

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

RIN 1018-AT66

**Endangered and Threatened Wildlife and Plants; Final Rule To Designate Critical Habitat for the Buena Vista Lake Shrew (*Sorex ornatus relictus*)****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Buena Vista Lake shrew (*Sorex ornatus relictus*) (referred to here as the shrew) pursuant to the Endangered Species Act of 1973, as amended (Act). In total, approximately 84 acres (ac) (34 hectares (ha)) occur within the boundaries of the critical habitat designation. The critical habitat is located in the Central Valley floor of Kern County, California.

**DATES:** This final rule is effective February 23, 2005.

**ADDRESSES:** Comments and materials received, as well as supporting documentation used in the preparation of this final rule, will be available for public inspection, by appointment, during normal business hours at the Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, W-2605, Sacramento, California 95825 (telephone 916-414-6600).

**FOR FURTHER INFORMATION CONTACT:** Shannon Holbrook or Arnold Roessler, Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605 Sacramento, California, (telephone 916-414-6600; facsimile 916-414-6712).

**SUPPLEMENTARY INFORMATION:****Designation of Critical Habitat Provides Little Additional Protection to the Species**

In 30 years of implementing the Act, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of available conservation resources. The Service's present system for designating critical habitat has evolved since its original statutory prescription into a process that provides little real conservation benefit, is driven by litigation and the courts rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources, and imposes huge social and economic

costs. The Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

*Role of Critical Habitat in Actual Practice of Administering and Implementing the Act*

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, "Because the Act can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7." Currently, only 468 species or 37 percent of the 1,256 listed species in the United States under our jurisdiction have designated critical habitat. We address the habitat needs of all 1,256 listed species through conservation mechanisms such as listing, section 7 consultations, the Section 4 recovery planning process, the Section 9 protective prohibitions of unauthorized take, Section 6 funding to the States, and the Section 10 incidental take permit process. We believe that it is these measures that may make the difference between extinction and survival for many species.

We note, however, that a recent 9th Circuit judicial opinion, *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*, has invalidated the Service's regulation defining destruction or adverse modification of critical habitat. We are currently reviewing the decision to determine what effect it may have on the outcome of consultations pursuant to Section 7 of the Act.

*Procedural and Resource Difficulties in Designating Critical Habitat*

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result of this consequence, listing petition responses, the Service's own proposals to list critically imperiled species and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court ordered designations have left the Service with almost no ability to provide for adequate public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals due to the risks associated with noncompliance with judicially imposed deadlines. This situation in turn fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive, and in the final analysis provides relatively little additional protection to listed species.

The costs associated with the critical habitat designation process include legal costs, the costs of preparation and publication of the designation, the analysis of the economic effects and the costs of requesting and responding to public comments, and, in some cases, the costs of compliance with National Environmental Policy Act. None of these costs result in any benefit to the species that is not already afforded by the protections of the Act enumerated earlier, and these associated costs directly reduce the scarce funds available for direct and tangible conservation actions.

**Background**

For background information, please see the proposed designation of critical habitat for the Buena Vista Lake shrew published on August 19, 2004 (69 FR 51417). That information is incorporated by reference into this final rule.

**Previous Federal Actions**

A final rule listing the shrew as endangered was published in the **Federal Register** on March 6, 2002 (67 FR 10101). Please refer to the final rule listing the shrew for information on previous Federal actions prior to March 6, 2002. On January 12, 2004, the United States District Court for the Eastern District of California issued a Memorandum Opinion and Order (*Kern County Farm Bureau et al. v. Anne*

*Badgley, Regional Director of the United States Fish and Wildlife Service, Region 1 et al.*, CV F 02-5376 AWIDLB). The order required the Service to publish a proposed critical habitat determination (also known as a proposed rule) for the shrew no later than July 12, 2004, and a final determination no later than January 12, 2005. On July 8, 2004, the court extended the deadline for submitting the proposed rule to the **Federal Register** to August 13, 2004.

On August 19, 2004 (69 FR 51417), we published a proposed critical habitat designation for the Buena Vista Lake shrew. Publication of this proposed rule opened a 60-day public comment period, which closed on October 18, 2004. On September 16, 2004, we announced via local news media and publications that a public hearing was to be held on September 30, 2004, in Bakersfield, California. At the public hearing, approximately 10 members of the public provided or presented information and comments on the proposed critical habitat designation. On November 30, 2004, we published a notice announcing the availability of our draft economic analysis (DEA) of the proposed critical habitat designation (69 FR 69578). The notice opened a 15-day public comment period on the DEA, extended the comment period on the proposed critical habitat designation, and closed on December 15, 2004.

#### **Summary of Comments and Recommendations**

We contacted appropriate Federal, State, and local agencies, scientific organizations, and other interested parties and invited them to comment on the proposed critical habitat designation for the Buena Vista Lake shrew. In addition, we invited public comment through the publication of a notice in the *Bakersfield Californian* on September 16, 2004.

In the August 19, 2004, proposed critical habitat designation (69 FR 51417), we requested that all interested parties submit comments on the specifics of the proposal, including information related to the critical habitat designation, unit boundaries, species occurrence information and distribution, land use designations that may affect critical habitat, potential economic effects of the proposed designation, benefits associated with the critical habitat designation, potential exclusions and the associated rationale for the exclusions, and methods used to designate critical habitat. We also contacted all appropriate Federal, State, and local agencies, scientific organizations, and other interested parties and invited them to comment.

This was accomplished through letters and news releases mailed to affected elected officials, media outlets, local jurisdictions, interest groups, and other interested individuals. In addition, we invited public comment through the publication of legal notices in newspapers throughout Kern County.

We provided notification of the draft economic analysis (DEA) through postcards, letters, and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. We published a notice of its availability in the **Federal Register** and made the DEA and associated material available on our Sacramento Fish and Wildlife Office Internet site on November 30, 2004 (69 FR 69578).

We received a total of 16 comment letters and electronic mail correspondences (e-mails) during the comment periods. We reviewed all comments received for substantive issues and new information regarding the Buena Vista Lake shrew. We grouped similar public comments into six general issue categories relating specifically to the proposed critical habitat determination and/or the DEA. Substantive comments and accompanying information have either been incorporated directly into the final rule or final economic analysis documents, and/or they have been addressed in the following summary.

#### **Peer Review**

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we solicited review from at least three appropriate and independent specialists/experts regarding the proposed rule. The purpose of such review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses.

We solicited peer review from 5 individuals who have detailed knowledge of and expertise in either mammalian biology in general, or shrew biology specifically, as well as scientific principles and conservation biology. The individuals were asked to review and comment on the specific assumptions and conclusions regarding the proposed designation of critical habitat. Two of the five reviewers submitted comments on the proposed designation.

*Peer Comment (1):* One peer reviewer felt the proposed critical habitat designation incorporated the most up to date information on the biology of the shrew and the issues of range, distribution, and life history requirements of the shrew. This peer

reviewer questioned whether connectivity of habitat fragments had been considered in preparation of the proposed rule. Both reviewers stated that shrews, that were possibly the Buena Vista Lake shrew, have been captured at the Atwell Island Land Retirement Demonstration project site: both reviewers questioned why this area was not included in the proposed critical habitat designation.

*Our Response (1):* Although we agree that preserving connectivity between known occupied locations is important for the conservation of the Buena Vista Lake shrew, we do not believe that unoccupied and historical locations are essential for the conservation of the species. The Recovery Plan for Upland Species of the San Joaquin Valley (Recovery Plan) determined that the Buena Vista Lake shrew could be conserved by protection of habitat in three or more disjunct occupied conservation areas, excluding unoccupied and/or historical locations. All units that were described in the Recovery Plan were analyzed to determine if the areas exhibited the physical and biological features that are essential to the conservation of the shrew and would require special management. We have determined that the areas or units that we have proposed to designate as critical habitat, based on our analysis of the best available scientific and commercial data, provide for the essential lifecycle needs of the species, and provide the habitat components essential for the conservation of this species (*i.e.*, the primary constituent elements (PCEs) described below in the Primary Constituent Elements section). Therefore, we do not believe that it is necessary for the conservation of the Buena Vista Lake shrew to designate critical habitat in unoccupied areas or areas that do not exhibit the primary constituent elements essential for the conservation of the species.

#### **State and Federal Agency or Tribal Comments**

We did not receive any comments regarding the proposed critical habitat designation from any State, Federal or Tribal entity.

#### **Other Public Comments and Responses**

We address other substantive comments and accompanying information in the following summary. Any changes and/or reference updates suggested by commenters have been incorporated into this final rule or the final economic analysis, as appropriate.

### *Issue 1—Habitat- and Species-Specific Information*

*Comment (1):* Several commenters stated that we have not adequately established that all the areas identified as critical habitat do in fact contain the Primary Constituent Elements (PCEs) essential for the conservation of the species and that the proposed designation fails to narrowly define those areas that have the PCEs. These commenters also stated they wanted excluded from designation those areas that did not contain the PCEs for the shrew. These comments were directed towards roads, pump sites, maintained canals, and other areas devoid of vegetation within the designation. One commenter expressed concern that there was no comprehensive biological study utilizing uniform assumptions of analysis for all five units.

*Our Response (1):* We used the best scientific and commercial data available to us at the time in determining which areas proposed as critical habitat are essential for the shrew. In our final determination, we used additional information available to us, including detailed aerial imagery and other information provided by commenters to assist us in refining our mapping of essential habitat. After refining our proposal by removing additional nonhabitat and other nonessential areas such as roads, pump sites, maintained canals, and other areas devoid of vegetation, and considering the best available information, we conclude that the areas designated by this final rule, including currently occupied areas, are essential for the conservation of the species. In our development of the proposed designation, we utilized certain specific conservation criteria of protecting a variety of habitats, protecting suitable habitat across the range of the species, and protecting habitats essential for the maintenance and growth of self-sustaining populations in establishing the areas of critical habitat. This strategy was also used in the development of the final designation.

*Comment (2):* One commenter suggested that there would be an increase in siltation and debris accumulation in channels and that this would increase maintenance burdens of water districts if there was a restriction in channel use due to the critical habitat designation.

*Our Response (2):* In our final determination, we have additional information available to us, including detailed aerial imagery and other information provided by commenters to assist us in refining our mapping of

essential habitat. We have determined that channels, because they lack the PCEs, do not provide habitat for the shrews. Therefore, channel areas have been removed from the critical habitat boundaries. Therefore, no restrictions of use or modifications to channel operations will be imposed due to critical habitat designation.

*Comment (3):* One commenter stated that the final rule should recognize all cumulative impacts to the shrew occurring in the area.

*Our Response (3):* In accordance with Section 4(b) of the Endangered Species Act, the regulations state that the Secretary shall determine whether a species is an endangered species or a threatened species because of any of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range, (2) overutilization for commercial, recreational, scientific, or educational purposes, (3) disease or predation, (4) the inadequacy of existing regulatory mechanisms, and (5) other natural or manmade factors affecting its continued existence. As a result of this analysis, the Buena Vista Lake shrew was listed as endangered on March 6, 2002 (67 FR 10101). The recognition of “cumulative impacts” or threats is part of the process of listing a species and not part of the designation of critical habitat.

*Comment (4):* One commenter stated that the final rule should reflect a commitment to monitoring or improved data collection for the threat of selenium contamination.

*Our Response (4):* Critical habitat identifies those areas which contain the physical and biological features that are essential to the conservation of the species and those areas that may require special management considerations or protections. Critical habitat designation is not intended to be a management plan for a specific area. Any monitoring or special management actions can be developed through consultation or management agreements through partnerships with Federal, State, local or private groups.

### *Issue 2—Costs and Regulatory Burden*

*Comment (5):* Several commenters stated that the Service needs to clarify the proposed rule to allow the public to understand what activities will be limited at each proposed unit. These commenters expressed concern that critical habitat designation would limit their land use practices. Specifically, several commenters stated concern over West Nile virus and whether mosquito abatement procedures would be allowed in areas and boundaries of those areas designated as critical habitat. Several

commenters were concerned over ability of the city to provide adequate drinking water supplies if groundwater recharge practices were restricted. Several commenters were concerned that critical habitat designation will adversely affect farming operations, interrupt water supplies, and cause degradation of surrounding farmland. One commenter states that critical habitat designation has potential to adversely affect water management activities such as irrigation, municipal purposes, and flood management. One commenter asks if critical habitat will affect how the County administers FEMA regulations.

*Our Response (5):* All Federal agencies are required to evaluate whether projects they authorize, fund, or carry out may adversely affect a federally listed species and/or its designated critical habitat. If projects with a federal nexus are not likely to adversely affect critical habitat, then a consultation with us would not be necessary. For projects that are likely to have only discountable, insignificant, or wholly beneficial effects on critical habitat, we would concur in writing and no further consultation will be necessary. For projects likely to have adverse effects on critical habitat, formal consultation would be required pursuant to Section 7 of the Act.

Only those activities federally funded or authorized that may affect critical habitat would be subject to the regulations pertaining to critical habitat. Since all of the Buena Vista Lake shrew habitat within the designation is occupied by the listed Buena Vista Lake shrew and occurs on privately owned lands, the designation of critical habitat is not likely to result in a significant increase in regulatory requirements above those already in place due to the presence of the listed species.

Buena Vista Lake shrews have been found within areas of proposed critical habitat where these intricate water banking and management operations are in place. We recognize and acknowledge that certain water banking and water management practices likely have no impacts on the Buena Vista Lake shrew and may in fact be beneficial for maintaining them.

While the designation of critical habitat does not constitute a regulation on private lands, the Federal listing of the Buena Vista Lake shrew under the Endangered Species Act may affect private landowners. Private actions which could result in take of Buena Vista Lake shrew (*e.g.*, ground disturbing activities) require an exemption from take following consultation under Section 7 or an

incidental take permit under section 10 of the Act. Because the Buena Vista Lake shrew was listed in 2002, proposed actions on private lands that require Federal authorization or funding that may affect the species already undergo consultation under Section 7 to ensure that their actions are not likely to jeopardize the continued existence of the species. Future consultations involving private lands will also analyze the effect of the proposed action on designated critical habitat.

The Act also requires recovery planning for listed species. Recovery planning for Buena Vista Lake shrew may include recommendations for land acquisition or easements involving private landowners. These efforts would be undertaken with the cooperation of the landowners. We also work with landowners to identify activities and modifications to activities that will not result in take, to develop measures to minimize the potential for take, and to provide authorizations for take through section 7 and 10 of the Act. We encourage landowners to work in partnership with us to develop plans for ensuring that land uses can be carried out in a manner consistent with the conservation of listed species.

*Comment (6):* One commenter stated there would be economic impacts if water deliveries to Buena Vista Lake Recreation Area were altered. One commenter feels that critical habitat will cause substantial financial burden if changes in structures or abilities to manage for irrigation and floodwater or banking operations are required. One commenter stated that the Critical habitat designation should be limited to those areas that are already reserved for habitat purposes to minimize economic impact. One commenter stated that the Service must quantify economic impacts and consider cumulative impacts of the proposed rule.

*Our Response (6):* We made a draft economic analysis (DEA) available for public comment for the Buena Vista Lake shrew on November 30, 2004, and accepted comments on the DEA from that date through December 15, 2004 (69 FR 69578). These comments will be considered in the final EA.

We did not propose to designate as critical habitat the Buena Vista Lake Recreation Area. Furthermore, based on our economic analysis, we do not anticipate a substantial financial burden in the area that we are designating. The annualized economic effects of this designation are estimated to be \$8,752 to \$12,932, based on the economic analysis for Kern Lake only, as all the other units were excluded from designation.

*Comment (7):* Several commenters stated that there should be allowances for continued operation, maintenance, repair, and replacement of existing facilities.

*Our Response (7):* Critical habitat designations do not prevent the normal operation, maintenance, repair, or replacement of existing facilities. However, any action that would result in the take of a federally listed species (e.g., ground disturbing activities), would require a Federal permit under section 7 or section 10 of the Act. Consultation on critical habitat is only triggered when there is a Federal nexus (action carried out, funded, or authorized by a Federal agency). Even if there is a Federal nexus, consultation would not be triggered unless the PCEs are present in the action area. Where possible, existing facilities, such as the ones referred to in the comment, have been excluded from critical habitat designation. Due to the mapping scale utilized in the rule, it was not possible to remove all areas that do not exhibit the PCEs for the species. Nonetheless, critical habitat does not include man-made structures and not containing one or more of the PCEs, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located. If these areas do not exhibit the PCEs, and/or there is no Federal nexus, the owners of the facilities would not have regulatory responsibilities due to critical habitat.

#### *Issue 3—Property Rights*

*Comment (8):* Several commenters were concerned that designation of critical habitat would affect flood control and water supply to Bakersfield and surrounding communities. They stated the designation could adversely affect agricultural production and urban water districts if water deliveries are restricted or restrictive management practices are imposed.

*Our Response (8):* Critical habitat designations do not constitute a burden in terms of Federal laws and regulations on private landowners carrying out privately funded activities. Unless a Federal nexus exists for a project proposed on private property, the critical habitat designation poses no regulatory burden for private landowners and similarly should not interfere with future land use plans. Therefore, we do not believe that this designation will deny ranchers and farmers use of their land. We have also determined that channels such as water delivery canals do not provide habitat for the shrews due to lack of the primary constituent elements, and we have removed them from the critical habitat

boundaries. Therefore, we do not anticipate restrictions of use or modifications to water deliveries to be imposed due to critical habitat designation.

While the designation of critical habitat does not typically result in regulation on private lands, the Federal listing of the Buena Vista Lake shrew under the Endangered Species Act may affect private landowners. Actions which could result in take of Buena Vista Lake shrew (e.g., ground disturbing activities) require a Federal permit under section 7 or section 10 of the Act. Because the Buena Vista Lake shrew was listed in 2002, Federal agencies already consult with us on activities in areas currently occupied by the species or, if the species may be affected by an action, to ensure that their action does not jeopardize the continued existence of the species.

*Comment (9):* One commenter asks if restrictive critical habitat management practices imposed on federal agencies or private property owners seeking federal permits increase mitigation costs, property damage, or raise public safety issues involving the maintenance of flood-carrying capacity for the affected water conveyance facilities.

*Our Response (9):* Critical habitat identifies those areas which contain the physical and biological features that are essential to the conservation of the species and those areas that may require special management considerations or protections. Critical habitat designation is not intended to be a management plan for a specific area. Any monitoring or special management practices can be developed through Section 7 or Section 10 of the Act. Based on previous consultations, there have been no restrictive management practices required that have resulted in increased mitigation costs, property damage, or have raised public safety issues. Nor do we anticipate, based on the economic analysis, in the future restrictive management practices that will increase mitigation costs, property damage or public safety issues.

*Comment (10):* Several commenters stated that areas that are subject to a management regime that supports the shrew should be excluded from designation.

*Our Response (10):* We exclude areas with management regimes from designation if a current plan provides adequate management or protection and meets three criteria: (1) The plan is complete and provides a conservation benefit to the species (i.e., the plan must maintain or provide for an increase in the species' population, or the enhancement or restoration of its habitat

within the area covered by the plan); (2) the plan provides assurances that the conservation management strategies and actions will be implemented (*i.e.*, those responsible for implementing the plan are capable of accomplishing the objectives, have an implementation schedule, and adequate funding for implementing the management plan); and (3) the plan provides assurances that the conservation strategies and measures will be effective (*i.e.*, it identifies biological goals, has provisions for monitoring and reporting progress, and is of a duration sufficient to substantially implement the plan and achieve the plan's goals and objectives). Units containing a management plan or regime that meets the above criteria have been excluded from designation.

*Comment (11):* Several commenters stated concern over the regular operation, repair, and maintenance of existing oil and gas pipelines and water diversion canals within critical habitat boundaries. Several commenters are concerned that critical habitat designation will affect water district supplies. They stated that significant economic effects will occur if operations of banking projects or delivery canals require modifications.

*Our Response (11):* Activities carried out, funded, authorized, or permitted by a Federal agency (*i.e.*, Federal nexus) require consultation pursuant to section 7 of the Act if they may affect a federally listed species and/or its designated critical habitat. Our experience with consultations on the Buena Vista Lake shrew is that few oil and gas activities have involved a Federal nexus and have not required a consultation under Section 7 of the Act. Regardless, we have excluded from critical habitat the units with oil and gas pipelines due to their adequate management plans. See Exclusions Under Section 4(b)(2) of the Act. Similarly, there are no water diversion canals within final critical habitat boundaries. The canal that occurs within the unit included in the final designation has been removed from the critical habitat boundary. Therefore, projects within these canals would not require consultation due to critical habitat.

*Comment (12):* Several commenters stated that designation would result in restrictions or delays to regular operation or maintenance or new construction of water delivery or agricultural or industrial facilities, requiring consultation with the Service.

*Our Response (12):* All lands designated as critical habitat are within the geographic area occupied by the species, and are likely to be used by the Buena Vista Lake shrew, whether for

foraging, breeding, growth of juveniles, genetic exchange, or sheltering. Thus, we consider all critical habitat units to be occupied by the species. Federal agencies already consult with us on activities in areas currently occupied by the species or if the species may be affected by the action to ensure that their actions do not jeopardize the continued existence of the species. Therefore, we believe that the designation of critical habitat is not likely to result in additional regulatory burden above that already in place due to the presence of the listed species.

#### *Issue 4—Mapping Methodology*

*Comment (13):* Several commenters asked that specific areas that they believed do not exhibit the PCEs be excluded from the critical habitat designation.

*Our Response (13):* Where site-specific documentation was submitted to us providing a rationale as to why an area should not be designated critical habitat, we evaluated that information in accordance with the definition of critical habitat pursuant to section 3 (5)(A) of the Act and the provisions of section 4 (b)(2) of the Act. Following our evaluation of the parcels, we made a determination as to whether modifications to the proposal were warranted. In the preparation of the final rule, we further examined the area proposed and we refined the critical habitat boundaries to exclude, where possible within the limitations of our minimum mapping scale, those areas that did not, or were not likely to, contain the PCEs for the Buena Vista Lake shrew.

Please refer to the Summary of Changes from the Proposed Rule section of this final rule for a more detailed discussion of changes and exclusion from the proposed rule.

*Comment (14):* One commenter urges the Service to expand critical habitat designation to include all habitats essential to the conservation of the species and in need of special management. The commenter further states that the proposed rule does not ensure recovery of the species. They state that the designation is too small and too isolated to ensure viable, self-sustaining populations. They argued that the rule should include occupied as well as unoccupied potential habitat that could be recolonized and provide potential dispersal habitats. This commenter also stated that the Service should analyze areas described in the Recovery Plan for inclusion in the final rule, as well as areas to provide connectivity. One commenter recommends identifying locations, such

as irrigation ditches and other potentially restorable riparian habitats which might provide essential connectivity between existing large blocks of core habitat. This commenter also wants the required agriculture land location at Atwell Island near Alpaugh included as critical habitat.

*Our Response (14):* Although we agree that preserving connectivity between known occupied locations is important for the conservation of the Buena Vista Lake shrew, we do not believe that unoccupied and historical locations are essential for the conservation of the species. The Recovery Plan for Upland Species of the San Joaquin Valley (Recovery Plan) determined that the Buena Vista Lake shrew could be conserved by protecting habitat in three or more disjunct occupied conservation areas, excluding unoccupied and/or historical locations. All units that were described in the Recovery Plan were analyzed to determine if the areas exhibited the physical and biological features (PCEs) that are essential to the conservation of the shrew and may require special management. The five units that we have proposed to designate as critical habitat provide for the essential life-cycle needs of the species, and provide the habitat components essential for the conservation of this species (*i.e.*, the primary constituent elements (PCEs) described below in the Primary Constituent Elements section). Under the Act, areas without PCEs cannot be designated critical habitat, such as these areas suggested for potentially restorable areas, unless determined to be essential for the conservation of the species. Again, we have determined that the areas or units that we have proposed to designate as critical habitat provide the habitat components essential for the conservation of this species. Therefore, we do not believe that it is necessary to the conservation of the Buena Vista Lake shrew to designate critical habitat in unoccupied areas.

#### *Issue 5—Procedural Concerns*

*Comment (15):* Several commenters stated concerns because the proposed rule was not accompanied by an economic analysis. They claimed it was difficult to comment on the proposed rule without reviewing the information from the economic analysis.

*Our Response (15):* We made a draft of the economic analysis (DEA) available for public comment for the Buena Vista Lake shrew on November 30, 2004, and accepted comments on the DEA from that date through December 15, 2004 (69 FR 69578). The information presented in the DEA has been reviewed

and its analysis has been included in our decisionmaking process for the final designation.

*Comment (16):* Several commenters stated that the Service could not designate critical habitat without first complying with NEPA requirements.

*Our Response (16):* We published a notice in the **Federal Register** on October 25, 1983 (48 FR 49244) outlining our reasons for our determination not to prepare an environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. It is our position that in the Ninth Circuit, as upheld by the courts (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)), we do not need to prepare environmental analyses as defined by the NEPA.

*Comment (17):* One commenter argued that the proposed critical habitat designation contains areas that are not occupied by the shrew. The commenter stated that Congress restricts the authority of the Service to designate critical habitat in areas that are occupied.

*Our Response (17):* All lands designated as critical habitat are within the geographic area and have been documented to be occupied by the species (CNDDDB 2004; Maldonado 1992; Williams and Harpster 2001; ESRP 2004), and are likely to be used by the Buena Vista Lake shrew, whether for foraging, breeding, growth of juveniles, genetic exchange, or sheltering. Thus, we consider all critical habitat units to be occupied by the species.

*Comment (18):* One commenter requested that Unit 2 be excluded from designation because it is currently in negotiations for a Section 7 permit, which the commenter believes would provide the area with a sufficient management plan.

*Our Response (18):* A current plan provides adequate management or protection if it meets three criteria, outlined above in our Response to Comment 10. A Section 7 consultation with long-term conservation assurances provides for the long-term protection and management of the species and its habitat. At the time we received this comment, the Service was in negotiations for a Section 7 permit. A Biological Opinion with long-term conservation assurances has since been completed and issued for the Gooselake project. The Goose Lake Unit has been excluded from designation based on the conservation measures that will benefit the Buena Vista Lake shrew outlined in the Section 7 consultation and long term

easement on the project. See Exclusions Section.

*Comment (19):* The City of Bakersfield stated that it is operating under current management practices that benefit the shrew and that it is currently developing a management plan to benefit the shrew, and therefore its unit should be excluded from designation.

*Our Response (19):* The City of Bakersfield's Kern Fan Water Recharge Unit has been excluded from designation based on the conservation measures that will benefit the Buena Vista Lake shrew outlined in the management plan which meets the Service's exclusion criteria. See Exclusions Section.

*Comment (20):* Several commenters stated that the Coles Levee Unit 4 is covered by a management plan sufficient for the protection of the species and its habitat and should be excluded from designation. The commenters stated that the conservation easement for the Coles Levee Unit, that is held by California Department of Fish and Game, specifically recognizes the shrew in Section 5.3 of the easement as a "Species of Concern Benefited by this Easement."

*Our Response (20):* We have reviewed and evaluated the conservation easement conditions which meet the Service's exclusion criteria. We have determined that the Coles Levee Unit 4 should be excluded from the designation based on the conservation measures that will benefit the Buena Vista Lake shrew. See Exclusions section.

#### *Issue 6—Economic Analysis*

*Comment (21):* One comment suggested that the analysis should address the costs associated with "allowing the extinction of the subspecies of shrew, including the genetic traits necessary for the survival of the entire species." Furthermore, extinction of the shrew would be a loss of opportunity for students and scientists who study the species, and who also spend money locally.

*Our Response (21):* The purpose of the DEA is to estimate the economic effects of conservation activities associated with the listing and designation of critical habitat for the shrew, as well as the economic effects of the protective measures taken as a result of the listing. The Service believes that the benefits of critical habitat designation are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking. Thus, the DEA does not provide a monetary measure of the economic benefits of preventing extinction.

*Comment (22):* One comment indicated that the economic analysis of critical habitat designation should measure not only loss of profit (*i.e.*, lost producer surplus) of affected businesses, but loss of revenue as a measure that may better capture the total economic impacts, including "employment dislocation" and "associated ill effects."

*Our Response (22):* The Service acknowledges that the economic effects identified by the commenter are important, and should be addressed. Both categories of effects (*i.e.*, welfare change in terms of lost producer surplus, and distributional effects in terms of employment dislocation) were addressed in the DEA. However, guidance from OMB, and compliance with Executive Order 12866 specifies that Federal agencies measure changes in economic efficiency as a means of understanding how society will be affected by a regulatory action. This provides a measure of the net impact of conservation measures. Consideration of how certain economic sectors or groups of people are affected in a distributional manner is important and should be considered, but OMB encourages Federal agencies to consider distributional effects separately from efficiency effects. These distinctions are discussed in Sections 1.1.1 and 1.1.2 of the DEA. As such, the DEA presents the quantitative effects of shrew conservation measures as the efficiency effects, and presents the distributional effects of changes in agricultural activities in Section 5.5.

*Comment (23):* One comment suggested that the water requirement assumption of 3.5 acre-feet per acre is "much too high, and that use of evapotranspiration rates for field crops and grass is not appropriate because it does not account for shading or mulch (as suitable habitat for the Buena Vista Lake shrew)."

*Our Response (23):* Several sources were consulted to determine appropriate water requirements for use in the DEA. The estimate of 3.5 acre-feet per acre was suggested by managers of the Kern National Wildlife Refuge (KNWR). As noted by those managers and as reported in Section 6.3.5.1 of the DEA, a rate of 3.5 acre-feet per acre provides for optimal management of habitat in KNWR. This level was considered reasonable because all units are in the same geographic zone, and the KNWR water rate reflects optimal management conditions. As noted in Section 2.0 of the DEA, estimates of water requirements for wetland habitat in the San Joaquin Valley range as high as 10 acre-feet per acre.

*Comment (24):* One comment noted that the cost of water purchases for maintaining habitat based on \$209 per acre-foot is “not accurate,” and would instead require the purchase of permanent water rights for “a guaranteed source of water.” Furthermore, current costs for water is \$2,500 per acre-foot.

*Our Response (24):* In drafting the DEA, the need for water was investigated for each of the proposed units. This research concluded that supplemental water would be necessary on two units (Unit 1, Kern National Wildlife Refuge; and Unit 2, Goose Lake), but may or may not be warranted on the remaining three units. The DEA assumes that supplemental water may be purchased on an as-needed basis. The \$209 per acre-foot estimate is an average spot price for leased water, equivalent to a one-time, one-use acquisition. The purchase of permanent water rights would add more certainty to the attainment of water, and would be a reasonable and conservative assumption. There is little difference between a purchase price of \$2,500 per acre-foot and discounted annual purchases of leased water, however. Thus, this comment does not significantly change the quantitative results of the economic analysis.

*Comment (25):* One comment letter inquired whether all the water applied to shrew habitat would be transpired or evaporated, or whether some would soak into the ground for eventual availability to adjacent water banks or croplands.

*Our Response (25):* The DEA considered the water diversion requirement (that is, the gross amount of water that would be applied to habitat). It is understood in the DEA that only a portion of that water would be used by plants or evaporated, and that at least some of that water would soak into the ground and would be available for other uses.

*Comment (26):* Multiple comments stated that the DEA understated the cost to water districts by not considering “worst case” operating and maintenance costs if the Service imposes restrictions on Federal surface water allotments, use of conveyance systems, water banking, and other water district activities and programs.

*Our Response (26):* A range of possible scenarios was investigated through interviews with area water district managers and representatives exploring the potential restrictions or other measures that could be imposed on water districts or purveyors. The “worst case” scenarios were considered, including the possibility of much higher

costs for purchased water, and the possibility of closure of the existing facilities to future uses for water banking or withdrawal. However, further research revealed that these scenarios could not be substantiated through available information and therefore were too speculative to be considered reasonably foreseeable.

*Comment (27):* A comment submitted on behalf of the City of Bakersfield, Kern County Farm Bureau, Kern County Water Agency, and J.G. Boswell Company suggested that designation of Unit 3 as critical habitat, Kern Fan Water Recharge Area (KFWRA), “places in jeopardy roughly \$37.5 million in water resources” of the City of Bakersfield, and “another \$25 million in potential replacement costs” for other entities who bank water (Buena Vista Water Storage District, Cal Water Service Company, Kern County Water Agency, and the Olcese Water District). The comment states that the KFWRA is an essential element of the City’s water supply that is relied upon for water storage. If banking of water at this project is restricted, the City may be required to seek additional water supplies from the already stressed State Water Project and Central Valley Project, which will result in additional economic and environmental impacts. Further, if banking of water during flood events is restricted, Kern River water could flood adjacent properties resulting in public safety risks. The commenter also suggested that the designation of Unit 3 may alter the diversion of water upstream of the habitat area and that Section 7 consultations “could cause the Army Corps of Engineers to re-schedule its operational releases from Lake Isabella to maintain habitat downstream in Unit 3.”

*Our Response (27):* Importantly, Unit 3 of the proposed designation is excluded from the final designation and impacts to water banking projects including the KFWRA associated with shrew conservation measures are therefore not expected. The following discussion, however, provides some context to the consideration of this project in the DEA. Multiple possible management scenarios for Unit 3 were investigated in the development of the DEA through interviews with area water district managers and representatives exploring the potential restrictions or other measures that could be imposed on water districts or purveyors. This research determined that a change in the management of the water recharge area from its historic operations would not be required if Unit 3 is designated as critical habitat. In the case that water banking quantity or timing were

impacted, economic impacts could occur though all information gathered during the development of the DEA did not suggest this would be the case.

*Comment (28):* One comment noted that, should the banked water from the Kern River and Friant-Kern Canal in Unit 3 be made unavailable to the Pioneer Project, Kern Water Bank, and Berrenda Mesa Project, the “replacement value” at a rate of \$209 per acre-foot for a total of 43,337 acre-feet banked annually would amount to \$9.1 million per year (or \$130 million over 20 years applying a seven percent discount rate). Additionally, the commenter states that the DEA doesn’t consider total economic impacts; “secondary impacts” resulting from timing of water supply and economic dislocation may result in an even greater cost. Applying a multiplier of 2.2, the commenter suggests impacts may be as high as \$311 million. The commenter further suggests that “conservation of that water may entail following in some other location that is supplying the water,” and cites estimates for field crops (e.g., alfalfa) and the loss of revenue that would lead to an economic impact of \$21.8 million annually. An additional commenter suggested that the Friant Water Authority could be affected in its ability “to manage flood waters with Kern and Tulare County water districts and growers throughout its Service Area.”

*Our Response (28):* Unit 3 is not included in the final designation for the BLVS and therefore no costs are expected related to the shrew designation in this area for purchase of replacement water. The following discussion, however, provides more information on the water use in the region. The current operation of Unit 3 is as a water recharge area, where excess flows from the Kern River are allowed to percolate to the groundwater aquifer for later extraction. The DEA concludes that a change in the management of the water recharge area from its historic operations would not be required if the area were to be designated as critical habitat and, as such, that there would not be a need to purchase the replacement of 43,337 acre-feet. In the case that operations were significantly affected, and some amount of water lost to these projects, the DEA would understate the economic effects to water users.

The Kern Fan Water Recharge Area also serves as a flood control management area, where flood flows may be deposited and channeled from other areas. The DEA concludes that the area will continue its historic use of flood management. To the extent that



flood management uses were restricted, the DEA would understate the economic effects in Unit 3.

*Comment (29):* One commenter stated that the Friant-Kern Canal and its district distribution systems could be affected by additional vegetation control or management on canals directing water to the critical habitat units.

*Our Response (29):* Neither the Friant-Kern Canal or Friant Water Authority and its member districts have facilities within or adjacent to any of the proposed units, and their distribution systems are not likely to be affected with additional vegetation control requirements.

*Comment (30):* One commenter indicated that the requirement for water to enhance critical habitat units "could cause a redirection of water in the Friant-Kern Canal," and that such a redirection would cause a financial burden to the Friant Water Authority. The commenter further notes that water purchased by the federal government for the critical habitat units "must be delivered to the sites, and the costs of which would be partly provided by the Authority."

*Our Response (30):* The need for supplemental water in each of the critical habitat units is effected by the assumption that water will be purchased from willing sellers. As such, no redirection or displacement of existing uses would take place; rather, supplemental water may be purchased on an as-needed basis. A \$209 per acre-foot estimate is an average spot price for leased water, equivalent to a one-time, one-use acquisition. The purchase price is assumed to include cost of delivery, and thus it would cover the cost of conveyance systems. The economic costs for water purchases are discussed in Section 6.3.5 in the DEA.

*Comment (31):* One commenter noted that requirement of water to flood habitat may burden the water districts operating the Friant-Kern Canal. During dry years, when the amount of water is limited, additional burden may occur on the Friant Water Authority and its member districts.

*Our Response (31):* The supplemental water for the critical habitat units is assumed to be purchased on an as-needed basis from willing sellers. In dry years, when water to member districts may be limited, the critical habitat units may also be limited in acquisition of water. In other words, water for the critical habitat units is necessarily secondary (or junior) to the member districts, and may not be available in dry years. As such, that the units need water is not expected to have a

supplemental financial burden effect on member districts.

*Comment (32):* Two comments indicated that the cost to agriculture is understated in that a larger buffer than the 45 feet estimated in the DEA would be necessary between farmed lands and critical habitat. One commenter also suggested that farmers who typically use aerial application of pesticides may have to change to more expensive ground application, and incur the higher costs.

*Our Response (32):* For the DEA, the Extension Service was consulted regarding the appropriate width of a buffer that is intended to prevent pesticide drift from farmed lands, and that would also allow for maneuverability of farm equipment. This width (45 feet) was used in the analysis.

Aerial application of pesticides is more likely to result in pesticide drift than are ground-based methods. There are six or fewer farms with cultivated land located adjacent to critical habitat. These are farms that are adjacent to Unit 2 (Kern Fan Recharge), Unit 3 (Goose Lake), and Unit 5 (Kern Lake). To the extent that any or all of these farms currently use aerial pesticide applications and switch to ground applications then the annual cost to those farms may be understated assuming costs of ground application is more expensive. It is not clear, however, how and where these farms employ pesticides, and it was not determined in the development of the DEA that aerial application would be restricted.

*Comment (33):* One comment indicated that the cost to agriculture is overstated, in that the value of the fruit produced in buffers should be subtracted from the cost of the trees.

*Our Response (33):* The DEA assumed that the pomegranate tree buffers planted on agricultural lands would not be developed for commercial production purposes, but to create "hedgerow thickets" designed to limit pesticide drift. As such, the plantings would be dense and managed for brush and foliage rather than fruit production, the yield of which would be less than a comparable orchard. Harvesting of fruit would be made difficult by the thicket. In conclusion, any revenue from fruit sales would be minimal.

*Comment (34):* One comment indicated that in Unit 5 (Kern Lake), "soil and groundwater conditions will not allow tree production" in the proposed buffer strip.

*Our Response (34):* The buffers would be installed in currently cultivated farmland. To the extent that the suggested buffer planting of a

pomegranate hedgerow will not survive because of the soil type, an alternative brushy or hedgerow plant could be identified as suitable for the soils. The cost of installing the buffer is not expected to vary more than a nominal amount from that estimated in the DEA in the case that a different hedgerow is required.

*Comment (35):* One comment noted that the DEA statement that "there is no cultivated farmland within the boundaries of the proposed designation" is not accurate. The commenter noted that approximately 47 acres in four fields within Unit 2, Goose Lake, have been cultivated in the past, and have been and are eligible for annual loan deficiency (Farm Program) payments.

*Our Response (35):* To the extent that the land continues to be enrolled in the Farm Program, and the owners choose not to cultivate the land for crop production in the future in order to avoid an incidental take of shrew, then the effect of the critical habitat designation would be the difference between net revenue (after expenses) of crop production and the farm program deficiency payment. This amount will vary depending upon crop and deficiency payment amount. In 2004, according to the commenter, the fields received loan deficiency payments, indicating that they may not have been cultivated and have not been used to produce an alternate crop. If this status were to continue in the future, there would be no effect on the owner from the critical habitat designation.

*Comment (36):* One commenter states that the DEA "fails to address the impacts to upstream agricultural water users if their water allotments are reduced or eliminated."

*Our Response (36):* The DEA considered the water needs of the critical habitat units, and acknowledges that supplemental water, whether required or optional, would necessitate a purchase or lease of water from willing sellers. Section 6.3.5 provides an analysis of the water requirements and associated costs for each of the units. The DEA also contemplated the possibility of closure of the existing facilities or effects on water users upstream of the units and determined these scenarios were considered unlikely; therefore, associated impacts were too speculative to be considered reasonably foreseeable.

*Comment (37):* One comment letter requested information as to whether critical habitat designation in Unit 5 (Kern Lake) would affect: (1) Mosquito abatement; (2) diversions of water from New Rim Ditch; (3) timing and



quantities of flows through the Kern Delta Water District facilities; (4) farming activities adjacent to Unit 5; (5) operation of the tile drain system; (6) maintenance of canals and roadways; (7) eligibility of the site for development into a mitigation bank; (8) eligibility for inclusion of Unit 5 into the Metropolitan Bakersfield HCP; and (9) activities of the owner to voluntarily supply water to the site.

*Our Response (37):* In the development of the DEA, our investigation regarding whether changes would be recommended to modify existing mosquito abatement activities revealed that producers who follow pesticide labels instructions for application will not be impacted by shrew conservation activities. The Kern Delta Water District uses the New Rim Ditch to transport water to its service members. The New Rim Ditch lies adjacent to, but outside of, critical habitat in Unit 5. It was determined that requirements for changing diversions, quantities, and timing of flows through existing facilities was not reasonably foreseeable in this area. The DEA considered farming activities in terms of the planting of buffer strips on adjacent lands, including those adjacent to Unit 5 (see Section 5.4 of the DEA).

Implementation of these buffer zones is estimated to cost approximately \$5,187 annually. The DEA also considered whether designation of critical habitat would affect operation, or possible removal, of the tile drain system. Discussions with the land owner indicate that operations on the tile drain system include periodic maintenance and repair of the pumps transporting tailwater at the end of the drains; these activities are not likely to affect the shrew. Routine maintenance of canals and roadways, including grading and adding to gravel base, have been conducted in the past and are not anticipated to be restricted due to shrew conservation activities. Further investigation did not indicate that designation of Unit 5 would limit its eligibility for development into a mitigation bank, or inclusion into the Metropolitan Bakersfield HCP. The potential for restrictions on additional water supply, or changes in the timing of water applications to the site, were also considered. Such activities are not likely to be restricted or limited as the shrew thrives on moist edges to wetted areas, and could reasonably adapt under these conditions.

*Comment (38):* One comment letter expressed concern about the future status of the tile drain system in Unit 5 (Kern Lake), and the economic damage in terms of land values and crop losses

“in excess of \$30 million” that would result if the Service required it to be dismantled.

*Our Response (38):* In developing the DEA, the possibility of impacts to tile drain system project, including its removal, were examined. No evidence was uncovered to give reason to assume that the existing system or tile drain in place would require any alteration, and therefore it was determined that there would not be any reasonably foreseeable loss of land value or crop production associated with modification to this project.

*Comment (39):* One commenter stated that the Kern Delta Water District operates and maintains the New Rim Ditch in Unit 5, and expressed concern that the district would be impacted if their ability to operate the ditch is affected by the designation.

*Our Response (39):* The New Rim Ditch, levee, and adjacent roadway are on the boundary, but outside of, the Unit 5. Previous operations and use of the New Rim Ditch have been conducive for the survival of the shrew, and the seepage has been beneficial for its habitat. As long as current operations and use do not change in the future, there would be no restrictions placed upon it that would result in economic effects.

*Comment (40):* One commenter indicated that the Buena Vista Water Storage District (BVWSD), which owns the Outlet Canal, located within Unit 4, Coles Levee, could be affected if they are unable to line the canal as they plan.

*Our Response (40):* Proposed Unit 4 is not included in the final designation for the BLVS and therefore no further costs are expected related to the shrew associated with this potential project. The following discussion, however, provides more information on the Outlet Canal lining project. A representative of the BVWSD was contacted regarding operational plans for the Outlet Canal. The BVWSD has considered lining the Outlet Canal since the late 1970s, but never completed necessary feasibility studies. More recently, the District has begun to consider it again, based on the installation of new equipment to better measure the seepage from the canal. Among the study alternatives is the efficacy of lining the entire canal (bottom and sides) versus lining the bottom and only parts of the sides, leaving the top parts of the levees unlined in order to protect the waterway habitat. Lining of the canal could provide the BVWSD with a reduction in seepage loss and ability to use or sell the conserved water. The benefit to the BVWSD of the additional water would be offset by the cost of lining. Future

improvements or changes to the Outlet Canal are uncertain, as the economic feasibility of improvements to the BVWSD has not yet been determined.

*Comment (41):* One comment asserts that the study understated the full range of effects on private individuals or entities due to Section 7 consultations that induce the preparation of biological reports. In particular, costs of preparation and ongoing operating costs for the Kern County Valley Floor HCP are understated. The Kern County Planning Department estimates that these costs are \$200,000 for completion of the HCP document and more than \$70,000 annually in subsequent years for implementation.

*Our Response (41):* The costs to private entities was determined along with other costs associated with Section 7 consultations and development of HCPs. Table 16 in the DEA provides a summary of the costs to non-Federal entities, both as a result of the listing and anticipated in the future.

With respect to the Kern County Valley Floor HCP, the commenter was contacted for cost estimates in the course of preparing the DEA, and those costs were subsequently included in the revised economic analysis. The total cost to date of \$450,000 was assumed to be divided equally among the 28 species included in the HCP. The prospective annual cost, which is \$125 as shown in Table 16, was based on the \$70,000 forecasted by the commenter as required to complete the HCP. The annual costs may appear understated because they are assumed to be shared equally among the 28 listed species considered in the HCP.

*Comment (42):* One comment suggested that designation of Unit 3, Kern Fan Water Recharge, would necessitate the installation of “an irrigation system such as sprinklers \* \* \* to water disconnected areas and establish sufficient vegetative cover.” As such, the DEA should include the annual costs for a sprinkler system.

*Our Response (42):* Proposed Unit 3 is currently operated as a water recharge area, where excess flows from the Kern River are allowed to percolate to the groundwater aquifer for later extraction. The DEA did not anticipate significant enough changes to operations in this Unit to necessitate the installation of infrastructure for irrigation. However, Unit 3 is not included in the final designation for the BLVS and therefore no costs are expected related to the shrew for an irrigation system in this area.

*Comment (43):* One comment noted that the DEA does not consider “the costs of replacing the consumptive use

of water needed to moisten shrew habitat” within Unit 3, the Kern Fan Water Recharge, and that the replacement of 9,163 acre-feet of groundwater in that unit would cost \$1.9 million annually.

*Our Response (43):* Unit 3 is not included in the final designation for the BLVS and therefore no costs are expected related to the shrew for purchase of replacement water. The following discussion, however, provides more information on the consumptive water use in the region. The Kern Fan Water Recharge area operates as a water bank with an intentional use of allowing water to percolate to the groundwater aquifer for eventual reuse. In allowing percolation of supplemental water, and simultaneously providing habitat moisture to the benefit of the shrew, some evaporative loss may occur that would not be recoverable. Assuming a 15 percent rate of evaporative loss, approximately 1,375 acre-feet of the supplemental water would not be available to groundwater users. It should be noted that it is not known whether supplemental water will be required in the Kern Fan Recharge Area. If water is required, it is assumed that water would be purchased from willing sellers, and hence would not displace other existing uses. Nevertheless, should the water be required, the upper bound on the opportunity cost of the 1,375 acre-feet of water lost, at \$209 per acre-foot, would be \$287,375 annually.

*Comment (44):* One comment letter stated that the Semitropic Water District owns and operates a canal in Unit 2 for water delivery and transport of flood waters, and concern was expressed that the district would be constrained in its operations or use of the canal.

*Our Response (44):* This canal is not included in the final designation for the

shrew as Unit 2 has been excluded from designation and therefore no economic impacts are anticipated to this project. Current operations of the canal in Unit 2 for water delivery and transport of flood waters have permitted the survival of the shrew, however, and investigation regarding whether the canal’s operation or use would be restricted in the future under a critical habitat designation concluded that restrictions are reasonably foreseeable.

*Comment (45):* One comment letter submitted on behalf of the Gooselake Holding Company (GHC) clarified the ownership status and plans for surface water regulation and groundwater recharge within Unit 2, Goose Lake, consistent with a Biological Opinion signed by the Service on November 15, 2004. GHC owns most of the Goose Lake Area, not the Semitropic Water Storage District as stated in the DEA.

*Our Response (45):* The Biological Opinion for this project was signed after the publication date of the DEA. The Service appreciates these clarifications to the description in the DEA and they are incorporated into the revised analysis. It is of note, however, that Unit 2 of the proposed critical habitat, which contains this project, has been excluded from the final designation of critical habitat.

*Comment (46):* One comment inquired whether water purchased for maintenance of shrew habitat would enhance waterfowl habitat in Unit 2 (Goose Lake), and if so, could a monetary value be placed on the enhancement and deducted from the cost of water.

*Our Response (46):* It is possible that waterfowl habitat would be enhanced by purchase of water for shrew habitat. However, estimating the monetary value or economic benefits (“negative costs”)

of habitat enhancement is extremely difficult, and requires that a strict set of conditions be met in order to follow the guidance of the Office of Management and Budget and develop useable results. While improvements to habitat to other species may occur, the Service believes that the benefits of critical habitat designation are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking. Thus, this DEA does not provide a monetary measure of the economic benefits of improving habitat for other species.

**Summary of Changes From the Proposed Rule**

In preparing our final designation of critical habitat for the Buena Vista Lake shrew, we reviewed comments received on the proposed designation of critical habitat. In addition to minor clarifications in the text, we made numerous changes to our proposed designation, as follows:

(1) Under section 4(b)(2) of the Act, we excluded four properties with adequate management plans that provide for conservation of the Buena Vista Lake shrew and its habitat. For more information, refer to Exclusions Under 4(b)(2) of the Act section below.

(2) We refined our mapping boundaries, using the best information available to us, to include only occupied areas which we have determined to have the primary constituent elements and are essential to the shrew. We removed canals, open water areas, and other nonessential areas from the proposed critical habitat designation.

(3) Collectively, we excluded a total of 4,566 ac (1,848 ha) of federally and privately-owned lands from this final critical habitat designation.

TABLE 1.—PROPOSED AND FINAL CRITICAL HABITAT AREA

Unit	Proposed	Final
1. Kern Wildlife Refuge Unit .....	387 ac (157 ha)	0 ac (0 ha).
2. Goose Lake Unit .....	1,277 ac (517 ha).	0 ac (0 ha).
3. Kern Fan Recharge Unit .....	2,682 ac (1,085 ha).	0 ac (0 ha).
4. Coles Levee Unit .....	214 ac (87 ha) ..	0 ac (0 ha).
5. Kern Lake Preserve Unit .....	90 ac (36 ha) ....	84 ac (34 ha).
Total .....	4,649 ac (1,882 ha).	84 ac (34 ha).

**Critical Habitat**

Section 3(5)(A) of the Act defines critical habitat as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in

accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or

protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the

species. "Conservation" means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not allow government or public access to private lands. Under section 7 of the Act, Federal agencies must consult with us on activities they undertake, fund, or permit that may affect critical habitat and lead to its destruction or adverse modification. However, the Act prohibits unauthorized take of listed species and requires consultation for activities that may affect them, including habitat alterations, regardless of whether critical habitat has been designated. We have found that the designation of critical habitat provides little additional protection to most listed species.

To be included in a critical habitat designation, habitat must be either a specific area within the geographic area occupied by the species on which are found those physical or biological features essential to the conservation of the species (primary constituent elements, as defined at 50 CFR 424.12(b)) and which may require special management considerations or protections, or be specific areas outside of the geographic area occupied by the species which are determined to be essential to the conservation of the species. Section 3(5)(C) of the Act states that not all areas that can be occupied by a species should be designated as critical habitat unless the Secretary determines that all such areas are essential to the conservation of the species. Our regulations (50 CFR 424.12(e)) also state that, "The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species."

Regulations at 50 CFR 424.02(j) define special management considerations or protection to mean any methods or procedures useful in protecting the physical and biological features of the environment for the conservation of listed species. When we designate critical habitat, we may not have the information necessary to identify all areas that are essential for the conservation of the species. Nevertheless, we are required to designate those areas we consider to be essential, using the best information available to us. Accordingly, we do not

designate critical habitat in areas outside the geographic area occupied by the species unless the best available scientific and commercial data demonstrate that those areas are essential for the conservation needs of the species.

Section 4(b)(2) of the Act requires that we take into consideration the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. We may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.

Our Policy on Information Standards under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), provides criteria, establishes procedures, and provides guidance to ensure that our decisions represent the best scientific and commercial data available. It requires our biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information should be the listing package for the species. Additional information may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by States and counties or other entities that develop HCPs, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Section 4 of the Act requires that we designate critical habitat on the basis of what we know at the time of listing. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by section 7(a)(2) and section 9 of the Act, as determined on the basis of the best

available information at the time of the action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

## Methods

Our methods for identifying the Buena Vista Lake shrew critical habitat included in this final designation are identical to the methods we used in our proposal of critical habitat for the Buena Vista Lake shrew, published on August 19, 2004 (69 FR 51417).

As required by section 4(b)(2) of the Act and regulations at 50 CFR 424.12, we used the best scientific and commercial data available to determine areas that contain the physical and biological features that are essential for the conservation of the shrew. This included data and information contained in, but not limited to, the proposed and final rules listing the shrew (65 FR 35033, June 1, 2000, and 67 FR 10101, March 6, 2002), the Recovery Plan for Upland Species of the San Joaquin Valley, California (Service 1998), the proposed rule designating critical habitat (69 FR 51417, August 19, 2004), research and survey observations published in peer-reviewed articles (Grinnell 1932, 1933; Hall 1981; Williams and Kilburn 1984; Williams 1986), habitat and wetland mapping and other data collected and reports submitted by biologists holding section 10(a)(1)(A) recovery permits, biological assessments provided to the Service through section 7 consultations, reports and documents that are on file in the Service's field office (Center for Conservation Biology 1990; Maldonado *et al.* 1998; ESRP 1999a; ESRP 2004), personal discussions with experts inside and outside of the Service with extensive knowledge of the shrew and habitat in the area, and information received during the two open comment periods. We also conducted site visits and visual habitat evaluation in areas known to have shrews, and in areas within the historical ranges that had potential to contain shrew habitat.

The critical habitat units were delineated by creating rough areas for each unit by screen-digitizing polygons (map units) using ArcView (Environmental Systems Research

Institute, Inc.), a computer Geographic Information System (GIS) program. The polygons were created by overlaying current and historic species location points (CNDDDB 2004), and mapped wetland habitats (California Department of Water Resources 1998) or other wetland location information, onto SPOT imagery (satellite aerial photography) (CNES/SPOT Image Corporation 1993–2000) and Digital Ortho-rectified Quarter Quadrangles (DOQQs) (USGS 1993–1998) for areas containing the shrew. We utilized GIS data derived from a variety of Federal, State, and local agencies, and from private organizations and individuals. To identify where essential habitat for the shrew occurs, we evaluated the GIS habitat mapping and species occurrence information from the CNDDDB (2004). We presumed occurrences identified in CNDDDB to be extant unless there was affirmative documentation that an occurrence had been extirpated. We also relied on unpublished species occurrence data contained within our files, including section 10(a)(1)(A) reports and biological assessments.

These polygons of identified habitat were further evaluated. Several factors were used to delineate the proposed critical habitat units from these land areas. We reviewed any information in the Recovery Plan for Upland Species of the San Joaquin Valley, California (Service 1998), or other peer-reviewed literature or expert opinion for the shrew to determine if the designated areas would meet the species' needs for conservation and whether these areas contained the appropriate primary constituent elements for the species. Further refinement was done by using satellite imagery, watershed boundaries, soil type coverages, vegetation/land cover data, and agricultural/urban land use data to eliminate areas that did not contain the appropriate vegetation or associated native plant species, as well as features such as cultivated agriculture fields, development, and other areas that are unlikely to contribute to the conservation of the shrew.

As stated earlier, the shrew occurs in habitats in and adjacent to riparian and wetland edge areas with a vegetation structure that provides cover, allowing for moist soils that support a diversity of terrestrial and aquatic insect prey. We have determined that one of the five known locations of shrew should be designated as critical habitat (CNDDDB 2004). This area contains wetland and/or riparian habitat, is located within the historical range of the shrew, and is occupied by the shrew. The specific essential habitat is explained in greater

detail below in the Unit Descriptions section.

### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements (PCEs)) that are essential to the conservation of the species, and that may require special management considerations and protection. These include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The specific primary constituent elements required for the shrew are derived from the biological needs of the shrew as described in the Background section of this proposal and in the final listing rule.

#### *Space for Individual and Population Growth and Normal Behavior*

As described previously, shrew were recorded in association with perennial and intermittent wetland habitats along riparian corridors, marsh edges, and other palustrine (marsh type) habitats in the southern San Joaquin Valley of California. The shrew presumably occurred in the moist habitat surrounding wetland margins in the Kern, Buena Vista, Goose and Tulare Lakes basins on the valley floor below 350 ft (107 m) elevation (Grinnell 1932, 1933; Hall 1981; Williams and Kilburn 1984; Williams 1986; Service 1998). With the draining and conversion of the majority of the shrew's natural habitat from wetland to agriculture and the channelization of riparian corridors for water conveyance structures, the vegetative communities associated with the shrew have become degraded and non-native species have replaced the plant species associated with the shrew (Grinnell 1932; Mercer and Morgan 1991; Griggs 1992; Service 1998). Current survey information has identified five areas where the shrew has been found (CNDDDB 2004; Maldonado 1992; Williams and Harpster 2001; ESRP 2004). The five locations are the former Kern Lake Preserve (Kern Preserve) on the old Kern Lake bed, the

Kern Fan recharge area, Cole Levee Ecological Preserve (Cole Levee), the Kern National Wildlife Refuge (Kern NWR), and the Goose Lake slough bottoms. The vegetative communities associated with these areas and with shrew occupancy are characterized by the presence of but are not limited to: Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), glasswort (*Salicornia* sp.), wild-rye grass (*Elymus* sp.), rush grass (*Juncus* sp.), and other emergent vegetation (Service 1998). Maldonado (1992) found shrews in areas of moist ground covered with leaf litter near other low-lying vegetation, branches, tree roots, and fallen logs, or in areas with cool, moist soil beneath dense mats of vegetation kept moist by its proximity to the water line. He described specific habitat features that would make them suitable for the shrew: (1) Dense vegetative cover; (2) a thick, three-dimensional understory layer of vegetation and felled logs, branches, and detritus/debris; (3) heavy understory of leaf litter with duff overlying soils; (4) proximity to suitable moisture; and (5) a year-round supply of invertebrate prey. Williams and Harpster (2001) concluded that the best habitat for the shrew was found in "riparian and wetland communities with an abundance of leaf litter (humus) or dense herbaceous cover." They also determined that "although moist soil in areas with an overstory of willows or cotton woods appears to be favored," they doubted that such overstory was essential. Based on changes in the native habitat composition and structure and information on habitat descriptions of where the shrew have been found, we include the moist vegetative communities surrounding permanent and semipermanent wetlands in our description of shrew critical habitat because they are the habitat requirements needed by the shrew.

#### *Food*

The specific feeding and foraging habits of the shrew are not well known. In general, shrews primarily feed on insects and other animals, mostly invertebrates (Harris 1990; Williams 1991; Maldonado 1992). Food probably is not cached and stored, so the shrew must forage periodically day and night to maintain its high metabolic rate.

The vegetation communities described above provide a diversity of structural layers and plant species and likely contribute to the availability of prey for shrews. Therefore, conservation of the shrew should include consideration of the habitat needs of prey species, including structural and species diversity and seasonal

availability. Shrew habitat must provide sufficient prey base and cover from which to hunt in an appropriate configuration and proximity to nesting sites. The shrew feeds indiscriminately on available larvae and adults of several species of aquatic and terrestrial insects. An abundance of invertebrates is associated with moist habitats, such as wetland edges, riparian habitat, or edges of lakes, ponds, or drainages that possess a dense vegetative cover (Owen and Hoffmann 1983). Therefore, to be considered essential, critical habitat consists of a vegetative structure that contains suitable soil moisture capable of supporting a diversity of invertebrates so that there is a substantial food source to sustain occurrences of the shrew.

#### Water

Open water does not appear to be necessary for the survival of the shrew. The habitat where the shrew have been found contain areas with both open water and mesic environments (Maldonado 1992; Williams and Harpster 2001). The availability of water contributes to improved vegetation structure and diversity which improves cover availability. The presence of water also attracts potential prey species improving prey availability.

#### Reproduction and Rearing of Offspring

Little is known about the reproductive needs of the shrew. The breeding season begins in February or March and ends in May or June, but can be extended depending on habitat quality and available moisture (Paul Collins, Santa Barbara Museum of Natural History, in litt. 2000). The edges of wetland or marshy habitat allow the shrew to provide hospitable environments and have a larger prey base to give birth and raise its young. The shrew's preference for dense vegetative understories also provides cover from predators. Dense vegetation also allows for the soil moisture necessary for a consistent supply of terrestrial and aquatic insect prey (Kirkland 1991; Ma and Talmage 2001; Freas 1990; Maldonado 1992; Maldonado *et al.* 1998).

The areas proposed for designation as critical habitat for the shrew consist of occupied habitat with the primary constituent elements that are essential for adult and juvenile shrews to maintain and sustain occurrences throughout their range. The PCEs below describe the physical and biological features essential to shrew conservation. Special management, such as habitat rehabilitation efforts (*e.g.*, provision of an adequate and reliable water source and restoration of riparian habitat), may be necessary in the unit designated.

#### Primary Constituents for the Buena Vista Lake Shrew

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have determined that the shrew's primary constituent elements are:

- (i) Riparian or wetland communities supporting a complex vegetative structure with a thick cover of leaf litter or dense mats of low-lying vegetation; and
- (ii) Suitable moisture supplied by a shallow water table, irrigation, or proximity to permanent or semipermanent water; and
- (iii) A consistent and diverse supply of prey.

The requisite riparian and wetland habitat is essential for the shrew because it provides space and cover necessary to sustain the entire life cycle needs of the shrew, as well as its invertebrate prey. The shrew is preyed upon by many large vertebrate carnivores as well as by avian predators. Therefore, a dense vegetative structure provides the cover or shelter essential for evading predators as well as serving as habitat for breeding and reproduction, and allows for the protection and rearing of offspring and the growth of adult shrews.

#### Criteria Used To Identify Critical Habitat

We are designating critical habitat on lands that we have determined essential to the conservation of the Buena Vista Lake shrew. These areas have the primary constituent elements described above. Protecting a variety of habitats and conditions that contain the PCEs will allow for the conservation of the species because it will increase the ability of the shrew to survive stochastic environmental (*e.g.*, fire), natural (*e.g.*, predators), demographic (*e.g.*, low recruitment), or genetic (*e.g.*, inbreeding) events, therefore lowering the probability of extinction. Suitable habitat within the historic range is extremely limited and remaining habitats are vulnerable to both anthropogenic and natural threats because so few extant occurrences of the shrew exist, and the number of individuals at each location is estimated to be low. Also, these areas provide habitats essential for the maintenance and growth of self-sustaining populations and metapopulations (a set of local populations where typically migration from one local population to other areas containing suitable habitat is possible) of shrews throughout its range.

Therefore, these areas are essential to the conservation of the shrew.

We are designating critical habitat in the units that we have determined are essential to the conservation of the shrew, except for those excluded under Section 4(b)(2). In our development of critical habitat for the shrew, we used the following methods. The unit being designated has the primary constituent elements described above.

Whenever possible, areas not containing the primary constituent elements, such as developed areas, were not included in the boundaries of critical habitat. However, we did not map critical habitat in enough detail to exclude all developed areas, or other areas unlikely to contain the primary constituent elements essential for the conservation of the Buena Vista Lake shrew. Areas within the boundaries of the mapped units, such as buildings, roads, parking lots, railroad tracks, canals, and other paved areas, are excluded from the designation by text, but these exclusions do not show on the maps because their scale is too small.

In summary, we are designating one critical habitat unit within the known geographical area occupied by the species. The primary constituent elements are present and the shrew is extant in this unit. Additional areas outside of the geographic area currently known to be occupied by the shrew were evaluated to determine if they are essential to the conservation of the shrew and should be included in the final critical habitat designation. Based upon our evaluation of available information, which included the Recovery Plan, survey data, and historical records, we do not find any areas outside of the known geographical area occupied by the shrew to be essential to the conservation of the species at this time.

#### Special Management Considerations or Protections

When designating critical habitat, we assess whether the areas determined to be essential for conservation may require special management considerations or protections. As we undertake the process of designating critical habitat for a species, we first evaluate lands defined by those physical and biological features essential to the conservation of the species for inclusion in the designation pursuant to section 3(5)(A) of the Act. Secondly, we then evaluate lands defined by those features to assess whether they may require special management considerations or protection.

The majority of locations supporting the shrew are on private land, and are

subject to a change in the water supply, which maintains the current habitat. Elevated concentrations of selenium also represent a serious environmental threat to the species (Service 2002). High levels of selenium have been measured in recharge and evaporation ponds adjacent to areas where the shrew occurs (California Department of Water Resources in litt. 1997). Potential dietary selenium concentrations from sampled aquatic insects are within ranges toxic to small mammals (Olson 1986) and could include, but may not be limited to, reduced reproductive output or premature death (Eisler 1985). The shrew also faces high risks of extinction from random catastrophic events (e.g., floods, drought, and inbreeding) (Service 1998). These threats and others mentioned above would render the habitat less suitable for the shrew, and

special management may be needed to address them. The critical habitat unit identified in this final designation may require special management considerations or protection to maintain a functioning hydrological regime to maintain the requisite riparian and wetland habitat, which is essential for the shrew by providing space and cover necessary to sustain the entire life cycle needs of the shrew, as well as its invertebrate prey. This designated unit is threatened by activities that may result in the alteration of the moisture regime which would lead to reduced water quality or supply, loss of suitable invertebrate supply for feeding and loss of complex vegetative structure for cover. We have determined this unit may require special management or protection, due to the existing threats to the shrew, and because no long-term

protection or management plan exists for this unit. Absent special management or protection, this unit is susceptible to existing threats and activities such as the ones listed in the "Effects of Critical Habitat" section, which could result in degradation and disappearance of the shrew populations and their habitat.

**Critical Habitat Designation**

We are designating one (1) unit as critical habitat for the shrew. This critical habitat unit described below constitutes our best assessment at this time of the areas essential for the conservation of the shrew. The unit being designated as critical habitat for the shrew is the Kern Lake Preserve Unit.

The approximate area encompassed within the critical habitat unit is shown in Table 2.

TABLE 2.—FINAL CRITICAL HABITAT UNITS FOR THE BUENA VISTA LAKE SHREW

Unit	Federal		State		Local agencies		Private		Total	
	ac	ha	ac	ha	ac	ha	ac	ha	ac	ha
1. Kern Lake Preserve .....	.....	.....	.....	.....	.....	.....	84	34	84	34
Grand Total .....	0	0	0	0	0	0	84	34	84	34

The areas essential for the shrew include an area within the species' range in California. Below is a brief description of the unit and the reasons why it is essential for the conservation of the shrew.

*Unit 1: Kern Lake Preserve Unit*

Modifications were made to this unit which resulted in the exclusion of a canal and the canal levee banks from the designation. This exclusion resulted in the reduction of critical habitat designation from 90 ac (36 ha) to 84 ac (34 ha).

The Kern Lake Unit is approximately 84 acres (34 ha) and is found in the southern portion of the San Joaquin Valley in southwestern Kern County, approximately 16 miles south of Bakersfield. This unit lies between Hwy 99 and Interstate 5, south of Herring Road near the New Rim Ditch. This unit is essential to the conservation of the species because it represents one of five remaining areas known to support an extant population of the shrew that also contains the PCEs. The Kern Lake area was formerly managed by the Nature Conservancy for the Boswell Corporation, and was once thought to contain the last remaining population of the shrew. This area does not have a

conservation easement and is managed by the landowners. We are unaware of any plans to develop this site.

The Kern Lake Unit is situated at the edge of the historic Kern Lake. Since the advent of reclamation and development, the surrounding lands have seen intensive cattle and sheep ranching and, more recently, cotton and alfalfa farming. While Kern Lake is now only a dry lake bed, the unit's "Gator Pond" site and wet alkali meadows stand as unique reminders of their biological heritage.

A portion of the runoff from the surrounding hills travels through underground aquifers, surfacing as artesian springs at Gator Pond. The heavy clay soils support a distinctive assemblage of native species. An island of native vegetation situated among a sea of cotton fields, this Unit contains three ecologically significant natural communities: freshwater marsh, alkali meadow, and iodine bush scrub. Gator Pond, in the sanctuary's eastern quarter, lies near the shoreline of the historic Kern Lake.

Shrews were discovered at the Kern Lake Unit in 1986 near a community of saltbushes and saltgrass. In 1988 and 1989, 25 shrews were captured in low-lying, riparian and/or wetland habitats

with an overstory of cottonwoods and willows, abundant ground litter, and moist soil (Center for Conservation Biology 1990).

The Kern Lake Unit may require special management considerations or protection to maintain a functioning hydrological regime to maintain the requisite riparian and wetland habitat, which is essential for the shrew by providing space and cover necessary to sustain the entire life cycle needs of the shrew, as well as its invertebrate prey. This designated unit is threatened by activities that may result in the alteration of the moisture regime which would lead to reduced water quality or supply, loss of suitable invertebrate supply for feeding and loss of complex vegetative structure for cover. Furthermore, no long-term protection or management plan exists for this unit.

**Effects of Critical Habitat Designation**

*Section 7 Consultation*

Section 7 of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat.

Section 7(a) of the Act requires Federal agencies, including the Service, to evaluate their actions with respect to

any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory. If a species is listed or critical habitat is designated, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the action agency ensures that the permitted actions do not destroy or adversely modify critical habitat.

When we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. "Reasonable and prudent alternatives" are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal

agencies may request reinitiation of consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain an opinion that is prepared according to 50 CFR 402.14, if critical habitat were designated. We may adopt the formal conference report as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (*see* 50 CFR 402.10(d)).

Activities on Federal lands that may affect the shrew or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act, a section 10(a)(1)(B) permit from the Service, or some other Federal action, including funding (e.g., Federal Highway Administration or Federal Emergency Management Agency funding), will also continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal and private lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that appreciably reduce the value of critical habitat to the shrew. We note that such activities may also jeopardize the continued existence of the species.

To properly portray the effects of critical habitat designation, we must first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species' critical habitat. Actions likely to "jeopardize the continued existence" of a species are those that would appreciably reduce the likelihood of the species' survival and

recovery. Actions likely to "destroy or adversely modify" critical habitat are those that would appreciably reduce the value of critical habitat to the listed species.

Federal agencies already consult with us on activities in areas currently occupied by the species to ensure that their actions do not jeopardize the continued existence of the species. These actions include, but are not limited to:

(1) Actions that would affect riparian or wetland areas by any Federal Agency. Such activities could include, but are not limited to, flood control or changes in water banking activities. These activities could eliminate or reduce the habitat necessary for the reproduction, sheltering, or growth of Buena Vista Lake shrews.

(2) Actions that would affect the regulation of water flows by any Federal agency. Such activities could include, but are not limited to, damming, diversion, and channelization. These activities could eliminate or reduce the habitat necessary for the reproduction, sheltering or growth of Buena Vista Lake shrews.

(3) Actions that would involve regulations funded or permitted by the Federal Highway Administration. (We note that the Federal Highway Administration does not fund the routine operations and maintenance of the State highway system.). Such activities could include, but are not limited to, new road construction and right-of-way designation. These activities could eliminate or reduce riparian or wetland habitat along river crossings necessary for reproduction, sheltering or growth of Buena Vista Lake shrews.

(4) Actions that would involve regulation of airport improvement activities by the Federal Aviation Administration. Such activities could include, but are not limited to, the creation or expansion of airport facilities. These activities could eliminate or reduce riparian or wetland habitat necessary for the reproduction, sheltering, foraging, or growth of Buena Vista Lake shrews.

(5) Actions that would involve licensing of construction of communication sites by the Federal Communications Commission. Such activities could include, but are not limited to, the installation of new radio equipment and facilities. These activities could eliminate or reduce the habitat necessary for the reproduction, sheltering, foraging, or growth of Buena Vista Lake shrews.

(6) Actions that would involve funding of activities by the U.S.



Environmental Protection Agency, Department of Energy, Federal Emergency Management Agency, Federal Highway Administration, or any other Federal agency. Such activities could include, but are not limited to, activities associated with the cleaning up of Superfund sites, erosion control activities, and flood control activities. These activities could eliminate or reduce upland and/or aquatic habitat for Buena Vista Lake shrews.

(7) Actions that would affect waters of the United States by the Army Corps under section 404 of the Clean Water Act. Such activities could include, but are not limited to, placement of fill into wetlands. These activities could eliminate or reduce the habitat necessary for the reproduction, feeding, or growth of Buena Vista Lake shrews.

All lands within this designation as critical habitat are within the historical geographic area occupied by the species, and are likely to be used by the shrew whether for foraging, breeding, growth of juveniles, dispersal, migration, genetic exchange, or sheltering. We consider all lands included in this designation to be essential to the survival of the species. Federal agencies already consult with us on activities in areas currently occupied by the species, and also one whether the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the species. Therefore, we believe that the designation of critical habitat is not likely to result in a significant regulatory burden above that already in place due to the presence of the listed species. Few additional consultations are likely to be conducted due to the designation of critical habitat.

#### *Application of Section 3(5)(A) and Exclusions Under Section 4(b)(2) of the Act*

Section 3(5)(A) of the Act defines critical habitat as the specific areas within the geographic area occupied by the species on which are found those physical and biological features (i) essential to the conservation of the species and (ii) which may require special management considerations or protection. Therefore, areas within the geographic area occupied by the species that do not contain the features essential for the conservation of the species are not, by definition, critical habitat. Similarly, areas within the geographic area occupied by the species that do not require special management or protection also are not, by definition, critical habitat. To determine whether an area requires special management, we first determine if the essential

features located there generally require special management to address applicable threats. If those features do not require special management, or if they do in general but not for the particular area in question because of the existence of an adequate management plan or for some other reason, then the area does not require special management.

We consider a current plan to provide adequate management or protection if it meets three criteria: (1) The plan is complete and provides a conservation benefit to the species (*i.e.*, the plan must maintain or provide for an increase in the species' population, or the enhancement or restoration of its habitat within the area covered by the plan); (2) the plan provides assurances that the conservation management strategies and actions will be implemented (*i.e.*, those responsible for implementing the plan are capable of accomplishing the objectives, and have an implementation schedule or adequate funding for implementing the management plan); and (3) the plan provides assurances that the conservation strategies and measures will be effective (*i.e.*, it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives).

Further, section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, the effect on national security, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined, following an analysis, that the benefits of such exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species.

In our critical habitat designations, we use both the provisions outlined in sections 3(5)(A) and 4(b)(2) of the Act to evaluate those specific areas that we are considering proposing designating as critical habitat as well as for those areas that are formally proposed for designation as critical habitat. Lands we have found do not meet the definition of critical habitat under section 3(5)(A) or have excluded pursuant to section 4(b)(2) include those covered by the following types of plans if they provide assurances that the conservation measures they outline will be implemented and effective: (1) Legally operative HCPs that cover the species, (2) draft HCPs that cover the species and

have undergone public review and comment (*i.e.*, pending HCPs), (3) Tribal conservation plans that cover the species, (4) State conservation plans that cover the species, and (5) National Wildlife Refuge System Comprehensive Conservation Plans.

#### **Relationship of Critical Habitat to the Kern National Wildlife Refuge Unit**

We are excluding the Kern National Wildlife Refuge.

The Kern National Wildlife Refuge has an approved and signed Comprehensive Conservation Plan (CCP) (Service 2004a) that provides for the protection and management of all trust resources, including federally listed species and sensitive natural habitats. One goal of the CCP for the Kern National Wildlife Refuge is to "restore and maintain representative examples of Tulare Basin riparian and saltbush scrub habitats on Kern Refuge." To reach this goal, the approved CCP provides for a water source to sustain riparian vegetation and remnant sloughs that support the Buena Vista Lake shrew through the flooding and managing of riparian areas in the fall, winter, and early spring, as well as irrigating trees in riparian areas during the summer months. As part of the approved CCP, an additional 15 acres of riparian vegetation would be planted and maintained to provide habitat for the shrew. The plan also calls for the eradication of salt cedar from the riparian areas and restoration of riparian areas through planting of riparian trees, shrubs, and forbs native to riparian forests in the area. This plan has already undergone a Section 7 consultation that has evaluated the plan for consistency with the conservation needs of the species (Service 2004b). Funding for the implementation of the CCP comes from the Kern Refuge Complex's annual operation budget. Management items that benefit the shrew will be accomplished by existing staff and existing annual budget.

The Refuge has completed a Comprehensive Conservation Plan (CCP) that addresses the shrew, the CCP has undergone section 7 review, and it clearly provides a conservation benefit to the species. The Service has a statutory mandate to manage the refuge for the conservation of listed species, and the CCP provides a detailed plan of how it will do so. The Refuge accordingly does not meet the definition of critical habitat under section 3(5)(A) of the Act because management plans already in place provide for the conservation of the shrew, and no special management or protection will be required.

### Relationship of Critical Habitat to the Goose Lake Project

Section 4(b)(2) of the Act requires us to consider other relevant impacts, in addition to economic impacts, of designating critical habitat. Section 7 of the Act authorizes us to issue permits for the take of listed wildlife species incidental to otherwise lawful activities. An incidental take permit application must be supported by a Biological Assessment that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the permitted incidental take.

One proposed critical habitat unit (Goose Lake Unit) warrants exclusion from the final designation of critical habitat under Section 4(b)(2) of the Act based on the special management considerations and protections afforded the Buena Vista Lake shrew habitat through the implementation of a Biological Opinion developed through a Section 7 consultation on a wetlands restoration and enhancement project funded through the North American Wetlands Conservation Act (NAWCA) in the Goose Lake bottoms. We believe the benefits excluding this wetlands restoration and enhancement project from the critical habitat designations will outweigh the benefits of including them. The following represents our rationale for excluding the Goose Lake Unit for Buena Vista Lake shrew from the final designated critical habitat.

#### (1) Benefits of Inclusion

Designation of critical habitat provides important information on those habitats and their primary constituent elements that are essential to the conservation of the species. This information is particularly important to any Federal agency, State, county, local jurisdiction, conservation organization, or private landowner that may be evaluating adverse actions or implementing conservation measures that involve those habitats. The benefit of a critical habitat designation would ensure that any actions authorized, funded, or carried out by a Federal agency would not likely destroy or adversely modify any critical habitat. Without critical habitat, some site-specific projects might not trigger consultation requirements under the Act in areas where species are not currently present; in contrast, Federal actions in areas occupied by listed species would still require consultation under Section 7 of the Act. We consider all habitats within this designation to be occupied. Therefore, we anticipate little additional regulatory benefit from including these

lands in critical habitat beyond what is already provided by the existing Section 7 nexus for habitat areas occupied by the listed extant species.

Where conservation measures are in place, our experience indicates that this benefit is small or nonexistent. The benefits of excluding projects with an approved biological opinion normally outweigh the benefits of inclusion. The principal benefit of any designated critical habitat is that federally funded or authorized activities in such habitat that may affect the habitat require consultation under Section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid adverse modification of critical habitat. We have found that if a project has completed its Section 7 consultation then the benefit of excluding an area from critical habitat can be greater than not designating the area. A Biological Opinion was developed through a Section 7 consultation on a wetlands restoration and enhancement project that includes areas in the Goose Lake Unit. In the Biological Opinion, we determined that the project would ensure the long-term survival of the covered species in the plan area, including the shrew. By implementing the Biological Opinion, this project includes management measures and protections for conservation of lands designed to protect, restore, and enhance their value as habitat for the Buena Vista Lake shrew. The project is funded through the NAWCA, which mandates a management agreement for the project.

Another possible benefit to including these lands is that the designation of critical habitat can serve to educate landowners and the public regarding the potential conservation values of an area. This may focus and contribute to conservation efforts of other parties by clearly delineating areas of high conservation value for certain species. However, we believe that this education benefit has largely been achieved. The additional educational benefits, which might arise from critical habitat designation, are largely accomplished through the proposed rule and request for public comment that accompanied the development of this regulation. We have accordingly determined that the benefits of designating critical habitat on this property covered by the described conservation measures above are small.

#### (2) Benefits of Exclusion

The Service believes that Buena Vista Lake shrews within the properties with conservation strategies will benefit substantially from landowner voluntary

management actions due to a reduction in competition with non-native predators, a reduction in risk of chemically altered aquatic habitats, a reduction in risk of loss of aquatic and upland habitat, and the enhancement and creation of aquatic habitat. The conservation benefits of critical habitat are primarily regulatory or prohibitive in nature. Where consistent with the discretion provided by the Act, the Service believes it is necessary to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation. Thus, we believe it is essential for the recovery of the Buena Vista Lake shrew to build on continued conservation activities such as these with a proven partner, and to provide positive incentives for other private landowners who might be considering implementing voluntary conservation activities but have concerns about incurring incidental regulatory or economic impacts.

While the consultation requirement associated with critical habitat on the Goose Lake Unit would add little benefit, it would require the use of resources to ensure regulatory compliance that could otherwise be used for on the ground management of the targeted listed or sensitive species. The Goose Lake Unit is currently protected under the Conservation Measures outlined for long-term management in a Section 7 Biological Opinion that was signed for the project in November 2004. The project is funded by NAWCA, which provides assurances for a 25-year long-term agreement. Through this NAWCA project and Section 7 consultation, Goose Lake project will enhance and restore wetlands and will be managed in this manner for the 25-year term of the project. The conservation measures outlined in the biological opinion will protect the shrew during construction and maintenance of the project and the wetlands restored and enhanced by the project will provide essential habitat for the shrew.

#### The Benefits of Exclusion Outweigh the Benefits of Inclusion

Based on the above considerations, and consistent with the direction provided in section 4(b)(2) of the Act and the Federal District Court decision concerning critical habitat (*Center for Biological Diversity v. Norton*, Civ. No. 01-409 TUC DCB D. Ariz. Jan. 13, 2003), we have determined that the benefits of excluding the Gooselake Holding Company property in Unit 2 as critical

habitat outweigh the benefits of including it as critical habitat for the Buena Vista Lake shrew.

This conclusion is based on the following factors:

(1) The Gooselake Holding Company property is currently operating under a Section 7 biological opinion in cooperation with the Service and Ducks Unlimited to implement conservation measures and achieve important conservation goals through the restoration and enhancement of important riparian and wetland habitat for the Buena Vista Lake shrew.

(2) Given the current conservation strategies created and implemented by the Gooselake Holding Company, the Service believes the additional regulatory and educational benefits of including these lands as critical habitat are relatively small. The designation of critical habitat can serve to educate the general public as well as conservation organizations regarding the potential conservation value of an area, but this goal is already being accomplished through the identification of this area in the management plans described above. Likewise, there will be little additional Federal regulatory benefit to the species because (a) this unit, if included, would likely not be adversely affected to any significant degree by Federal activities requiring section 7 consultation, and (b) all units are already occupied by the Buena Vista Lake shrew, and a section 7 nexus already exists. The Service is unable to identify any other potential benefits associated with critical habitat for these properties.

(3) Excluding these privately owned lands with conservation strategies from critical habitat may, by way of example, provide positive social, legal, and economic incentives to other non-Federal landowners who own lands that could contribute to listed species recovery if voluntary conservation measures on these lands are implemented.

In conclusion, we find that the exclusion of critical habitat on Gooselake Holding Company would most likely have a net positive conservation effect on the recovery and conservation of the Buena Vista Lake shrew when compared to the positive conservation effects of a critical habitat designation. As described above, the overall benefits to these species of a critical habitat designation for these properties are relatively small. In contrast, we believe that this exclusion will enhance our existing partnership with these landowners, and it will set a positive example and provide positive incentives to other non-Federal landowners who may be considering

implementing voluntary conservation activities on their lands. We conclude there is a higher likelihood of beneficial conservation activities occurring in these and other areas without designated critical habitat than there would be with designated critical habitat on these properties.

#### **Relationship of Critical Habitat to the Kern Fan Recharge Area Unit**

Section 4(b)(2) of the Act requires us to consider other relevant impacts, in addition to economic impacts, of designating critical habitat. One proposed critical habitat unit (Kern Fan Recharge Area Unit) warrants exclusion from the final designation of critical habitat under Section 4(b)(2) of the Act based on the special management considerations and protections afforded the Buena Vista Lake shrew habitat through a Management Plan for the Kern Fan Recharge Area developed by the City of Bakersfield. We have determined that the benefits of excluding the Kern Fan Unit from the critical habitat designation will outweigh the benefits of including it in the final designation. The following represents our rationale for excluding the Kern Fan Recharge Area Unit for Buena Vista Lake shrew from the final designated critical habitat.

Portions of the recharge area are flooded sporadically, forming fragmented wetland communities throughout the area. Narrow strips of riparian communities exist on both sides of the Kern River. The plant communities of the Kern Fan Water Recharge Area include a mixture of Valley saltbush scrub, Great Valley mesquite shrub, and some remnant riparian areas. Remnant riparian areas are found throughout the water bank area, but are mainly located near the main channel of the Kern River. The Buena Vista Lake shrew has been documented on the Kern Fan Water Recharge Unit. This Unit is currently protected under a Service-approved Management Plan developed by the City of Bakersfield that includes yearly monitoring and Service approval of any changes.

#### *(1) Benefits of Inclusion*

Designation of critical habitat provides important information on those habitats and their primary constituent elements that are essential to the conservation of the species. This information is particularly important to any Federal agency, State, county, local jurisdiction, conservation organization, or private landowner that may be evaluating adverse actions or implementing conservation measures

that involve those habitats. The benefit of a critical habitat designation would ensure that any actions authorized, funded, or carried out by a Federal agency would not likely destroy or adversely modify any critical habitat. Without critical habitat, some site-specific projects might not trigger consultation requirements under the Act in areas where species are not currently present; in contrast, Federal actions in areas occupied by listed species would still require consultation under section 7 of the Act. We consider all habitats within this designation to be occupied. Therefore, we anticipate little additional regulatory benefit from including these lands in critical habitat beyond what is already provided by the existing section 7 nexus for habitat areas occupied by the listed extant species.

The benefits of including areas with approved management plans in critical habitat are normally small. The principal benefit of any designated critical habitat is that federally funded or authorized activities in such habitat that may affect it require consultation under section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid adverse modification of critical habitat. Where conservation measures are in place, our experience indicates that this benefit is small or nonexistent. Currently approved management plans are already designed to ensure the long-term survival of covered species within the plan area. Management plans include management measures and protections for conservation lands designed to protect, restore, and enhance their value as habitat for the Buena Vista Lake shrew.

Another possible benefit to including these lands is that the designation of critical habitat can serve to educate landowners and the public regarding the potential conservation values of an area. This may focus and contribute to conservation efforts of other parties by clearly delineating areas of high conservation value for certain species. However, we believe that this education benefit has largely been achieved. The additional educational benefits, which might arise from critical habitat designation, are largely accomplished through the proposed rule and request for public comment that accompanied the development of this regulation. We have accordingly determined that the benefits of designating critical habitat on this property covered by the described conservation measures above are small.

*(2) Benefits of Exclusion*

Approximately 80 percent of the occurrence records of the Buena Vista Lake shrew are on private lands. Proactive voluntary conservation efforts by private or non-Federal entities are necessary to prevent the extinction and promote the recovery of the Buena Vista Lake shrew in the Tulare Basin.

We have determined that the Buena Vista Lake shrew within the properties with management plans or conservation strategies that protect or enhance the conservation of the species will benefit substantially from voluntary landowner management actions due to an enhancement and creation of riparian and wetland habitat and a reduction in risk of loss of riparian habitat. The conservation benefits of critical habitat are primarily regulatory or prohibitive in nature. Where consistent with the discretion provided by the Act, the Service believes it is necessary to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation (Wilcove *et al.* 1998). Thus, we believe it is essential for the recovery of the Buena Vista Lake shrew to build on continued conservation activities such as these with a proven partner, and to provide positive incentives for other private landowners who might be considering implementing voluntary conservation activities but have concerns about incurring incidental regulatory or economic impacts.

The City of Bakersfield manages the Kern Fan Recharge Area in such a way as to promote the conservation of the Buena Vista Lake shrew. The Service-approved management plan developed by the City of Bakersfield includes management of the area for the benefit of the shrew. These activities include limiting public access to the site, cessation of grazing practices, protection of the site from development or encroachment, maintenance of the site as permanent open space that has been left predominantly in its natural vegetative state, and the spreading of flood waters which promotes the moisture regime and wetland and riparian vegetation determined to be essential for the conservation of the shrew. Annual monitoring of the site will also be implemented to promote adaptive management of the area for the optimal enhancement of wetland and riparian vegetation for the benefit of the shrew. Funding for the implementation of the habitat management plan is assured through the annual fiscal budget

of the City of Bakersfield's Water Resource Department.

*(3) The Benefits of Exclusion Outweigh the Benefits of Inclusion*

Based on the above considerations, and consistent with the direction provided in section 4(b)(2) of the Act and the Federal District Court decision concerning critical habitat (*Center for Biological Diversity v. Norton*, Civ. No. 01-409 TUC DCB D. Ariz. Jan. 13, 2003), we have determined that the benefits of excluding the City of Bakersfield property in Unit 3 from critical habitat outweigh the benefits of including them as critical habitat for the Buena Vista Lake shrew.

This conclusion is based on the following factors:

(1) The City of Bakersfield property is currently operating under a Service-approved Management Plan to implement conservation measures and achieve important conservation goals through the management of water banking operations to achieve the optimal flooding regime for the enhancement of important riparian and wetland habitat for the Buena Vista Lake shrew.

(2) Given the past and current conservation strategies created and implemented by the City of Bakersfield, the Service believes the additional regulatory and educational benefits of including these lands as critical habitat are relatively small. The Service anticipates that the conservation strategies will continue to be implemented in the future, and that the funding for these activities will continue to be available because the City of Bakersfield is enterprise funded and receives an annual budget for the operation and maintenance of the Kern Fan Recharge Area. The designation of critical habitat can serve to educate the general public as well as conservation organizations regarding the potential conservation value of an area, but this goal is already being accomplished through the identification of this area in the management plans described above. Likewise, there will be little additional Federal regulatory benefit to the species because (a) there is a low likelihood that these proposed critical habitat units will be negatively affected to any significant degree by Federal activities requiring section 7 consultation, and (b) all units are already occupied by the Buena Vista Lake shrew and a section 7 nexus already exists. The Service is unable to identify any other potential benefits associated with critical habitat for these properties.

(3) Excluding these privately owned lands with conservation strategies from

critical habitat may, by way of example, provide positive social, legal, and economic incentives to other non-Federal landowners who own lands that could contribute to listed species recovery if voluntary conservation measures on these lands are implemented.

In conclusion, we find that the exclusion of critical habitat on the City of Bakersfield's Kern Fan Water Recharge Unit would most likely have a net positive conservation effect on the recovery and conservation of the Buena Vista Lake shrew when compared to the positive conservation effects of a critical habitat designation. As described above, the overall benefits to these species of a critical habitat designation for these properties are relatively small. In contrast, we believe that this exclusion will enhance our existing partnership with these landowners, and it will set a positive example and provide positive incentives to other non-Federal landowners who may be considering implementing voluntary conservation activities on their lands. We conclude there is a higher likelihood of beneficial conservation activities occurring in these and other areas without designated critical habitat than there would be with designated critical habitat on these properties.

**Relationship of Critical Habitat to the Coles Levee Unit**

The Coles Levee Ecosystem Preserve has been established with a conservation easement that is held by the California Department of Fish and Game. This conservation easement establishes that this area will be "retained forever in a natural condition and to prevent any use of the property that will significantly impair or interfere with the conservation values of the property." The Conservation Easement limits the use of the Property to such activities as set forth and reserved in the easement, including those involving the conservation, protection, restoration and enhancement of native species and their habitat.

We proposed as critical habitat, but have now considered for exclusion from the final designation, the Coles Levee Unit that is entirely within the Coles Levee Ecosystem Preserve.

*(1) Benefits of Inclusion*

There is minimal benefit from designating critical habitat for the Buena Vista Lake shrew within the Coles Levee Ecosystem Preserve because these lands are already managed for the conservation of wildlife. One possible benefit of including these lands as critical habitat would be to educate the

public regarding the conservation values of these areas and the habitat they support. However, critical habitat designation provides little gain in the way of increased recognition for special habitat values on lands that are expressly managed to protect and enhance those values. Additionally, the designation of critical habitat will not have any appreciable effect on the development or implementation of public education programs in these areas.

Another possible benefit to including these lands is that the designation of critical habitat can serve to educate landowners and the public regarding the potential conservation values of an area. This may focus and contribute to conservation efforts of other parties by clearly delineating areas of high conservation value for certain species. However, we believe that this education benefit has largely been achieved. The additional educational benefits, which might arise from critical habitat designation, are largely accomplished through the proposed rule and request for public comment that accompanied the development of this regulation. We have accordingly determined that the benefits of designating critical habitat on this property covered by the described conservation measures above are small.

The designation of critical habitat would require consultation with us for any action undertaken, authorized, or funded by a Federal agency that may affect the species or its designated critical habitat. However, the management objects for the Coles Levee Ecosystem preserve already include specifically managing for targeted listed species and sensitive species; therefore, the benefit from additional consultation is likely also to be minimal.

### (2) Benefits of Exclusion

While the consultation requirement associated with critical habitat on the Coles Levee Ecosystem Preserve would add little benefit, it would require the use of resources to ensure regulatory compliance that could otherwise be used for on-the-ground management of the targeted listed or sensitive species. The Coles Levee Ecosystem Preserve is currently managed by the California Department of Fish and Game through a conservation easement and management agreement that is funded in perpetuity. Through this management, the entire Preserve is fenced to prevent trespass grazing or other unauthorized uses of the area. There is additional fencing around the pond area that provides for shrew habitat. As part of the management,

ARCO will provide for a continuous water source to the pond to sustain habitat beneficial to the shrew. The management agreement for the Preserve also includes impact and avoidance measures for any construction that will occur in the area and provides for the monitoring of the Preserve on a yearly basis for plants and animals. The agreement also stipulates a mitigation requirement at a 4 to 1 ratio for replacement of any habitat that is impacted. Therefore, the benefits of exclusion include relieving additional regulatory burden that might be imposed by the critical habitat, which could divert resources from substantive resource protection to procedural regulatory efforts.

### (3) The Benefits of Exclusion Outweigh the Benefits of Inclusion

We believe that the potential disincentives to the State's active management of their trust resources that are provided by designation of critical habitat are appreciably greater than the benefits to be derived from such designation. This is a result of the fact that these lands are already managed to protect and enhance unique and important natural resource values. We therefore conclude that the benefits of excluding the Coles Levee Ecosystem Preserve lands from the final critical habitat designation outweigh the benefits of including them. Such exclusion will not increase the likelihood that management activities would be proposed that would appreciably diminish the value of the habitat for conservation of the species. Further, such exclusion will not result in the extinction of the species. We therefore conclude that the benefits of excluding Coles Levee Ecosystem Preserve lands from the final critical habitat designation outweigh the benefits of including them.

Based on the above considerations, and consistent with the direction provided in section 4(b)(2) of the Act and the Federal District Court decision concerning critical habitat (*Center for Biological Diversity v. Norton*, Civ. No. 01-409 TUC DCB D. Ariz. Jan. 13, 2003), we have determined that the benefits of excluding the Coles Levee Ecosystem Preserve property in Unit 4 as critical habitat outweigh the benefits of including them as critical habitat for the Buena Vista Lake shrew.

### Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant

impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as part of critical habitat. We cannot exclude such areas from critical habitat if such exclusion would result in the extinction of the species.

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate the potential economic effect of the designation. The draft analysis was made available for public review on November 30, 2004. We accepted comments on the draft analysis until December 15, 2004.

The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for the Buena Vista Lake shrew. This information is intended to assist the Secretary in making decisions about whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be co-extensive with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies. Economic impacts that result from these types of protections are not included in the analysis as they are considered to be part of the regulatory and policy baseline.

Our proposed critical habitat rule pertained to the Buena Vista Lake shrew. Therefore, our economic analysis evaluated the potential future effects associated with the listing of this species as endangered under the Act, as well as any potential effect of the critical habitat designation above and beyond those regulatory and economic impacts associated with listing.

We received nine comment letters on the draft economic analysis of the proposed designation. Following the close of the comment period, we considered comments, prepared responses to comments, and prepared a summary of revisions to economic issues based on final critical habitat designation (*see Responses to Comments section*). The economic analysis indicates that this rule will not have an annual economic effect of \$100 million or more. Based on our economic analysis, the annualized economic effects of this designation are estimated to be \$8,752 to \$12,932, because the economic analysis is for Kern Lake only, as all the other units were excluded from designation. We have excluded 4,173 ac (1,689 ha) of privately owned lands (and 387 ac (157 ha) of federal land) analyzed in the draft economic analysis based on non-economic considerations.

A copy of the final economic analysis and a description of the exclusion process with supporting documents may be obtained from the Sacramento Fish and Wildlife Office directly (*see ADDRESSES section*).

### Required Determinations

#### *Regulatory Planning and Review*

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but will not have an annual effect on the economy of \$100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. As explained above, we prepared an economic analysis of this action; the draft economic analysis was made available for public comment, and we considered those comments during the preparation of this rule. We used this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific area as critical habitat. We also used it to help determine whether to exclude any area from critical habitat, as provided for under section 4(b)(2), if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless we determine, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

The economic analysis indicates that this rule will not have an annual economic effect of \$100 million or more.

#### *Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

#### *Executive Order 13211*

On May 18, 2001, the President issued an Executive Order (E.O. 13211) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This proposed rule to designate critical habitat for the shrew is not a significant regulatory action under Executive Order 12866, and it is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

#### *Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501), the Service makes the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments or the private sector and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal

governments," with two exceptions. It excludes "a condition of federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or tribal governments "lack authority" to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) Due to current public knowledge of the species' protection, the prohibition against take of the species both within and outside of the designated areas, and the fact that critical habitat provides no incremental restrictions, we do not anticipate that this rule will significantly or uniquely affect small governments. As such, Small Government Agency Plan is not





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■ 3. Amend § 17.95(a) by adding an entry for “Buena Vista Lake shrew” in the same alphabetical order as this species appears in the table in § 17.11, to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

(a) Mammals.

\* \* \* \* \*

Buena Vista Lake Shrew (*Sorex ornatus relictus*)

(1) Critical habitat units are depicted for Kern County, California, on the maps below.

(2) The primary constituent elements of critical habitat for the Buena Vista Lake shrew are the habitat components that provide:

(i) Riparian or wetland communities supporting a complex vegetative structure with a thick cover of leaf litter or dense mats of low-lying vegetation; and

(ii) Suitable moisture supplied by a shallow water table, irrigation, or proximity to permanent or semipermanent water; and

(iii) A consistent and diverse supply of prey.

(3) Critical habitat does not include existing features and structures, such as buildings, aqueducts, airports, roads, and other developed areas not containing one or more of the primary constituent elements.

(4) Data layers defining map units were created on a base of USGS 7.5’ quadrangles, and critical habitat units were then mapped using Universal Transverse Mercator (UTM) coordinates.

(5) Unit 1: Kern Lake, Kern County, California.

(i) From USGS 1:24,000 quadrangle map Coal Oil Canyon, California, land bounded by the following UTM 11 NAD 27 coordinates (E,N):

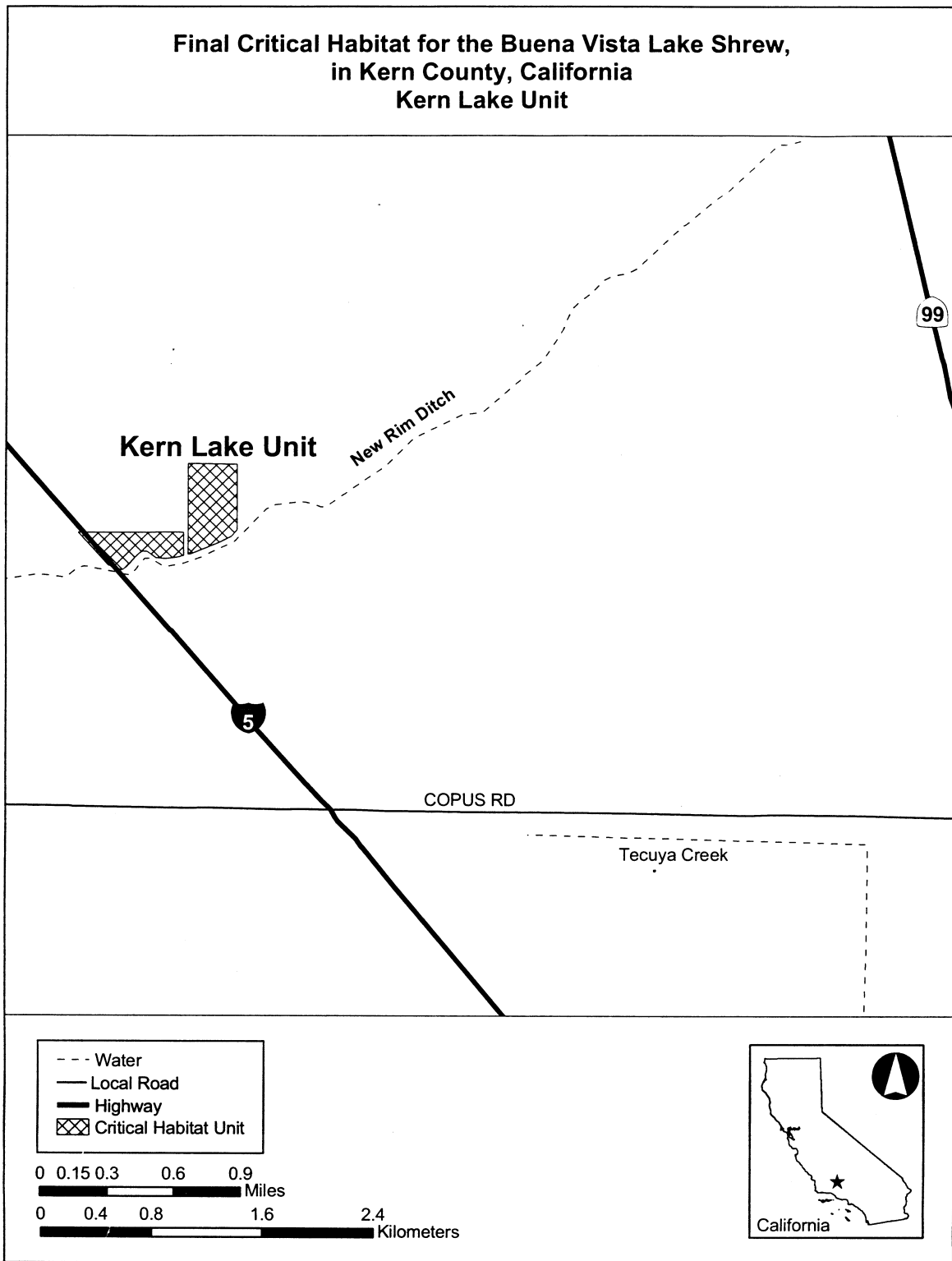
(ii) Western Polygon: 312678, 3887297; 313415, 3887298; 313415, 3887297; 313439, 3887297; 313437, 3887127; 313415, 3887121; 313415,

3887121; 313369, 3887111; 313304, 3887106; 313237, 3887111; 313199, 3887141; 313174, 3887156; 313172, 3887156; 313169, 3887157; 313156, 3887157; 313139, 3887155; 313124, 3887148; 313109, 3887135; 313096, 3887121; 313081, 3887105; 313064, 3887087; 313051, 3887072; 313042, 3887062; 313035, 3887052; 313031, 3887048; 313002, 3887026; 313001, 3887026; 313000, 3887025; 312990, 3887023; 312979, 3887026; 312963, 3887031; 312958, 3887033; 312947, 3887036; 312933, 3887044; 312921, 3887050; 312911, 3887052; 312900, 3887052; 312896, 3887052; returning to 312678, 3887297;

(iii) Eastern Polygon: 313471, 3887135; 313472, 3887797; 313823, 3887791; 313823, 3887314; 313786, 3887267; 313696, 3887224; 313618, 3887189; 313491, 3887139; returning to 313471, 3887135.

(iv) Note: Map follows:

BILLING CODE 4310-55-P



\* \* \* \* \*

Dated: January 12, 2005.

**Craig Manson,**  
*Assistant Secretary for Fish and Wildlife and  
Parks.*

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