of unnecessary roads. Dr. Schiffman describes the resulting benefits from halting grazing as "cascades of ecologically positive results." In addition to promoting pronghorn and tule elk movement across the plain, the removal of fences and restoration of roads would improve the visual resources on the plain. This action would help simplify route management and enforcement and allow the restoration of true wilderness character to the primitive areas.

Recommendations: Scientific evidence contradicts the idea that livestock grazing should be used as a vegetation management tool on the valley floor. The preferred alternative allocates 117,500 acres as "available for livestock grazing, but only for the purpose of vegetation management". We urge the BLM to consider reallocating these lands as "unavailable for any livestock grazing" as proposed in Alternative 1.

B. Grazing and invasive species need to be managed to protect the natural environment and the Monument objects.

We appreciate BLM's recognition, in its preferred alternative, of the need to protect Monument objects and the demonstrated risks from grazing by setting a goal to use grazing only for vegetative management. However, we hope to see this recognition and commitment strengthened in the final plan so that the Monument's objects can be protected and, where appropriate, this creative approach to managing grazing can be effectively achieved.

With the designation of the Monument, the BLM was given a new mandate for management of these lands to protect the "objects" identified in Proclamation No. 7393 including the grassland ecosystem and the wildlife that depend upon it, as well as cultural resources. Because of their ecological and cultural significance these lands merited designation as a National Monument and inclusion in the Conservation System, requiring management to prioritize protecting these values. Uses of the Monument lands that are secondary to this overriding purpose should be identified and restricted in order to protect Monument objects.

In this context, we appreciate the BLM's concept of managing grazing for the purpose of vegetation management, which would enable the agency to permit grazing only where it could benefit protection and enhancement of the Monument's values. As discussed in more detail below, in order to justify continued grazing in the Monument, the agency must first determine that it will actually benefit and/or not harm the Monument's biological and cultural resources.

Where such a determination can be made, making lands available for grazing only for purposes of vegetation management will require additional clarification in the RMP.

Dr. Schiffman recommends a process to make such a determination in her comments to the BLM:

> Of course, it is possible, perhaps even likely, that a few native species respond positively to livestock grazing. For example, Germano et al. suggested that blunt-nosed leopard lizards may benefit from livestock grazing because it improves habitat quality by reducing non-native grass cover. Nevertheless, as the situation stands right now, there is no substantive evidence-based reason to include livestock grazing in the Conservation Target Table that includes "Management Objectives and Variables" and "Management Guidelines" (Appendix C: pages C-5 through C-103). Therefore, if grazing is going to continue at Carrizo Plain National Monument, I strongly recommend that it be done only on an explicitly experimental basis and that clear justifications should be provided. Each justification should contain a precise description of all the expected management benefits as well a discussion of potential adverse effects (including possible effects on non-target species). A clear plan (including a timeline) for monitoring and evaluating the results should be included. Only meaningful hypotheses about the possible efficacy of grazing in certain specific contexts (for example, reducing the cover of certain noxious weeds o improving habitat for blunt-nosed leopard lizards) should be tested. Justifications and monitoring/evaluation plans should be formulated and implemented for all other significant management efforts as well, particularly when important uncertainties exist (for example, for prescribed burns). Input from the Carrizo Plain National Monument's Science Advisory Team should be sought during the development and evaluation of these plans. Findings generated by this scientific approach can then be used to inform management decisions (adaptive management) and to direct future research initiatives.

The Draft RMP does not clearly define how lands classified as "available for grazing for the purpose of vegetation management" would differ from land classified as simply "available for grazing." Similarly, the Draft RMP does not set out in detail how the management strategies would differ and how existing leases would be amended.

Recommendations: Where the agency can determine that livestock grazing will benefit Monument objects, limiting this use to vegetation management and clarifying that the Monument lands will not be generally "available" for grazing is more consistent with the Proclamation, as well as responsible management of biological and cultural resources. To achieve this transition, the RMP must specify:

- differences in the classification of lands – including re-classification in the RMP as permitted under the terms of existing grazing leases;
- standards for determining when vegetation management is needed and whether grazing is the appropriate tool; and
- terms and authority under which grazing will be permitted and managed – since typical 10-year grazing leases are not an appropriate vehicle.

C. The Monument Proclamation and existing scientific evidence cannot support long-term grazing leases and any renewal of leases must be conditioned on protection of Monument objects.

Proclamation No. 7393, creating the Carrizo Plain National Monument states: "Full of natural splendor and rich in human history, the majestic grasslands and stark ridges in the Carrizo Plain National Monument contain exceptional objects of scientific and historic interest . . . **providing crucial habitat for the long-term conservation of the many endemic plant and animal species that still inhabit the area**. The Monument offers a refuge for endangered, threatened, and rare animal species" (emphasis added). Species identified in the Proclamation are:

> San Joaquin kit fox, the California condor, the blunt-nosed leopard lizard, the giant kangaroo rat, the San Joaquin antelope squirrel, the longhorn fairy shrimp, and the vernal pool fairy shrimp; important populations of pronghorn antelope and tule elk; and many rare and sensitive plant species, including the California jewelflower, the Hoover's woolly-star, the San Joaquin woolly-threads, the pale-yellow layia, the forked fiddleneck, the Carrizo peppergrass, the Lost Hills saltbush, the Temblor buckwheat, the recurved larkspur, and the Munz's tidy-tips.

The Proclamation clearly states that the Monument is created "for the purpose of protecting the objects identified above."

In recognition of the vital role of sufficient quantity and quality of water in the function of the Monument's ecosystem, the Proclamation also provides: "There is hereby reserved, as of the date of this proclamation and subject to valid existing rights, a quantity of water sufficient to fulfill the purposes for which this monument is established."

The Draft RMP repeatedly acknowledges that ongoing grazing can harm Monument objects and restriction of grazing can better protect them. *See, e.g.* Draft RMP at pp. 3-17, 4-8 – 4-9, 4-221. The potential harm to Monument objects from continued grazing, and the benefits from ceasing grazing, are also highlighted by the results of the ongoing study of grazing on the Monument. A long-term study has been underway on the Monument since 1997 (Christian *et al.* in prep), specifically designed to evaluate the effects of grazing on native plants and giant kangaroo rats, prey for the San Joaquin kit fox, creating burrows used by the San Joaquin antelope squirrels and blunt-nosed leopard lizards and (through vegetative clipping and seed harvesting) creating habitat for the endangered San Joaquin species. These species are all noted in the Monument proclamation as objects to be protected; the Proclamation also highlights the value of Monument designation to these species, highlighting the importance of these lands for "long-term conservation of the dwindling flora and fauna characteristic of the San Joaquin Valley region."

The study has been jointly conducted by the BLM, The Nature Conservancy, the California Department of Fish and Game, and researchers from Sonoma State University. Despite a working hypothesis that cattle grazing would benefit native species, the results of the study have revealed that two of the primary management objectives for using grazing as a management tool, enhancing native species and decreasing exotic plant species, cannot be supported. Similarly,

although the study was undertaken with the hypothesis that grazing would have a positive effect on giant kangaroo rat habitat by removing exotic grass, the study has shown that grazing has had a negative effect for four years and no effect for the other two years studied. *See, e.g.,* Draft RMP at 4-114.

While this study has focused on the foothills and valley floor areas of the Monument, the BLM has already recognized that the results of the study are generally transferable to the grazing allotments in the Caliente Mountains, citing the study for the proposition that, if grazing were stopped, "[n]ative species abundance in the shrublands is expected to increase overall (Christian *et al.* in prep)." EA# CA169-07-009 p. 31. Additional research may be advisable to confirm the likely impacts of grazing on the woodland areas of the Sulphur Canyon and Selby Ranch allotments, but the existing studies certainly provide ample evidence that grazing is likely to harm, and definitely not likely to improve, the condition of Monument objects.

Recommendations: The Proclamation requires the BLM to manage the Monument for the purpose of protecting these natural values. In this context, protection means not just protecting this ecosystem from total destruction, but proactively supporting its function. As part of this Draft RMP for the Monument, the BLM must consider whether and how grazing can support the changed management mandate for these lands imposed by the Proclamation. Given the findings of the study and the agency's conclusion that "no grazing" is likely to benefit the Monument objects, additional changes to existing grazing leases are necessary in the RMP. Instead of merely providing for these leases to be adjusted or cancelled at a later date (pp. 2-84 and 2-85), the BLM should limit the term of the leases to coincide with the finalization of the Monument RMP (such as for a period of three years) and specifically provide that the leases will only be renewed if a study shows that ongoing grazing will benefit the Monument objects, including vegetation and riparian areas that are vital to the Monument's ecosystem.

D. The applicable legal framework supports a thorough analysis of the benefits of the proposed approach to utilize a short-term grazing lease with renewal conditioned on showing that grazing can protect Monument objects.

The lands of the Monument are not within a grazing district, indicating that the BLM has already determined that these lands are not "chiefly valuable" for grazing and raising forage. *See* 43 U.S.C. § 315. This determination has been reinforced by the creation of the Monument, through a Monument Proclamation that identifies a host of other values for which these lands are clearly most valuable. In addition, FLPMA directs the BLM to manage the public lands in a manner that will "best meet the present and future needs of the American people." 43 U.S.C. § 1702(c). The designation of the Monument reflects a Presidential determination that the best use of these lands is to protect Monument objects – and other uses, including grazing, should be managed accordingly.

The Taylor Grazing Act does not require the BLM to issue all grazing leases for 10-year terms. Rather, the Taylor Grazing Act states only that "permits shall be for a period of not more than ten years. . ." 43 U.S.C. § 315b. FLPMA also specifically authorizes the issuance of leases for less than 10 years when "the land will be devoted to a [different] public purpose prior to the end

of ten years [] or it will be in the best interest of sound land management to specify a shorter term…." 43 U.S.C. § 1752 (2) and (3). Further, BLM's regulations specifically provide for limiting the term of grazing leases in certain situations, including where the "authorized officer determines that a permit or lease for less than 10 years is in the best interest of sound land management" or "land will be devoted to a public purpose which precludes grazing prior to the end of 10 years." 43 C.F.R. § 4130.2(d)(4), § 4130.2 (d)(2). In the context of the Carrizo Plain National Monument, the BLM's current analysis and ongoing science indicate that "sound" management, in light of the Proclamation's directive to prioritize protection of Monument objects, would support a shorter lease term; in addition, the Monument RMP may ultimately determine that grazing is not appropriate on the Monument at all.

The Proclamation language does not require the continuation of grazing. Rather, the Proclamation provides that "laws, regulations and policies" pertaining to grazing "shall continue to apply" – it does not require that grazing continue. There is no guarantee to graze lands on the Monument or any BLM lands. As stated in the Taylor Grazing Act "issuance of a permit pursuant to the provisions of this subchapter shall not create any right, title, interest, or estate in or to the lands." 43 U.S.C. § 315b. The applicable regulations also provide for cancellation or modification of grazing leases for a variety of reasons, including conformance with land use plans and rangeland health standards. 43 C.F.R. §§ 4110.3, 4130.3-1, 4130.3-3.

NEPA obligates the BLM to thoroughly consider feasible alternatives to the proposed action. Although we support the agency's consideration of Alternative 1 and a no grazing alternative, the BLM has not fully analyzed an alternative that would limit the renewal term of the subject leases and condition further renewal on a scientific study showing that grazing will support the BLM's compliance with the Proclamation. The BLM must not adopt an alternative to renew the subject grazing leases "without intense consideration of other more ecologically sound courses of action" (Envnt'l Defense Fund., Inc. v. U.S. Army Corps. of Eng'rs, 492 F.2d 1123, 1135 (5th Cir. 1974)) and must consider alternatives that would "avoid or minimize" adverse environmental effects. Or. Envtl. Council v. Kunzman, 614 F.Supp. 657, 659-660 (D. Or. 1985). "NEPA requires that federal agencies consider alternatives to recommended actions whenever those actions 'involve[ ] unresolved conflicts concerning alternative uses of available resources.' 42 U.S.C. § 4332(2)(E) (1982)." Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228-29 (9th Cir. 1988).

Limiting the renewal term is consistent with the agency's obligations under FLPMA, NEPA, the Monument Proclamation, and applicable law governing management of grazing. In light of the findings in the current study, which shows that grazing is not assisting the agency in meeting its obligations under the Proclamation, simply identifying these areas as "available to grazing," renewing the leases for 10 years and not providing that grazing can only continue if it supports protection of Monument objects, is not desirable or consistent with the relevant law and policy, especially in light of the improved approach we have highlighted in our comments.

The results from the grazing study on the valley floor of the Monument, taken in conjunction with the existing body of scientific research, should underscore the importance of maintaining maximum flexibility in managing grazing on the Monument. Unless or until grazing can be

shown to be consistent with protecting the Monument objects, the BLM should limit any commitments to long-term grazing on the Carrizo Plain National Monument.

Recommendations: Lands in the Caliente Mountains should not be characterized as "available" for grazing (as in Alternative 2 and 3); grazing should only be used if it can be shown to be consistent with protecting the Monument objects on all lands within the Monument. We urge the agency to take this opportunity to renew the Section 15 grazing leases for a shorter term, conditioning renewal on a science-based determination that grazing will contribute to and improve the functioning of the Monument's San Joaquin Valley ecosystem.

The BLM can and should set out a new approach to managing grazing, acknowledging the priority that must be given to protection of Monument objects, by using its discretion to renew the subject grazing leases for a term of no more than three years and conditioning any further renewal on a scientifically-based finding that continued grazing will support protection of Monument objects, encompassing not only the identified species, but also the vegetation and riparian areas upon which they depend.

E. Prescribed burning should be evaluated as a tool to manage invasive species.

The BLM should not simply assume that either grazing or fire will be an effective tool to control invasive species on the Carrizo Plain National Monument. Neither should be used without analysis of a defined need in a specific place – keeping the options open. However, the Draft RMP failed to give additional consideration to prescribed burning as a management tool.

Unlike grazing, there is some evidence from research done at the Carrizo Plain that prescribed burns can effectively accomplish resource management objectives. An experiment done by Meyer and Schiffman (1999) showed that properly timed burns were quite effective at reducing non-native plant cover and promoting native plant cover and diversity.

Keeley (2001) found that while spring burning might be an effective way to shift the landscape "away from the annual alien grasses towards increased native cover," this is only true "on sites with an existing perennial bunchgrass presence" and "may not be an appropriate community restoration technique because it inhibits native annuals as well." The author notes, for example, that "repeated prescription burning during summer has shown promise for reducing the level of infestation of yellow starthistle, although native bunchgrasses were unaffected and alien annual grasses increased" (DiTomaso *et al.* 1999, as cited in Keeley 2001). Keeley (2001) also notes that "there is no convincing demonstration that fire alone is an effective technique for diminishing the dominance by nonnative annuals" and that "generally burning of annual grasslands does not greatly alter the native to nonnative composition, unless accompanied by active native plant restoration."

In a study of serpentine grassland, Seabloom *et al.* (2003) also found "there was no effect of burning or mowing on native abundance or richness in the absence of seeding." Germano, Rathbun, and Saslaw (2001), additionally, found in a study of the effects of fire in the Lokern Natural Area, that "fire often completely kills native saltbush," which provides "potentially

important cover" for antelope squirrels and lizards. Germano, Rathbun, and Saslaw (2001) suggest further that "fire now maintains alien grasslands in habitats throughout the world, including the San Joaquin Valley, at the expense of native plant communities" (D'Antonio and Vitousek 1992, as cited in Germano, Rathbun, and Saslaw 2001). On the other hand, some studies indicate that "late season forbs, particularly yellow starthistle, can also be controlled by repeated early summer burns" (DiTomaso *et al.* 1999a, Kyser and DiTomaso 2002, as cited in DiTomaso, Enloe, and Pitcairn 2007). Additionally, in a study of the invasive annual grass barb goatgrass (Aegilops triuncialis) at the University of California Hopland Research and Extension Center (HREC) in Mendocino County, DiTomaso *et al.* (2001) found that two years of prescribed burning, conducted in late spring or early summer, "before barb goatgrass seeds had reached maturation," effectively controlled barb goatgrass "while increasing native perennial grass cover and native species richness, particularly legumes." The authors also found, however, that a single year of burning "is not sufficient to provide long-term management of barb goatgrass" (DiTomaso *et al.* 2001).

Recommendations: As the above paragraph shows and as Dr. Schiffman points out in her comments submitted to the BLM on the Draft RMP, "there is still considerable uncertainty about the use prescribed burns as a vegetation management tool, but there is probably no need to repeat previous research. Instead, burn-related issues that still need to be addressed include (1) how vegetation composition (particularly native species) responds when sites are burned repeatedly over a period of years, (2) how repeated burning affects bunchgrasses (*Poa secunda* and *Nassella cernua*), and (3) whether burning can effectively control non-native species such as tumbleweeds, mustards, and prickly lettuce that are very widespread in some years and/or in some locations."

NEPA requires the BLM to evaluate this alternative management tool. If there is a real need to control invasive species, if it is the right season, and if precautions are taken, then prescribed burning should be an option. In addition, impacts from prescribed burning to the already compromised San Joaquin air basin should be taken into consideration.

F. The RMP must specify the conditions to be accepted for use of motorized vehicles by the holders of grazing leases.

The Draft RMP contemplates ongoing motorized use of grazing leaseholders to access allotments. However, the Proclamation specifically prohibits use of motorized vehicles off of designated roads and the Draft RMP acknowledges the potential damage from motorized use to Monument objects. Accordingly, the conditions and limitations applicable to motorized use must be carefully crafted to permit management of this use in a way that protects Monument objects.

Recommendations: As the plan is written, these conditions are not clear. Specifically, the RMP must set out reasons for allowing such use, an explanation of how it is consistent with the Proclamation, a monitoring plan for ensuring that Monument objects are being protected, and detailed descriptions of the conditions in which motorized use is envisioned. This is especially true if the BLM contemplates permitting motorized use off designated roads for herding or maintenance of fences and other facilities.

IV. BIOLOGICAL RESOURCES

A. General considerations and detailed expert comments

The Carrizo Plain National Monument is home to a high concentration of unique, rare, and threatened and endangered species. The Monument Proclamation recognizes that the area is "ideal for long-term conservation of the dwindling flora and fauna characteristic of the San Joaquin Valley region." Additionally, the Monument's status in the National Landscape Conservation System gives BLM the discretion and direction to manage biological resources as a priority over all other uses.

Dr. Elizabeth Painter and Dr. Paula Schiffman have submitted extensive comments on appropriate management of the Monument's many important biological resources. In addition to specific recommendations for a multitude of species and soil crusts, her major concerns are grazing, and specifically that it is documented as a factor in the proliferation of non-native species, the lack of baseline data to educate restoration efforts, and the Draft RMP's exclusion of the Meyer and Schiffman study on prescribed burning in Carrizo. BLM should thoroughly review her comments and afford her due consideration as an expert in the field.

Recommendations: BLM should ensure that protection of the biological resources the Monument was designated to safeguard is prioritized over other uses in the Monument, and should make full use of the expert opinion and detailed recommendations to correct inadequacies in analysis and management prescriptions submitted by Dr. Painter.

B. Conservation Target Table

BLM and The Nature Conservancy have clearly put a great effort into creating the Conservation Target Table, which will serve as the foundation for management of the Monument, including by enabling and informing adaptive management. We are impressed by this effort and appreciative of BLM's commitment to informed and flexible management based on the status of biological resources and Monument objects.

However, there are several issues that must be addressed in order for the table to function in a manner that actually meets these goals:

1. ***The table must be more specific***. For example, where the management objective is to "maintain distribution and size of existing populations," the current population distribution and size should be documented. Additionally, the table must be more specific as to what actions will be taken when objectives are not being met.
2. BLM must complete an ***inventory of baseline data*** in order to determine appropriate management actions and restoration efforts.
3. The RMP should include a ***commitment to implementation*** and strategies for ***enforcement*** of the standards set out in the table to achieve management objectives.

4. Some key resources are completely excluded, including important invertebrate and plant species. The ***full suite of biological resources*** should be represented in the table with standards and monitoring commitments.
5. The RMP must explain the ***scientific basis*** for decisions included in the table, in order to support the selection of the applicable standards used.
6. Where data is incomplete or missing all together, the ***precautionary principle*** should apply until the necessary information can be compiled to ensure protection of the resources. This principle, taken from conservation biology, states that precautionary measures should be taken when a certain activity or inactivity threatens to harm human health or the environment, even when science has not fully established cause-and-effect relationships; and is rooted in the recognition that scientific understanding of ecosystems is complicated by numerous factors, including dynamic ecosystem processes and the various effects of human activities. Put simply, it is easier to prevent harm to biodiversity than to attempt to repair it later. A commitment to the application of the precautionary principle should be incorporated into the RMP and the table.

In addition, we would recommend that the focus of the management matrix be altered:

- Grazing should be removed from the matrix. As discussed in detail in the previous section, relevant studies confirm that livestock grazing has not been shown to be an effective management tool.
- Climate change impacts on the Monument's ecosystem can be monitored using the table and management adjusted to better protect the function of this ecosystem, as discussed in more detail later in these comments. BLM should incorporate this focus and appropriate management tools into the table.

Recommendations: The concerns and recommendations set out above should be incorporated into a revision of the Conservation Target Table to ensure that it is an effective tool for managing biological resources within the Monument.

C. Vernal Pool Species and Habitat

Among the myriad habitats protected within the Monument's boundaries, the vernal pool and grassland ecosystem is perhaps the most imperiled. Urban development, flood control projects, highway and utility construction, the conversion of natural lands for agricultural use, and other forms of human intervention have transformed most vernal pool wetlands. By 1997, between eighty and ninety percent of vernal pool habitat in California's Central Valley and Coastal Ranges had been lost. See Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (available at http://www.fws.gov/sacramento/es/recovery_plans/vp_recovery_plan_links.htm.).

Due to this overwhelming destruction of habitat, the U.S. Fish and Wildlife Service ("FWS") listed fifteen vernal pool species endemic to California and Oregon vernal pools as threatened or endangered under the Endangered Species Act ("ESA"), 16 U.S.C. § 1531 et seq. At least two of these species—the longhorn fairy shrimp and vernal pool fairy shrimp—are found on the Carrizo

Plain National Monument. The longhorn fairy shrimp is particularly imperiled, its habitat having dwindled to only three remaining areas, including the Monument. Draft RMP at 3-26. It occurs in at least 21 locations within the Monument, clustered within the northern and southern ends of the Plain. Id.

As acknowledged by BLM, areas within the Monument that were proposed for designation as vernal pool critical habitat pursuant to the ESA were ultimately excluded. Id. Specifically, in September 2002, FWS proposed 16,033 acres of critical habitat for the longhorn fairy shrimp and the vernal pool fairy shrimp within the 250,000-acre Monument. Protection of this habitat is especially important for the longhorn fairy shrimp because it is "extremely rare . . . known from only a small number of widely separated populations," including those in the Monument. Recovery Plan at II-187. Vernal pool habitat within the Monument represents the southern extent of the longhorn fairy shrimp's range, and thus may have genetic characteristics essential to overall long-term conservation of the species.

The Draft RMP, however, fails to state that these critical habitat exclusions were made by FWS at the specific request of BLM, which argued that the pending RMP would provide for the protection and recovery of the longhorn fairy shrimp, vernal pool fairy shrimp, and vernal pool ecosystems in general. FWS agreed to the exclusions despite an earlier determination that BLM management of Carrizo Plain prior to Monument designation was inadequate because vernal pools habitat was not protected within BLM-administered lands and surrounding private lands. 59 Fed. Reg. 48136, 48150 (Sept. 19, 1994).

In light of the fact that FWS excluded the Monument's vernal pool critical habitats at the specific request of BLM, it is imperative that the agency follow through on its promise to manage and protect those habitats so as to ensure the recovery of the longhorn and vernal pool fairy shrimp. While the draft RMP states that BLM monitors vernal pool species occurrence and protects the pools from vehicle use and disturbance, these necessary actions are not sufficient to guard against possible habitat disturbance and destruction from oil and gas, communications rights of way, and climate change.

In order for BLM to meet its obligations under the ESA, as well as its assurances given to FWS during the critical habitat designation process, the agency must:

1. Under the "Goals, Objectives and Management Actions Common to All Action Alternatives," add longhorn fairy shrimp as a covered species within the "Core Area Threatened and Endangered Animals" objectives, and develop and identify specific management actions for its protection. See RMP at 2-13. These goals should compliment the vernal pools and sag ponds goals and objectives at pages 2-16 and 17 of the draft RMP.
2. Establish a specific management program for the longhorn fairy shrimp, similar to the programs established for pronghorn, tule elk, and long-billed curlew. Id. at 3-27.
3. Provide that vernal pool habitats shall be protected from all possible disturbances, including oil and gas activities, and communications rights of way.

Recommendations: The BLM's commitment to provide for the specific management and protection of longhorn fairy shrimp and other vernal pool species should be incorporated into the final RMP to ensure that the agency's management of the Monument is assisting in the protection and recovery of vernal pool habitats and imperiled species.

D. Ensuring that management of grazing does not compromise biological resources.

As discussed in the preceding section of these comments, grazing studies in the Monument have not only failed to show that grazing can enhance monument objects, but also have shown that grazing is likely to have negative impacts on biological resources, including native flora and fauna. To comply with the Proclamation, grazing should only be permitted in the Monument where it can be shown to benefit Monument objects, including biological resources.

Additionally, the RMP should more thoroughly discuss and give adequate weight to the benefits to biological resources from reducing grazing in the Monument. Reduction of grazing will allow BLM to remove fences, which will improve and restore habitat for pronghorn and tule elk. The RMP acknowledges that "without habitat rehabilitation, the present-day CPNM [Carrizo Plain National Monument] may not contain enough suitable habitat to support a viable population of pronghorn antelope. Restoration of native bunchgrasses and shrubs are considered important to improve habitat suitability." Draft RMP at 3-28. Fence removal will be an essential component of meeting BLM's target population goals, but cannot be achieved without a corresponding reduction of grazing to obviate the need for fencing. On the other hand, the Draft RMP predicts that continuing livestock grazing on the Monument will require the construction of "10-20 miles of fencing to protect oak trees" "[f]encing of 500 acres…to protect rare plant populations." Draft RMP at 4-11 and 4-15. The Draft RMP states that such fencing would "have negligible effects on wildlife in the Monument" but in fact, it would actually have significant effects to the movement of wildlife like pronghorn antelope.

Recommendations: BLM must ensure that the biological resources of the Monument are not compromised by grazing and evaluate the potential benefits for restoring habitat that can only be achieved by reducing lands available for grazing.

E. Wildlife Viability

Given the sizable land management challenges of the coming decades— including federal land management agencies' response to climate change and the complex natural resource dilemmas associated with climate change (i.e. species adaptation, extreme variability in natural processes)—it is imperative that the BLM Bakersfield Field Office and this RMP employ effective and efficient science-based planning and analysis methods to support robust and legitimate decision-making processes.

The effective application of science to land management planning and decision-making requires three "essential ingredients":

- Well-defined, measurable **standards** (e.g. fish and wildlife population or habitat condition targets), developed via robust public involvement processes
- The employment of science-based **analytical tools** to evaluate compliance with the standards (e.g. population viability analysis, or the spatially explicit Decision Support System recommended by the Western Governor's Association)
- **Consistent implementation** of science-based analysis and decision-making (i.e. dedicated funding for monitoring and science-based adaptive management processes)[1]

The Carrizo Plain National Monument RMP should consider these essential elements as it moves forward with efforts to respond to the pressing land management challenges of the coming decades.

Well-defined standards

Providing functioning habitat for fish and wildlife and ensuring the long-term persistence of fish and wildlife populations are part of the BLM's responsibilities to manage the public lands for multiple use and sustained yield. FLPMA specifically directs that management of public lands "takes into account the long-term needs of future generations" for wildlife, as well as other resources, and is implemented toward "achievement and maintenance in perpetuity" 43 U.S.C. §§ 1712(c)(1); 1702(c) and (h). Achieving these goals for fish and wildlife can best be realized by establishing well-defined, measurable standards. The use of well-articulated concepts and operational planning practices associated with the literature and practice of population viability assessment may provide land managers with effective and efficient means of applying science-based conservation methods to fish and wildlife planning decisions.

Science-based analytical tools

In order to adopt a legitimate, efficient and effective science-based planning framework, the Bakersfield Field Office should look to the well-established conservation planning and population viability assessment literature, as well as models employed by other BLM units and neighboring agencies.[2] For example, the Grand Mesa, Uncompaghre and Gunnison (GMUG) National Forests in Colorado monitor populations of "management indicator species" to measure the effects of management activities on unmeasured species and to provide insights into the integrity of the ecological systems to which they belong. The use of an indicator or focal species approach, in combination with robust knowledge of the link between species and habitats, allows managers an effective means to apply science-based principles to resource management decisions. Species such as the Red-naped sapsucker and northern goshawk (ponderosa pine ecosystems), Brewer's sparrow (sagebrush) and Colorado River cutthroat trout (aquatic) have been identified as key indicator species by the GMUG and have also been identified by Colorado's Comprehensive Wildlife Conservation Strategy and Wildlife Action Plans as species of greatest conservation concern. Indeed, to meet the challenges of 21st century land management

[1] Rohlf, D.J. 2004. Science, Law, and Policy in Managing Natural Resources: Toward a Sound Mix Rather than a Sound Bite. Pages 127-142 *in* K. Arabas and J. Bowersox, editors. *Forest futures: science, politics, and policy for the next century.* Rowman and Littlefield, Lanham, Maryland, USA.

[2] See U.S. Department of Agriculture, Committee of Scientists. (March 15, 1999). *Sustaining the People's Lands: Recommendations for Stewardship of the National Forests and Grasslands into the Next Century*, from http://www.fs.fed.us/emc/nfma/includes/cosreport/Committee%20of%20Scientists%20Report.htm.

and conservation, agencies will need to cooperate on vital management planning activities, including the sharing and co-generation of biological information.

Another example of a comprehensive monitoring approach can be found in Appendix 2 - "Implementation, Monitoring, and Evaluation Process" - of the Jack Morrow Hills Coordinated Activity Plan, prepared by the Wyoming BLM, available at: http://www.blm.gov/pgdata/etc/medialib/blm/wy/field-offices/rock_springs/jmhcap/rod.Par.76416.File.dat/31apx02.pdf. We particularly note the following, as examples of the sort of detail that should be contained in the Carrizo Plain National Monument RMP:

- Table A17-1 Resource Management Indicators - p. 8
- Table A17-2 Indicator Detail - pp. 9-11
- Table A17-3 Measurement Detail - pp. 12-14
- Figure A17-3 CAP Management Process - p. 16
- Discussion of the JMH CAP - pp. 20-21

Landscape-level planning
The adoption of a science-based approach to RMP development is also consistent with the agency's commitments in the Healthy Lands Initiative (HLI). HLI is premised on the BLM's recognition of major changes to the landscape arising from population, energy development and global warming. The goal of HLI is "to preserve the diversity and productivity of public and private lands across the landscape." HLI is to be implemented through specific projects, which will "enable and encourage local BLM managers to set priorities across a broader scale and mitigate impacts to an array of resources in ways not previously available to them" and "give managers flexibility to identify lands where a particular resource might be emphasized in order to encourage sustained health and balance across a broader ecosystem or landscape." *See, generally*, HLI Factsheet at: http://www.blm.gov/pgdata/etc/medialib/blm/wo/Communications_Directorate/public_affairs/healthy_lands_initiative.Par.80058.File.dat/HLI-National_FY09.pdf . Implementation of the management approach described above will further support efforts to address habitat fragmentation and climate change, as discussed in later sections of these comments.

Recommendations: The Draft RMP should adopt planning and decision-making processes (including data collection, analysis, and monitoring) that employ measurable planning objectives at multiple biological scales (i.e. fish and wildlife populations, habitat and ecosystem conditions) to ensure viable fish and wildlife populations. This recommendation is strongly echoed by the Western Governors Association's *Wildlife Corridor Initiative* (www.westgove.org/wga/initiatives/corridors) and the Sportsmen for Responsible Energy Development's *Recommendations for Responsible Oil and Gas Development* (www.sportsmen4responsibleenergy.org).

G. California Condor

In concluding that livestock grazing is beneficial for California condors, the Draft RMP states that "California condors historically foraged primarily over rangelands and often depended on dead livestock as a primary food source" and that "livestock carcasses probably were the major food item." Draft RMP at 4-67. However, livestock grazing on the Monument has only occurred relatively recently, and condors thrived in the area long before cattle were introduced here.

In promoting the use of livestock grazing to benefit condors, the Draft RMP also points to the nearby Bitter Creek National Wildlife Refuge, stating that it is managed as condor foraging habitat and is also grazed by livestock. However, it is also important to note that this wildlife refuge has not allowed any livestock grazing whatsoever since 2005, and that it is currently reevaluating livestock grazing levels and seasons of use there to accommodate the restoration of native wildlife as part of the Bitter Creek National Wildlife Refuge Grassland Habitat Management and Restoration Plan. This plan is scheduled to be finalized later this year.

In addition to overemphasizing the benefits of livestock grazing on California condors, the Draft RMP also ignores potential impacts. For example, the increased human activity associated with managing and maintaining commercial livestock grazing operations can have an adverse impact on condors, particularly regarding their habituation to human presence. And as mentioned previously, the presence of domestic livestock may displace native ungulates like pronghorn and tule elk, which condors historically relied on as a food source.

"The California condor's long-term survival is dependent on healthy ungulate populations as a food source. Although, the grazing regimen does remove a potential fire hazard by removing dry vegetative matter, it also displaces the native ungulate populations (Stafford 2005). Native wildlife has to compete with domestic livestock for resources, especially basic needs essential for survival. In addition, numerous wildlife species, even with adequate resources, are unable to cohabitate with domestic livestock. Condors will travel long distances in search for food. The continued presence of contaminants and hazardous materials in the human environment has caused deaths in the condor population (Stockton 2005). Therefore, managing areas like the Refuge for the survival and enhancement of native ungulate populations benefits the long term survival of the condor population and achieves Refuge purposes." U.S. Fish & Wildlife Service, 2008. *Environmental Assessment for Grassland Habitat Management and Restoration, Bitter Creek National Wildlife Refuge*, at p.30.

Recommendations: The RMP should evaluate whether the restoration of native ungulates like tule elk and pronghorn antelope (and the concurrent reduction of livestock grazing there) will provide a more consistent and reliable food source for California condors.

F. Cumulative Impacts Analysis

The Draft RMP analyzes the cumulative impacts of plan implementation on wildlife. Draft RMP at 4-117. A one-page analysis of cumulative impacts is inadequate.

Recommendations: The BLM should incorporate additional analysis and detail into this section to comply with NEPA.

V. CULTURAL RESOURCES

A. BLM should commit to completing a Cultural Resources Management Plan.

The Carrizo Plain National Monument contains many important and world class cultural and historic resources, which are recognized in the Proclamation as objects to be protected. However, the RMP is completed at the landscape level and therefore not capable of providing the implementation directions necessary to fully preserve and restore these resources. BLM should commit, as part of the RMP, to completing a Cultural Resources Management Plan within 2 years. The Draft RMP proposes for all action alternatives, "Monitor/identify/record cultural sites at risk from human activity & natural forces. Implement corrective actions." Draft RMP at 2-164. A Cultural Resources Management Plan would be an appropriate and effective way to achieve this goal.

This management plan should include a detailed monitoring plan for the Monument's cultural resources, and should be presented to the public for review and comment. An essential component of the monitoring plan should be Painted Rock, as well as other rock art sites, and whether the management approach adopted for visitor use is effectively protecting the area while providing educational opportunities. This will be especially important if BLM moves forward with the preferred alternative, allowing visitors to go on self-guided tours for much of the year. Another important issue that must be addressed in the monitoring plan is whether dust suppressant methods on Soda Lake Road are damaging cultural resources. An example of this problem is Nine Mile Canyon in Utah, where magnesium chloride used to suppress dust is damaging rock art by combining with the dust.

Larry Spanne, an archaeologist and expert on cultural resources, submitted comments to BLM with many detailed implementation-level recommendations for inventorying, protecting, and restoring cultural resources within the Monument. BLM should consult his comments in preparing a Cultural Resources Management Plan, taking into consideration his expertise in the field.

Recommendations: BLM should complete a Cultural Resources Management Plan within two years that includes a detailed and robust monitoring and mitigation strategy, addressing impacts from public recreation and dust suppressants. These commitments should be set out in the RMP.

B. BLM must actively reduce threats and damages occurring from inappropriate uses within the Monument.

The Draft RMP states that the biggest human threats to cultural resources are illegal ORV use and gunshots and other acts of vandalism. Draft RMP at 3-73. Although the Draft RMP does not identify grazing as a major threat in this section, it does state that "one of the most effective protective measures for cultural resources implemented in 1987 was the closure of the Painted Rock pasture to livestock use" because cattle can "trample cultural midden constituents and

disturb rock art by rubbing against the painted surfaces." Draft RMP at 3-71. Clearly, grazing is a threat to the preservation of cultural resources.

Furthermore, field visits to Carrizo Plain National Monument have revealed that the Draft RMP does not accurately represent the damage that is occurring to cultural resources as a result of irresponsible ORV use. BLM should close roads or provide more signage to protect resources, and control ORVs that use Soda Lake Road to access closed areas. BLM also should make all areas with known or potential cultural resources, especially rock art, unavailable to grazing and ensure proper fencing reduces or eliminates this threat.

Recommendations: BLM needs to more accurately and completely assess the damages to cultural resources resulting from illegal ORV use and grazing. BLM must then adopt an alternative that actively reduces these impacts.

VI. TRAVEL MANAGEMENT

A. Landscape level planning

Travel planning requires the agency to manage human travel across the landscape. The land use planning process, which addresses the broader landscape within a planning area, provides one of the best opportunities to make travel planning decisions in the appropriate context. While we understand that BLM does not have authority to close or relocate highways, major roads, or County roads, BLM must include these routes when analyzing the transportation network as they have a great impact on habitat fragmentation and reduction in core area size. The placement and design of travel routes define which areas will remain or become roadless, and which areas will be disturbed and how. In other words, route decisions determine the fragmentation of the landscape, and, thus, how naturally or unnaturally a landscape will behave in terms of water flow and quality, wildlife migration, and species composition and function. The fragmentation impacts of routes on habitat are also compounded by fences, which can present similar barriers to wildlife.

As discussed above, NEPA requires federal agencies to assess the direct, indirect and cumulative environmental impacts of proposed actions, taking a "hard look" at environmental consequences and performing an analysis commensurate with the scale of the action at issue. 42 U.S.C. § 4321, *et seq*.; 40 C.F.R. § 1508.8; s*ee also* Metcalf v. Daley, 214 F.3d 1135, 1151 (9th Cir. 2000); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989). Travel planning affects the entire landscape and can only be thoroughly and properly assessed by considering potential impacts and making decisions at a comparable level. In terms of how to evaluate the potential impacts of travel management decisions, NEPA's definition of "cumulative impact" is particularly instructive, since there are numerous "incremental impacts" from a variety of sources, which can be expected to continue and increase over time.[3]

[3] NEPA defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

The Draft RMP acknowledges a variety of direct, indirect and cumulative impacts associated with habitat loss and fragmentation from motorized routes and travel management. *See*, e.g., Draft RMP at 4-117, 4-127. Further, the Draft RMP acknowledges that a recent study has demonstrated the importance of restoring native vegetation and without such habitat rehabilitation (which would require closure, removal and restoration of motorized routes and fencing), wildlife viability will be called into question. Draft RMP at 3-28. However, there is not a specific discussion of the related impacts of motorized access and fencing or specific standards set out for improving habitat. BLM must account for the direct, indirect, and cumulative impacts of all motorized routes in the Monument and related impacts in order to design an acceptable travel management plan.

Recommendation: BLM should address travel management on a landscape-wide basis by addressing the impacts of all roads and fences in the Monument and accounting for the landscape-wide impacts of these roads and fences. Thus, direct, indirect and cumulative impact analysis of travel management decisions must assess habitat connectivity in light of the road network *and* fencing, and the RMP should adopt an alternative that will support wildlife viability as required by the Proclamation.

B. Clarification and supplementation regarding status of roads and allowable uses

The Draft RMP states that in primitive recreation zones, "[a] variety of non-motorized and non-mechanized recreational activities such as hiking, equestrian use, camping, wildlife viewing, nature photography, and other activities consistent with the goal of providing a primitive experience would be allowed" (Draft RMP at 2-98) and "motorized roads within this zone would be either converted to trails or closed to public use." Draft RMP at 2-92. However, Map 2-3: Alternative 2 Recreation Management Zones and Route Designations, shows several "open" routes in primitive areas. BLM needs to clarify whether there are open motorized routes in primitive areas, and allow the public to make substantive comments on the proposed travel network with these clarifications.

The Draft RMP also describes many roads as "limited" but does not explicitly set out what the allowable uses (*i.e.*, the actual "limits") for these roads are. For example, "limited" could mean that only bicycles are allowed, or that roads are open to public motorized use only at certain times of year (seasonally limited), or that only administrative vehicles are allowed access. Without this information, it is impossible for the public to make substantive comments on the proposed plan, which is required by NEPA. In this regard, NEPA "guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." Robertson v. Methow Valley Citizens Council, 490 U.S. at 349. NEPA not only requires that BLM have detailed information on significant environmental impacts, but also requires that the agency make this information available to the public for comment. Inland Empire Public Lands Council v. U.S. Forest Service, 88 F.3d 754, 757 (9th Cir. 1996).

Further, we would note that in managing motorized use in the Monument, BLM is obligated to limit motorized vehicles to roads and to ensure that their use is not interfering with protection of Monument objects, as required by the Proclamation. Management of motorized vehicles to protect the natural and cultural resources of the Monument is also required by the agency's regulations governing use of off-road vehicles (ORVs), which require BLM to ensure that areas and trails for ORV use are located "to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability" and "to minimize harassment of wildlife or significant disruption of wildlife habitats" with special attention "to protect endangered or threatened species and their habitats." 43 C.F.R. § 8342.1(a) and (b). BLM is also obligated to close routes to ORV use if ORVs are causing or will cause considerable adverse effects on natural resources, wilderness suitability, and cultural and historic resources. 43 C.F.R. § 8341.2.

Recommendation: BLM should provide supplemental information and analysis on the proposed travel network, including demonstrating compliance of the travel network with the requirements of the Proclamation and regulations, and provide a public comment period before the final RMP is published so that the public has the opportunity to make substantive recommendations based on all the pertinent information.

C. Specific recommendations on individual routes

Many of the undersigned, our partner organizations, and our members have spent a great deal of time in the Monument "ground-truthing" the maps and route designations presented and proposed in the Draft RMP. BLM should give special consideration to the valuable information presented in these specific recommendations, and refer to them in preparing a final travel management network. Specifically, we herein reference and support the very detailed comments submitted by Craig Deutsche of the Sierra Club.

VII. RECREATION AND INTERPRETATION

We appreciate BLM's designation of primitive, backcountry, and frontcountry recreation zones in the Monument as a method to identify appropriate types of recreation and provide management direction. We support the designation of wilderness-quality lands as primitive zones and the application of robust management actions to preserve the primitive experience. The management prescriptions for each recreation zone are appropriate for protecting the monument's resources and providing quality recreation experiences to visitors. Furthermore, we agree with the application of corresponding Visual Resource Management classifications, and believe that management of primitive recreation zones and VRM classifications as set out in Alternative 1 is most consistent with the directives of the Monument Proclamation.

A. Hunting

The imperiled wildlife and habitat found in the Carrizo Plain are a primary reason for the establishment of the National Monument. Furthermore, expected development surrounding the

Monument will continue to increase the importance of the undeveloped habitat found in the Monument for these species. Recognizing this mandate, BLM has established in the Draft RMP a rigorous management plan for maintaining viable populations of target species and their core and important habitat. Two of these species, pronghorn and tule elk, are also California Department of Fish and Game (CDFG) hunting targets. These species having a dual management goal as both hunting resources and Monument objects could lead to competition and conflict.

The BLM has the authority to manage hunting on public lands as part of its management of the Monument, including limiting levels of hunting or instituting closures. BLM should explicitly address this issue in the RMP, and reach an agreement with CDFG as to how this conflict will be resolved. The Monument Proclamation identifies pronghorn and tule elk as objects to be protected; there are many other lands in California where these species can be hunted without application of such protections. Therefore, the RMP should recognize the Monument's status demands protections for natural resources that are not mandated on other BLM lands, including in management of hunting.

In addition, the BLM should explicitly prohibit use of lead bullets to protect California condors, which are identified as a Monument object. The State of California no longer permits use of lead bullets within the current and historic range of the California condor and the BLM should implement similar protections to be consistent with State law. See, 43 U.S.C. §§ 1712(c)(9), 1763.

We are encouraged by BLM's proposal to eliminate varmint hunting in the Monument. This action will protect cultural, historic, and other resources from vandalism, as well as better protect all species within the Monument from accidental shooting. We hope BLM and CDFG will come to an agreement on this management action and carry it through. Eliminating varmint hunting would also aid in enforcing the ban on target shooting. Currently, when law enforcement personnel encounter persons shooting randomly they may claim to be hunting rabbits or other varmints and may avoid receiving a citation.

Finally, many guzzlers within the Monument are no longer in use, and roads to guzzlers can damage resources in the Monument. BLM must demonstrate that guzzlers are enhancing Monument objects if they are to be maintained. Some guzzlers are likely to be necessary to maintain population targets and biological resources as required by the Proclamation and other laws governing special status species. However, some guzzlers are clearly not necessary, and BLM should inventory all of the guzzlers to determine which ones can be removed, and the related roads decommissioned and restored.

Recommendations: BLM should address the relationship between CDFG hunting targets and the Conservation Target Table population targets for pronghorn and tule elk. The RMP should establish a plan for ensuring that hunting does not interfere with protecting Monument objects, including game species. The RMP should also prohibit the use of lead bullets in order to protect condors. Additionally, BLM should assess whether guzzlers are necessary for enhancing management objects, and remove any that are not, closing and rehabilitating any associated roads.

VIII. OIL AND GAS DEVELOPMENT

Thank you for prioritizing the purchase of private mineral rights within the Carrizo Plain National Monument. The BLM has already recognized the importance of evaluating potential impacts from oil and gas exploration within the Monument by requiring an Environmental Impact Statement (EIS) analysis on the Vintage Petroleum proposal. The RMP should establish that the highest levels of analysis will be required for any proposal for oil and gas exploration or development within the Monument's boundaries and state that an EIS will be presumed to be the appropriate level of analysis, given the likelihood of damage to the Monument from these activities.

A. The BLM has the authority to deny development or restrict the manner in which oil and gas development can occur to access private minerals within the Monument and should specifically state these restrictions in the RMP.

Although the Monument was established "subject to valid existing rights" the BLM also has an obligation to manage these lands for the protection of the Monument's values. As the manager of the surface, the BLM has the authority to deny requests for access to conduct geophysical exploration and applications for permits to drill altogether, or to impose other restrictions on development to protect important ecological and cultural values, such as requiring directional drilling from existing or off-site well pads or phasing development to ensure limited disturbance at any given time. The BLM has argued in federal district court that the agency retains full discretion to prohibit development of a lease after it is issued. The agency stated that:

> if BLM identifies an unacceptable environmental or other impacts during its review under the National Environmental Policy Act ("NEPA") of an APD submitted under the Resource Management Plan Amendment ("RMPA") at issue in this litigation, BLM retains the right to institute "reasonable measures" to protect that resource, including denying the APD if necessary. See 43 C.F.R. § 3162.3-1(h).

State of New Mexico v. Bureau of Land Management, Civ. No. 05-0460 BB/RHS, Federal Defendants' Reply Brief, p. 3 (February 27, 2006), copy attached. The agency's authority is heightened in the context of protecting Monument objects and could support denial of potential requests from private mineral owners altogether in light of the threats to the Monument and threatened and endangered species.

Further, the requirements of the Endangered Species Act may also require the denial of access where exploration or development could adversely affect threatened and endangered species. *See, e.g.,* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a) (once a species is listed, Section 7 of the ESA mandates that every federal agency "consult" with FWS when taking any action that "may affect listed species"; the purpose of the Section 7 consultation process is to insure that no agency actions "jeopardize the continued existence" of a listed species.). In the Monument, the presence of many threatened and endangered species requires the BLM to consider denial of access for exploration and development. Additional limitations may be imposed by application of the National Historic Preservation Act. *See, e.g.,* 16 U.S.C. § 470f ; 36 CFR § 800.1 (Section

106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties; the results of the consultation and consideration should lead to a range of alternatives that will protect cultural resources). The Monument Proclamation also identifies the historic and cultural resources in the Monument as values that the BLM must protect as a priority over other uses.

The BLM can also protect the Monument by including requirements that any subsequent development be conducted from non-sensitive lands, including outside the Monument, by imposing "no surface occupancy" (NSO) as a condition of approval, such that lessees could still access oil and gas by using **directional drilling**. Directional drilling allows companies to access fossil fuel reserves from existing well pads, often by drilling at an angle, thereby reducing the footprint of new extraction. This approach has been demonstrated to be cost-effective on many BLM lands and has been technologically feasible at a distance of 5-6 miles (see below). Directional drilling from an existing well pad seems a feasible alternative to disturbing additional acreage in this highly valuable area, where irreplaceable wildlife habitat and cultural resources may be destroyed.

During the previous Administration, the Executive Branch directed that the employment of low-impact drilling technologies should be a priority in the implementation of energy development on public lands:

> Enormous advances in technology have made oil and natural gas exploration and production both more efficient and more environmentally sound. Better technology means fewer rigs, more accurate drilling, greater resource recovery and environmentally friendly exploration.
> High-tech drilling allows us to access supplies **five to six miles** away from a single compact drilling site, leaving sensitive wetlands and wildlife habitats undisturbed . . .

"Overview," National Energy Policy, The White House, May 2001 (emphasis added available online at: http://www.whitehouse.gov/energy/). The prior administration's Energy Policy also touts "highly sophisticated directional drilling that enables wells to be drilled **long horizontal distances** from the drilling site . . ." *Id.* at "21st Century Technology: The Key to Environmental Protection and New Energy Production" (emphasis added). This administration should do no less. Pursuant to making these priorities effective "on the ground," it is incumbent upon BLM, as custodian of the public lands, to actively encourage environmentally sound development by carefully considering directional drilling alternatives.

The necessity to rigorously explore and objectively evaluate reasonable alternatives that include directional drilling has been recognized by the Interior Board of Land Appeals. Biodiversity Associates, IBLA 2001-166 (2001) at 9 (where the Board set aside a BLM FONSI where "the record fails to…provide a rational basis for failing to analyze fully the alternative of directional drilling…"). In Biodiversity Associates, BLM had offered "without elaboration" directional drilling "'[a]lternatives to the proposed action [that] were considered but dropped from analysis due to geologic and economic restraints at the time the EA was written.'" *Id.* at 8. Another factually similar case held that BLM's analysis of alternatives was inadequate when it relied

unquestioningly upon statements by the project applicant that the alternative in dispute was not feasible and required the BLM to consider directional drilling as an alternative for development. Southern Utah Wilderness Alliance v. Norton, 237 F.Supp.2d 48, 52-53 (D.D.C. 2002).

Former oil and gas industry manager of exploration and development, and certified professional geo-scientist, Ken Kreckel has reviewed the history of directional drilling in the Rockies and concluded that directional drilling technology has evolved to the point that is certainly economically viable in the current market and should be required by the BLM to protect surface resources as part of responsible multiple use management. *See* the attached report, *Directional Drilling: The Key to the Smart Growth of Oil and Gas Development in the Rocky Mountain Region*, for details on his analysis and conclusions. Kreckel's research and conclusions are applicable to the Monument area as well.

Another option would be for the BLM to require any development in the Monument be conducted under a strategic approach of **phased development**. Phased development is an overarching plan that spreads out the harms created by oil and gas exploration and development over time and/or over a geographic area so that other uses and values of the land can be sustained both during and after the lifetime of oil and gas extraction. Phased development can limit both the amount of equipment in use at any given time and amount of surface disturbance on a lease at any given time, and can require successful restoration before permitting additional disturbance. It can also allow for core habitat and wildlife corridors to be left undeveloped to ensure sufficient habitat exists and allow for wildlife movement.

The long-term nature of phased development supports FLPMA's requirement for "sustained yield" by allowing "the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources consistent with multiple use." 43 U.S.C. § 1702(b). FLPMA's provision that the Secretary of Interior shall take any action "necessary to prevent unnecessary or undue degradation of the lands" is consistent with the use of phased development. 43 U.S.C. § 1732(b). Phased development is another environmentally preferable alternative that BLM should examine in detail to comply with its NEPA obligations. A federal court in Montana has held that phased development falls within the "range" of alternatives to be considered. Northern Plains Resource Council v. Bureau of Land Management, CV 03-69-BLG-RWA (D.Montana February 25, 2005). The court then stated that phased development is "within the range of reasonable alternatives" and **must** therefore be "given detailed consideration" when the BLM is considering a plan for development rather than a site specific project. Lastly, the court held that phased development "is not the functional equivalent of a no-action alternative" and should be considered in addition to other reasonable alternatives. A similar approach should be considered **prior** to approval of any development in the Monument.

B. The BLM should require an EIS for any proposal for oil and gas exploration or development within the Monument's boundaries.

NEPA requires preparation of an EIS when the proposed action may significantly impact the environment. 40 C.F.R. § 1501.4. The definition of "significantly" (set out at 40 C.F.R. §

1508.27) requires preparation of an EIS for oil and gas exploration within the Monument's boundaries.

"Significantly," as used in NEPA and defined in the NEPA regulations (set out at 40 C.F.R. § 1508.27 and excerpted in part below) requires considerations of both context and intensity:

> ***Context*** means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality, depending upon the setting of the proposed action.
> ***Intensity*** refers to the severity of impact and includes consideration of:
> - ***Unique characteristics*** of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
> - The degree to which the effects on the quality of the human environment are likely to be ***highly controversial***.
> - The degree to which the action may ***establish a precedent*** for future actions with significant effects or represents a decision in principle about a future consideration.
> - The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or ***may cause loss or destruction of significant scientific, cultural, or historical resources***.
> - The degree to which the action may adversely affect an ***endangered or threatened species*** or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
> - Whether the action ***threatens a violation*** of Federal, State, or local law or ***requirements imposed for the protection of the environment***.

The establishment of the Carrizo Plain National Monument and the potential impacts from oil and gas exploration or development are very important in the *context* of the BLM's National Landscape Conservation System, regionally, and in California, as shown by the many values listed in the Monument Proclamation. Moreover, the impacts of the oil and gas exploration and development are of high **intensity/severity** due to the precedent-setting nature of such activity in this Monument and also because of the special characteristics of the Monument, many of which are of the types specifically mentioned in the regulation (as excerpted above), such as significant resources and endangered or threatened species and their habitat. Additionally, balancing the development of oil and gas resources while protecting ecological integrity and other Monument values is **highly controversial**, having been the subject of much public comment and concern.

Any EIS should be prepared to fully analyze the significant impacts of oil and gas decisions. The minimum 45-day comment period required by NEPA (40 C.F.R. § 1506.6) would provide the public with a more reasonable amount of time to review and comment on these important issues. Further, BLM should provide a formal response[s]to public comments, as required by 40 C.F.R. § 1503.4.

Seismic exploration may have significant impacts in the Monument. Geophysical exploration has been shown to lead to significant potential damage to public lands. Seismic testing has direct and indirect effects, as well as cumulative impacts, to a host of natural and historic resources including, but not limited to the following: soils (including cryptobiotic soils – damage to which,

according to the U.S. Geological Survey, can take over 200 years to recover), vegetation, wildlife, water (including seeps, springs, and riparian habitat), historic properties (*i.e.*, cliff dwellings, rock art [pictographs and petroglyphs], and pit houses), and wilderness values. *See, e.g.,* Letter from Larry Svoboda, EPA, to Patrick Gubbins, BLM Re: Stone Cabin 3-D Seismic Survey Project, Draft Environmental Assessment (Oct. 3, 2003), raising concerns about cumulative impacts from seismic exploration and related development. A copy is attached.

BLM decisions to approve geophysical testing have been set aside or stayed, until BLM added mitigation measures, in several federal court and administrative rulings. In Southern Utah Wilderness Alliance v. Norton ("Yellow Cat"), 237 F. Supp. 2d 48 (D.D.C. 2002), the district court reversed and remanded a BLM decision to approve a 2-D seismic project in Grand County, Utah because, among other things, the BLM had failed to consider a reasonable range of alternatives to the proposed action.[4] The Yellow Cat court, and earlier the Office of Hearing and Appeals, enjoined the Yellow Cat project shortly after it began because of potentially significant impacts to cryptobiotic soils. *See* Southern Utah Wilderness Alliance, D-2002-177 (Order, February 23, 2002 - attached). Likewise, in Biodiversity Conservation Alliance, IBLA 2006-43 (Order, Jan. 12, 2006 – attached), the Interior Board of Land Appeals recently issued a stay of the Cherokee West 3-D seismic project citing the risk of damage that seismic exploration posed to paleontological resources. See also San Juan Citizens Alliance v. Norton, Civil Action No. 02-B-1597 (MJW) (2002) (court issued temporary restraining order because of the threat seismic activities – the North Mail Trail 3-D seismic project – posed to historic properties in Canyons of the Ancients National Monument).

Recommendations: The damage associated with oil and gas exploration should not be risked on the Carrizo Plain National Monument without preparation of an EIS and full consideration of prohibiting access altogether or imposing stringent requirements on any such activity. Similar concerns apply to any further development activities, which also involve long-term surface disturbance. As we point out in the section above, the BLM has already required an EIS analysis on the Vintage Petroleum proposal and they should follow this principle in the future. As shown above, BLM does not have to simply allow unrestrained entry on the Carrizo Plain National Monument for oil and gas exploration and development and should set specific limitations and restrictions on the manner in which oil and gas development can occur to access private minerals.

We have also made specific recommendations for revising the oil and gas exploration and development goals, objectives, and management actions outlined in the Draft RMP on pages 2-112 to 2-118 to make them more consistent with the Monument Proclamation (attached as Appendix A to these comments). Specific comments on the language included in the Proposed Standard Operating Procedures, Appendix P to the Draft RMP, are also included (attached as Appendix B to these comments). In addition to the language proposed in the Draft RMP, there are also many other standards that could be incorporated into the RMP. We suggest that, as a starting point, the BLM incorporate the standards and guidelines set out in the Los Padres

[4] In Yellow Cat, the plaintiffs also challenged the BLM's failure to prepare an EIS to evaluate the project's potentially significant impacts. The court, however, declined to address this argument after concluding that the agency had failed to consider a reasonable range of alternatives.

National Forest oil drilling plan (attached to these comments), which would still require substantial improvement to protect Monument objects.

IX. WATER RESOURCES

A. Water Rights and Water Quantity:

The Draft RMP correctly acknowledges the express reservation of water rights in the Monument Proclamation. Draft RMP at 3-56. However, the Draft RMP fails to take a hard look at the potential issues that may arise concerning water rights during the term of the proposed RMP, stating only that there are "no known existing water rights issues." Id. In fact, it is reasonably foreseeable that several issues may arise as a result of the management changes under the proposed RMP and/or during the term of the proposed RMP. For example, issues may arise regarding the surface water developments associated with past and any ongoing grazing on the Monument. As grazing is retired under the proposed RMP, BLM must ensure that any and all water rights that may arguably have been established through the use of water for livestock are transferred to the U.S. for the benefit of Monument resources. In no case should any water rights that may have arguably been established through livestock grazing or other activities on the Monument be allowed to be transferred off the Monument. In addition no change of use should be authorized or supported except for a change in use from livestock to use for native flora and fauna (on site or "in stream" use) or possibly for wildlife water supplementation (*see* further discussion of water supplementation below).

The Draft RMP provides only the most general information about the surface waters, springs and seeps on the Monument as part of the environmental settling or baseline. *See, e.g.,* Draft RMP at 3-57, Map 3-9. No comprehensive list of springs and seeps is provided, nor are there any Proper Functioning Condition reports. The Draft RMP notes that 15 springs have been developed from livestock and are also available for wildlife but does not provide the necessary level of detail for meaningful review or evaluation. Draft RMP at 3-57. In order to properly analyze the environmental impacts of a project, it is essential that the agency adequately describe the environmental baseline from which the impacts will be measured and evaluated. *American Rivers v. Fed. Energy Regulatory Comm'n*, 201 F.3d 1186, 1195 & n.15 (9th Cir. 1999). "Without establishing ... baseline conditions ... there is simply no way to determine what effect [an action] will have on the environment and, consequently, no way to comply with NEPA." *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988). It is critical for the BLM to provide baseline information regarding resources of the Monument that is fully defined, accurate and complete in order to meaningfully inform the effects analysis regarding the proposed RMP and the alternatives. Because BLM has failed to provide the needed baseline information regarding water resources, the Draft RMP fails to adequately inform the public and decision makers regarding the potential impacts of the proposal.

For vernal pools, the Draft RMP provides somewhat more information as part of the biological resources discussion but still fails to provide the detailed comprehensive information needed as the basis for a comprehensive analysis. *See* Draft RMP at 3-56, 3-26 to 3-27, 3-44 to 3-45.

The Water Resources Program common to all action alternatives provides generally that there would be additional information collected and inventory and monitoring of springs. Draft RMP at 4-172. Pursuant to NEPA and FLPMA the inventory should be regularly updated and certainly should have been obtained to inform the baseline for this NEPA review. Nonetheless, we support these measures as part of the proposed RMP.

The Water Resources Program also includes "providing water for livestock /wildlife/administrative use from wells rather than springs as needed to protect the springs." Draft RMP at 4-172. The Draft RMP should provide more specific baseline information and specific goals and targets for all proposed water resource improvements in the RMP including the proposal to shift impacts away from springs. To the extent that such measures are focused on restoring the natural condition of springs and are not used to support continued or expanded livestock grazing on the Monument, we support these proposals.

The scant information provided in the Draft RMP is far too general to support any expansion of water developments for wildlife including the proposed new water developments for upland game birds. *See* Draft RMP at 4-175. Indeed, the Draft RMP fails to provide even the most basic information about the environmental baseline and impact from ongoing use and maintenance of man-made water resources for pronghorn and tule elk that already exist on the Monument. While in some instances water supplementation may be necessary to the survival of native wildlife due to overall habitat loss and degradation, such installations should not be used simply to increase hunting opportunities where, as here, there are risks that artificially increasing populations of so-called "game" species will detrimentally impact other native wildlife, including by increasing competition for scarce native plant forage. Any new site-specific installations of water developments should only be approved after additional environmental review including public notice and comment.

The Draft RMP also fails to provide necessary information regarding the existing and potential future ground water use by oil and gas development. BLM only notes that such use has a high potential to occur and that it would cause cumulative impacts to water resources. Draft RMP at 4-177. To meet the standards required by NEPA BLM must provide more specific information about these water uses.

Recommendations: In order to comply with the Monument Proclamation's directives to protect Monument objects and to manage the water right reserved in the Proclamation, as well as to comply with NEPA, the RMP must establish an adequate baseline inventory and specific standards for management of the water resource to ensure sufficient water is available. Recognizing the need for ongoing inventory, we also recommend that the BLM specify a schedule for supplementing the baseline inventory and altering water management based on updated information.

B. Water Quality

The Draft RMP also fails to provide sufficient information on impacts on water quality of activities that would be authorized under the proposed RMP. Again, the Draft RMP does little

more than mention the sources of water quality impairment and provides no specific information about the existing impacts or likely future impacts under the proposed RMP. For example, BLM acknowledges the kinds of impacts to surface waters that can result from livestock grazing but provides no detailed information about the actual status of each of the natural waters on the Monument or the use by livestock. Draft RMP at 4-173. The Draft RMP states generally for Alternative 1 that "any impacts to water resources would be localized, negligible to minor, and short-term." Draft RMP at 4-173. These are merely conclusions and provide no identification of impacts or analysis as required by NEPA. For Alternative 2, the preferred alternative, the Draft RMP attempts to circumvent any discussion by limiting grazing to a "vegetation management tool." Draft RMP at 4-176. However, simply denoting grazing as a management tool does not in itself ensure that water quality will be protected nor do the statements in the Draft RMP provide the needed information for public review as required by NEPA—again, BLM provides little more than conclusory statements. For example, the Draft RMP completely fails to address siltation in streams and springs that may occur from soil disturbance including from livestock grazing and ORV use. Similarly, the Draft RMP fails to address the wastewater created by existing oil and gas wells on the Monument. These and other issues must be fully disclosed and analyzed as part of the environmental analysis for the proposed RMP and the alternatives.

Recommendations: In order to ensure that Monument objects are protected and that NEPA's requirements are met, the BLM must fully analyze the likely direct, indirect and cumulative impacts to water quality and evaluate alternatives accordingly.

X. RIGHTS-OF-WAY

Several communications facilities including a repeater for BLM communications are located within the boundaries of the Carrizo Plain National Monument. In addition there are two utility corridors currently designated on the Monument. We support the Draft RMP establishing the Carrizo Plain National Monument as a right-of-way avoidance area and extinguishment of the two current utility corridor designations. However, we are concerned that the exception in the Draft RMP for new rights-of-way that "directly serve a land parcel within the Monument" leaves open the possibility of new utility rights-of-way that would cross the Monument and lead to large-scale disturbance, such as transmission to access potential wind energy developments on private land within the Monument or near the boundary of the Monument. Draft RMP at 2-120. The Draft RMP states that "testing for a possible wind energy development is being initiated within the Temblor Range." Draft RMP at 4-218. Establishing the BLM as a right-of-way exclusion area would help to address this concern.

We also support the management action of relinquishing unneeded, existing rights-of-way such as private easements and country road easements. Draft RMP at 2-121 and 2-120. However, the management actions defined in preferred alternative allows the BLM to approve new communication right-of-way. This conflicts with the establishment of the Monument as a right-of-way avoidance area.

Recommendations: In order to manage existing authorizations within the Monument in keeping with the overall purposed of the Monument Proclamation, we support the approach in

Alternative 1, which authorizes no new rights-of-way. In addition, we urge the BLM to consider establishing the Monument as a right-of-way exclusion area.

All communications facilities that aren't required for public safety should be eliminated or the leases should not be renewed. The BLM should prioritize relinquishing unneeded, existing rights-of way in backcountry and primitive areas as defined in Alternative 1. Finally, the BLM should take steps to ensure that the BLM repeater and all communications facilities within the Monument are made raptor safe.

XI. CLIMATE CHANGE

A. BLM is required to analyze the impacts of climate change and show how the actions proposed in the RMP will reduce it.

Secretary of the Interior Order No. 3226, signed January 19, 2001, requires that:

> "Each bureau and office of the Department will consider and analyze potential climate change impacts when undertaking long-range planning exercises, when setting priorities for scientific research and investigations, when developing multi-year management plans, and/or when making major decisions regarding the potential utilization of resources under the Department's purview."[5]

The BLM has identified and acknowledged its two-fold obligation with regard to climate change analysis in the Carrizo Plain RMP. The RMP purports to analyze: "(1) impacts of climate change on the resource conditions and effectiveness of implementing RMP objectives and actions; and 2) impacts from implementing objectives and actions in the RMP alternatives on climate change." Draft RMP at 4-178.

Our comments focus primarily on the obligation of BLM to analyze the impacts of climate change on the resources under its management. The agency has an even higher obligation to protect this ecosystem from threats such as climate change in order to fulfill the dictates of the Monument Proclamation.

Recommendations: Given its role as steward of these lands, the BLM can influence whether the public's natural resources and, this Monument, survive the impacts of a hotter, drier climate. However, to accomplish this, it is imperative that the BLM prioritize management for climate change in the RMP. This will require the agency to do four things:

- Commit to specific management actions **now** based on preliminary analysis of climate change impacts on the Monument;
- Conduct further analysis on the impacts of climate change on the Monument's resources and objects;

[5] U.S. Dept. of the Int., Sec. Order No. 3226 (Jan. 19, 2001), Section 3.

- Conduct ongoing monitoring for the impacts of climate change; and
- Act on monitoring information and amend management strategies accordingly.

B. Climate change effects and management.

Climate change has been intensely studied by the world's scientists, and broad consensus exists around its causes, magnitude and effects. The planetary warming that scientists predict will result from human emissions of heat-trapping gases is already underway. In February 2007, the Intergovernmental Panel on Climate Change (IPCC) declared, "[w]arming of the climate system is unequivocal," and it is "very likely" that most of the warming since the middle of the 20th century is the result of human pollutants. Climate change is a global phenomenon with well-documented and serious local impacts. Those impacts affect the both ecosystems and the welfare of citizens not only around the world, but in the United States and the nation's Western states in particular.

Impacts of Climate Change Across Western Landscapes

For the last five years (2003 through 2007), the global climate has averaged 1.0 degree Fahrenheit hotter than the 20th century average. The Rocky Mountain Climate Organization found that[6] during the 2003 through 2007 period, the 11 western states averaged 1.7 degrees Fahrenheit hotter than the 20th century average. That is 0.7 degrees, or 70 percent, more warming than for the world as a whole. And scientists have confirmed that most of the recent warming in the West has been caused by human emissions of heat-trapping gases. The West has also experienced more frequent and severe heat waves, with the number of extremely hot days increasing by up to four days per decade since 1950.

In the arid and semi-arid West, global warming is already having serious consequences for the region's scarce water supplies, particularly the snow that makes up most of the region's precipitation and, when melted, provides 70 percent of its water. Already, decreases in snowpack, less snowfall, earlier snow melt, more winter rain events, increased peak winter flows, and reduced summer flows have been documented. As global warming continues, the IPCC also predicts more intense and longer droughts, and characterized the severe drought that began in the western United States in 1999 and continues today as a "notable extreme climate event." The IPCC also concluded that "recent warming is already strongly affecting" ecosystems and wildlife. One study found that hotter spring and summer temperatures are responsible for increases in wildfire in the West.

Climate Change is Affecting Ecosystems and Wildlife

Greenhouse gas emissions are also having direct and indirect impacts on wildlife species, including numerous listed species. The IPCC has reported that 30 percent of animal and plant species could be at an increased risk of extinction if global warming continues unabated.[7]

[6] Saunders, S. and others. "Warming in the West: Evidence of Climate Disruption in Western States". The Rocky Mountain Climate Organization and Natural Resources Defense Council, March 2008.
[7] IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: Fourth Assessment Report, Synthesis Report, available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf

Another report chronicles the various types of extinction threats posed by global warming.[8] Undeniably, failure to respond effectively to the global warming challenge will affect many western wildlife species, including endangered and threatened species, as the result of changes to habitats and migration corridors as well as other impacts.

Indeed, impacts are already occurring as the result of climate change. The warming of the West is also disrupting the natural timing of seasons and leading to loss of wildlife. Lilacs and honeysuckle bushes are blooming earlier in the spring, marmots are emerging from hibernation earlier, jays are nesting earlier, ptarmigan are hatching earlier, and butterflies are emerging earlier.

Species of wildlife are adapting to an altered climate by changing where they live (moving toward the poles or to higher elevations) —and in a few cases are being eliminated from areas where they used to live.[9] Research published in June 2008 indicates that up to 66% of about 2,500 plants found only in California could see their habitats shrink by up to four-fifths by 2100 as the result of alteration to the state's rainfall and temperature patterns as the result of greenhouse gas emissions.[10]

Climate Change Impacts on the Carrizo Plain National Monument

The Carrizo Plain is a semi-arid environment and as such is especially sensitive to climate change. The Draft RMP assumes that the Carrizo Plain will become hotter and drier during the projected 20 year implementation of the plan. Draft RMP at 3-61. This is an assumption that is widely supported by scientific data and is a sound basis for planning. Although the specific impacts of climate change on the Carrizo are not yet fully known, the Draft RMP identifies certain projected impacts on the Monument:

- **Water resources**: Lower precipitation levels, less groundwater and less recharge capacity will result in reduced stream flows, dry springs, and higher salinity in Soda Lake, one of the Monument's landmark features.
- **Vegetation**: Changes in the amount, persistence, and distribution of vegetation and vegetation zones will impact habitat and food sources for species from kangaroo rats to pronghorn antelopes.
- **Soil resources**: Increased storm activity will lead to higher levels of soil disturbance and erosion which can impact the quality and flow of waterways, vegetation growth, and food sources for numerous species.

We commend the BLM for doing this preliminary analysis. It is a step in the right direction, but much more in-depth analysis is needed. The BLM must commit to conducting this research as soon as possible. In the interim, **it is imperative that the BLM act now on the information that is available to protect the unique resources of the Monument.**

[8] Randall, J., Climate Change, Wildlife and Endangered Species (2007).
[9] *See, e.g.*, Berman, D., ""Dramatic' effects of rising temps being seen on public lands," *Greenwire*, April 27, 2007.
[10] Loarie, Scott and others, Climate Change and the Future of California's Endemic Flora, PLoS One 3(6): e2505. doi:10.1371/journal.pone.0002502.

The projected impacts of climate change identified in the RMP will make achievement of many of the RMP goals more challenging, including:

- Protect soils;
- Maintain and enhance groundwater quality;
- Protect water quantity; and
- Restore and maintain a mosaic of natural communities.

Recommendations: The RMP should identify strategies that can be undertaken immediately to address the impacts that are already occurring on key resources and those that are known to have a high likelihood of occurring. For example:

- ***Water*****:** The need to conserve water resources is even more acute due to climate change (as acknowledged the Draft RMP). As grazing is retired under the proposed RMP, BLM must ensure that any and all water rights that may arguably have been established through the use of water for livestock are transferred to the U.S. for the benefit of Monument resources. In no case should any water rights that may have arguably been established through livestock grazing or other activities on the Monument be allowed to be transferred off the Monument
- ***Vegetation*****:** Likely effects of climate change include less resistance to non-native species, desertification and loss of woodlands, with foreseeable effects on wildlife and the function of the entire desert ecosystem. The BLM should develop a strategy to identify and recommend more limitations on those activities most likely to introduce non-natives, such as grazing and motorized vehicle routes.
- ***Soil*****:** The effects identified in connection with vegetation will similarly damage the functioning of soil and its ability to support native vegetation, undermining the desert ecosystem. The BLM should consider limiting motorized vehicle use seasonally and after storm events when solid erosion is often most severe and should consider closing specific motorized vehicle routes if severe erosion patterns develop.

Other management decisions must be analyzed in the context of how they might contribute to increasing the effects of climate change or decreasing them, such as taking into account the stress caused by grazing and motorized use. The Draft RMP does not currently carry through a detailed analysis or provide sufficient management prescriptions, contrary to the BLM's responsibilities under NEPA and the Monument Proclamation.

Increased Threats

Climate change will affect not only natural systems, it will also intensify the impacts of human activities such as off road vehicles, cattle grazing, and oil and gas development. The BLM must analyze the impacts of these activities in the broader context of climate change and acknowledge that the historic impacts of these threats will be exacerbated by hotter, drier conditions. The BLM must commit to specific management actions to address the increased impacts of these threats now and to take additional actions as necessary.

ORV: Soil erosion is projected to get worse in a hotter, drier climate, and ORV use will intensify this problem. The BLM should consider a number of measures to minimize the impacts of ORV use in a changing climate:

- Limit ORV use following storm events when there is increased erosion activity
- Limit ORV use seasonally
- Close areas to ORV use as increased erosion patterns develop

Grazing: Climate change is expected to cause an increase in the number and frequency of drought-years and therefore reduced levels of forage for cattle. In addition, cattle contribute to climate change through emissions of methane, carbon dioxide, nitrous oxide and ammonia (*see*, *Livestock's Long Shadow,* available at ftp://ftp.fao.org/docrep/fao/010/a0701e/a0701e03.pdf. Management actions include:

- Eliminating grazing as a vegetative management tool on the Valley Floor
- Other specific limitations on grazing as forage decreases

Oil and Gas: Seismic testing, road building and other industrial activities related to oil and gas development place tremendous stress on threatened and endangered species under any circumstances. In the context of a changing climate these activities will be even more damaging. The BLM must hold all oil and gas applications to the highest environmental standard:

- Require EIS-level review for all oil and gas exploration and development activities
- Explicitly address the increased vulnerability of Monument resources to industrial stressors due to climate change
- Thoroughly explore the authority to deny development altogether
- Impose No Surface Occupancy conditions on permits
- Require low impact drilling techniques and phased development

Adaptive Management

Managing natural resources and biodiversity to adapt to climate change is an evolving science. The RMP relies heavily on Adaptive Ecosystem Management (AEM) as the primary strategy for managing the impacts of climate change (4-178). **While AEM can be a flexible and effective tool it cannot be the only tool.** The BLM must commit to taking specific actions now to manage for known impacts of climate change on Monument resources. Adaptive management can then be used to respond to new information over the course of the RMP implementation period.

AEM will only be a helpful tool for managing climate change if three key components are present:

- Sufficient baseline data
- Regular and frequent monitoring
- Taking action in response to monitoring data.

The current staffing and funding levels for the Monument are insufficient to meet the basic requirements needed to build an effective AEM program. The BLM must provide additional resources so that Monument staff can compile adequate baseline data and implement a comprehensive ongoing monitoring protocol to collect data on climate change impacts.

The BLM should incorporate the following strategies into its AEM plan to address the impacts of climate change in order for the program to make a meaningful and timely contribution to the protection of Monument resources:

- Augment BLM staff capacity for monitoring by engaging local universities, volunteer citizen-scientists to conduct field research
- Use indicators for species viability as the basis for determining whether a management approach is working
- Include climate change as a management goal in the *Conservation Target Table*

XII. SOLAR ENERGY DEVELOPMENT

There are three proposals for development of utility-scale solar energy projects on lands surrounding the Carrizo Plain National Monument. The Draft RMP acknowledges some of this development, noting that "[o]ver 11,000 acres of solar energy development are being proposed on rangelands and agricultural lands within 10 miles of the northern boundary of the Monument." Draft RMP at 4-117. The Draft RMP also acknowledges the solar development as contributing to destruction of native vegetation and soils as part of increased development around the Monument (Draft RMP at 4-139, 4-170), as well as requiring water and damaging additional water through use of chemicals. Draft RMP at 4-178.

As discussed above, NEPA requires the BLM to consider cumulative impacts, which include "**reasonably foreseeable** future actions **regardless of what agency (Federal or non-Federal) or person undertakes** such other actions. 40 C.F.R. § 1508.7. (emphasis added). The development of some or all of these projects will have potentially significant impacts on Monument objects. By destroying wildlife habitat outside the Monument, the protected habitat within the Monument will become more important and possibly draw additional wildlife populations. Management to achieve population goals and protect imperiled species must include flexibility specifically to monitor impacts and ensure protection of wildlife. Further, by using scarce water resources and employing chemicals, the projects could impact both the water quantity and water quality vital to protection of Monument objects, specifically Soda Lake.

The Draft RMP does not include sufficient analysis or management approaches. Rather, the Draft only acknowledges the need to address impacts to groundwater and states: "Without more information on actual plans and without data for groundwater levels and trends, BLM is not able to assess the possible impacts at this time and acknowledges the need for monitoring." Draft RMP at 4-178. As discussed in detail above, the agency cannot simply rely on a general discussion of monitoring as mitigation of potentially significant impacts. Specific description of and commitments to mitigation measures must be included in the RMP to address solar energy development.

Recommendations: The RMP should specifically acknowledge the foreseeable impacts of solar energy development on Monument objects and tailor the proposed management approach to provide for monitoring and management to address these impacts.

XIII. PRIVATE INHOLDINGS

We appreciate the BLM's commitment to prioritizing the acquisition of private inholdings within the Monument. We also appreciate BLM's recognition, in its preferred alternative, of the need to target inholdings that are important to maintaining linkages between the Monument and the San Joaquin Valley and inholdings that are at risk of being developed. It's also especially important, as the preferred alternative states, for the BLM to develop and maintain a GIS database that shows and prioritizes private acquisition. Draft RMP at 2-122. This tool would also help to facilitate raising public and private funding for acquisition efforts.

Recommendation: We strongly recommend that the BLM maintain this commitment to the acquisition of private inholdings and allocate the funding and resources needed to achieve this goal.

XIV. CONTACTS

We appreciate the BLM's commitment to protecting the Monument objects and the BLM's effort on the Draft RMP. We hope that the concerns laid out above will help guide the development of the Final RMP. We are available to discuss our comments further at your convenience. If you would like to talk with us or have any questions, please contact the undersigned.

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