

# Amargosa River Area of Critical Environmental Concern Implementation Plan

Barstow Field Office





# The Bureau of Land Management Today

## *Our Vision*

To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

## *Our Mission*

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

## *Our Values*

To serve with honesty, integrity, accountability, respect, courage, and commitment to make a difference.

## *Our Priorities*

To improve the health and productivity of the land to support the BLM multiple-use mission.

To cultivate community-based conservation, citizen-centered stewardship, and partnership through consultation, cooperation, and communication.

To respect, value, and support our employees, giving them resources and opportunities to succeed.

To pursue excellence in business practices, improve accountability to our stakeholders, and deliver better service to our customers.

**Amargosa River  
Area of Critical Environmental Concern  
Implementation Plan**

**Bureau of Land Management  
Barstow Field Office**

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# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Barstow Field Office  
2601 Barstow Road  
Barstow, CA 92311  
<http://www.blm.gov/ca/barstow/>



In Reply Refer To:  
1792 (P)  
CA-680.01

May 31, 2007

Dear Reader:

Enclosed, for your review, is the draft Amargosa River Area of Critical Environmental Concern (ACEC) Implementation Plan and associated Environmental Assessment (EA). The draft ACEC Plan will guide the implementation of management goals established in the Northern and Eastern Mojave (NEMO) 2002 amendment to the California Desert Conservation Area (CDCA) Plan. The Bureau of Land Management (BLM) prepared these documents in fulfillment of its responsibilities under the Federal Land Management Policy Act of 1976, the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and BLM ACEC management regulations (43 CFR 1610.7-2).

The Amargosa River ACEC planning area includes about twenty-one-thousand acres of public land located in southeastern Inyo County and northeastern San Bernardino County near the communities of Tecopa, Shoshone, and Death Valley Junction. The purpose of the draft ACEC Implementation Plan is to guide BLM's on-the-ground management activities of public land within the ACEC over the next twenty years. The EA assesses the impacts of the draft Plan and its alternatives.

Thirty-five days are being provided for public review. Comments should be addressed to:

Amargosa River ACEC Plan  
Bureau of Land Management  
2601 Barstow Road  
Barstow, CA 92311

Final approval of the Amargosa River ACEC Implementation Plan will be documented in a Decision Record. The Record Decision will reflect any changes made as a result of public review and will be made available to the public and mailed to interested parties.

Sincerely,

Roxie C. Trost  
Field Manager

Enclosure  
Draft ACEC Implementation Plan and Environmental Assessment (EA).

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Amargosa River  
Area of Critical Environmental Concern  
Implementation Plan

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## **I. Introduction**

### **A. Location and Setting of Planning Area**

The Amargosa River Area of Critical Environmental Concern (ACEC) is located in northeastern San Bernardino and southeastern Inyo Counties, California, near the communities of Tecopa and Death Valley Junction, California (Map 1). Ninety-two percent of the lands composing the ACEC are public lands administered by the Bureau of Land Management (BLM). BLM has no authority to implement any part of this plan on private lands without the willing agreement of the private landowner.

The ACEC encompasses 21,552 acres in three distinct geographic units (Maps 2a through 2c). The 15,964 acre Central Amargosa Unit includes the previous Amargosa Canyon and Grimshaw Lake Natural Areas plus additional lands in China Ranch Wash and the Tecopa area. Eighty-nine percent of the Central Amargosa Unit<sup>1</sup> is public lands administered by BLM. The Lower Carson Slough Unit<sup>2</sup> is located about two miles northeast of Death Valley Junction along State Route 190 and contains 4,340 acres of public land administered by the BLM. The Upper Amargosa Mesquite Bosque Unit<sup>3</sup> is located west of State Route 127 and south of the Nevada state line and contains 2,720 areas of public land administered by the BLM.

The Amargosa River originates in the mountains surrounding Beatty, Nevada, flows through the Amargosa Desert region, and terminates at Bad Water in Death Valley National Park. Most of the river course to Bad Water is underground, but about seventeen miles of surface flow exist in the areas of Shoshone, Tecopa, and the Amargosa Canyon. This perennial surface flow has created lush riparian and wetland habitats that support endemic and sensitive species such as the endangered Amargosa vole (*Microtus californicus scirpensis*). The Amargosa Canyon contains some of the lush cottonwood-willow gallery forest in the Mojave Desert. Portions of the Amargosa River are eligible for inclusion in the National Wild and Scenic River System (NWSRS).

The alkali flats in the Carson Slough Unit are downstream from Ash Meadows in Nevada. Carson Slough is a tributary to the main Amargosa River and provides designed critical habitat for two regionally endemic plants listed under the Endangered Species Act.

The Upper Amargosa Unit includes upstream flow and source waters for the Central Unit, mesquite bosque, and ephemeral wetlands. One-hundred and five acres of public land administered by BLM within the Upper Unit may be patented as private land within the life of this plan.

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<sup>1</sup> Referred to as the Central Unit

<sup>2</sup> Referred to as the Carson Slough Unit

<sup>3</sup> Referred to as the Upper Amargosa Unit

## **B. Relevance and Importance Criteria of the Amargosa River ACEC**

To qualify as an Area of Critical Environmental Concern (ACEC), an area must meet the relevance and importance criteria defined in the Federal Land Policy and Management Act of 1976 (FLPMA) and codified in 43 Code of Federal Regulations (CFR) 1610.7-2. An environmental resource can be found *relevant* if there is a significant historic, cultural, or scenic value; a fish or wildlife resource; or other natural system or process. An environmental resource can be found *important* if the significant value, resource, or system have substantial significance and value. This generally requires that qualities exceed mere local significance and special worth.

The resources present in the Amargosa River ACEC are both relevant and important because of three resource values:

### **A. Fish and wildlife resources and natural systems and processes**

The importance of the Amargosa River ACEC lies in its unique and dramatic contrast from the vast surrounding desert area and its isolation from other similar landscapes and habitats. Perennial free-flowing water and associated wetland and riparian habitats provide food, cover, and water to diverse bird, fish, mammal, mollusk, and insect species that would otherwise not be found in this part of the Mojave Desert. Extensive riparian, wetland, and alkali mudflat habitats are found in other isolated spots of the Mojave Desert, but those found along this section of the Amargosa River have been isolated for so long that they have begun to take on special significance. Plant and animal species, found nowhere else in the world, such as the Amargosa vole, Amargosa pupfish (*Cyprinodon nevadensis amargosae*), Amargosa dace (*Rhinichthys osculus spp.*), and many others depend on these distinct habitats for survival. These endemic species are perfectly adapted to the special environmental conditions and forces that these habitats have placed on them, but they are not adapted to pressures placed on them by current land use practices. Legal protection for many of these species and critical habitat designation for the Amargosa vole provide special importance to this area and the need for ACEC designation. The Carson Slough Unit contains alkali mudflats and saltgrass meadows containing designated critical habitat for the federally endangered Amargosa niterwort (*Nitrophila mohavensis*) and federally threatened Ash Meadows Gum Plant (*Grindelia fraxino-pratensis*).

### **B. Historical and cultural values**

The Amargosa River Area of Critical Environmental Concern (ACEC) encompasses diverse, unique, and significant cultural and paleontological resources. Because the Amargosa River is a significant water source in the Mojave Desert, human use extends over the last 8,000 years (BLM 1983b:9). Rogers (1939) identified four distinct cultural complexes, which have since been renamed Paleo-Indian, Lake Mohave/Pinto, Amargosa, and Shoshonean. In addition to its prehistoric value, historic landmarks include the Old Spanish Trail and the Tonopah and Tidewater Railroad, which traversed the canyon. The Lake Tecopa bed is fossil-rich and the canyon area is scientifically valuable for paleontological study (Sulley 1972:1).

### **C. Scenic values**

The presence of important scenic values is part of the agency record in the California Desert Conservation Area (CDCA) Plan (1980). Applying the Visual Resources Management (VRM) inventory program of the time, the BLM rated CDCA polygons as to land form, color, water, vegetation, uniqueness, intrusions, and adjacent scenery. Using a points system, each “rating area” was assigned an overall rating of A, B or C. Seventeen rating area polygons exist within the viewshed of the Amargosa River ACEC; eight were rated A, seven were rated B, and one was rated C. In the A, B, and C rating system, A areas combine the most outstanding characteristics of each rating factor. The ACEC’s viewshed includes natural scenery entirely or partly within the boundaries of eight wilderness areas and two wilderness study areas managed by BLM, as well as substantial wilderness acreage within Death Valley National Park.

### **C. Purpose and Need of the Plan**

The Amargosa River Area of Critical Environmental Concern (ACEC) Implementation Plan is a site-specific, interdisciplinary plan that strategically implements management goals for the Amargosa River ACEC. The area is a popular recreation destination due to its location and special values, and is an integral component for local community services and economic life. A real threat to the water resources within the ACEC comes from potential future development in Nevada and California. Development could cause an overdraft of the aquifers that feed the spring sources providing water to the Amargosa River. Because of the high sensitivity, popularity, and importance of the ACEC’s resources and values, special management actions are necessary to monitor and evaluate resources and values and to control and repair damage from recreation, resource use, invasive species, and other pressures that are not part of the native, natural environment.

This site-specific implementation plan integrates the vision for this area from various previous planning documents and designations, and defines a long-term action plan for the ACEC through implementation goals and actions to meet those goals. The plan will also identify the cost and priority associated with each action.

### **D. Management Background**

The California Desert Conservation Area (CDCA) Plan of 1980 established the Grimshaw Lake and Amargosa Canyon Natural Areas of Critical Environmental Concern (ACECs). The CDCA Plan recognized the Amargosa River’s importance as a natural system containing important resources and values. BLM adopted activity plans for these ACECs in 1983. Management objectives of the 1983 plans were to:

1. Improve the condition, and maintain the current extent of wetland habitats in order to perpetuate certain sensitive wildlife species, including least Bell’s vireo (*Vireo bellii pusillus*), California yellow-billed cuckoo (*Coccyzus americanus occidentalis*), Amargosa speckled dace, Amargosa River pupfish, and the Amargosa vole.

2. Minimize man-caused intrusions to protect high-value scenery (geologic features and vegetative patterns).
3. Provide for passive recreation opportunities (non-motorized, day-use) in a manner compatible with the protection of sensitive wildlife species and scenic values.

Because of events that created changes in circumstances on public lands administered by BLM in the Northern and Eastern Mojave (NEMO) Planning Area, the NEMO plan amendment to the CDCA plan was completed in 2002. These changes of circumstance include:

1. Almost twenty miles of the Amargosa River, from Shoshone to State Highway 178, are eligible for the inclusion in the National Wild and Scenic River System (NWSRS). Consideration of a river for suitability puts a certain constraints on development. These constraints prohibit activities and uses that may adversely affect the potential suitability of the river segment at the recommended level of protection (wild, scenic or recreational), until suitability determination is made.
2. The Old Spanish Trail, which follows the Amargosa River, was included in the National Historic Trails System (NHTS) in 2002. The National Park Service (NPS) and BLM are jointly developing a management plan that guides the protection and interpretation of the trail.
3. The listing of the Amargosa vole as endangered under the Endangered Species Act (ESA) in 1984, the designation of critical habitat, and in 1997 the publication of a recovery plan for the species.
4. The California Desert Protection Act of 1994 (CDPA) created the Kingston Range Wilderness, portions of which are in the Central Unit. Wilderness constraints on uses and activities need to be integrated into the plan's overall management and interpretation strategies.
5. The 1985 listing of the Amargosa niterwort as endangered and the Ash Meadows gumplant and spring-loving centauray (*Centaureium namophilum*) as threatened under ESA, and the designation of critical habitat for the two former plant species. Recovery of these plants is addressed in the *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada* (FWS 1990).
6. The southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo were listed as endangered under ESA and recent surveys conducted in 2005 and 2006 have confirmed that least Bell's vireo is nesting in the Amargosa River ACEC.
7. Inyo County adopted a Recreational Trails Strategy for eastern Inyo County. The Strategy needs to be integrated into the ACEC's overall management and interpretation strategies.

The NEMO Amendment to the CDCA Plan established the new Amargosa River ACEC with modified boundaries, adopted additional management strategies, designated routes of travel, and identified the need for an updated ACEC Plan to implement these strategies and integrate them with existing ACEC Plan strategies.

## **II. Resource Summary**

The Amargosa River Area of Critical Environmental Concern (ACEC) includes perennial surface flows that support major riparian and wetland systems in the Death Valley region of the Mojave Desert. As a result, the ACEC contains an important and complex array of resources. Within the ACEC's Central Unit, the Amargosa River, and its cottonwood-willow gallery forest are the most notable of these resources. The Amargosa River and its riparian forest support two federally listed birds, a state listed bird, and two BLM sensitive fish. Because of its perennial water, the Amargosa River has a long history of human use and occupation.

Grimshaw Lake, also in the Central Unit, provides important wetlands for migrating waterfowl. The meadows, marshes, and pastures surrounding Grimshaw Lake provide habitat for the federally endangered Amargosa vole, which is endemic to the ACEC. Critical habitat for the vole is designated within the ACEC. The Central Unit provides a variety of compatible recreation opportunities and continues to be increasingly popular with recreationalists.

The Carson Slough Unit provides designed critical habitat for two federally listed plants and suitable habitat for a third. These rare plants are endemic to the Ash Meadows region.

The continued presence of these sensitive resource values is dependent upon the continued adequate flow of ground and surface water and the proper functioning of riparian and wetland systems.

The environmental assessment for the implementation plan (Appendix A) and Appendices B through E outline in detail ACEC features, resources, and uses.

### **III. Management Goals**

To meet the vision for the Amargosa River ACEC set forth in current resource management plans and incorporate recent strategies, the following management goals were identified for implementation:

1. Protect, enhance, and restore natural riparian and wetland systems;
2. Protect and prevent irreparable damage to threatened and endangered species and their habitat;
3. Take prudent, proactive steps towards recovery of threatened and endangered species and their habitat;
4. Conserve and protect water resources essential to the maintenance of valued resources and habitat;
5. Implement an inventory and monitoring strategy;
6. Provide recreation opportunities that are consistent with resource protection;
7. Protect sensitive historical, cultural, and scenic values;
8. Provide for consistent management of public lands within ACEC boundaries.



## IV. Implementation Actions

Implementation actions were developed for the Amargosa River ACEC based upon eight management goals that were derived from the CDCA Plan and its NEMO amendment. The actions were placed into one of three categories: those specific actions specially analyzed by the accompanying Environmental Assessment (Appendix A) (\*), administrative policies and procedures that do not require analysis (#), and actions that will require analysis on a case-by-case basis once specific implementation has been determined (+). The accompanying Environmental Assessment analyzed all actions for cumulative effects. Actions were then prioritized as high (I), medium (II), and low (III) based upon regulatory requirement, management policy, and expected funding scenarios.

### A. Protect, enhance, and restore natural riparian and wetland systems

#### Priority I

1. Control tamarisk (*Tamarix spp.*) through implementation of the Barstow Field Office's ten-year weed control plan. Control or contain, as appropriate, other species of weeds. Efforts will include infestations that are both upstream and within the ACEC. If feasible, BLM will establish partnerships to treat state and private lands where there is nexus to the ACEC.\*
2. Implement, as needed, a controlled burn program to further supplement weed control projects and/or to eliminate refuse from mechanical removal.\*
3. Conduct active riparian restoration, as needed, by introducing native riparian plant species into areas of weed control and other priority damaged areas.\*
4. Use the results of bird surveys and literature review of microhabitat requirements to design projects that encourage the nesting of listed and candidate bird species.\*
5. Prohibit ground fires on public lands within the ACEC.\*

#### Priority II

6. Initiate additional active riparian and upland restoration in priority degraded areas within the ACEC.+

#### Priority III

7. Take steps to restore and maintain the natural sinuosity of the Amargosa River in order to minimize unnatural down cutting.+

### B. Protect and prevent irreparable damage to threatened and endangered species and their habitat

#### Priority I

8. Reduce direct and indirect impacts to listed and special status plants by maintaining existing protective fences. Fence, restore closed routes, and/or sign known listed or special status plant population centers that have determined to be impacted by human or other disturbances.\*
9. Construct a vehicle barrier at the mouth of Cowboy Canyon to protect riparian listed species habitat.\*
10. Maintain the existing off-highway vehicle (OHV) barriers at the southern end of the Amargosa River ACEC adjacent to Sperry wash. These barriers protect wilderness values and support the existing OHV vehicle closure in Amargosa Canyon to protect listed species and their habitat.\*
11. Survey the location of current and proposed land use authorizations for potential adverse effects to listed species<sup>4</sup> or their habitat and develop and/or implement specific protection or avoidance measures, dependent on location, threats, and other relevant factors.#
12. Motorized vehicles will be limited to designated routes of travel by the 2004 NEMO Route of Travel process.#
13. Enter into cooperative agreements with State and private landowners to limit vehicle access in the ACEC to the 2004 NEMO Route of Travel designations.#
14. Eliminate bathing at native hot springs<sup>5</sup> located in suitable habitat for the Amargosa vole in order to protect habitat.\*

## Priority II

15. Reduce the numbers of exotic fauna within listed species habitat consistent with protocols in appendix I. This may include, but is not limited to:
  - the house mouse (*Mus musculus*);
  - free-roaming and/or feral domestic cats (*Felis silvestris*);
  - brown-headed cowbirds (*Molothrus ater*).\*
16. Periodically review the fire management plan for the region and modify it if necessary to assure that it continues to provide appropriate protection and mitigation for listed and sensitive species and their habitat during wildfire suppression and managed fire operations.#

## **C. Take prudent, proactive steps towards recovery of threatened and endangered species and their habitat**

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<sup>4</sup> For the purpose of this document listed species are those listed as threatened or endangered (T&E) under the Federal or State ESA, species that are T&E candidates under ESA, or species that are BLM sensitive.

<sup>5</sup> For clarification, this action does not apply to the Inyo County or privately operated facilities in Tecopa Hot Springs.

## Priority I

17. Develop a formalized agreement between BLM, California Department of Fish and Game (CDFG), U.S. Geological Survey (GS), and U.S. Fish and Wildlife Service (FWS) for the implementation of actions in the *Amargosa Vole Recovery Plan*. BLM will encourage the establishment of an interagency Amargosa Vole Recovery Team that meets regularly to coordinate, evaluate, and prioritize Amargosa vole research and recovery actions. Amargosa vole recovery actions considered for evaluation and prioritization should include:

- Identification of any additional threats to the vole;
- Enhancement of habitat in current wetlands that could support populations of Amargosa vole;
- Expansion of wetland habitat into selected saltgrass meadows that may support populations of Amargosa vole;
- Increasing the level of gene flow between existing, isolated populations of Amargosa vole, this may include establishment and restoration of wetland corridors and/or an expanded Amargosa vole translocation program;
- Carrying out a focused Amargosa vole research and survey program that will provide information to enhance populations. This program may include, but is not limited to:
  - changes to abundance, distribution, natality, mortality, recruitment, age class distribution dispersal and temporal and spatial distribution patterns;
  - rate of population change;
  - genetic diversity studies;
  - assessments of changes to suitable habitat for the Amargosa vole;
  - micro and macro-habitat surveys and assessments in order to quantify habitat characteristics;
  - determination of temporal and spatial patterns of habitat use.

Specific recovery implementation actions will require separate additional NEPA analysis and for the lead party or parties to acquire a section 10(a)(1)(A) recovery permit under the Endangered Species Act and a State of California incidental take permit. BLM will cooperate and support, to the maximum extent possible, the party implementing each recovery action.+

18. Prioritize and evaluate, in consultation and coordination with Ash Meadows National Wildlife Refuge, the issues related to the recovery and research of the Ash Meadows gumplant and Amargosa niterwort such as:

- Establishment of new Ash Meadows gumplant and Amargosa niterwort populations in unoccupied, suitable habitat, based on monitoring results and literature review;
- Monitoring to better determine specific habitat requirements for Ash Meadows gumplant and Amargosa niterwort.

Specific implementation of these recovery actions will require NEPA analysis and a section 10(a)(1)(A) recovery permit under the Endangered Species Act and a State of California incidental take permit. BLM will take the lead of these recovery actions occurring on public lands in the Amargosa River ACEC.+

## **D. Conserve and Protect water resources essential to maintenance of valued resources and habitat**

## Priority I

19. Prohibit new non-administrative, discretionary stream diversions and groundwater disturbing activities on public lands within the ACEC.\*
20. Prohibit discretionary geothermal development and exploration in the ACEC.\*
21. Do not authorize land uses within the Amargosa watershed that would result in the deterioration of water quality or quantity within the ACEC or that may adversely affect listed species through their direct or cumulative effects. Develop protective measures as appropriate and notify responsible state water control agencies as appropriate. Coordinate efforts with Death Valley National Park, Las Vegas Field Office, and Ash Meadows National Wildlife Refuge.+
22. Assert Federal Reserve water rights for Kingston Range Wilderness, Wild and Scenic River<sup>6</sup>, and Public Water Reserves and file for appropriated water rights to conserve existing water sources that support the ACEC's resources and values.\*

## Priority II

23. Utilize the U.S. Geological Survey (GS) Death Valley Regional Flow System (DVRFS) Model (Belcher, W.R., ed., 2004) or other best available technology to model the aquifers that feed the within the ACEC. Key questions include:
  - Sources of recharge;
  - Hydrologic connectivity with neighboring basins and hydrologic systems;
  - Effects of local and regional groundwater withdrawals.#

## **E. Implement an inventory and monitoring strategy**

### Priority I

24. Install and maintain stream monitoring equipment to quantify Amargosa River flows in the Amargosa Canyon.\*
25. Identify, map, and/or monitor groundwater sources and springs within the ACEC.\*
26. Monitor and evaluate habitat trends and conditions specific to listed species on public lands throughout the ACEC and work with private landowners, the State, and other federal agencies to identify listed species habitat and habitat trends throughout the ACEC.\*
27. Conduct multi-year surveys to establish vegetation baseline in the ACEC, including additional populations of listed and sensitive plant species. Monitor suitable listed and sensitive plant habitat, track population trends, and identify additional recovery needs.

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<sup>6</sup> If determined suitable

Monitor changes in vegetation characteristics over time, once a baseline is established. Identify thresholds for substantial change that would trigger the reevaluation of strategies.\*

28. Monitor levels of visitor use of the ACEC trail system and watchable wildlife areas with visitor registers, periodic visitor counts, traffic counters, and other methods.\*
29. Monitor water uses from new BLM land use authorizations within the California portion of the Amargosa watershed.\*
30. Identify sensitive resources that have been or are subject to being degraded by improper use, ongoing erosion, or are potential health and safety hazards.+
31. Monitor for effectiveness of restoration efforts.+
32. Monitor any newly established populations of Ash Meadows gumplant and Amargosa niterwort to determine the success of these new populations.+
33. Monitor recreational activities to identify adverse effects to habitat, sensitive resources, and facilities using appropriate on-the-ground and remote methodologies.+
34. Conduct regular focused research and surveys for listed, sensitive, and other riparian birds to determine variety, abundance, nesting locations, and information to maintain and enhance nesting populations. Determine changes to nesting status.+

#### Priority II

35. Monitor surface water quality at pre-selected locations to gauge condition and trend.\*
36. Document cultural resources within the ACEC through an archaeological inventory of culturally significant portions of the ACEC. This inventory will fulfill Section 110 of the National Historic Preservation Act (NHPA) and use any of the methods or techniques suitable for Section 110 surveys. Monitor locations exhibiting intense use and areas with fragile cultural resources.\*

#### Priority III

37. Survey for populations of Amargosa River pupfish and the Amargosa Canyon speckled dace.\*
38. Conduct an Order III soil survey for the ACEC that will include a series or association level vegetation map for the ACEC.\*
39. Inventory invertebrate populations and assemblages in the ACEC, and monitor sensitive fish and invertebrate microhabitats to identify trends and threats.\*

40. Conduct an in-stream flow study to document flows required to sustain resources and values within the ACEC. Model historic flows. Attempt to identify causes for non-seasonal changes.+
41. Monitor species diversity, richness, and abundance for mammalian, avian, reptilian, amphibian, and vascular plant taxa within the ACEC. Identify thresholds for substantial change that would trigger reevaluation of strategies.+

## **F. Provide recreation opportunities that are consistent with resource protection**

### Priority I

42. Determine the need and if necessary, build an OHV exclusion barrier at the trailhead of the rerouted northern end of the Tecopa Trail, and restore the previous trailhead.\*
43. Prohibit the discharge firearms on public lands within the ACEC except shotguns when engaged in legal hunting.\*
44. Prohibit overnight camping on public lands within the Central Unit of the ACEC.\*
45. Implement Trail Plan Alternative A (Appendix B).\*
46. Maintain a pack it in pack it out policy on public lands within the ACEC.#

### Priority II

47. Implement Interpretive Plan Alternative A (Appendix C).\*

## **G. Protect sensitive historical, cultural, and scenic values**

### Priority I

48. Protect cultural resources that display adverse effects by signing or fencing.+

## **H. Provide consistent management of public lands within ACEC Boundaries**

### Priority I

49. Cooperate with other agencies and partners to establish a public education program that Includes:
  - Information on the listed and sensitive species within the ACEC and ways to assist in conservation efforts;
  - Harmful effects of releasing non-native fish into the Amargosa River;
  - Information for private landowners about invasive species and federal, state, and non-governmental organization (NGO) invasive species assistance programs.#



50. Work with other federal, state, county and local governments, as appropriate, to implement management activities within the ACEC. Participate in regional forums and coordination processes to the extent possible. Seek a formalized agreement between BLM, GS, FWS, CDFG, and private parties for the implementation of actions in the ACEC Plan. Cooperate with non-governmental groups (NGOs) and individuals that wish to cooperate to implement the ACEC Plan.#
51. Actively engage in the existing interagency forums concerned with Devil's Hole and the Death Valley Regional Flow System. Notify appropriate state water control agencies, land managers, and the DOI Solicitor's Office of the importance of the Amargosa River and its sensitive biological resources present within the ACEC.#

#### Priority II

52. Work with mosquito and vector control districts to promote alternative methods to mosquito fish for mosquito control in the Amargosa River region.#

#### Priority III

53. Work with other federal, state, county and local governments and partners, as appropriate, to develop an informational database of the Amargosa watershed.#
54. Acquire State and private lands within the Amargosa River ACEC through exchange or purchase from interested, willing landowners to consolidate public lands. Priority areas would be lands that were identified in the 1983 ACEC Plans and lands in the expanded ACEC that contain significant resource values or designated critical habitat.\*

## **V. Consultation and Coordination**

### **A. Public Outreach**

BLM informed the public in June of 2003 that an update of the Amargosa River ACEC activity plan was being initiated with the following notices:

1. A letter to the BLM CDCA wilderness mailing list dated June 17, 2003.
2. California BLM press release number CA-CDD-03-58 dated June 23, 2003: In addition to regular distribution, the press release was mailed to the NEMO routes of travel mailing list.
3. A notice posted on the BLM California and Barstow Field Office Internet web pages on June 24, 2003.
4. A notice in the BLM California's email newsletter News.bytes, issue 114 released June 24, 2003.

These notices opened a thirty-day public scoping period to identify issues and alternatives within the Amargosa River ACEC that were consistent with the NEMO Plan goals and framework. Five commenters identified twenty-nine potential issues (Table 5.1). Each issue was considered. The table discusses the reason for not incorporating those issues that were not incorporated into the range of alternatives considered.

After the June 2003 scoping period, BLM created a mailing list based on current commenters, area cooperators and landowners, and previous requests to be involved in this planning effort.

A letter updating the public on plan status and a final request for input went to the ACEC mailing list for the ACEC Plan on April 18, 2005.

BLM will make this proposed plan and environmental assessment available for a thirty-day public-review and comment period prior to its approval. During that period, BLM will host one public meeting in Tecopa to brief the public on the proposed activity plan and solicit additional feedback. BLM will announce the document's availability and the public meeting via a press release, which BLM will mail to the ACEC Plan mailing list.

At the end of the public review period for the environmental analysis, BLM will analyze the comments and make appropriate changes to the activity plan or analysis. If there are no substantial changes as a result of public comment, BLM will then prepare and issue a Decision Record for the implementation of the Amargosa River ACEC Activity Plan. If substantial changes are made, BLM will recirculate the plan and environmental assessment for another review period. Upon issuance of the decision record, the activity plan will be subject to a thirty-day appeal period in accordance with Title 43 of the Code of Federal Regulations, Part 4.

**Table 5.1: SCOPING COMMENTS**

<i>Item</i>	<i>Comment</i>	<i>Category</i>	<i>Response/Where Incorporated</i>
1	Inventory and monitor spring snails.	Bio	E 39 and E 41
2	Manage vegetation at Bore Hole Spring to allow more water to flow into Grimshaw Lake.	Bio	B 14, Vegetation at Bore Hole Springs provides suitable Amargosa vole habitat.
3	Inventory and monitor fish.	Bio- Fish	E 38, E 39, and E 41
4	Monitor T&E plants.	Bio- Plants	C 18, E 27, E 28, E 33, and E 41
5	Create a series-level vegetation map of the ACEC.	Bio- Plants	E 27
6	Inventory and monitor for Spring loving centaury, Tecopa bird's beak, Hall's meadow hawkbeard, Desert popcorn flower, & Bee-hive cactus.	Bio- Plants	E 27, E 28, and E 41
7	Designate critical habitat for vole.	Bio- Vole	Beyond scope of an activity plan to modify critical habitat boundaries: FWS may do so in the future based on the data collected in implementing this plan.
8	Develop a cooperative agreement to control camel thorn in Tecopa.	Bio-Plants	A 1 and H 49 (does not specify all invasive species that may be controlled)
9	Remove protective fence at Carson Slough due to blow sand problem it creates.	Bio-Plants	Construction techniques were used to minimize such problems (3-strand smooth-wire). Any problems would be mitigated but there are no plans to remove the fence, which has eliminated off-route incursions into occupied T&E plant critical habitat.
10	Protect cultural sites.	Cultural	E 37, G 48
11	Acquire in-holdings within the ACEC boundary	General	H 54
12	Coordinate management activities with other agencies.	General	A 1, B 13, C 17, C 18, E 34, E 40, E 41, and H 49-53

13	Develop contingency plan for hazardous materials transported on SR 127.	General	There are existing California Desert District (CDD)-wide and Barstow Field Office (BAFO) contingency plan for hazardous materials releases to public lands that adequately covers sensitive resources that may be affected, including those in the ACEC. If a SR 127 specific plan is needed for specific transport activities, it would be addressed in the context of those activities, and BLM would provide appropriate input at that time.
14	Build a solid, scientific database to use as a baseline.	Monitoring	E 26-28, E 36, E 40, E 41, and H 53
15	Build a cultural and geologic database to serve as a baseline.	Monitoring	E 26 and E 37
16	Inventory and monitor for cuckoos and plovers.	Monitoring-Birds	E 35 and E 41. Includes cuckoo but not specifically plovers. Several other avian species are included, and the specific indicator species may be modified based on inventory results and which species provide the most complete dataset for various habitat niches, in consultation with other agencies.
17	Inventory and monitor for vole populations, locations, and habitat.	Monitoring-Vole	C 17
18	Eliminate bathing at Bore Hole Spring.	Bio-Vole	B 14
19	Eliminate all wheeled vehicle use of ACEC except on routes of travel (ROT).	Recreation	B 9, B 10, B 12, B 13 and E 45
20	Develop bicycle and motorized map of ACEC to control use.	Recreation	E 47. All bicycles would be limited to designated ROT.
21	Protect Old Spanish Trail and the Mormon Trail.	Recreation	G 48 and H 50. Additional OST measures may be identified during the concurrent, multi-state OSNHT planning process. Mormon Trail not addressed.
22	Manage Central Unit in accordance with the National Wild and Scenic River System (NWSRS).	Recreation	This policy was established in NEMO upon eligibility determination, pending suitability findings. Protection measures and data gathering to provide suitability data include D 19-23, E 24, E 29, E 35, E 36, E 39, and E 40.
23	Resolve access issues.	Recreation	B 9, B 10, B 12, and B 13
24	Only improve the hiking trail between China Ranch Wash and Sperry Siding, no others.	Recreation	This is addressed in the range of alternatives. Trail Plan alternatives include a no new trails/trail upgrades alternative, a larger network designed for hiking only, and a larger network for both equestrian and hiking use.
25	Control salt cedar	Restoration	A 1, A 2, and A 3
26	Institute control burn program in the Central Unit	Restoration	A 2

27	Control Athel	Restoration	A 1 and A 6 if necessary. Currently, no athel infestations have been identified as invasive threats. BLM is currently focusing priority on invasive species that are known to displace native plants (e.g. saltcedar).
28	Protect ground water, springs, and in-stream flows.	Water	D 19-23, E 24, E 36, and E 40
29	Promote water conservation in Tecopa.	Water	May occur in conjunction with local agencies, based on information collected under H 50.

## **B. Interagency Coordination**

BLM submitted a biological evaluation to FWS with a request to initiate informal consultation in January 2004. At the same time, the biological evaluation was also sent to CDFG for their review and comment. Subsequent discussions with wildlife agencies resulted in several clarifications and modifications to the proposed action, and submission of additional information. In addition, interested agencies and partners were consulted to provide input to the monitoring plan for the ACEC, including Death Valley National Park, California Native Plant Society, CDFG, Point Reyes Bird Observatory, and FWS. Death Valley National Park was briefed on the plan and provided an opportunity to comment on the entirety of the proposed action in January 2005. The County of Inyo was briefed of the proposed plan in February 2005 and through follow-up letters and discussions, several issues were clarified to address County concerns.

## **C. Agency Consultation**

In January 16, 2004, the proposed action was submitted for formal consultation with the U.S. Fish and Wildlife Service (FWS) under Section 7 of the Endangered Species Act for proposed actions that may affect listed species. The biological opinion for the proposed plan was received from the Fish and Wildlife Service on March 13, 2006, and is attached as Appendix F.

May 8, 2006, informal, programmatic consultation with the State Historic Preservation Office (SHPO) was conducted. SHPO concurred that pursuant to the California State Protocol Agreement, a qualified archeologist will review each ground disturbance resulting from the implementation of this plan.

## **D. Intergovernmental Coordination**

Requests for consultation with twelve tribal entities were initiated on September 9, 2003. To date, no comments have been received and no additional Native American issues have been identified through the scoping and consultation process.

**E. List of Consultants**

Bob Boyd	BLM Nevada State Hydrologist
Brian Croft	U.S. Fish and Wildlife Service (FWS)
Chris Kennedy	Inyo County Planning Division
Denyse Racine	California Department of Fish and Game
Linda Greene	Death Valley National Park
Val Page	Mojave Weed Management Area

**F. List of Preparers**

Amy Lawrence	Archaeologist - now employed by Bureau of Reclamation
Anthony Chavez	Rangeland Management Specialist
Brad Mastin	Outdoor Recreation Planner
Brian Croft	Natural Resource Specialist - now employed by FWS
Charles Sullivan	Natural Resources Specialist
Chris Roholt	CDD Wilderness Specialist
David Frink	Outdoor Recreation Planner
Edythe Seehafer	Environmental Coordinator
Jim Shearer	Archaeologist
Ken Schulte	Geologist - Retired
Rebecca Gonzalez	Resources Branch Chief
Roxie Trost	Field Manager
Russell Scofield	Project Lead
Shelly Jackson	Geographic Information System Specialist
Tim Read	Field Manager – Retired



## VI. References

- Belcher, W.R., ed., 2004, Death Valley regional ground-water flow system, Nevada and California—Hydrogeologic framework and transient ground water flow model: U.S. Geological Survey Scientific Investigations Report 2004-5205, 408 p.
- Bureau of Land Management, 1983b. *Management Plan for Grimshaw Lake Natural Area: An Area of Critical Environmental Concern*. Barstow Resource Area. Barstow, California.
- Bureau of Land Management, 1980. *The California Desert Conservation Area Plan 1980 as amended*. California Desert District. Riverside, California.
- Bureau of Land Management, 2002. *Proposed Northern and Eastern Mojave Desert Management Plan: Amendment to The California Desert Conservation Area Plan*. A Final Environmental Impact Statement. California Desert District. Riverside, California.
- Rogers, Malcolm J., 1939. Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. *San Diego Museum of Man Archaeological Papers* 3. San Diego, California.
- Sully, John M., Miriam A. Romero, and Robert D. Smith, 1972. *Amargosa Canyon-Dumont Dunes Proposed Natural Area*. A Report Submitted to the Bureau of Land Management by The Pupfish Habitat Preservation Committee, Montrose, California.
- U.S. Fish and Wildlife Service, 1990. *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada*. Portland, Oregon. 43pp.