

September 2, 2008

Hector Villalobos  
Field Manager  
Bureau of Land Management  
Ridgecrest Field Office  
300 S. Richmond Road  
Ridgecrest, CA 93555

Subject: Timberline Resources Drilling Project, NEPA CA065-EA-2007-76

Dear Mr. Villalobos:

The California Wilderness Coalition (CWC) is a non-profit organization incorporated under the laws of the State of California with its central office in Oakland, California, and field offices in Upland and Redding. CWC has more than 5,000 members and more than 200 member organizations and business sponsors. The CWC protects the natural landscapes that make California unique – providing clean air and water, a home to wildlife, and a place for spiritual renewal. In particular, the CWC focuses on the management of roadless areas on National Park Service, Forest Service and Bureau of Land Management (BLM) land.

We appreciate this opportunity to comment on the Timberline Resources Drilling Project, NEPA CA065-EA-2007-76. The proposed drilling project is located in the CWC's Malpais Mesa Proposed Wilderness Additions as is illustrated by the "X" on the map below. CWC Desert Program Director Monica Argandoña has shared details of this and other wilderness proposals with Senator Dianne Feinstein's staff and the BLM on numerous occasions. In fact, Ms. Argandoña discussed the Malpais Mesa wilderness proposal with Ridgecrest BLM staff on April 25, 2008. The map attached as Appendix 2 was created by the BLM at the request of Senator Feinstein's staff.

The CWC strongly opposes the proposed drilling because it will damage the wild character of the Malpais Mesa Proposed Wilderness Additions. CWC staff and volunteers who have visited the region consider the Malpais Mesa Proposed Wilderness Additions to be both an ecological and scenic jewel. The central feature of the proposed additions is Conglomerate Mesa, a 7,700-foot structure topped with spectacular, jagged conglomerate rock. The topography gradually drops to 3,800 feet west of the mesa. The western slope includes rolling, laminated badlands. East of the mesa, the elevation drop is precipitous, ending in flat lands at approximately 5,700 feet. From the mesa, visitors can see beautiful meadows, lush Joshua tree forest and the glittering Sierra Nevada. Though the area has no surface water, it is remarkably verdant and seems to be a stronghold for native plants even as desert lands elsewhere are being invaded by cheat grass and other noxious weeds.

### **Impacts to the area's wilderness values must be disclosed and discussed**

The EA fails to discuss and disclose the proposed drilling project's impact on the Malpais Mesa Proposed Wilderness Additions.

The proposed wilderness additions are over 5,000 acres in size and remain primitive in character. Thus, it qualifies for future designation as wilderness according to the criteria established by the Wilderness Act of 1964. As the courts have affirmed, "[t]he possibility of future wilderness classification triggers, at the very least, an obligation on the part of the agency to disclose the fact that development will affect a 5,000 acre roadless area." Smith v. U.S. Forest Service, 33 F.3d 1072 (9<sup>th</sup> Cir. 1994).

While the BLM may argue that the California Desert Protection Act of 1994 "released" roadless areas to nonwilderness uses, this authorization does not free the BLM from its obligation under NEPA to consider the site-specific impacts of developing roadless areas and diminishing their primitive character. *See id.*

Some of the issues that should have been studied, described and discussed in detail for each alternative in the EA include:

- Impacts to plant species, including non-native invasives and habitat fragmentation;
- Effects of roads, including the possibility that reopening the routes (even for a year) will result in the illegal pioneering of new user-created routes;
- Impacts to species that are listed as threatened, endangered or sensitive under the Endangered Species Act (including species proposed for listing);
- Consequences for non-mechanized, mechanized and motorized recreation;
- Impacts to scenic quality;
- Consequences to heritage resources; and
- Impacts to the area's wilderness values, including natural integrity, apparent naturalness, remoteness, solitude, special features, manageability, logical boundaries, and special places or values.

Since none of these issues were addressed in any detail, the effect of the proposed action on the wild character of the proposed additions was improperly studied in the EA (or more precisely, not studied at all) and therefore it does not satisfy the detailed analysis requirements set forth in 36 CFR § 219.17.

### **Information regarding the potential impacts to plants and animals is inadequate**

The EA did not offer even a cursory discussion of the potential impacts of the project on wildlife and plants. Indeed, the document failed to even list the potentially affected species as can be found on the California Department of Fish and Game's California Natural Diversity Database (CNDD) at [http://imaps.dfg.ca.gov/viewers/cnddb\\_quickviewer/app.asp](http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp).

A review of the CNDD reveals that many plant and animal species have been recorded in the 7.5-minute quadrangle that the proposed project is in as well as in the adjoining quadrangles. The full list is attached as Appendix 1 at the end of this document.

Neither the public, nor the BLM can make informed decisions when faced with an incomplete analysis. The EA therefore fails to meet the standards set forth in the NEPA, 40 CFR § 1500.2 (e) and § 1500.1 (b) which require the federal government to ensure “that environmental information is available to public officials and citizens before decisions are made and before actions are taken,” and that the information provided to public officials and citizens “must be of high quality.”

### **The EA offers an insufficient range of alternatives**

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 Env'tl. Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997). By failing to “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action, the agency violates NEPA. City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14).

The BLM did not thoroughly consider alternatives in the EA and thus the FONSI was improperly issued. 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). In failing to include an adequate evaluation of alternatives the BLM narrowly defined the objectives of the project, and found that they could only be accomplished by Timberline’s proposal, requiring the construction of an access road.

No alternatives were evaluated by the BLM in the EA that would have provided for transporting drill rigs by means other than the proposed route such as air transport. The EA states: “This environmental assessment focuses on the proposed and no action alternatives. Other alternatives considered, but eliminated from further analysis includes the accessing of the proposed drill locations by means other than the proposed routes.” Because of the admitted failure on the part of the BLM to include in the EA the analysis of alternative means to transport the drill rigs, BLM did not go far enough to establish a “range of alternatives.”

Additionally, the no action alternative does not provide a “range” of alternatives. Instead, the no action alternative is summarily overviewed and not fully described in the EA. In the no action alternatives section of the EA, BLM cites to 43 C.F.R. §3809.411. This section allows the BLM to disapprove or withhold approval of a plan of operations if it “proposes operations that would result in unnecessary or undue degradation of public lands.” BLM does not discuss the possible applicability of this provision to the Timberline project. We hold that the construction of 3.4 miles of road in order to create access for drilling operations by Timberline Resources Corporation will result in unnecessary and undue degradation of public lands and thus withholding approval of the proposed project would be appropriate.

### **An EIS is required**

NEPA requires an EIS for actions that “significantly” effect the environment, and for actions that impact the “[u]nique 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.” 40 C.F.R. § 1508.27(b)(3). The preparation of an EIS is required for actions which are “highly controversial.” 40 C.F.R. § 1508.27(b)(4).

The proposed activities by Timberline Resources Corporation would significantly affect the unique characteristics of the Malpais Mesa Proposed Wilderness Additions. *See* 40 CFR 1508.27(b)(3). The construction of a temporary access road and the completion of seven drillholes will significantly affect the unique characteristics of this desert region. NEPA requires that the severity of the impact of the project be considered by agency decision-makers. In making this determination, agency officials must consider whether the activities described in the proposed action involve effects on the human environment that are likely to be “highly controversial.” (40 CFR 1508.27(b)(4)).

The existence of a public controversy over the effect of an agency action is one factor in determining whether the impact is “significant.” *See* 40 C.F.R. § 1508.27(b)(4) (1991); LaFlamme v. FERC, 852 F.2d 389, 400-01 (9th Cir. 1988); Jones v. Gordon, 792 F.2d 821, 828-29 (9th Cir. 1986). A federal action is controversial if “a substantial dispute exists as to [its] size, nature, or effect.” Foundation for North American Wild Sheep v. United States Department of Agriculture, 681 F.2d 1172, 1182 (9th Cir. 1982).

We hold that there would be significant effects from allowing Timberline Resources Corporation to construct a temporary access road and seven drillholes in Conglomerate Mesa. This is precisely the type of “controversial” action for which an EIS must be prepared. Otherwise, 40 C.F.R. Sec. 1508.27(b)(4) is rendered a nullity.

The 9<sup>th</sup> Circuit in Smith v. U.S. Forest Service, 33 F.3d 1072 (1994) held that “the possibility of future wilderness classification triggers, at the very least, an obligation on the part of the agency to disclose the fact that development will affect a 5,000 acre roadless area.” There is no such disclosure in the EA prepared by the BLM. The EA does not mention that the proposed project is within the Malpais Mesa Proposed Wilderness Additions. The absence of this information in the EA may show that there already exists a substantial dispute as to the effect of the project on the natural environment.

The EA fails to acknowledge the highly controversial nature of this project as well as the significance of the effects of the proposed activities to the environment and the wilderness’ character. As a result, approval of this project mandates an EIS and a thorough assessment of potential mitigating measures that would lessen or avoid the significant effects and controversies created by this project.

### **Greater analysis of cumulative impacts is required**

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. 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).

In Fritiofson v. Alexander, the U.S. Court of Appeals for the Fifth Circuit held that in a cumulative impact analysis, an agency should consider "(1) past and present actions without regard to whether they themselves triggered NEPA responsibilities and (2) future actions that are 'reasonably foreseeable,' even if they are not yet proposals and may never trigger NEPA-review requirements. 772 F.2d 1225, 1245 (5th Cir. 1985). The court stated: "The regulation does not limit the inquiry to the cumulative impacts that can be expected from proposed projects; rather; the inquiry also extends to the effects that can be anticipated from "reasonably foreseeable future actions." Id. at 1243 (emphasis added).

In the instant facts, the BLM's obligation to analyze the cumulative impacts of mining that could result from finding gold certainly extends beyond the dismissive statement currently included and must realistically address the potential for further development.

### **A thorough economic analysis of the proposed project and its impact on the region**

We have attached as Appendix 3 an economic analysis performed Michelle Haefele and Alice Bond of The Wilderness Society. This analysis examines the important economic benefits of wilderness areas to the economies which surround the desert areas of Southern California. It is our hope that you will consider the correlation between the presence of protected public lands and economic growth in the desert region.

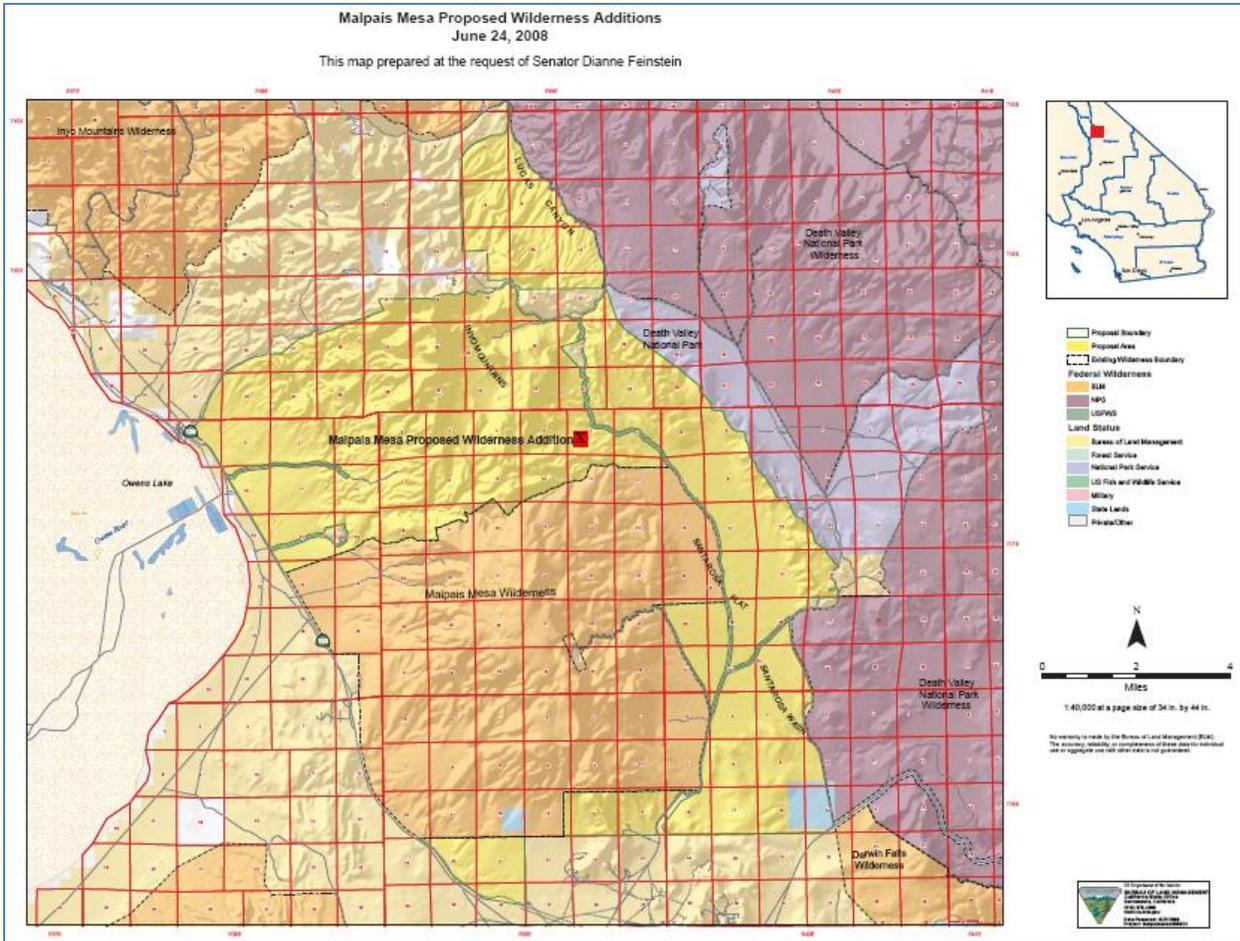
Thank you for considering our comments.

Sincerely,

Erin Ziegler  
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## Appendix 1: Malpais Mesa Proposed Wilderness Additions



This map of the CWC's Malpais Mesa Proposed Wilderness Additions was prepared by the BLM at the request of Senator Dianne Feinstein on June 24, 2008. We have placed an "X" at the site of the proposed project to illustrate how it relates to the proposed wilderness additions.

Appendix 2: List of plant and animal species that have been recorded in the 7.5-minute quadrangle that the proposed project is in, as well as in the adjoining quadrangles.

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG	CNPS LIST
Centennial Canyon	Toxostoma lecontei	Le Conte's thrasher	None	None	SC	
Centennial Canyon	Spermophilus mohavensis	Mohave ground squirrel	None	Threatened		
Centennial Canyon	Lupinus magnificus var. magnificus	Panamint Mountains lupine	None	None		1B.2
Cerro Gordo Peak	Toxostoma lecontei	Le Conte's thrasher	None	None	SC	
Cerro Gordo Peak	Myotis ciliolabrum	western small-footed myotis	None	None		
Cerro Gordo Peak	Erigeron uncialis var. uncialis	limestone daisy	None	None		1B.2
Cerro Gordo Peak	Perityle inyoensis	Inyo rock daisy	None	None		1B.2
Cerro Gordo Peak	Caulostramina jaegeri	Jaeger's caulostramina	None	None		1B.2
Cerro Gordo Peak	Astragalus cimae var. sufflatus	inflated Cima milk-vetch	None	None		1B.3
Cerro Gordo Peak	Eriogonum eremicola	Wildrose Canyon buckwheat	None	None		1B.3
Cerro Gordo Peak	Eriogonum microthecum var. panamintense	Panamint Mountains buckwheat	None	None		1B.3
Cerro Gordo Peak	Mimulus parryi	Parry's monkeyflower	None	None		2.3
Darwin	Falco mexicanus	prairie falcon	None	None		
Darwin	Antrozous pallidus	pallid bat	None	None	SC	
Darwin	Arabis pulchra var. munciensis	Darwin rock-cress	None	None		2.3
Darwin	Astragalus mohavensis var. hemigyris	curved-pod milk-vetch	None	None		1A
Darwin	Petalonyx thurberi ssp. gilmanii	Death Valley sandpaper-plant	None	None		1B.3
Darwin	Oxytheca watsonii	Watson's oxytheca	None	None		2.2
Jackass Canyon	Dipodomys panamintinus panamintinus	Panamint kangaroo rat	None	None		
Jackass Canyon	Ovis canadensis nelsoni	Nelson's bighorn sheep	None	None		
Jackass Canyon	Elgaria panamintina	Panamint alligator lizard	None	None	SC	
Jackass Canyon	Mojave Riparian Forest	Mojave Riparian Forest	None	None		
Jackass Canyon	Cymopterus ripleyi var. saniculooides	sanicle cymopterus	None	None		1B.2
Jackass Canyon	Lomatium foeniculaceum var. macdougallii	Macdougall's lomatium	None	None		2.2
Jackass Canyon	Arabis dispar	pinyon rock-cress	None	None		2.3
Jackass Canyon	Astragalus atratus var. mensanus	Darwin Mesa milk-vetch	None	None		1B.1
Jackass Canyon	Lupinus pusillus var. intermontanus	intermontane lupine	None	None		2.3
Jackass Canyon	Phacelia anelsonii	Aven Nelson's phacelia	None	None		2.3

Jackass Canyon	<i>Camissonia boothii</i> ssp. <i>intermedia</i>	Booth's hairy evening-primrose	None	None		2.3
Jackass Canyon	<i>Ivesia arizonica</i> var. <i>arizonica</i>	yellow ivesia	None	None		2.3
Jackass Canyon	<i>Penstemon fruticiformis</i> var. <i>amargosae</i>	Amargosa beardtongue	None	None		1B.3
Keeler	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	Threatened	None	SC	
Keeler	<i>Toxostoma lecontei</i>	Le Conte's thrasher	None	None	SC	
Keeler	<i>Myotis ciliolabrum</i>	western small-footed myotis	None	None		
Keeler	<i>Euderma maculatum</i>	spotted bat	None	None	SC	
Keeler	<i>Spermophilus mohavensis</i>	Mohave ground squirrel	None	Threatened		
Lee Wash	<i>Antrozous pallidus</i>	pallid bat	None	None	SC	
Lee Wash	<i>Cymopterus ripleyi</i> var. <i>saniculooides</i>	sanicle cymopterus	None	None		1B.2
Lee Wash	<i>Astragalus cimae</i> var. <i>sufflatus</i>	inflated Cima milk-vetch	None	None		1B.3
Lee Wash	<i>Oxytheca watsonii</i>	Watson's oxytheca	None	None		2.2
Nelson Range	<i>Antrozous pallidus</i>	pallid bat	None	None	SC	
Nelson Range	<i>Cymopterus ripleyi</i> var. <i>saniculooides</i>	sanicle cymopterus	None	None		1B.2
Nelson Range	<i>Arabis pulchra</i> var. <i>munciensis</i>	Darwin rock-cress	None	None		2.3
Nelson Range	<i>Astragalus cimae</i> var. <i>sufflatus</i>	inflated Cima milk-vetch	None	None		1B.3
Nelson Range	<i>Mentzelia inyoensis</i>	Inyo blazing star	None	None		1B.3
Nelson Range	<i>Aliciella ripleyi</i>	Ripley's aliciella	None	None		2.3
Santa Rosa Flat	<i>Antrozous pallidus</i>	pallid bat	None	None	SC	
Santa Rosa Flat	<i>Spermophilus mohavensis</i>	Mohave ground squirrel	None	Threatened		
Santa Rosa Flat	<i>Cymopterus ripleyi</i> var. <i>saniculooides</i>	sanicle cymopterus	None	None		1B.2
Santa Rosa Flat	<i>Perityle inyoensis</i>	Inyo rock daisy	None	None		1B.2
Santa Rosa Flat	<i>Astragalus cimae</i> var. <i>sufflatus</i>	inflated Cima milk-vetch	None	None		1B.3
Santa Rosa Flat	<i>Oxytheca watsonii</i>	Watson's oxytheca	None	None		2.2
Talc City Hills	<i>Toxostoma lecontei</i>	Le Conte's thrasher	None	None	SC	
Talc City Hills	<i>Spermophilus mohavensis</i>	Mohave ground squirrel	None	Threatened		
Talc City Hills	<i>Perityle inyoensis</i>	Inyo rock daisy	None	None		1B.2
Talc City Hills	<i>Oxytheca watsonii</i>	Watson's oxytheca	None	None		2.2
Talc City Hills	<i>Blepharidachne kingii</i>	King's eyelash grass	None	None		2.3

Appendix 3: California Deserts and Economic Prosperity: Analysis of the economic benefits of desert wildlands, prepared by Michelle Haefele and Alice Bond of The Wilderness Society

California's desert wildlands are an important source of biodiversity, wildlife habitat, open space, solitude and scenic beauty. They are also an important economic asset for the surrounding communities and for the entire state. For example, a 2004 report on the economic value of the lands included in the California Desert Protection Act of 1994 found that wildlands in the California desert support nearly 3,700 jobs in the affected counties.<sup>i</sup>

Research over many decades, from a variety of economists and other scientists, shows that the economy of the American West is dependent on more than just the extraction of raw materials.<sup>ii</sup> Public lands have long been a source of economic benefit to surrounding communities, and the California Desert is no exception. In the past these benefits largely derived from the salable commodities that can be extracted from the land, such as oil, gas, minerals, and grazing opportunities. Yet communities throughout the West are increasingly realizing that wildlands provide direct support for local and regional economies by offering a scenic backdrop, recreation opportunities, and a desirable rural lifestyle. These and other tangible and intangible amenities attract new residents, businesses, and income to the rural West.

Key economic indicators that signal both a change in California's economy and the health of the state's communities include: 1) the rapidly expanding professional and service sectors, 2) the increasingly important role that recreation and tourism play in the region, 3) the rise of small businesses and other entrepreneurial endeavors, and 4) the growing importance of retirees.

1) The professional and service industries are a vital part of regional economic health. These industries have been growing in importance in California's desert counties – accounting for 24% of San Bernardino County's personal income and 21% and 13% in Riverside and Imperial Counties respectively.<sup>iii</sup> This sector is very diverse – encompassing a wide range of occupations – from medicine to museums, from technology to tourism. The diversity of this growing sector is important for sustainable economic well-being. The proximity of protected wildlands, including those in the California Desert, can serve to attract new businesses and is an important factor in keeping the professional and service industries sector of the economy strong and growing.

The areas nearest to California's deserts include parts of Imperial, Riverside and San Bernardino Counties, and these areas also show the current economic importance of the professional and service sector. (See Figure 1.)

The professional and service sector is diverse, encompassing a wide range of occupations and making it an important contributor to a region's overall economic diversity. (See Figure 2.)

Local communities with nearby protected wildlands reap measurable benefits in terms of employment and personal income. Surveys indicate that scenic amenities and wildlife-based recreation - both of which are strongly supported by the California desert - motivate many firms to locate or stay in the West. Similarly, residents of counties with wilderness cite the presence of that wilderness as an important reason why they moved to the county, and long-term residents cite it as a reason they stay.

2) Outdoor recreation by residents and tourists alike is an important component of California's economy. Ten million people participated in wildlife activities (hunting, fishing and wildlife watching) in California in 2005, spending over \$7.7 billion. Wildlife watching accounted for

80% of total participation and 60% of expenditures. Maintaining habitat for the fish and wildlife sought by these recreationists is a wise investment for western communities. Participants in active outdoor recreation such as hiking, mountain biking and camping contribute \$46 billion annually to California's economy and support over 400,000 jobs. The potential economic impact of tourism in the region can be seen in terms of employment and the amount that tourists already spend. (See Figures 3 and 4.)

Tourism can also diversify the local economies in two ways: First, industries associated with tourism can provide a range of jobs for workers in the region; second, people who visit the area as tourists may choose the location for permanent residence.

3) Entrepreneurs bring jobs and income to the region and have been found to be an important indicator of an area's overall economic health and potential future prosperity. Studies of the growth of rural regions have linked entrepreneurial activity with long-term economic growth.<sup>iv</sup>

4) Retirees and investors drive one of the top "industries" in the state, with their income making up nearly one-quarter of California's total personal income. Research has shown that many entrepreneurs choose the location for their businesses after first visiting an area as a tourist, and retirees also often make similar location decisions.

The presence of protected public lands, transportation, and communication infrastructure, along with access to larger markets in metropolitan centers and recreation and scenic amenities, is highly correlated with the strongest economic growth in the rural West. Research has also shown that amenities including scenery and opportunities for outdoor recreation attract entrepreneurs and the highly skilled workers they will need to grow and prosper.<sup>v</sup> On the other hand, extractive-industry income in California has declined in the last 30 years, accounting for less than one percent of total personal income in the state. California's people and communities have come to depend instead on the state's natural amenities.

This trend has been documented in detail for the areas immediately surrounding the Carrizo Plain National Monument. This important and protected grassland has been the subject of a recent study by The Wilderness Society which shows how the local communities surrounding the Monument are poised to benefit from the presence and protective management of this national treasure.<sup>vi</sup> Go to [www.wilderness.org/california](http://www.wilderness.org/california) for a copy of the report.

The report builds from research demonstrating a correlation between the presence of protected public lands and economic growth and applies a set of indicators to evaluate the regional characteristics of the Carrizo Plain Economic Region. These indicators measure attributes that have been found to correlate with the potential for economic growth in rural counties. They include the presence of human amenities (such as scenery, healthcare and restaurants), skilled workers, innovators and entrepreneurs, as well as the capital and infrastructure to support them.

The report also evaluates the income and employment trends of the regional economies, which show a steady increase in the professional/service sector. This sector is also shown to be the most stable and diverse part of the local economies, even where industries such as energy development or agriculture, play an important role. The strength of the professional/service sector is a key consideration in concluding that the local economies will be able to achieve economic growth – growth that will benefit from the protection of the natural amenities of the Carrizo Plain National Monument.

What the report reveals for the Carrizo Plain National Monument area is also quite likely to be true of the communities near California's other desert wildlands. The economy of rural

California is moving away from the extraction of natural resources and toward the exploitation of the natural beauty of the state's wonders to attract a diverse workforce primarily in the knowledge-based sectors.

Healthy, intact landscapes, like the California desert are not just important for protecting plants and wildlife but also for ensuring sustainable, continued economic growth for the state's communities.

Reference cited in this article can be viewed on-line at [www.desertreport.org](http://www.desertreport.org). They can be found by clicking on the "letters" button.

*Michelle Haefele, Resource Economist joined the Wilderness Society in 2003 after working as a Post-doctoral Research Associate for the USDA Forest Service and Colorado State University, where she participated in research projects exploring public values and attitudes toward public lands. Her current projects explore the various economic and social aspects of public land management, including oil and gas development and tourism.*

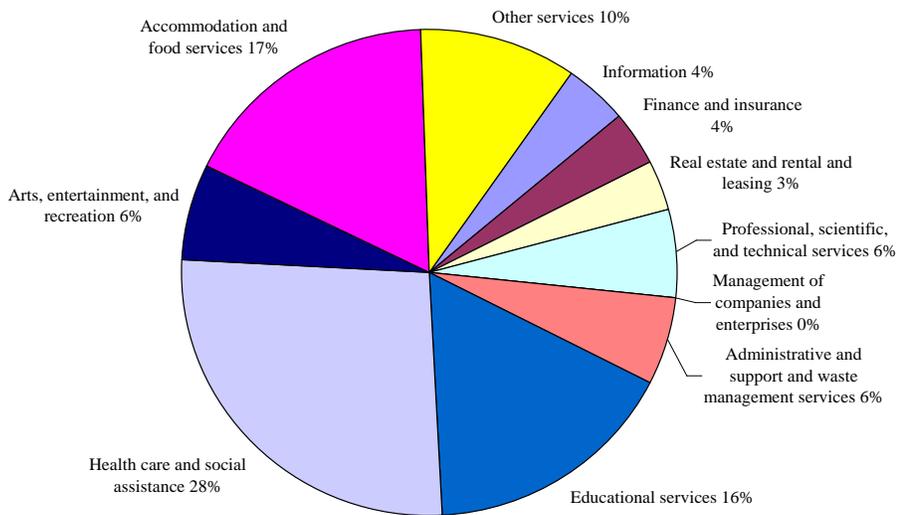
*Alice Bond, Public Lands Associate, has worked for The Wilderness Society since 2006 to protect the best of the Bureau of Land Management's lands in California. Previously she has worked for the National Outdoor Leadership school and also as a consultant to the National Park Service to develop a business plan for Hawaii Volcanoes National Park.*

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<b>Employment in the California Desert Region – Figure 1</b>			
	Percentage of Total Employment		
	Professional & Service Sector	Mining (includes oil & gas extraction)	Farming & Ranching
Imperial County's Desert Areas	35%	0%	20%
Riverside County's Desert Areas	41%	0%	9%

**Employment in the California Desert Region – Figure 1**

	Percentage of Total Employment		
	Professional & Service Sector	Mining (includes oil & gas extraction)	Farming & Ranching
San Bernardino County's Desert Areas	55%	0.4%	0.5%
California	59%	0.15%	2%
United States	57%	0.38%	1.5%



**Professional & Service Sector Employment in the California Desert Region**

Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <http://www.sonoran.org/eps/>

**Figure 2**

**Travel Impacts in Some of California's Desert Counties – Figure 3**

	Travel Spending	Employment (jobs)
Imperial County	\$272,900,000	4,550
Riverside County	\$5,172,500,000	62,160

San Bernardino County	\$3,141,700,000	42,210
<i>Source: Dean Runyan Associates. 2007. California Travel Impacts by County</i>		

<b>Percentage of Employment in the Tourism Industry in the California Desert Region</b>	
<b>Figure 4</b>	
Imperial County's Desert Areas	6.77%
Riverside County's Desert Areas	14.13%
San Bernardino County's Desert Areas	12.76%
United States	7.87%
California	8.18%
* Tourism consists of Arts, Entertainment, Recreation, Accommodation and Food Services <i>Source: U.S. Department of Commerce, Census Bureau Data, compiled by the Economic Profile System for Communities (EPSC), available at: <a href="http://www.sonoran.org/eps/">http://www.sonoran.org/eps/</a></i>	

<sup>i</sup> The California Desert Protection act protected lands in Inyo, San Bernardino, Riverside, and Imperial Counties. From Richardson, R. B. 2004. *The Economic Benefits of California Desert Wildlands: 10 Years Since The California Desert Protection Act of 1994*. Washington DC: The Wilderness Society. 59 pp.  
<http://www.wilderness.org/Library/Documents/upload/EconBenefitsOfCaliforniaDesertWildAlerts2004.pdf>

<sup>ii</sup> See Whitelaw and Niemi 1989, Rudzitis and Johansen 1989, Johnson and Rasker 1993 and 1995, Freudenburg and Gramling 1994, Snepenger et al. 1995, Deller 1995, Power 1995 and 1996, Bennett and McBeth 1998, Duffy-Deno 1998, McGranahan 1999, Nelson 1999, Rudzitis 1999, Morton 2000, Lorah 2000, Deller et al. 2001, Johnson 2001, Shumway and Otterstrom 2001, Lorah and Southwick 2003, Rasker et al. 2004, Holmes and Hecox 2004 and Reeder and Brown 2005, Sonoran Institute 2006, and Barrens et al. 2006 for some examples. Haefele et al. (2007) provides a detailed description of the aforementioned research on the amenity economy and the ways in which local economies benefit from protected public lands.

<sup>iii</sup> U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System ([www.bea.gov](http://www.bea.gov))

<sup>iv</sup> Low, S., J. Henderson, and S. Weiler. 2005. Gauging a Region's Entrepreneurial Potential. *Economic Review* (Third Quarter) Federal Reserve Bank of Kansas City. And Low, S. 2004. Regional Asset Indicators: Entrepreneurship Breadth and Depth. *The Main Street Economist*, September, 2004. Center for the Study of Rural America, Federal Reserve Bank of Kansas City, Kansas City, MO.

<sup>v</sup> Low, S. 2005a. Regional Asset Indicators: The Wealth of Regions. *The Main Street Economist*, September, 2005. Center for the Study of Rural America, Federal Reserve Bank of Kansas City, Kansas City, MO.

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<sup>vi</sup> Haeefe, M., N. Culver and A. Bond. 2008. The Carrizo Plain National Monument: A Stunning Natural Area Sustaining Vibrant Communities. San Francisco CA: The Wilderness Society. 52pp. Available at: [http://www.wilderness.org/Library/Documents/upload/CarrizoPlainNationalMonument\\_SustainingLocalCommunities.pdf](http://www.wilderness.org/Library/Documents/upload/CarrizoPlainNationalMonument_SustainingLocalCommunities.pdf)