



# Federal Register

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**Wednesday,  
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## **Part III**

# **Department of the Interior**

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**Fish and Wildlife Service**

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**50 CFR Part 17**

**Endangered and Threatened Wildlife and  
Plants; Designation of Critical Habitat for  
the California tiger salamander  
(*Ambystoma californiense*) in Santa  
Barbara County; Final Rule**

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

RIN 1018-AT44

**Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California tiger salamander (*Ambystoma californiense*) in Santa Barbara County**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Santa Barbara County population of California tiger salamander (*Ambystoma californiense*) (referred to here as California tiger salamander or CTS in Santa Barbara County) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 11,180 acres (ac) (4,523 hectares (ha)) fall within the boundaries of the critical habitat designation. The critical habitat is located in northern Santa Barbara County, California. Collectively, we excluded a total of 2,740 ac (1,109 ha) of privately-owned lands from this final critical habitat designation.

**DATES:** This final rule is effective December 27, 2004.

**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 Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura, CA 93003.

**FOR FURTHER INFORMATION CONTACT:** Diane Noda, Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES** section) (telephone 805/644-1766; facsimile 805/644-3958).

**SUPPLEMENTARY INFORMATION:****Designation of Critical Habitat Provides Little Additional Protection to 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 445 species or 36 percent of the 1,244 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat. We address the habitat needs of all 1,244 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. The Service believes 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, 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 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 resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act (NEPA). 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 they directly reduce the funds available for direct and tangible conservation actions.

**Background**

For background information, please see the proposed designation of critical habitat for the Santa Barbara County Distinct Vertebrate Population Segment (DPS) of the California tiger salamander published on January 22, 2004 (69 FR 3064). That information is incorporated by reference into this final rule.

**Previous Federal Action**

On February 25, 2003, the Environmental Defense Center and Center for Biological Diversity filed a complaint challenging our failure to designate critical habitat for the Santa Barbara County DPS of the California tiger salamander (*Environmental Defense Center et al. v. U.S. Fish and Wildlife Service et al.*, EVCD 03-00195

(C.D. Cal)). By an order dated August 7, 2003, the district court ordered us to publish a proposed rule to designate critical habitat for the Santa Barbara County DPS of the California tiger salamander by January 15, 2004, and a final rule by November 15, 2004. We published the proposed rule on January 22, 2004 (69 FR 3064).

On August 4, 2004, we made a new determination regarding the listing status of the California tiger salamander. This determination changed the status of the Santa Barbara population. We determined that the California tiger salamander is threatened rangewide, and we published this finding along with a Special Rule exempting existing routine ranching practices throughout the species' range (69 FR 47212). New version: The rule included a detailed analysis of threats to the California tiger salamander, Central population, and a reclassification of the Santa Barbara County and Sonoma County populations. As a result, we removed these populations as separately listed DPSs, and listed the entire California tiger salamander species as threatened.

We are issuing this final designation of critical habitat for the California tiger salamander in the Santa Barbara County portion of its range in compliance with the court's order (described above), noting that it does not include all portions of the range of the entity now listed. We anticipate completing the critical habitat designation for California tiger salamander rangewide through future rulemaking. We proposed critical habitat for the California tiger salamander, Central population, on August 10, 2004 (69 FR 48570).

#### 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 CTS in Santa Barbara County. In addition, we invited public comment through the publication of a notice in the Santa Barbara News-Press on January 26, 2004, and the Santa Maria Times on January 28, 2004.

In the January 22, 2004, proposed critical habitat designation (69 FR 3064), 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 Santa Barbara County.

We received several requests for a public hearing and an extension of the comment period. We announced the reopening of the comment period and the date and time of the public hearing on April 13, 2004 (69 FR 19364), and invited additional comments in letters to appropriate elected officials; Federal, State, and local agencies; scientific organizations; and other interested parties. We also published notices in several news sources, including the **Federal Register**, Santa Barbara News-Press, and the Santa Maria Times. We held a public hearing in Santa Maria, California, on May 11, 2004. Thirty-two individuals gave testimony on the proposed critical habitat designation for the CTS in Santa Barbara County.

We provided notification of availability of the draft economic analysis (DEA) through letters and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. We also published a notice of its availability in the **Federal Register** on October 7, 2004 (69 FR 60138) and made the DEA and associated material available on our Ventura Fish and Wildlife Office Internet site. The reopened comment period closed on November 8, 2004.

We received a cumulative total of 71 comment letters and electronic mail messages (e-mails) during all of the comment periods. We reviewed all comments received for substantive issues and new information regarding the CTS in Santa Barbara County. We grouped the comments into three categories: peer review comments, State comments, or public comments. 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, 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 11 individuals who have detailed knowledge of and expertise in amphibian biology in general, or salamander biology specifically, as well in 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. Three of the eleven reviewers submitted comments on the proposed designation. The three reviewers strongly endorsed the approach we used in our proposal that emphasized the importance of conserving aquatic habitat in the context of surrounding upland habitat. The reviewers felt that this approach is crucial for the conservation and long-term survival of the CTS in Santa Barbara County. They also stated that the rule placed appropriate emphasis on protecting the remaining habitat. All generally supported our methodology and conclusions.

*Comment (1) (Peer):* One peer reviewer cited the importance of conserving the historical connectivity between the six critical habitat units and suggested that all lands surrounding and between Units 3 (Western Alamos/Careaga), 4 (Eastern Los Alamos), 5 (Purisima Hills), and 6 (Santa Rita Valley) be included as critical habitat. The reviewer also suggested that additional historical locations of the CTS in Santa Barbara County be considered for critical habitat, and specifically recommended inclusion of the known pond near Unit 6 (Santa Rita Valley) and some upland habitat surrounding Unit 2 (Eastern Santa Maria).

*Our Response:* Although we agree that preserving connectivity between known breeding ponds is essential for the conservation of the CTS in Santa Barbara County, we do not believe that unoccupied and historical locations are essential for the conservation of the species. The science subteam of the recovery team for CTS in Santa Barbara County determined that the CTS in Santa Barbara County could be conserved by protecting habitat in six disparate conservation areas, excluding

unoccupied and/or historical locations between these six conservation areas. These six conservation areas were identified over a series of meetings that took place between 2002 and 2003 (Service files 2002–2003). These six conservation areas closely resemble the critical habitat units contained in this rule. The six units that we have designated 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).

#### State Agencies

We received comments from the California Department of Transportation (Caltrans). Technical data provided by Caltrans has been incorporated into, or addressed in, this final rule, while other issues raised by Caltrans are addressed below.

*Comment (2) (State):* Caltrans commented that it is unclear why Unit 1 (Western Santa Maria/Orcutt) extends to the western side of State Highway 1, from Black Road to Clark Road. Caltrans requested that this boundary be along the eastern State Highway right-of-way (ROW). Caltrans stated that the rule is written so that it is difficult to discern whether the State ROW is included in the boundary. Caltrans commented that, as currently written in the proposed rule, the State Highway appears to be the boundary. Caltrans stated that the boundary should be relocated outside the State ROW and clearly defined. Caltrans indicated that State ROWs are regularly disturbed and do not provide essential habitat for California tiger salamanders. Furthermore, Caltrans stated that including State ROWs is not necessary and would be prohibitive in terms of both staff time and unnecessary expenses to the State, and would provide little to no benefit to sensitive species.

*Our Response:* ROWs are not included in this designation.

*Comment (3) (State):* Caltrans stated that the maps provided in the **Federal Register** need to be more informative with a greater level of detail that accurately defines the boundaries of proposed critical habitat units. Caltrans suggested that the Service publish Geographic Information System (GIS) maps.

*Our Response:* The maps in the **Federal Register** are meant to provide the general location and shape of critical habitat. The proposed rule also included Universal Transverse Mercator (UTM) coordinates of the proposed critical

habitat units. These legal descriptions are readily plotted and transferable to a variety of mapping formats, and are available electronically upon request for use with GIS programs. The scale of the legal descriptions is sufficiently detailed for locating the extent and configuration of the units.

In addition, at the public hearing, the maps were expanded to wall size to assist the public in better understanding the proposal. These larger scale maps were also provided to individuals upon request. Furthermore, we provided direct assistance in response to written or telephone questions with regard to mapping and land ownership within the proposed designation.

*Comment (4) (State):* Caltrans stated that clarification is needed where the rule reads “Federal agencies already consult” on activities that include “road construction and maintenance, right-of-way designation, and regulation funded or permitted by the Federal Highway Administration (FHWA).” Caltrans suggested that this be changed to read “The FHWA funds new construction and does not fund the routine operations and maintenance of the State highway system.”

*Our Response:* We have changed the language in the preamble to this final rule to reflect this clarification.

#### Other Public Comments and Responses

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

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

*Comment (5):* One commenter stated that historical populations of the salamander are unknown and could, in fact, be increasing. One commenter stated that many pictographs that exist in the traditional tribal domain of the Chumash (from Monterey to Malibu) display the California tiger salamander. The commenter concluded that this points to an amphibian that was very common among the Chumash culture and located over a wide area. Several commenters stated that not enough has been done to demonstrate that this amphibian is threatened.

*Our Response:* The historical distribution and numbers of CTS in Santa Barbara County are not known. The CTS in Santa Barbara County is presently found in 6 disparate locations in northern Santa Barbara County. Because this species spends much of its

life underground, only a portion of the total number of animals migrate to pools to breed each year and animals do not always breed in their natal pool or pond, estimates of the total number of CTS in Santa Barbara County are difficult to make. This difficulty has been noted by a number of biologists (Jennings and Hayes 1994; Shaffer *et al.* 1993).

When making a listing determination, we carefully consider the best available scientific and commercial data regarding the historic and current ranges of the taxon under consideration, as well as the abundance of the species (if known), and the pattern, imminence, and magnitude of threats relative to the species’ distribution. After completing such an analysis for the CTS in Santa Barbara County in 2000, we listed the Santa Barbara County animals as an endangered DPS. Recently, we re-evaluated that determination in the context of California tiger salamanders rangewide. We determined that the best available evidence supports a threatened listing for a single species rangewide. The original analysis and our more recent analysis are available in our final rules that published in the **Federal Register** on (September 21, 2000, 65 FR 57242) and (August 4, 2004, 69 FR 47212).

*Comment (6):* One commenter stated that there is no scientific proof that protecting habitat will protect a species from anything. Another commenter stated that critical habitat does not further the conservation efforts for protecting the California tiger salamander.

*Our Response:* The fundamental importance of habitat to wildlife populations was established long ago (*e.g.*, Grinnell 1917, 1928, as cited in Real and Levin 1991; Leopold 1933; Noss *et al.* 1997). “[All] organisms require appropriate habitats if they are to survive” (Ehrlich 1988, p. 22). Therefore, we conclude that the protection of habitat is an important conservation action. Habitat provides species with cover, shelter, protection from the elements and predation, and space to breed and raise offspring.

In the case of the California tiger salamander, aquatic habitat is needed for breeding, and upland habitat is needed for foraging, sheltering, and protection from predation and the elements (such as the hot, dry weather typical of Santa Barbara County during the non-breeding season). In addition, upland habitat located between aquatic habitats is essential in maintaining gene flow and for recolonization of sites that are temporarily extirpated.

The designation of critical habitat can play a role in conserving the California tiger salamander. Designation ensures that federal agency actions affecting essential California tiger salamander habitat are carefully reviewed so that the habitat will remain functional to serve its intended conservation role.

*Comment (7):* One commenter stated that the area designated for critical habitat is not threatened.

*Our Response:* The known locations of CTS in Santa Barbara County fall into six disparate areas of Santa Barbara County. Habitat in these areas is threatened with loss and/or fragmentation (*i.e.*, reduction in habitat quantity). We are also aware of several factors that may reduce habitat quality within these areas; the presence of introduced species which compete with or feed on California tiger salamanders; unsuitable grazing (see August 4, 2004, Special Rule in 69 FR at 47241), and disturbance from past oil production cleanup efforts. Each of the six areas has a distinctive combination of habitat types, breeding pond types, landscape features, surrounding land uses, and topography. Because of the existing population level, and the types of threats to these populations, we determined that these six areas were essential to the conservation of the species.

*Comment (8):* One commenter stated that the Service should find critical habitat for the salamander to be not warranted. The commenter stated that the designation would provide a second layer of protection but the listing itself provides all that is required to protect the species.

*Our Response:* The term, "not warranted," applies to petition findings and is a result that is possible for a petition finding. We do not have a not warranted option for a critical habitat designation. We can find that critical habitat is not prudent but the courts have found that the not prudent exception is narrow and should be sparsely applied.

The designation means that Federal agencies are required to consult with the Service on the impacts of actions they undertake, fund, or permit on designated critical habitat. While in many cases, these requirements may not provide substantial additional protection for most species, they do direct the Service to consider specifically whether a proposed action will affect the functionality of essential habitat to serve its intended conservation role for a species rather than to focus exclusively on whether the action is likely to jeopardize the species' continued existence. We agree,

however, that even absent a critical habitat designation, Federal agencies are still required to consult on the impacts of their activities on listed species and their habitat.

*Comment (9):* One commenter stated that the determination on page 3073 of the proposed designation (January 22, 2004, 69 FR 3064) under Summary is not substantiated.

*Our Response:* On page 3073 of the proposed rule, it reads "In summary, we propose six areas where populations of California tiger salamander are known to occur as critical habitat because we believe protection of those areas is essential to the conservation of the species." As required under section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, we identified those areas containing the physical and biological features (PCEs) that are essential to the conservation of the CTS in Santa Barbara County and their need for special management considerations or protections using the best scientific data available. Two of the three peer reviewers agree that the areas we are designating as critical habitat provide for the essential life-cycle needs of the CTS in Santa Barbara County and provide the habitat components essential for the conservation (PCEs) of this species. The third reviewer believes that the area included in the critical habitat designation should be expanded to include some unoccupied areas.

*Comment (10):* One commenter stated that the Service failed to mention that most of Unit 2 has historically been cultivated.

*Our Response:* The fact that an area has been cultivated historically does not necessarily make it unsuitable for California tiger salamanders. However, the trend in Santa Barbara County has been to move from dry farming and grazing to more intensive forms of agriculture such as row-cropping and vineyards. This trend resulted in the rapid loss of California tiger salamander upland habitat which was the primary threat to the species at the time of listing in 2000 (September 21, 2000, 65 FR 57242). Although we are aware that most of Unit 2 (Eastern Santa Maria) has historically been cultivated, portions of Unit 2 are fallow and provide upland habitat for the CTS in Santa Barbara County. In addition, some cultivated lands in Unit 2 function as important connectivity habitat between ponds.

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

*Comment (11):* One commenter stated that the designation is an unneeded cost to the taxpayer and that much of the habitat features that make up this

designation are already listed for other species within the area.

*Our Response:* Section 4 of the Endangered Species Act of 1973, as amended, and our implementing regulations, state that critical habitat shall be designated for species listed under the Act.

Certain critical habitat units for other listed species in the vicinity of CTS in Santa Barbara County may overlap with the critical habitat units designated for the California tiger salamander. This is the case with the final critical habitat designation for the La Graciosa thistle (*Cirsium loncholepis*). However, the habitat components essential for conservation (PCEs) differ for each of these species (for detailed information on the PCEs for the La Graciosa thistle, see the Primary Constituent Element section of the final rule (March 17, 2004, 69 FR at 12559); for detailed information on the PCEs for the CTS in Santa Barbara County, see the Primary Constituent Element section of this rule). The habitat components essential for conservation of the La Graciosa thistle identified in the final critical habitat rule would aid in protection of California tiger salamander aquatic habitat, but the proposed rule does not include a sufficient amount of upland habitat to sustain a viable population of California tiger salamanders (69 FR 12559). Therefore, the critical habitat proposed for the La Graciosa thistle does not afford adequate protection for the CTS in Santa Barbara County.

Critical habitat has recently been proposed for the California red-legged frog (*Rana aurora draytonii*) (April 13, 2004, 69 FR at 19626). A portion of the California red-legged frog proposed critical habitat (Unit 24, Santa Ynez River Unit) overlaps with the CTS in Santa Barbara County critical habitat (Unit 6, Santa Rita Valley). The habitat components essential for conservation of this species identified in the proposed California red-legged frog rule would aid in protection of California tiger salamander aquatic habitat, but the proposed rule does not include a sufficient amount of upland habitat to sustain a viable population of California tiger salamanders (69 FR 19627). Therefore, the critical habitat proposed for the California red-legged frog does not afford adequate protection for the CTS in Santa Barbara County.

*Comment (12):* One commenter was concerned with potential loss of land value in urban areas or areas designated for development.

*Our Response:* The economic analysis states that, because only about 1 percent of the real estate supply in Santa Barbara County is likely to be set aside

for the CTS in Santa Barbara County, offsetting compensation measures are not expected to have a significant impact on the dynamics of the regional real estate market. While real estate market values may temporarily decline following designation due to the perception that critical habitat designation may impose additional regulatory burdens on land use, we expect any such impacts to be short term. Additionally, critical habitat designation does not preclude development of Habitat Conservation Plans (HCPs) and issuance of incidental take permits. Landowners within the boundaries of this critical habitat designation will continue to have the opportunity to use their property in ways consistent with the conservation of the CTS in Santa Barbara County. Therefore, we believe that, because of (1) the high degree of public awareness of the species in northern Santa Barbara County, (2) the prohibition against take of the species both within and outside of the designated critical habitat areas, and (3) the small percentage of the Santa Barbara County real estate supply involved, property values are not likely to be affected by the critical habitat designation in the long term.

#### *Issue 3—Property Rights*

*Comment (13):* Several commenters expressed concern that the critical habitat designation would limit their land use practices or result in the loss of their lands. Specifically, one commenter stated that the government is proposing to condemn this private land or reduce its value to the owners. Another commenter stated that this rule would deny ranchers and farmers the use of their land. Another commenter was concerned that the designation would result in the loss of prime agricultural soils that are intensely farmed. One commenter was concerned with potential limits on irrigation and soil compaction. One commenter stated a concern regarding the additional time and money that would be needed in areas designated as critical habitat for oil spill cleanup.

*Our Response:* These comments reflect a misunderstanding of regulatory effect of critical habitat designation. Critical habitat designations do not constitute a burden in terms of Federal laws and regulations on private landowners carrying out private activities. Unless a Federal approval or permit is required, or Federal funds are involved with a project proposed on private property, the critical habitat designation poses no regulatory burden for private landowners, and in particular, should not affect farming and

ranching activities on private lands. Similarly, absent a future Federal nexus, the designation should not affect future land use plans. Routine ranching activities are also exempt from take under the 4(d) rule.

While the designation of critical habitat does not constitute a regulation of private lands, the listing of the CTS in Santa Barbara County under the Endangered Species Act may affect private landowners. Actions which could result in take of California tiger salamanders (e.g., ground disturbing activities such as soil compaction or soil remediation activities) require an exemption from take following consultation under Section 7 or an incidental take permit under section 10 of the Act. Because the CTS in Santa Barbara County was listed in 2000, 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 CTS in Santa Barbara County 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 and will continue to do so following the designation to preserve the conservation value of critical habitat while compatible development proceeds.

#### *Issue 4—Mapping Methodology*

*Comment (14):* Several commenters stated that the acreage proposed to be designated as critical habitat was too extensive.

*Our Response:* We used the best scientific data available in the designation of critical habitat for the CTS in Santa Barbara County, as per section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12. The areas we are designating as critical habitat have the physical and biological features (primary constituent elements

or PCEs) that are essential to the conservation of the CTS in Santa Barbara County and that may require special management or protections. Few populations of the California tiger salamander exist in Santa Barbara County, and the threats to these populations are substantial. The six areas we are designating as critical habitat are essential to conserve these populations and to the overall conservation of the species. Each of the three peer reviewers agree that the areas we are designating as critical habitat provide for the essential life-cycle needs of the California tiger salamander and provide the habitat components essential for the conservation (PCEs) of this species. One of the three believes that the area included in the critical habitat designation should be expanded to include unoccupied areas in some cases.

*Comment (15):* Several commenters referred to additional acreage or, specifically, an additional 4,000 ac (1,619 ha) being protected for the CTS in Santa Barbara County by this designation.

*Our Response:* We are not aware of the acreage or area to which the commenters are referring. To our knowledge, no lands in Santa Barbara County are currently set aside for the protection of the California tiger salamander.

*Comment (16):* One commenter stated that lines drawn on the map are arbitrary. Another commenter stated that the acreage proposed for critical habitat has not been substantiated.

*Our Response:* Our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271) and our U.S. Fish and Wildlife Service Information Quality Guidelines (2002) provide criteria, establish procedures, and provide guidance to ensure that our decisions represent the best scientific and commercial data available. They require 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.

In determining areas that meet the definition of critical habitat for the CTS in Santa Barbara County, we used the best scientific and commercial data available. We have reviewed the overall approach to the conservation of the CTS in Santa Barbara County recommended to us by the science subteam of the recovery team for the CTS in Santa Barbara County (Service files 2002–

2003). We have also reviewed available information that pertains to the habitat requirements of this species. This material includes: data in reports submitted during section 7 consultations and by biologists holding section 10(a)(1)(A) recovery permits, research published in peer-reviewed articles and presented in academic theses and agency reports, and regional GIS coverages. Few populations of the California tiger salamander exist in Santa Barbara County and the protection of these populations is essential to the survival and recovery of the species as a whole. The six areas we are designating as critical habitat contain the essential primary constituent elements for the conservation of these populations and for the conservation of the entire species.

*Comment (17):* One commenter stated that Unit 4 includes approximately 27 ac (11 ha) of cultivated vineyards directly south of Hwy 101 which should not be included in the critical habitat designation.

*Our Response:* Vineyards can be used by California tiger salamanders for dispersal purposes (*i.e.*, they provide connectivity between aquatic and upland habitats) and, if small mammal burrows are present, sheltering and foraging. The 27 ac (11 ha) of cultivated vineyards in Unit 4 provide essential connectivity between the known ponds within that critical habitat unit.

*Comment (18):* One commenter opposed the inclusion of the Foley property, which is located on the edge of Unit 6 (Santa Rita Valley). This land is in existing vineyards. The commenter presumed that this inclusion was the result of a mapping error.

*Our Response:* This vineyard was included as a result of a mapping error. We have removed this vineyard in the final critical habitat map for Unit 6.

*Comment (19):* One commenter requested that Highway 246 and its shoulders be excluded from the designation.

*Our Response:* We have removed Highway 246 and its shoulders (or ROWs) from this designation (see Criteria Used To Identify Critical Habitat section).

*Comment (20):* One commenter stated that it is unclear what is meant by "must hold water for a minimum of 12 weeks."

*Our Response:* We needed to specify a timeframe to identify how long water should remain in these ponds in order to support successful California tiger salamander metamorphosis. Twelve weeks was selected as the minimum ponding interval that will allow at least some California tiger salamanders to

metamorphose. This assumes that eggs are laid late in the season when water temperatures are higher and development occurs at the maximum rate. When eggs are laid in November through January at lower water temperatures, California tiger salamanders probably cannot metamorphose within 12 weeks. Our goal in setting this criterion is to separate those ponds that, in an average or better year, can potentially produce California tiger salamander metamorphs from those ponds that are too ephemeral to be successful breeding sites in any but the wettest years.

*Comment (21):* One commenter asked what period of time is used to determine a year of "average" rainfall. The commenter asked how we determined that a particular site retained water for 12 weeks during a year of average rainfall. The commenter asked if there is a reference year when rainfall was at or near average. The commenter asked what the source is for the rainfall and aquatic habitat site information.

*Our Response:* Rainfall is commonly calculated using the average rainfall for the rainy season rather than for a full calendar year. In California, precipitation generally occurs from late fall to early spring. Average rainfall for northern Santa Barbara County for the 1948–1949 through 2002–2003 rainy seasons averaged about 12.9 inches (in) (32.8 centimeters (cm)) (range, 4.3 in (10.9 cm) in 1971–1972 to 32.5 in (82.6 cm) in 1997–1998) based on the rainfall station at Santa Maria, California (<http://www.wrcc.dri.edu/summary/climsmsca.html>). We did not base our approach on a "reference year." Our goal was to separate those ponds that, in an average or better year, can potentially produce California tiger salamander metamorphs from those ponds that are too ephemeral to be successful breeding sites in any but the wettest years. A pond that dries quickly in a "dry" year may still represent good habitat in a wetter year. Our minimum 12-week requirement is based on observations by Sam Sweet in Santa Barbara County (Dr. Sam Sweet, University of California at Santa Barbara, pers. comm. 2004). Similarly, Feaver (1971) reported that in Fresno County metamorphs leave pools 60 to 94 days (about 8–12 weeks) after eggs were laid. However, the length of time needed can be much longer in other parts of the range of the California tiger salamander. For example, in Monterey County metamorphs almost universally remained in ponds until May 1 (approximately 120 days (about 17 weeks) after eggs were laid) (Peter Trenham, U.S. Geological Survey, pers. comm. 2004).

*Comment (22):* One commenter asked what the time frame is for a potential pool site to be considered viable or "essential," and at what point does that expire (*e.g.*, what if a pond held water for 12 weeks one time 7 years ago?). After how many years of below-average rainfall does a site become excluded from "aquatic habitat?"

*Our Response:* As previously stated, a pond that dries quickly in a "dry" year may still be good habitat in a wetter year. With this designation, we did not include habitats that are too short lived. We have no examples of sites that are not considered aquatic habitat for California tiger salamanders in Santa Barbara County because they have not held water for long periods of time. Because we have no examples of such circumstances, we have not specified a time frame which might apply.

*Comment (23):* One commenter asked what grade or level is the cutoff point in elevation that is considered to be too steep for salamanders to cross.

*Our Response:* We did not use a specific criterion in terms of degrees of slope in our analysis because of the complex interaction between variables. In general, we used slope as a surrogate estimator for soil depth and soil moisture retention, when combined with knowledge of vegetation, aspect, and underlying geology. For example, an extensive south-facing hillside with chaparral and bedrock outcrops at a lesser slope might be excluded, whereas a north-facing slope with oaks and with greater slope might not be excluded. The south-facing slope might have too few small mammal burrows with too little residual soil moisture in late summer and fall, and thus, would not be suitable upland habitat for California tiger salamanders.

*Comment (24):* One commenter requested a detailed list of each type of vegetation that would be considered "unsuitable" and asked how dense this vegetation would need to be to exclude salamanders from passing through it or using the habitat around it.

*Our Response:* Regarding vegetation types, our specific goal was to include habitat that California tiger salamanders would clearly use (grassland, oak woodland, oak savanna, long-lasting ephemeral pools), and exclude habitats that were marginal and thus, not critical to the conservation of the species. However, because a patch or swath of marginal habitat nested within high quality habitat could not be excluded, most of these types of exclusions were made along the margins of units. Because of this type of site-by-site variation, it is not practicable for us to develop a complete list of index plants.

Regarding vegetation density, it is not practical for us to develop a specific criterion or vegetation thickness that would prevent salamanders from dispersing through vegetation. Density would be much greater to prevent dispersal in grassland habitat versus chaparral. We are unable to provide formal criteria to determine vegetation density due to the variation of vegetation present throughout the range of the California tiger salamander.

*Comment (25):* One commenter requested a detailed list of every type of geologic barrier that is excluded from the proposed critical habitat rule.

*Our Response:* An index of soil types or geologic formations cannot be developed because these categories (as formally defined by geologists, even at the finest scale of resolution) are rather broad. For example, lateral and vertical variation in the composition of the Paso Robles, or the Sisquoc, or the Careaga formations creates a range of suitable to unsuitable local soils, which is further complicated by slope, aspect, and geomorphological structure. The exact same bedrock on the crest of an anticline (a geological term for an arch of layered rock) will make for very different conditions than would occur at the bottom of a syncline (a trough of layered rock, opposite of an anticline). Because of these broad categories and variations in geological formations, we cannot provide an index of every type of geologic barrier.

*Comment (26):* One commenter requested a list of each and every type of agricultural barrier that would have no potential for restoration. The commenter asked how close an otherwise excluded agricultural barrier would need to be in order to be included because it is "next" to a known breeding pond. The commenter asked for clarification of the statement that an agricultural barrier would be included if it provided upland refugia for the California tiger salamander around a known pond. The commenter asked if this includes all or only some of the "agricultural barriers." The commenter asked how the determination was made that an otherwise excluded agricultural barrier be included because it is important for connectivity between known breeding ponds. The commenter asked how large an area would need to be included to ensure connectivity between known breeding locations.

*Our Response:* We have already excluded agricultural barriers that we determined had "no potential for restoration." For example, we drew boundaries that ran along the edge of agricultural fields. In addition, we

excluded most, but not all, areas of frequently harvested agricultural lands. We determined which agricultural lands in association with known breeding ponds to include in the critical habitat designation on a site-by-site basis. We based our determination on the importance of agricultural land as either "upland refugia" (defined as the 2,200-ft (671 m) area surrounding a breeding pond) or as connectivity habitat between ponds. We did not consider agricultural lands more than 2,200 ft (671 m) from known breeding ponds to be upland refugia; therefore, we did not include them in critical habitat. We also excluded areas closer than 2,200 ft (671 m) if we determined that the areas did not contain the PCEs for the CTS in Santa Barbara County.

Using aerial photos, we also evaluated each agricultural area to identify barriers to California tiger salamander movements and agricultural areas of connectivity between breeding ponds. We considered ponds within 0.7 miles (mi) (1.1 kilometers (km) of each other to be within the dispersal distance of California tiger salamanders, therefore having connectivity value. If there was agricultural land between two ponds within 0.7 mi (1.1 km) of each other, we included the land because of its connectivity value unless there was a barrier that would prevent salamander movement between the ponds (e.g., a heavily traveled highway). For a more detailed discussion, see the *Criteria Used To Identify Critical Habitat section*.

Accordingly, lands that are currently designated as critical habitat provide PCEs under current management practices. These lands were designated to provide protection from changes in management practices that would result in adverse modification of the critical habitat.

*Comment (27):* One commenter requested a complete list of each and every "other" type of land that is "unlikely to contain PCEs essential for California tiger salamander conservation" so that this criteria can be replicated by a person outside of the Service.

*Our Response:* It is not practicable for us to develop a complete list of each and every "other" type of land that is unlikely to contain PCEs. Determining if specific lands within the critical habitat boundaries do not have the PCEs for the California tiger salamander boundaries will have to be conducted on a case-by-case basis. We excluded areas that we could identify do not contain PCEs for the California tiger salamander. However, the PCEs for the California tiger salamander include lands essential

for connectivity. Some lands which do not appear to provide suitable breeding or foraging habitat for the California tiger salamander are essential for connectivity (i.e., cultivated land). Protecting the ability of California tiger salamanders to move freely across the landscape in search of breeding ponds is essential in maintaining gene flow and for recolonization of sites that are temporarily extirpated.

*Comment (28):* One commenter requested a detailed map of all ponds throughout the range of the CTS in Santa Barbara County. The commenter requested a copy of the science or references that were used to make this determination.

*Our Response:* The California Tiger Salamander Habitat map can be purchased through the County of Santa Barbara (South Coast, 123 East Anapamu Street, Santa Barbara, CA 93101-2058; North Coast, 624 W. Foster Road, Santa Maria, CA 93455-3623). The map was created in spring of 2000 by biologists who had conducted California tiger salamander surveys throughout Santa Barbara County (references provided with map).

*Comment (29):* One commenter requested that the land ratio formula be re-evaluated on the basis of individual applications rather than a "one shoe fits all" approach.

*Our Response:* We did not use a "one shoe fits all" approach. Rather, we evaluated lands within each unit separately, using the best scientific and commercial data available, to determine areas that best provide essential habitat for the California tiger salamander (see also response to comment 16). For each unit, we used 2,200 ft or 350 ac as a guide for the amount of upland habitat around known breeding locations to be mapped as critical habitat for the purposes of preserving California tiger salamanders within small mammal burrows (PCE 2). However, although various studies provide an approximation of the distances that California tiger salamanders can move from their breeding ponds in search of suitable upland refugia, we recognize that upland habitat features will influence California tiger salamander movements in a particular landscape. Therefore, where we had site-specific information on those features such as land use, topography, and geologic landform, we altered critical habitat lines to reflect that information.

*Comment (30):* One commenter suggested including additional unoccupied habitat in the final rule, such as pond watersheds, upland dispersal and burrowing areas, and



potentially suitable breeding ponds that are not occupied.

*Our Response:* Although one peer reviewer stated that including some unoccupied areas in the designation would be appropriate, the other peer reviewers agreed with our approach of including occupied areas only and stated that the areas we are designating provide for the essential life-cycle needs of the species, and provide the habitat components essential for the conservation (PCEs) of this species. Based on recommendations from the science subteam of the recovery team for the CTS in Santa Barbara County (Service files 2002–2003), and our analysis of the best available scientific and commercial data, we determined that these areas or units provide for the essential life-cycle needs of the species, and provide the habitat components essential for the conservation of the California tiger salamander. Therefore, we do not believe that it is necessary to the conservation of the California tiger salamander to designate critical habitat in unoccupied areas.

*Comment (31):* One commenter stated that the Service failed to explain why the one known pond in Unit 6 (Santa Rita Valley) was left out of the designation and why it is not considered essential to the conservation of the California tiger salamander. The commenter stated that, although the pond is isolated, it is one of the two known breeding populations in that valley and should be included.

*Our Response:* This pond likely has little or no connectivity due to the distance between it and other known or potential breeding ponds (over 2 miles), which is further than California tiger salamander dispersal distance. In addition, this pond occurs in a separate drainage and is separated from the other ponds by a steep ridge. Because of the isolation of the human-made pond in Unit 6, we do not believe it contains the primary constituent elements for the California tiger salamander and did not include it within the boundaries of critical habitat.

#### Issue 5—Economic Analysis

*Comment (32):* One commenter stated that, as written in the proposal, the economic analysis of effects is biased regarding small businesses.

*Our Response:* As set forth in our regulations found at 50 CFR 424.19, the economic analysis is conducted after critical habitat has been proposed in a given area. As required 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), we

published a notice of rulemaking for this proposed rule, and we prepared and made 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). Please refer to the Required Determinations section contained in this final rule for more information.

*Comment (33):* Several commenters stated that an economic analysis should be completed and shared with the community prior to designating critical habitat.

*Our Response:* We routinely prepare a draft of the economic analysis (DEA) on proposed critical habitat rules and release it for public comment before issuing a final critical habitat rule. We released the DEA for the California tiger salamander in Santa Barbara County on October 7, 2004 (69 FR 60138) and accepted comments on the DEA from that date through November 8, 2004. This information has been used in our final determination.

*Comment (34):* A few commenters were concerned with the short timeline for the economic analysis to be completed. The commenters reiterated that the economic analysis needs to be accurate and complete.

*Our Response:* We frequently designate critical habitat under short, court-ordered deadlines. Even when our analyses are conducted under short time frames, we use the best scientific and commercial data available.

*Comment (35):* Several commenters stated that the public should have the opportunity to comment on the economic analysis.

*Our Response:* As part of the process by which all critical habitat rules are finalized, we solicit data and comments from the public on all aspects of critical habitat proposals, including data on the economic and other impacts of designation. We released the DEA for the California tiger salamander in Santa Barbara County on October 7, 2004 (69 FR 60138) and accepted comments on the DEA from that date through November 8, 2004.

*Comment (36):* One commenter recommended that the DEA follow the methodology used by the California Resource Management Institute in examining economic impacts resulting from critical habitat designation for the California Coastal Gnatcatcher.

*Our Response:* On August 15, 2003 the California Resource Management Institute (CRMI) released an economic analysis, authored by Dr. Sunding, of critical habitat designation entitled “Economic Impacts of Critical Habitat

Designation for the Coastal California Gnatcatcher” (referred to as the CRMI study). The CRMI study relies on an economic model developed to assess the impacts of reductions in real estate product (*e.g.*, residential and commercial buildings) in areas proposed for designation as critical habitat for the Coastal California Gnatcatcher.

Despite addressing a different critical habitat rulemaking, the California Tiger Salamander Draft Economic Analysis (CTS DEA) and the CRMI study share a number of important analytical and methodological similarities. First, both studies agree that the primary economic impacts to real estate will result from (1) reduced real estate development, (2) project modification and regulatory compliance costs associated with species conservation activities, and (3) project delay.

Second, both the CRMI approach and the DEA rely on demographic and land use projections obtained from public agencies to estimate future development pressure and the associated loss of development opportunities due to habitat set aside. Third, both approaches assume that all real estate development projects will be affected, regardless of the presence of a Federal nexus.

Finally, both approaches estimate the total costs of species conservation activities without subtracting the impact of pre-existing baseline regulations (*i.e.*, the cost estimates are fully co-extensive). It is important to note that in previous comparisons of the results of analyses prepared by the Service and CRMI, much of the difference in impact estimates resulted from the use of different assumptions regarding the necessity of a Federal nexus to generate costs and different assumptions about counting costs attributable co-extensively to baseline regulations (*i.e.*, in previous Service analyses baseline costs were not counted).

The DEA also includes a number of additional economic categories not evaluated in the CRMI study but these categories represent a relatively small component of the total economic impact (these include costs associated with California Environmental Quality Act (CEQA) as well as those incurred by viticulture, road construction, utilities and airport facilities).

Two analytical differences exist between the methodology applied in the DEA and the CRMI approach.

1. *Discounting:* The two studies apply a different approach to evaluating economic impacts that occur over time. Specifically, the DEA applies a positive real discount rate to costs that occur in the future to account for the affect of the

time value of money. In contrast, the CRMI study assumes that the real discount rate will equal real property appreciation, and thus the timing of development has no impact on economic value. (The CRMI study does assume a positive discount rate to calculate the economic impact of delay.)

**2. Consumer Surplus:** The DEA concludes that the California tiger salamander in Santa Barbara County critical habitat designation will primarily affect individual property owners/developers and not market prices or consumers of real estate. In contrast, CRMI study concludes that the Gnatcatcher critical habitat designation will lead to an increase in real estate market prices and thus a reduction in consumer surplus. The CRMI study calculates this reduction in consumer surplus and includes it in the total economic impact attributable to Gnatcatcher critical habitat designation.

Chapter 3 of the DEA evaluates the potential for the California tiger salamander in Santa Barbara County critical habitat designation to reduce consumer surplus by increasing real estate market prices. The analysis concludes that critical habitat designation will not affect regional real estate markets or prices, and thus consumer surplus, because the total reduction in land supply is expected to represent a very small component of total future market demand in the region. Specifically, the upper-bound estimate of developable acres of habitat set-aside within critical habitat designation is estimated at about 1.1 percent of future market growth in Santa Barbara County through 2030. Supply adjustments by developers, including increased density and/or project reconfigurations, are likely to further cancel the market impact of the relatively small land supply reduction created by critical habitat designation.

**Comment (37):** Two commenters states that the economic analysis needs to calculate the loss in future earnings (or lost investment) from land that can not be developed as a result of critical habitat designation.

**Our Response:** Potential earnings from real estate are reflected in real estate prices. Specifically, in a competitive market, the price of land is the best reflection of its future earning potential. The DEA calculates lost earnings from real estate by estimating land value losses associated with land that is projected to be dedicated as habitat rather than developed for profit. Specifically, the DEA assumes that each acre of projected real estate development within critical habitat designation will require 3 acres of land

be set aside as habitat (*i.e.*, a 3-to-1 offsetting compensation ratio). The prevailing market value of the habitat set aside is lost when the land is designated as habitat because the land no longer has earning potential. Land value losses are described in Chapter 3 of the DEA and presented in Table 6.

**Comment (38):** One commenter stated that the DEA assumption of a 3-to-1 offsetting compensation ratio is an underestimate.

**Our Response:** The Service has not conducted a formal consultation concerning residential development effects on California tiger salamanders in Santa Barbara County and their habitat. The Service has conducted one consultation involving a construction project which involved only minimal habitat removal and no set-aside. Due to the lack of historical precedent, the DEA relies on an offsetting compensation ratio based on interviews with Service field biologists. The DEA acknowledges that actual offsetting compensation requirements are unknown but notes that the assumption of a 3-to-1 ratio is consistent with ratios resulting from consultations on other listed species with similar habitat needs and lies within the range of used in other critical habitat designation economic analyses. The actual offsetting compensation ratio used in any particular case will depend on a variety of factors unique to the circumstance at hand. The 3-to-1 assumption used in the DEA represents an average.

**Comment (39):** A number of comments state that the DEA does not rely on appropriate real estate values to estimate land value losses from critical habitat designations.

**Our Response:** To calculate land values for acreage expected to support at least one unit per acre, the DEA relies on the median sale price of a newly-constructed home in Santa Barbara County in 2004, as reported by DataQuick Information Systems. For acreage expected to support less than one unit per acre, the DEA relies on the median sale price of raw residential land in Santa Barbara County, as reported by DataQuick. As shown in Table 3 of the DEA, land values vary by the density of expected development. The Service maintains that DataQuick is an acceptable data source and that the Santa Barbara County market area is appropriate given the extent of the critical habitat designation.

**Comment (40):** One comment states that the land value appreciation forecasted by the DEA is overly optimistic.

**Our Response:** To estimate future appreciation in home values, the DEA

relies on long-term historical trends which are appropriate for the 26-year forecast utilized by the DEA. In particular, the DEA relies on the average of a 10-year and a 20-year trend of repeat sales and refinancing of the same properties in California. The price indexing of the same properties over time controls for potential changes in housing quality, location and size over time. These data were obtained from U.S. Department of Labor, Office of Federal Housing Enterprise Oversight.

**Comment (41):** In order to quantify lost development opportunities within critical habitat designations, the DEA must rely on a projection of future demand for real estate within critical habitat designations. One commenter stated that the use of aggressive growth projections is arbitrary and that 100 percent buildout is not realistic. Further, the comment states that in-fill is likely to offset development in "greenfield" areas.

**Our Response:** The DEA endeavors to estimate economic impacts of a critical habitat designation using a conservative (*i.e.*, overestimate rather than underestimate) approach. For this reason, the analysis relies upon aggressive development projections, generated by Santa Barbara County Planning and Development, which suggest that full buildout is realistic. It should be noted that the full buildout scenario relied upon by the DEA assumes that on-site habitat set aside for California tiger salamander reduces the development possible within a critical habitat designation. The assumption that in-fill will not satisfy projected demand is also made in an effort to estimate impacts conservatively.

**Comment (42):** Two commenters stated that urban growth boundaries in Santa Maria and Orcutt may prevent development projected by the DEA.

**Our Response:** The legal requirements of the growth boundary ordinances are complex and it is unclear how they may limit real estate development over the long term. For example, the Orcutt Community Plan allows for changes in growth limitations if in-fill development opportunities begin to disappear. In an effort to conservatively estimate the economic impacts resulting from forgone real estate development, the DEA implicitly assumes that local policies regarding growth will adapt to satisfy real estate demand as forecasted by the County.

**Comment (43):** One comment states that the fractional ownership of land within CHD may result in project infeasibility due to offsetting compensation for impacts.

*Our Response:* While fractional land ownership may impair project feasibility in some cases, the Service maintains that economic losses are accurately measured. A number of options are available to project proponents unable to go forward with a project due California tiger salamander conservation measures, including (1) buy adjacent land for habitat set-aside for project expansion, (2) buy off-site land for habitat set-aside or (3) scale the project to allow for habitat set-aside. Over the long term it is very unlikely that any land parcel will be rendered totally useless by a critical habitat designation (a feasibility study of each parcel within critical habitat is beyond the scope of the DEA). While additional transaction costs and planning costs may be incurred, these additional costs are likely to be minor relative to the loss in land value captured by the DEA.

*Comment (44):* One commenter stated that development projects currently undergoing the planning process are not sufficiently considered by the DEA.

*Our Response:* The DEA does not examine each future development project individually. Future development forecasts are based on aggregate-level growth projections provided by Santa Barbara County Planning and Development. This approach allows the Service to estimate impacts farther into the future (*i.e.*, 26 years) than a method that relies on assessing currently planned projects. Although not identified by name, impacts to development projects such as the Bradley Ranch are included in the DEA estimates, because these projects represent the fulfillment of near-term growth projected by the County.

*Comment (45):* One commenter suggested that economic impacts should be estimated in perpetuity.

*Our Response:* Page 17 of the DEA states that "the analysis looks prospectively at future costs associated with the listing, critical habitat, and other related (California tiger salamander) protections \* \* \* based on activities that are "reasonably foreseeable," including but not limited to activities that are currently authorized, permitted or funded, or for which proposed plans are currently available to the public." The DEA time horizon corresponds to available population and housing forecasts available from Santa Barbara County. The Service does not have sufficient data to estimate future impacts in perpetuity with any level of certainty. However, it should be noted that land value losses represent losses in perpetuity since property values

account for potential earnings in perpetuity.

*Comment (46):* One commenter stated that development of all second tier agricultural land by 2015 is unlikely.

*Our Response:* Page 35 of the DEA states that "Second-tier agricultural lands are assumed to convert to residential use \* \* \* beginning in 2015" and that this "allows 10 years for agricultural preservation contracts (*i.e.*, Williamson Act) to be cancelled." The 2015 date indicates when contracts will begin to expire. The analysis does not assume that all second-tier agricultural lands will be developed by 2015, but rather that they will develop between 2015 and 2030.

*Comment (47):* Various commenters suggested that the impacts of CHD on the CEQA process for projects located within CHD are not estimated correctly, some stating that costs are overstated and others asserting that they are understated.

*Our Response:* The DEA estimates CEQA-related costs by assuming that projected future projects that might have qualified for a negative declaration or an exemption under CEQA will undergo an Environmental Impact Report and experience higher CEQA costs after a critical habitat designation. The elevated CEQA review and associated cost is attributable to new information provided by a critical habitat designation. Projected future projects are based on historical CEQA trends in Santa Barbara County, as reported by the State of California's CEQAnet database. Costs associated with various CEQA documents are based on interviews with a number of consulting firms specializing in CEQA analyses (see footnote 39 in the DEA for the names of these firms).

*Comment (48):* One commenter stated that project delay would not result from CHD.

*Our Response:* The DEA does not assume that all projects will experience delays. Rather, the DEA calculates delay costs based on the assumption that only projects commencing in the first year after a critical habitat designation will experience delays. These projects may not have planned to conduct California tiger salamander conservation activities. Projects beginning more than 12 months after a critical habitat designation will avoid delay by incorporating consideration of a critical habitat designation in standard project planning.

*Comment (49):* One commenter called into question the use of a 7 percent discount rate.

*Our Response:* The most current Office of Management Budget (OMB)

guidance on discounting practices to be used in regulatory analysis is provided in OMB Circular A-4.<sup>1</sup> OMB circular A-4 states the following:

"\* \* \* A real discount rate of 7 percent should be used as a base-case for regulatory analysis. The 7 percent rate is an estimate of the average before-tax rate of return to private capital in the U.S. economy. It is a broad measure that reflects the returns to real estate and small business capital as well as corporate capital. It approximates the opportunity cost of capital, and it is the appropriate discount rate whenever the main effect of a regulation is to displace or alter the use of capital in the private sector."<sup>2</sup>

*Comment (50):* One commenter stated that cattle grazing impacts should be addressed.

*Our Response:* Impacts to cattle ranching are addressed on page 50 of the DEA.

*Comment (51):* One commenter stated that the DEA fails to consider the multiplier effects associated with lost investment opportunities as the critical habitat designation affects industry, residential, commercial, retail, and agricultural land uses.

*Our Response:* Indirect "multiplier" effects are sometimes used to analyze the impact of major development projects or other economic activities on an economic region, often defined as a county or multi-county area. The localized nature of critical habitat designations makes analysis using multipliers difficult, because multiplier data is unreliable at the sub-county level. In addition, real estate development, the primary sector expected to be affected by a critical habitat designation, is unlikely to be affected at the county level (see discussion in Chapter 3 of the DEA). That is, although construction activity may be redistributed throughout Santa Barbara County as a result of CHD, it is not expected to decline overall.

*Comment (52):* Several commenters stated that the DEA inadequately addresses impacts to small businesses.

*Our Response:* Appendix A analyzes impacts to small businesses in the land development and viticulture sectors. As described in this appendix, the DEA uses the best available data to identify the number of firms that might be affected by the critical habitat designation and to estimate impacts to those firms based on estimates of total impacts. Because it is nearly impossible to identify the specific small businesses

<sup>1</sup> Executive Order 12866, "Regulatory Planning and Review," September 30, 1993; U.S. Office of Management and Budget, "Circular A-4," September 17, 2003, available at <http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf>.

<sup>2</sup> *Ibid.*

that will undertake development and viticulture projects within the critical habitat designation over a 26 year period (e.g., 115 small developers currently exist in Santa Barbara County), the assumptions relied upon in the analysis are reasonable.

*Comment (53):* One commenter stated that the DEA fails to fully consider impacts associated with highway maintenance, such as us 101, Highways 246 and 135, which run through the middle of the critical habitat designation.

*Our Response:* The primary focus of the DEA is to provide decision makers with an estimate of the impacts associated with the proposed rulemaking. Understanding the magnitude of historical impacts helps decision makers place future costs in context. The DEA estimates historical costs associated with viticulture, road construction, utilities and infrastructure projects, and the airport district development project using the best publicly-available data (see Chapters 4 and 5 of the DEA).

*Comment (54):* A number of commenters stated that the DEA underestimates the historical cost of California tiger salamander conservation measures.

*Our Response:* The primary focus of the DEA is to provide decision makers with an estimate of the impacts associated with the proposed rulemaking. Understanding the magnitude of historical impacts helps decision makers place future costs in context. However, because historical costs are not directly relied upon for decision making, a less precise cost estimate is acceptable.

*Comment (55):* One commenter stated that costs associated with re-planning projects originally intended for critical habitat areas are not captured by the analysis.

*Our Response:* While some current projects may incur additional planning costs, future projects will be aware of habitat constraints before the planning process begins. For this reason, additional planning costs are expected to be minor.

*Comment (56):* Numerous comments state that costs associated with litigation are not estimated by the DEA.

*Our Response:* It is likely that potentially affected parties may incur administrative costs related to review of Federal documents such as the Proposed Rule in order, for example, to ensure their activities are appropriately considered in the economic analysis, or to request exemption from the rulemaking. The DEA considers only the direct and indirect costs associated with

compliance with the rulemaking. The DEA does, however, include administrative costs of compliance with the rulemaking where appropriate, for example the administrative costs of section 7 consultation, which may similarly include review of Federal documents. In addition, the DEA focuses on activities that are considered reasonably foreseeable. The number, scope and timing of potential legal challenges associated with the rulemaking is difficult to quantify.

*Comment (57):* Two commenters stated that costs associated with CTS conservation activities undertaken by public entities may result in an increased tax burden for the community.

*Our Response:* While economic impacts born by the public sector are captured by the DEA, it is unclear if or how various jurisdictions might pass on their increased costs to taxpayers. However, it is important to note that these tax policy and cost allocation decisions are regarded as distributional rather than economic welfare effects. Given the high level on uncertainty associated with future tax and spending policy at the local and State level, The DEA does not forecast these effects.

*Comment (58):* One comment states that the DEA limits its analysis of agricultural impacts of the critical habitat designation to viticulture.

*Our Response:* The DEA addresses impacts to agriculture in Chapter 4. Grazing activities are assumed to proceed as they do currently, a point bolstered by the Service's special rule, authorized under section of 4(d) of the ESA, to work cooperatively with ranchers. The DEA assumes that prime agricultural lands will not be affected by the critical habitat designation as these cultivated lands are not suitable habitat for California tiger salamander. In addition, the DEA estimates that all secondary agricultural land will be developed during the period of the study (Chapter 3), which results in higher costs than if habitat set-asides were applied to agricultural land. Finally, costs associated with vineyard conversion are calculated and presented in Tables 11 and 12.

*Comment (59):* One commenter stated that the DEA should evaluate the impact of the critical habitat designation on conversions of rangeland to dry and irrigated crops.

*Our Response:* The California tiger salamander consultation history does not contain any biological opinions addressing rangeland conversion to field crops. Given the lack of historical consultations, the DEA does not calculate any impact resulting from this

project type. The Service will evaluate such conversions, if they occur, on a case-by-case basis. Impacts related to vineyard conversion resulting from the critical habitat designation are calculated in Chapter 4 of the DEA.

*Comment (60):* One commenter stated that the DEA should account for the impact of the critical habitat designation on CEQA costs for agriculture projects.

*Our Response:* While the critical habitat designation will provide new information regarding California tiger salamanders in agricultural areas, it is unlikely that small agriculture projects would be required to prepare an Environmental Impact Report due to the critical habitat designation alone.

*Comment (61):* One commenter stated that the DEA does not reflect any of the major economic benefits that would accrue to Santa Barbara County if the county was excluded from the critical habitat designation.

*Our Response:* The economic impacts presented in the DEA reflect the estimated cost of the proposed critical habitat designation. Any areas that are excluded from the proposed designation (in the final designation) would avoid such impacts, which could be construed as the associated benefit, or cost avoidance.

*Comment (62):* One commenter asked how will the Department consider economic impacts as part of the overall final designation.

*Our Response:* Section (4)(b)(2) of the Act requires the Service to designate critical habitat on the basis of the best scientific data available, after taking into consideration the economic impact and any other relevant impact, or specifying any particular areas as critical habitat. The Service may exclude areas from the 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 the extinction of the species. The Service uses the information in the economic analysis to determine whether it should consider areas for exclusion for economic reasons.

*Comment (63):* One commenter stated that the DEA falsely assumes that small rural residential development projects will not be subject to land set-asides.

*Our Response:* The economic analysis shows total efficiency costs for the species in Santa Barbara County. Project modification and administrative costs are those costs associated with implementing species and habitat management efforts. These costs include the cost of offsetting compensation (i.e., land set-aside) for impacts to California tiger salamander habitat. Additionally

project modifications include minimization and avoidance measures to protect the California tiger salamander when a project is ongoing. Land set-asides make up the large majority of the total project modification cost. Estimation of the regional significance of land set-aside suggests that regional real estate markets will not be affected by California tiger salamander conservation efforts. One of the key assumptions of this analysis, see Exhibit ES-4, is the analysis does not assume that developers may satisfy multiple public land use requirements by setting aside California tiger salamander habitat on the project site. In reality, projects benefit from claiming that habitat protection provides open space, necessary buffering between incompatible land uses, flood control, and other functions. The use of habitat land in this way reduces the projects required dedication of land for other open space uses compared to a land use plant in which no habitat set aside is required. As shown in Table 2 "Summary of Future Development Set-Aside within Proposed CTS CH (2005–2030)" of the DEA, footnote (3) states "\* \* \* Note that some low-density land uses (e.g., rural residential) are assumed to not require land set-aside."

*Comment (64):* One commenter stated critical habitat requirements overlap with other requirements that promote open space and thus should not be entirely accounted for as an impact; the commenter expressed concern that the estimates contained in the DEA inappropriately include costs associated with existing land-use requirements that serve to promote open space.

*Our Response:* The primary purpose of the economic analysis is to estimate the impact of actions taken to protect the federally listed California tiger salamander and its habitat. It attempts to quantify the economic effects of the designation of critical habitat, as well as the economic effects of protective measures taken as a result of the listing of the California tiger salamander. The economic analysis also complies with the direction from the U.S. 10th Circuit Court of Appeals, that, when deciding which areas to designate as critical habitat, the economic analysis informing that decision should include "co-extensive" effects. The DEA discusses other relevant regulations and protection efforts as the protection of the California tiger salamander and its habitat is not limited to the Act. In general, this analysis errs on the side of conservatism in order to make certain the economic effects have not been missed. It treats as "co-extensive" other federal and State requirements that may

result in overlapping protection measures (e.g., section 404 of the Clean Water Act, and the California Environmental Quality Act). In some cases, however, non-habitat related regulations will limit land use activities within critical habitat in ways that will directly or indirectly, benefit the California tiger salamander or its habitat (e.g., local zoning ordinances). These impacts were not considered to be "co-extensive" with the California tiger salamander listing or designation.

As stated in the DEA, 280, "This analysis also endeavors to capture the net economic impact imposed on regulated entities, and the regional economy resulting from California tiger salamander conservation efforts. To the extent possible, the estimated net economic impact should account for any offsetting benefits that might accrue to the regulated community due to their habitat preservation activities. For example, in certain cases real estate development that effectively incorporates California tiger salamander habitat set-aside on-site might realize a value premium typically associated with additional open space. Any such premium will offset land preservation costs borne by landowners/developers. Unfortunately, reliable data revealing the premium that the market places on nearby open space in Southern California is not readily available. Moreover, the value premium associated with habitat preservation is likely to be limited given that the recreational uses associated with habitat preserves are generally restricted."

*Comment (65):* One commenter stated that DEA for the critical habitat designation for the California tiger salamander in Santa Barbara County does not identify and assess benefits.

*Our Response:* The DEA, 440, Benefits section, states "Given the limitations associated with estimating the benefits of proposed critical habitat designation for the California tiger salamander, the Service believes that the benefits of proposed critical habitat designations are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking." The development of quantitative estimates associated with the benefits of critical habitat is impeded by the lack of available studies and information relating to the size and value of beneficial changes that are likely to occur as a result of listing a species or designating critical habitat.

This analysis is used for helping the Service to decide whether to exclude areas and whether the exclusions outweigh the conservation benefits of inclusion. So, the economic analysis

looks at the burden on the public of the regulation, and whether any areas have a disproportionate burden. The Service must then balance that against the benefits of including that area—including the benefits of the area to the species and the benefits of the species' existence and recovery. We do this in the 4(b)(2) discussion in our rules. We believe that monetizing may trivialize the benefits of critical habitat because there are no widely accepted ways for placing a dollar value on a biological benefit. In this analysis, several categories of benefits were identified, including preservation of open space and biodiversity, both of which are associated with species conservation.

*Comment (66):* One commenter stated that the area within Unit 1 (Western Santa Maria/Orcutt), east of Black Road, and the area within Unit 2 (Eastern Santa Maria), west of Telephone Road, should both be excluded because of proposed future growth and development plans.

*Our Response:* Section (4)(b)(2) of the Act requires the Service to designate critical habitat on the basis of the best scientific data available, after taking into consideration the economic impact and any other relevant impact, or specifying any particular areas as critical habitat. The Service may exclude areas from the 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 the extinction of the species. Based on the Service's analysis of the best available scientific and commercial data, we determined that these areas or units provide for the essential life-cycle needs of the species. The draft economic analysis shows that Units 1 or 2 carry over 98 percent of total estimated costs (\$418.3 million) for 52 percent of the total proposed acreage.

Unit 1 (Western Santa Maria/Orcutt) is essential to the conservation of the California tiger salamander because it contains 37 percent of the natural vernal pools for this population. Unit 1 contains 7 (approximately 37 percent) of the 19 natural vernal ponds that occur in Santa Barbara County. Often, natural ponds do not require as much, if any, maintenance whereas artificial ponds require continual maintenance (e.g., berm repair, erosion control, sediment removal activities). Collectively, Unit 1 contains 12 known California tiger salamander breeding ponds and several water bodies that are suitable for breeding California tiger salamanders but that have never been surveyed. The 12 known breeding ponds in this unit constitute approximately 26 percent of

the known breeding ponds (46) in Santa Barbara County.

Unit 2 (Eastern Santa Maria) is essential to the conservation of the California tiger salamander because it contains 21 percent of the natural vernal pools used for California tiger salamander breeding in Santa Barbara County (19 natural vernal ponds total). The unit contains 4 known California tiger salamander breeding ponds and additional water bodies that are suitable for breeding California tiger salamanders but that have never been surveyed. All four known breeding ponds in Unit 2 are natural vernal pools. As mentioned in the above description for Unit 1 (Western Santa Maria), often, natural ponds do not require as much, if any, maintenance whereas artificial ponds require continual maintenance (e.g., berm repair, erosion control, sediment removal activities).

*Comment (67):* One commenter stated that the Service needs to reevaluate the critical habitat designation because the California tiger salamander no longer constitutes a DPS and as a result needs to conduct a new and revised economic analysis; Another commenter stated the economic analysis needs to consider the potential impacts across the entire range of the species (186,840 acres) rather than just the critical habitat designation's proposed designation of 13,920 acres.

*Our Response:* On January 22, 2004, we proposed six units comprised on 13,920 in total for the California tiger salamander in Santa Barbara County (69 FR 3064). At the time this analysis was conducted, the California tiger salamander was listed as a DPS and we looked at the 13,920 acres proposed as critical habitat. Exhibit ES-1 of the draft economic analysis details the description and acreage of each unit. The purpose of the draft economic analysis report is to identify and analyze the potential economic impacts associated with the designation of critical habitat for the California tiger salamander in Santa Barbara County. The geographic scope of the economic analysis focuses on the area being proposed for designation in northern Santa Barbara County, and not the entire range of the species. We will conduct an economic analysis for the California tiger salamander, Central population designation this fiscal year, and when we propose the Sonoma County portion of the California tiger salamander critical habitat, we will analyze the economic impacts of that portion of the designation.

#### *Issue 6—Procedural Concerns*

*Comment (68):* One commenter stated that the critical habitat designation is not determinable due to lack of sufficient information regarding the space needed for individual and population growth, and for normal behavior; the species requirements for food, water, air, light, mineral, or other nutritional or physiological needs; the amount of cover or shelter required; the locations for breeding, reproduction or rearing of offspring; nor the location of habitats that are protected from disturbance or that are representative of historic geographical and ecological distributions of the species.

*Our Response:* We believe that we have sufficient information to identify appropriately critical habitat for the California tiger salamander in Santa Barbara County. In our determination of the areas that meet the definition of critical habitat for the California tiger salamander, we used the best scientific and commercial data available (see also Response to Comment (16)).

Several published, peer-reviewed studies have been conducted relating to the California tiger salamander's biology and its habitat needs. Included in this information is how far they have been found to disperse (i.e., space needed for individual and population growth and for normal behavior), the fact that they feed underground in small mammal burrows as adults and in aquatic habitat when juveniles (i.e., the species requirements for food), the need for ponded water for breeding purposes (i.e., the species' requirements for water and the locations for breeding, reproduction or rearing of offspring), and the fact that they spend most of their lives underground in small mammal burrows (i.e., the amount of cover or shelter required). For more species information, please refer to the Background section of the proposed critical habitat rule (January 22, 2004, 69 FR 3064).

*Comment (69):* One commenter stated that the designation is not prudent due to the fact that the species continues to be threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species and such designation of critical habitat would not be beneficial to the species.

*Our Response:* According to our regulations at 50 CFR 424.12, a designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity and identification of critical habitat can be expected to

increase the degree of such threat to the species or (2) such designation of critical habitat would not be beneficial to the species. In the final rule listing the California tiger salamander in Santa Barbara County as endangered (September 21, 2000, 65 FR 57242), we found that a designation of critical habitat was prudent. Our reasoning is discussed in that final rule listing. We believe this rationale is still applicable.

*Comment (70):* Several commenters stated that no public input was used in the designation.

*Our Response:* The public is asked to provide comments on critical habitat proposals. The comments are fully considered as we make our final determination. We solicited data and comments from the public on all aspects of this proposal, including data on the economic and other impacts of designation. We had three public comment periods on the proposed rule (January 22, 2004, through March 22, 2004, April 13, 2004, through May 28, 2004, and October 7, 2004, through November 8, 2004). We also held a public hearing on our proposal to designate critical habitat for the Santa Barbara County population of California tiger salamanders on May 11, 2004, in Santa Maria, California. We conducted an informational meeting on March 10, 2004, in Santa Maria to discuss the methodology used to create the critical habitat units and what critical habitat means for landowners within the critical habitat boundaries. Written public comments were accepted at the public hearing and entered into the supporting record for the rulemaking. Oral comments given at the public hearings were also accepted into the supporting record. In making our decision on the critical habitat designation, we gave written comments the same weight as oral comments presented at hearings. See also *Summary of Comments and Recommendations* section above.

*Comment (71):* One commenter generally agreed with, and supported, the designation, and requested that the Service make available to the public which areas, if any, will be left out of the final rule at the same time the economic analysis is released for comment.

*Our Response:* Typically, we do not make a determination to exclude an area from final critical habitat based on economic considerations at the time the draft analysis is released. The determination is made at the end of the rulemaking process following our receipt and review of public comments on the proposed rule and draft economic analysis and following any

appropriate revisions to the draft economic analysis as we write the final critical habitat rule.

*Comment (72):* One commenter stated that much of the farming and ranching around these areas build and use stock ponds, which salamanders use. However, these increased restrictions might make it so no one would want to continue to do this or other soil conservation projects. Another commenter stated that this designation has the potential to discourage many wildlife friendly ranching practices and further hinder new and ongoing restoration and conservation efforts.

*Our Response:* We recognize the importance of landowner cooperation for conservation of listed species. This is true for the lands designated as critical habitat for the California tiger salamander, which are mostly under private ownership. We also recognize that critical habitat designations could potentially have a negative impact on voluntary partnerships with private landowners. Some landowners have been working with us to develop conservation easements on or Memoranda of Understanding for their properties to protect the California tiger salamander. These voluntary conservation efforts are not complete but are well under way. After weighing the benefits of including these areas as critical habitat with the benefits of excluding them, we concluded that the designation of critical habitat would have a net negative conservation effect in some situations, and we excluded those areas with completed Memoranda of Understanding regarding conservation actions from the final designation of critical habitat. See our discussion under the Relationship of Critical Habitat to Lands Implementing Approved Conservation Strategies below. We also acknowledged the importance of ranchlands to California tiger salamander conservation in our August 4, 2004, Special Rule exempting existing routine ranching practices from take of California tiger salamanders throughout the species' range (August 4, 2004, 69 FR 47212).

*Comment (73):* One commenter stated that the process for farmers and ranchers to obtain Federal funding through the Farm Bill is already too slow a process; the additional section 7 consultation would add more time to this.

*Our Response:* All lands designated as critical habitat are within the geographic area occupied by the species (based on observations made within the last 3 years), and are likely to be used by the California tiger salamander, whether for foraging, breeding, growth of larvae and

juveniles, dispersal, migration, 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 significant additional regulatory burden above that already in place due to the presence of the listed species.

*Comment (74):* One commenter recommended that the Service use the economic analysis prepared by David Sunding, Aaron Swoboda, and David Zilberman of the Center for Sustainable Resource Development in the College of Natural Resources at UC Berkeley, titled "The Economic Costs of Critical Habitat Designation: Framework and Application to the Case of California Vernal Pools" for a more realistic look at the true costs of designating critical habitat.

*Our Response:* The Service has adopted numerous guidelines and procedures for developing critical habitat designations based upon the best information available. From time to time, these guidelines are altered, and we will consider any information that could make these designations more useful; however, we cannot adopt an outside source of guidance without considerable review and consideration. We appreciate the commenter's recommendation and will evaluate the referenced document for future critical habitat rules.

*Comment (75):* Several commenters stated that, if the Santa Barbara County DPS of the California tiger salamander is downlisted to threatened as proposed in the May 2003 proposal (68 FR 28648), this might affect the final critical habitat rule.

*Our Response:* Designation of critical habitat is required under the Act whether a species is threatened or endangered. In the final rule we have designated habitat in Santa Barbara County that is essential for the conservation of the California tiger salamander. Each of the six populations of California tiger salamander in Santa Barbara County is essential to the survival and recovery of the species as a whole and this designation covers the habitat essential to conserve those six populations. Because our August 4, 2004, determination listed the California tiger salamander rangewide as threatened and eliminated the separate Santa Barbara County and Sonoma

County DPS designations (69 FR 47212), this final critical habitat designation will become part of the critical habitat ultimately designated for the species rangewide. We anticipate completing the critical habitat designation for California tiger salamander rangewide through future rulemaking. We proposed critical habitat for the central portion of the California tiger salamander's range (Central population) on August 10, 2004 (69 FR 48570).

*Comment (76):* One commenter referred to efforts being made by the Service and stakeholders working together towards the delisting of the California tiger salamander, and questioned why those efforts have stopped.

*Our Response:* A species may be downlisted or delisted if a review of its status shows that it has either recovered to the point it is no longer threatened or endangered, or if the threats to its survival and recovery have been reduced to the extent that the species is no longer threatened or endangered. These downlisting or delisting criteria are usually established in a recovery plan; however, decisions on downlisting and delisting may be made based upon a review of current scientific evidence. Completing a recovery plan for the California tiger salamander in Santa Barbara County and rangewide is important to us. Efforts on the Santa Barbara County portion of the range have helped us determine which areas are essential to the conservation of the California tiger salamander addressed herein. We are currently discussing how to proceed most efficiently and effectively with recovery planning efforts in light of our August 4, 2004, determination listing California tiger salamander rangewide as threatened (69 FR 47212).

*Comment (77):* One commenter stated that the certification of SBREFA has no analysis and is not supported.

*Our Response:* As required 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), when we published the proposed critical habitat rule, we included an assessment of the proposed rule's effects under SBREFA and certified the rule would not have a significant effect on a substantial number of small entities. We subsequently prepared and made available for public comment a draft economic analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). Please refer to the *Required*



*Determinations* section contained in this final rule for more information.

*Comment (78):* One commenter stated that the Service has failed to operate within the Administrative Procedure Act (APA), because its “collaborative” approach (*i.e.*, the recovery team) violates APA.

*Our Response:* We have been working with a recovery team on a draft recovery plan for the California tiger salamander in Santa Barbara County. We have used some of the information gathered for the draft recovery plan in helping us determine areas essential to the conservation of the California tiger salamander addressed herein. We did not hold meetings with the recovery team or otherwise ask the recovery team to help identify critical habitat units. Our efforts in this process fully comply with the ESA, and the APA.

*Comment (79):* One commenter asked how CEQA will, or how it is supposed to, review critical habitat designations. The commenter stated that critical habitat will prevent development without just cause.

*Our Response:* The CEQA guidelines state that a project would have a significant effect on the environment (meaning the potential need to prepare an Environmental Impact Report) if it would substantially affect a rare or endangered species or its habitat. In the case of California tiger salamander in Santa Barbara County, all of the critical habitat is occupied. Therefore, the critical habitat designation will not result in additional CEQA review solely on that basis.

All Federal agencies must consult under section 7 of the Act with us to ensure that any action that they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. Project proposals have been subject to our review process since the California tiger salamander was listed in 2000 (65 FR 57242). We have provided our best assessment of what the effects of the section 7 consultation requirement may be for private landowners as well as for State agencies proposing activities with a Federal nexus within designated critical habitat. The commenter provides no factual support for the assertion that designation of critical habitat will prevent development.

*Comment (80):* Several commenters stated that a Recovery Plan should be completed before critical habitat is designated.

*Our Response:* Section 4 of the Act requires us to designate critical habitat at the time of listing to the maximum

extent prudent and determinable. In addition, we are under a court ordered deadline to complete critical habitat for the California tiger salamander in Santa Barbara County by November 15, 2004. While we agree that a recovery plan is a useful tool to assist us with determining which areas are essential for the conservation of a species, we are not at the liberty to postpone the final designation pending completion of a recovery plan. However, we have been working with a recovery team on a draft recovery plan for the California tiger salamander in Santa Barbara County and have used some of the information gathered for the draft recovery plan in helping us determine areas meeting the definition of critical habitat for the California tiger salamander addressed herein.

*Comment (81):* Two commenters stated their concerns regarding the short timelines the Service has to prepare rules such as this critical habitat designation. The commenters stated that shortened time frames force the Service to work with fewer facts.

*Our Response:* When we designate critical habitat at the time of listing or under short, court-ordered deadlines, we will often not have sufficient information to identify all areas of critical habitat. Nevertheless, we are required to make a decision and, thus, must base our designations on what, at the time of designation, we know to be critical habitat. In determining such areas, we used the best scientific and commercial data available, including information gathered by the science subteam of the recovery team for the CTS in Santa Barbara County (Service files 2002–2003).

*Comment (82):* One commenter stated that their property is not located within the mapped areas but they have still been told that they need to hire biologists to assess the site for potential California tiger salamanders and their habitat.

*Our Response:* California tiger salamanders could potentially occur throughout their range in northern Santa Barbara County. Most of the land is privately-owned and has not been surveyed. Surveys following specified protocols (available from the Ventura Fish and Wildlife Office) are recommended to assess the likelihood that California tiger salamanders are present on a particular property. Property with suitable habitat (aquatic or upland) within the range of the California tiger salamander may harbor California tiger salamanders. If so, any activities involving ground disturbance could result in take. Protocol surveys provide a useful tool to establish that

California tiger salamanders are unlikely to be present on a specific property.

*Comment (83):* A few commenters asked why, if critical habitat adds little protection to a listed species as stated in the language in the beginning of each critical habitat rule, then why does the Service continue to designate critical habitat?

*Our Response:* Section 4 of the Endangered Species Act of 1973, as amended, and our implementing regulations, state that critical habitat shall be designated for species listed under the Act unless the Secretary determines that such designation is not prudent or not determinable.

*Comment (84):* One commenter stated that the designation specifies the need for more ponds to be built and upland habitat to be restored and asked who would do this, as most of the critical habitat occurs on private land.

*Our Response:* The measures mentioned in the proposed rule refer to recommendations made by the science subteam of the recovery team for the CTS in Santa Barbara County to enhance and protect California tiger salamander habitat (Service files 2002–2003). Critical habitat designations affect only activities that require Federal permits or funding, and do not require landowners to carry out special management or restrict use of their land. We have been, and will continue, to work with interested individuals, organizations, and agencies on a voluntary basis to implement conservation and recovery actions that will benefit the California tiger salamander.

*Comment (85):* One commenter stated that the County of Santa Barbara incorporates critical habitat designations, such as the one for the California tiger salamander into their own regulations, which they then enforce.

*Our Response:* We do not dictate how a local government, such as Santa Barbara County, uses critical habitat designations. However, from the point of view of the Federal government, a critical habitat designation does not allow either government or public access to private land, and similarly will not result in the closure of the area to access or use. If a species is listed or critical habitat is designated, section 7(a)(2) requires Federal agencies to insure 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.



**Summary of Changes From the Proposed Rule**

In preparing our final designation of critical habitat for the California tiger salamander, we reviewed comments received on the proposed designation of critical habitat. In addition to minor clarifications in the text pertaining to State and Federal projects and section 7 consultations (see State comment (4)), we made five changes to our proposed designation, as follows:

(1) We made revisions to preamble based on information supplied by commenters which clarified the U.S.

Federal Highway Administration's oversight during section 7 consultations.

(2) Under section 4(b)(2) of the Act, we excluded properties with adequate management plans that cover the California tiger salamander and its habitat. For more information, refer to *Exclusions Under Section 4(b)(2) of the Act* below.

(3) We excluded an existing vineyard from critical habitat Unit 6 (Santa Rita Valley) that was included in the proposed rule as a result of a mapping error.

(4) Based on comments on the proposed rule, we found that the

generalized boundaries we employed were too inaccurate. Therefore, the final critical habitat boundaries were refined to more closely follow actual landscape features (such as roads) that can be more readily found on the ground. For example, the proposed critical habitat Unit 1, Western Santa Maria, showed the boundary extending slightly south of State Highway 1. The boundary for the final critical habitat for Unit 1 stays north of State Highway 1.

(5) Collectively, we excluded a total of 2,740 ac (1,109 ha) of privately-owned lands from this final critical habitat designation.

TABLE 1.—PROPOSED AND FINAL CRITICAL HABITAT ACREAGES

Unit	Proposed/final acreage	
1. Western Santa Maria/Orcutt .....	4,349 ac (1,760 ha)	4,135 ac (1,673 ha)
2. Eastern Santa Maria .....	2,985 ac (1,208 ha)	2,909 ac (1,177 ha)
3. Western Los Alamos/Careaga .....	2,181 ac (882 ha)	1,451 ac (587 ha)
4. Eastern Los Alamos .....	1,302 ac (527 ha)	90 ac (36 ha)
5. Purisima Hills .....	2,359 ac (955 ha)	1,957 ac (792 ha)
6. Santa Rita Valley .....	744 ac (301 ha)	638 ac (258 ha)
Total .....	13,920 ac (5,633 ha)	11,180 ac (4,523 ha)

**Critical Habitat**

Critical habitat is defined in section 3 of the Act 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,” as defined by the Act, 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.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat.

To be included in a critical habitat designation, the habitat must contain the physical and biological features “essential to the conservation of the species.” Critical habitat designations identify, to the extent known using the

best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and our U.S. Fish and Wildlife Service Information Quality Guidelines (2002) provide criteria, establish procedures, and provide guidance to ensure that our decisions represent the best scientific and commercial data available. They require 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, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Critical habitat designations do not signal that habitat outside the designation is unimportant to the California tiger salamander in Santa

Barbara County. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1), and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally funded or assisted 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 California tiger salamander critical habitat included in this final designation are identical to the methods we used in our proposal of critical habitat for the California tiger salamander, published on January 22, 2004 (69 FR 3064).

On August 10, 2004, we proposed critical habitat for the California tiger salamander, Central population, in four

regions: Central Valley, Southern San Joaquin Valley, East Bay, and Central Coast (69 FR 48570). The methods used to identify critical habitat in the Central designation are similar in nature to the methods used for the critical habitat designation for the CTS in Santa Barbara County; some methods differ as a result of differences in local biological and commercial data for each population. For example, the proposed designation for the California tiger salamander, Central population, includes an additional primary constituent element as a result of habitat features specific to that population (69 FR 48575).

#### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining what areas are critical habitat, we shall consider those physical and biological features that are essential to the conservation of the species and, within areas currently occupied by the species, that may require special management considerations or protection. These generally include, but are not limited to, the following: 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. Further, when considering the designation of critical habitat, we shall focus on the principal biological or physical constituent elements (*i.e.*, PCEs) within the defined area that are essential to the conservation of the species.

The specific PCEs required for California tiger salamander critical habitat are derived from the biological needs of the California tiger salamander as described below.

The areas proposed for designation as critical habitat for the California tiger salamander are designed to provide sufficient aquatic habitat for breeding and upland habitat as refugia for adults to maintain and sustain populations of California tiger salamanders throughout their range, and provide those habitat components essential for the conservation of the species. Due to the complex life history and dispersal capabilities of California tiger salamanders, and the dynamic nature of the environments in which they are found, the primary constituent elements described below should be found throughout the units that are being designated as critical habitat. Critical

habitat for California tiger salamanders will provide for breeding and nonbreeding habitat and for dispersal between these habitats, as well as allowing for an increase in the size of California tiger salamander populations, which is essential to the conservation of the subspecies.

Critical habitat includes: Essential aquatic habitat, essential upland nonbreeding season habitat with underground refugia, and dispersal habitat connecting occupied California tiger salamander locations to each other. Based on our current knowledge of the life history and ecology of the species and the relationship of its essential life history functions to its habitat, as summarized in the *Background* section of the proposed critical habitat rule (69 FR 3064), we have determined that the California tiger salamander requires the following primary constituent elements: (1) Standing bodies of fresh water, including natural and man-made (*e.g.*, stock) ponds, vernal pools, and dune ponds, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a sufficient length of time (*i.e.*, 12 weeks) necessary for the species to complete the aquatic portion of its life cycle. (2) Barrier-free uplands adjacent to breeding ponds that contain small mammal burrows. Small mammals are essential in creating the underground habitat that adult California tiger salamanders depend upon for food, shelter, and protection from the elements and predation. (3) Upland areas between breeding locations (PCE 1) and areas with small mammal burrows (PCE 2) that allow for dispersal among such sites.

We describe the relationship between each of these PCEs and the conservation of the salamander in more detail below. The essential aquatic habitat described as the first PCE is essential for California tiger salamander breeding and for providing space, food, and cover necessary to sustain early life history stages of California tiger salamanders. Breeding habitat consists of fresh water bodies, including natural and man-made (*e.g.*, stock) ponds, vernal pools, and dune ponds. To be considered essential, aquatic habitats must have the potential to hold water for a minimum of 12 weeks in the winter or spring in a year of average rainfall because this is the amount of time needed for juveniles to complete metamorphosis and become capable of surviving in upland habitats. During periods of drought or less-than average rainfall, these breeding sites may not hold water long enough for individuals to complete metamorphosis, but these sites would still be considered

essential because they constitute breeding habitat in years of average rainfall. Without its essential aquatic habitat, the California tiger salamander would not survive, because no breeding could occur.

Associated upland habitat containing underground refugia described as the second PCE is essential for the survival of adult California tiger salamanders and juveniles that have recently undergone metamorphosis. Adult and juvenile California tiger salamanders are terrestrial, and they enter aquatic habitats only for short periods of time to breed. For the majority of their life cycle, California tiger salamanders depend for survival on upland habitats containing underground refugia in the form of small mammal burrows. These underground refugia provide protection from the hot, dry weather typical of Santa Barbara County in the nonbreeding season. California tiger salamanders also find food in small mammal burrows and rely on the burrows for protection from predators. The dispersal habitat described as the third PCE is essential for the conservation of the California tiger salamander. Protecting the ability of California tiger salamanders to move freely across the landscape in search of breeding ponds is essential in maintaining gene flow and for recolonization of sites that are temporarily extirpated.

Lifetime reproductive success for California and other tiger salamanders is low. Trenham *et al.* (2000) found the average female bred 1.4 times and produced 8.5 young that survived to metamorphosis per reproductive effort. This resulted in roughly 11 metamorphic offspring over the lifetime of a female. In part, this low reproductive success is due to the extended time it takes for California tiger salamanders to reach sexual maturity: Most do not breed until 4 or 5 years of age. While individuals may survive for more than 10 years, many breed only once. Combined with low survivorship of metamorphosed individuals (in some populations, less than 5 percent of marked juveniles survive to become breeding adults (Trenham *et al.* 2000)), reproductive output in most years is not sufficient to maintain populations. This trend suggests that the species requires occasional "boom" breeding events to prevent extirpation (temporary or permanent loss of the species from a particular habitat) or extinction (Trenham *et al.* 2000).

With such low recruitment, isolated populations are susceptible to unusual, randomly occurring natural events as

well as from human-caused factors that reduce breeding success and individual survival. Factors that repeatedly lower breeding success in isolated pools can quickly extirpate a population. Therefore, a critical element for successful conservation is the maintenance of sets of interconnected sites that are within the "rescue" distance of other ponds (Trenham *et al.* 2001). Dispersal habitat described as the third PCE is also essential in preserving the California tiger salamander's population structure. The life history and ecology of the California tiger salamander make it likely that this species has a metapopulation structure (Hanski and Gilpin 1991). A metapopulation is a set of local populations or breeding sites within an area, where typically migration from one local population or breeding site to other areas containing suitable habitat is possible, but not routine. Movement between areas containing suitable habitat (*i.e.*, dispersal) is restricted due to inhospitable conditions around and between areas of suitable habitat. Because many of the areas of suitable habitat may be small and support small numbers of salamanders, local extinction of these small units may be common.

A metapopulation's persistence depends on the combined dynamics of these local extinctions and the subsequent recolonization of these areas through dispersal (Hanski and Gilpin 1991; Hanski 1994). Essential dispersal habitat generally consists of upland areas adjacent to essential aquatic habitat that are not isolated from breeding ponds by barriers that California tiger salamanders cannot cross. Essential dispersal habitat provides connectivity among California tiger salamander breeding ponds. While California tiger salamanders can bypass many obstacles, and do not require a particular type of habitat for dispersal, the habitat connecting essential aquatic habitat must be free of barriers (*e.g.*, a physical or biological feature that prevents salamanders from dispersing beyond the feature). Examples of barriers are areas of steep topography devoid of soil or vegetation and State Highway 101. Agricultural lands such as row crops, orchards, vineyards, and pastures do not constitute barriers to the dispersal of California tiger salamanders.

In general, we are designating critical habitat that allows for dispersal between breeding locations within 0.70 mi (1,158 m) of each other; however, we decreased or increased this distance based on site-specific conditions within each unit. In summary, the primary constituent

elements consist of three components. At a minimum, this will include suitable breeding locations and associated uplands surrounding these water bodies that are connected by dispersal habitat that is free of barriers.

#### Criteria Used To Identify Critical Habitat

To identify areas that are essential to the conservation of the California tiger salamander in Santa Barbara County, we first looked at the potential range of the species in Santa Barbara County, as mapped in spring of 2000 by biologists who had conducted California tiger salamander surveys throughout Santa Barbara County. The boundaries of the potential range were developed based on topography, geology, and survey information. In some areas (*e.g.*, Vandenberg Air Force Base), seemingly appropriate habitat was excluded based on several years of negative survey results. Other areas (*e.g.*, the Solomon Hills) had slopes too steep to support ponding necessary for California tiger salamander breeding. Other areas of intact habitat adjacent to known ponds were included, and areas with extensive ponded wetland habitat (*e.g.*, Guadalupe Lakes) were also included.

We then focused on areas within the range where we had credible records (*e.g.*, museum voucher specimens, reports filed by biologists holding section 10(a)(1)(A) recovery permits) indicating California tiger salamander presence. The known locations of California tiger salamanders fall into six disparate areas of Santa Barbara County. Our conservation strategy focuses on providing sufficient breeding and upland habitat to ensure high enough adult survival to maintain and sustain existing populations of California tiger salamanders in each of these six areas within the County. Each of the six areas has a distinctive combination of habitat types, breeding pond types, landscape features, surrounding land uses, and topography. Because of the population size, and the existing threats, we determined that conservation of each of these six populations and the habitats essential to support them is essential to the conservation of the California tiger salamander in Santa Barbara County and to the species as a whole.

Conserving California tiger salamanders over the long term requires a three-pronged approach: (1) Protecting the hydrology and water quality of breeding pools and ponds; (2) retaining or providing for connectivity between breeding locations for genetic exchange and recolonization; and (3) protecting sufficient upland habitat around each breeding location to allow for high

enough adult survival to maintain a breeding population over the long term. An explanation of how we determined the amount of upland habitat that is essential for the conservation of the California tiger salamander in each critical habitat unit is described in more detail below.

Once we identified the known breeding locations, we mapped the upland watershed of each pond based on aerial photographs taken in 2002 (AirPhotoUSA Inc. 2002) overlain with topographic relief lines. Protecting the watersheds of breeding ponds is essential for two reasons: (1) To ensure that the amount of water entering the pond is not altered in a manner that would allow for colonization of breeding sites by bullfrogs and fish, which can prey upon California tiger salamander eggs and larvae and (2) to preserve water quality by minimizing the entry of sediments and other contaminants to the breeding ponds. Therefore, our critical habitat boundaries include the watersheds of all known breeding ponds.

We then identified the upland habitat surrounding the ponds where juvenile and adult California tiger salamanders live during the majority of their life cycle. To determine a general guideline for the amount of upland habitat necessary to support a population of adult California tiger salamanders, we reviewed the primary literature regarding California tiger salamander upland habitat use, including Trenham (2001), Trenham *et al.* (2000), and Trenham and Shaffer (unpublished manuscript). We also reviewed information from other biologists who have conducted upland habitat use studies but have not yet written up the results (*e.g.*, Sue Orloff, Steve Sykes, SAIC—see *Background* section of the proposed critical habitat rule (69 FR 3064)).

Data indicate that California tiger salamanders do not remain primarily in burrows close to breeding ponds, but instead move some distance out into the surrounding landscape. As described in the Background section of the proposed critical habitat rule (69 FR 3064), California tiger salamanders have been found up to 1.2 mi (2 kms) from breeding ponds. However, most California tiger salamanders are found closer to the ponds. Two studies conducted in Monterey and Solano Counties provide the best available data on upland movement distances. First, the mark-recapture study of Trenham *et al.* (2001) showed that California tiger salamanders commonly moved between ponds separated by 2,200 ft (671 m), suggesting that movements of this

magnitude are not rare. Second, the ongoing study at Olcott Lake (Solano County) has directly documented the presence of high densities of juvenile and adult California tiger salamanders at upland locations at least 1,312 ft (400 m) from this breeding pond. Recent trapping efforts captured large numbers (representing 16 percent of total captures) of juvenile salamanders at 2,296 ft (700 m) (Trenham *et al.* unpublished data). Trenham and Shaffer (unpublished manuscript) determined that conserving upland habitats within 2,200 ft (671 m) of breeding ponds would protect 95 percent of California tiger salamanders at their study location in Solano County. Based on this information, we focused on protecting upland areas within 2,200 ft (671 m) of a known breeding pond. Protecting an upland habitat area with a radius of 2,200 ft (671 m) around a single pond yields a minimum area of 350 ac (145 ha), but depending on the size of the pond, can be more than that.

We used 2,200 ft (671 m) or 350 ac (145 ha) as a guide for the amount of upland habitat around known breeding locations to be mapped as critical habitat for the purposes of preserving California tiger salamanders within small mammal burrows (PCE 2). However, although the studies discussed above provide an approximation of the distances that California tiger salamanders can move from their breeding ponds in search of suitable upland refugia, we recognize that upland habitat features will influence California tiger salamander movements in a particular landscape. Therefore, where we had site-specific information on those features, such as land use, topography, and geologic landform, we altered critical habitat lines to reflect that information. In some locations, we protected a shorter distance than 2,200 ft (671 m) if: (1) Commercial or residential developed areas were present (*e.g.*, Santa Maria), (2) the upland habitat was separated from the breeding habitat by a substantial barrier (*e.g.*, State Highway 101); (3) the habitat type within that distance was unsuitable for California tiger salamanders (*e.g.*, hard chaparral); or (4) the area did not provide underground refugia because it could not support small mammal burrowing systems due to geological features such as fractured shales. We also excluded areas based on a combination of topography and geology. If soil and vegetative conditions are appropriate, California tiger salamanders can traverse areas of steep topography. Some steep areas do not support soils or vegetation

that allow for California tiger salamanders to traverse. Therefore, we excluded areas that we know to be both steep and devoid of vegetation or burrowing mammal potential.

In some cases, we extended the boundary of critical habitat beyond 2,200 ft (671 m) if (1) suitable but unsurveyed breeding locations were present that would augment California tiger salamander populations; (2) no barriers to California tiger salamander dispersal are present and the habitat is suitable; (3) watershed boundaries for known breeding ponds exceed distances of 2,200 ft (671 m); or (4) the upland area between breeding ponds was conducive to California tiger salamander travel and would facilitate dispersal between ponds within the units which is essential for California tiger salamander gene flow.

We excluded most areas of frequently harvested agricultural lands from the boundaries of critical habitat areas. Agricultural lands were only included if they are directly adjacent to known breeding ponds, thereby providing the only available upland refugia for California tiger salamanders breeding in that pond, or providing essential connectivity between known breeding locations. In the case of the two units within the Santa Maria Valley, so little California tiger salamander good quality upland refugia habitat is left that restoration is necessary to provide sufficient good quality upland refugia to sustain a population of adult California tiger salamanders. Currently, the majority of habitat within these two units provide for dispersal purposes (*i.e.*, they provide connectivity between aquatic and upland habitats).

To determine the areas to be mapped within each unit for the purposes of dispersal (*i.e.* PCE 3), we used a distance of 0.70 mi (1.1 km) as a general guide. The only known study we are aware of that specifically investigated movement of California tiger salamanders between breeding ponds projected that 0.70 mi (1.1 km) would encompass 99 percent of interpond dispersal (Trenham *et al.* 2001; Trenham pers. comm. 2004). However, we recognize that (as with movements in search of suitable underground refugia) upland habitat features influence California tiger salamander movements within a particular landscape. Thus, we altered critical habitat unit boundaries to reflect site-specific knowledge where it was available to us. In some units, we protected a shorter dispersal distance than 0.70 mi (1.1 km) for similar reasons as described for PCE 2 (*e.g.* barriers prevented movement, no ponds existed in a given direction).

In one unit (the eastern Santa Maria Unit) we included a dispersal corridor of 1.2 mi, which extends a greater distance than 0.70 mi (1.1 km) between breeding locations. In general, we designated critical habitat that allows for dispersal between breeding locations within 0.70 mi (1,158 m) of each other; however, we decreased or increased this distance based on site-specific conditions within each unit. We determined the longer corridor within this unit was justified given the observations by S. Sweet (in litt. 1998), where he found an adult California tiger salamander 1.2 mi (1.9 km) from the closest breeding location within this unit, and because of the relatively flat, barrier-free terrain between the breeding locations. We determined that the connection between the two known breeding areas is essential for the conservation of the California tiger salamander in this area, because, without it, these locations would become isolated and much more susceptible to extirpation.

We are designating critical habitat on lands that contain the physical or biological features considered essential to the conservation of the California tiger salamander (see *Primary Constituent Elements* section).

All of the known locations for the California tiger salamander in Santa Barbara County occur on non-Federal and private lands. Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed species incidental to otherwise lawful activities. An incidental take permit application must be supported by a habitat conservation plan (HCP) that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the requested incidental take. We often exclude non-Federal public lands and private lands that are covered by an existing operative HCP and executed implementation agreement (IA) under section 10(a)(1)(B) of the Act from designated critical habitat because the benefits of exclusion outweigh the benefits of inclusion as discussed in section 4(b)(2) of the Act. In the case of the California tiger salamander, no lands are covered by an existing operative HCP. We are aware of three HCPs under development; however, we have not excluded these draft HCPs because we have not yet made an initial determination that they meet our issuance criteria and are ready for public notice and comment.

When defining critical habitat boundaries, we made an effort to exclude all developed areas, such as towns, housing developments, and other

lands unlikely to contain PCEs essential for California tiger salamander conservation. However, our minimum mapping unit does not exclude all developed lands, such as lands supporting outbuildings, paddocks, roads, ROWs, paved areas, and lawns that do not contain PCEs. These areas are not included in the designation. These areas have been excluded by text and Federal actions limited to these areas would not trigger a section 7 consultation, unless they affect the species and/or the PCEs in adjacent critical habitat.

In summary, we designate six areas where populations of California tiger salamander are known to occur as critical habitat because the primary constituent elements need protection and/or special management to ensure any change to existing management does not adversely modify the critical habitat and protection of those areas is essential to the conservation of the species. We then mapped as critical habitat sufficient habitat to ensure the conservation of the California tiger salamander.

**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. Areas in need of management for the California tiger salamander include not only the immediate locations where the species may be present at a particular point in time, but additional areas adjacent to these that are essential to provide for normal population fluctuations that may occur in response to natural and unpredictable events. The California tiger salamander are dependent upon habitat components beyond the immediate areas where individuals of the species occur at any given time, because these areas are important in maintaining ecological processes such as hydrology, expansion of distribution, recolonization, and maintenance of natural predator-prey relationships, all

of which are essential for the conservation of the species.

We believe that the areas proposed for critical habitat may require special management considerations or protections due to the threats outlined below:

- (1) Non-native and introduced predators such as bullfrogs and fish.
- (2) Disturbance of aquatic breeding habitats during the breeding season.
- (3) Sedimentation and erosion into water bodies.
- (4) Contamination by chemicals such as those used for agricultural purposes.
- (5) Habitat loss due to construction of barriers or elimination of small mammal burrows.

*Relationship to Section 4(b)(2) of the Act*

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. Consequently, we may exclude an area from designated critical habitat based on economic impacts, the effect on national security, or other relevant impacts such as preservation of conservation partnerships, if we determine the benefits of excluding an area from critical habitat outweigh the benefits of including the area in critical habitat, provided the action of excluding the area will not result in the extinction of the species.

In our critical habitat designations, we have used the provisions outlined in section 4(b)(2) of the Act to evaluate those specific areas that are proposed for designation as critical habitat and those areas that are subsequently

finalized (*i.e.*, designated). We have applied the provisions of this section of the Act to land meeting the definition of critical habitat of the subject species to evaluate excluding them from critical habitat. Lands that we have either excluded from or not included in critical habitat based on those provisions include those covered by: (1) Legally operative Habitat Conservation Plans (HCPs) that cover the species, and provide assurances that the conservation measures for the species will be implemented and effective; (2) draft HCPs that cover the species, have undergone public review and comment, and provide assurances that the conservation measures for the species will be implemented and effective (*i.e.*, pending HCPs); (3) Tribal conservation plans that cover the species and provide assurances that the conservation measures for the species will be implemented and effective; (4) State conservation plans that provide assurances that the conservation measures for the species will be implemented and effective; (5) Fish and Wildlife Service Comprehensive Conservation Plans that provide assurances that the conservation measures for the species will be implemented and effective; and (6) adequate management plans or agreements that protect the primary constituent elements of the habitat.

**Critical Habitat Designation**

We are designating six units as critical habitat for the California tiger salamander. The critical habitat areas described below constitute our best assessment at this time of the areas essential for the conservation of the California tiger salamander. The six areas designated as critical habitat are: (1) Western Santa Maria/Orcutt; (2) eastern Santa Maria; (3) western Los Alamos/Careaga; (4) eastern Los Alamos; (5) Purisima Hills; and (6) Santa Rita Valley.

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

TABLE 2.—FINAL CRITICAL HABITAT UNITS FOR THE CALIFORNIA TIGER SALAMANDER IN SANTA BARBARA COUNTY

Critical habitat unit	Acres	Hectares
1. Western Santa Maria/Orcutt .....	4,135	1,673
2. Eastern Santa Maria .....	2,909	1,177
3. Western Los Alamos/Careaga .....	1,451	587
4. Eastern Los Alamos .....	90	36
5. Purisima Hills .....	1,957	792
6. Santa Rita Valley .....	638	258
Total .....	11,180	4,523

The majority of the acreage occurs on privately owned land. We know of no Federal, State, tribal, or military lands within these boundaries. A small portion of land within the western Santa Maria/Orcutt Unit is owned by local jurisdictions, including the county of Santa Barbara and the Laguna County Sanitation District.

Critical habitat includes California tiger salamander habitat throughout the species' range in Santa Barbara County, California. Brief descriptions of all units, and reasons why they are essential for the conservation of the California tiger salamander, are presented below. Each unit contains essential aquatic, upland, and dispersal habitat. Each unit is occupied by California tiger salamanders based upon observations recorded since 2000.

#### *Unit 1: Western Santa Maria/Orcutt*

Modifications were made to this unit as a result of a revised mapping methodology, which resulted in more accurately showing the boundary of this unit. This modification resulted in the reduction from 4,349 ac (1,760 ha) to 4,135 ac (1,673 ha).

Unit 1 consists of 4,135 ac (1,673 ha) west and southwest of the city of Santa Maria, mostly in unincorporated areas of the County and the community of Orcutt. This area encompasses the known California tiger salamander breeding sites extending from the Casmalia Hills on the south to the Santa Maria Airport on the north and from west of Black Road eastward to Highway 135. This unit makes up 26 percent of the total area we have identified as containing the PCEs for the species and as being essential to the conservation of the species in Santa Barbara County. The unit contains 12 known California tiger salamander breeding ponds and several water bodies that are suitable for breeding California tiger salamanders but that have never been surveyed. The 12 known breeding ponds in this unit constitute approximately 26 percent of the known breeding ponds (46) in Santa Barbara County.

Of even greater significance, Unit 1 contains 7 (approximately 37 percent) of the 19 natural vernal ponds that occur in Santa Barbara County. These natural ponds occur on the Orcutt Dune Sheet, which contains soils that are unique to the Santa Maria Valley. The Orcutt Dune Sheet is an ancient, windblown sand deposit that covers the southern one-half to two-thirds of the Santa Maria Valley (Hunt 1993). All natural California tiger salamander breeding sites occurring on the sheet are classified as dunal or deflation pools and ponds, a type of California tiger

salamander breeding pond occurring only within the two units within the Santa Maria Valley. The five remaining known ponds occur along the base of the Casmalia Hills, just off the southwestern edge of the Orcutt Dune Sheet.

Population growth and the concomitant residential and commercial development are the greatest threat to California tiger salamanders within this unit. The city of Santa Maria currently sustains a population of 82,148 people and is anticipated to reach a population of 110,800 people by 2020, with an annual growth rate of 1.8 percent (Santa Barbara County Association of Governments 2002). Annexations to further development are proposed in the remaining California tiger salamander habitat (Marc Bierdzinski, Santa Maria Community Development Department, pers. comm. 2003).

The city of Santa Maria is the fastest growing city in Santa Barbara County, with a 26 percent increase in population in the 1990s (16,000 new residents). Santa Barbara County's population is projected to grow by at least 160,000 people in the next 30 years (Santa Barbara County Planning and Development 2002). Depending on housing densities, the county may need over 15,000 ac (6,070 ha) of residentially zoned land on which to build homes to meet this goal (Santa Barbara County Planning and Development 2002). All of the urban areas in the county except Santa Maria and Orcutt have nearly exhausted land zoned for residential development. The California Department of Housing and Community Development expects the county and cities to set aside land for over 17,500 homes in the next seven years (Santa Barbara County Planning and Development 2002). Approximately 3,600 ac (1,457 ha) of prime agricultural land has been annexed to meet the increase in population. Prime farmland east and west of Santa Maria currently designated by the City of Santa Maria as "No Urban Development Areas" are expected to face increasing pressure to develop as the city exhausts land available for development around 2010 (Santa Barbara County Planning and Development 2002).

Several development projects have been proposed within Unit 1. The Santa Maria Airport District proposes to build a 400-ac (162-ha) research park and golf course just south of the airport on a parcel with three known California tiger salamander breeding ponds (Rincon 2002). The Orcutt Community Plan identifies Key Site 22 as a site for 60 percent buildout to a maximum of 3,000 units of dwellings (Santa Barbara

County 2002). This site lies entirely within the critical habitat unit. Additional proposed development projects include Union Valley Parkway (City of Santa Maria 2003) and expansion of the Laguna County Sanitation District's wastewater treatment plan.

In the West Santa Maria subpopulation, 78 percent of California tiger salamander upland habitat has been lost or separated from breeding ponds by fragmentation. Three large development projects (Mahoney Ranch, Key Site 22, and the Santa Maria Airport Research Park and Golf Course) threaten most of the remaining habitat. The Santa Maria Airport has worked with the Service to develop a plan that will minimize impacts to the California tiger salamander; however, one of the most productive ponds, the easternmost pond on the Santa Maria Airport property, will be permanently isolated from all other ponds on a 120-acre (49-ha) reserve once the Santa Maria Airport Research Park goes forward (Service files). A number of smaller development projects (Laguna Sanitation District Expansion, construction of three administrative buildings on Foster Road, Union Valley Parkway) also threaten to further reduce the available upland habitat and fragment the breeding ponds from each other.

This unit is essential to the conservation of the California tiger salamander because it contains 37 percent of the natural vernal pools for this Santa Barbara population. It is critical for the conservation of the species to conserve the California tiger salamander within a range of habitat types as protecting a variety of habitat conditions will increase the ability of the species to survive stochastic events.

This unit requires special management to continue efforts to protect PCEs essential for the conservation of California tiger salamanders. In particular, one pond is known to have introduced fish, another is subject to berm failure, and bullfrogs breed in close proximity to a third site. Managing these ponds to maintain the existing PCEs is essential for the conservation of the California tiger salamander. Addressing the removal of upland habitat (PCE 2) and dispersal habitat (PCE 3) due to building pressures through special management or protection is essential for the conservation of the California tiger salamander.

#### *Unit 2: Eastern Santa Maria*

Modifications were made to this unit as a result of a revised mapping methodology, which resulted in more

accurately showing the boundary of this unit. This modification resulted in the reduction from 2,985 ac (1,208 ha) to 2,909 ac (1,177 ha).

This unit covers a portion of the eastern half of the Orcutt Dune Sheet, but is separated from the western Santa Maria Valley unit by a broad area of urban and agricultural development, including State Highways 135 and 101. The unit is 2,909 ac (1,177 ha) in size and is bordered by State Highway 101 on the west, the Solomon Hills on the south, the Sisquoc River on the east, and the Santa Maria River floodplain on the north. This unit makes up 26 percent of the total area we have identified as containing the PCEs for the species and as being essential to the conservation of the species in Santa Barbara County. The unit contains 4 known California tiger salamander breeding ponds and additional water bodies that are suitable for breeding California tiger salamanders but that have never been surveyed.

The four known breeding ponds in Unit 2 are natural vernal pools. Therefore, Unit 2 represents approximately 21 percent of the natural vernal pools used for California tiger salamander breeding in Santa Barbara County (19 natural vernal ponds total). The four of the known breeding ponds in Unit 2 have had substantial alterations to the surrounding upland habitats, and substantial fragmentation of the habitat between breeding ponds has occurred.

This unit contains primary constituent elements essential to the conservation of the California tiger salamander in Santa Barbara County because it contains 21 percent of the natural vernal pools (PCE 1) in the Santa Barbara County population. It is critical for the conservation of the species to conserve the California tiger salamander within a range of habitat types as protecting a variety of habitat conditions will increase the ability of the species to survive stochastic events. At least 10 additional ponds that appear suitable for California tiger salamander breeding exist within the unit.

As mentioned in the discussion under Unit 1, the Santa Maria Valley is quickly growing, and both Unit 1 and Unit 2 are facing increasing pressure due to development. Some proposed projects further threaten the remaining California tiger salamander habitat, including the 2000-ac (809-ha) Bradley Ranch proposed development project (John L. Wallace & Associates 2002), scattered low-density residential development, two soil remediation projects, and the construction of a radio tower. Additionally, Unit 2 has also

experienced some loss of California tiger salamander habitat due to illegally-conducted ground disturbing activities.

#### *Unit 3: Western Los Alamos/Careaga*

Part of this unit was excluded from this final critical habitat designation because this area is actively managed for the protection and enhancement of California tiger salamander habitat (refer to *Exclusions Under Section 4(b)(2) of the Act*). This modification resulted in the reduction from 2,181 ac (882 ha) to 1,451 ac (587 ha).

This unit consists of 1,451 ac (587 ha) to the west of Highway 101, bordered on the west by the Careaga Divide. Four ponds within this unit have been documented as breeding habitat by California tiger salamanders. Several other agricultural impoundments are located within dispersal distance of the California tiger salamander breeding ponds in the western Los Alamos Valley. These human-made ponds may also be used by California tiger salamanders for breeding.

In contrast to the dunal or deflation ponds found in the two units to the north within the Santa Maria Valley, the natural breeding ponds within the Western Los Alamos/Careaga Unit are found in structural basin ponds. These ponds occur in the valleys or depressions along the axes of the synclines. The natural ponds within the unit occur along the axis of the Los Alamos Syncline and an unnamed syncline occurring parallel to and west of the Los Alamos Syncline.

This unit contains primary constituent elements essential to the conservation of the California tiger salamander because it contains some of the highest-quality natural California tiger salamander breeding pools remaining in the County. The Careaga Divide pond, located on the western side of the unit, is one of the most unique and pristine vernal ponds (PCE 1) where California tiger salamanders breed. The wetland is unique in that it is enclosed on two sides by extensive, dense coast live oak woodland, and by coastal sage scrub and grasslands. The unit also provides large blocks of continuous unfragmented upland habitat with few known sources of mortality, all occurring within a working rangeland landscape (PCE 2 and 3). The unit requires special management in the form of fish removal from at least one pond and sediment control at three ponds (PCE 1). This unit also requires protection and special management to reduce other threats, including berm failure and vineyard development proposals that could reduce aquatic, upland refugia and

dispersal habitats (PCEs 1, 2 and 3). The current surrounding land use is cattle grazing.

#### *Unit 4: Eastern Los Alamos*

Part of this unit was excluded from this final critical habitat designation because this area is actively managed for the protection and enhancement of California tiger salamander habitat (refer to *Exclusions Under Section 4(b)(2) of the Act* section below). This modification resulted in the reduction from 1,302 ac (527 ha) to 90 ac (36 ha).

This unit consists of two separate parcels, one 27 ac (10.9 ha) parcel and one 63.7 ac (25.8 ha) parcel, for a total of 90 ac (36 ha). This unit is located south of Highway 101 and southeast of the town of Los Alamos. This population is currently comprised of four known California tiger salamander breeding ponds; however, the property on which these four ponds are located has been excluded from this designation due to a conservation strategy that the landowners have created to enhance existing and create additional California tiger salamander aquatic habitat.

Given the small number of known breeding populations, the acreage remaining in this final designation contains primary constituent elements essential for the conservation of the California tiger salamander, because, despite its location adjacent to State Highway 101, it provides essential upland habitat. In addition, the acreage remaining within this unit is essential to support a self-sustaining population of California tiger salamanders.

Furthermore, the populations within this unit constitute the easternmost location of the species in Santa Barbara County. It is critical for the conservation of the species to conserve the California tiger salamander within the range of habitat types where it is found in nature. Protecting a variety of habitat conditions will increase the ability of the species to survive stochastic events.

The unit requires special management to address the threats of road mortality and upland habitat loss.

#### *Unit 5: Purisima Hills*

Part of this unit was excluded from this final critical habitat designation because this area is actively managed for the protection and enhancement of California tiger salamander habitat (refer to *Exclusions Under Section 4(b)(2) of the Act* section). This modification resulted in the reduction from 2,359 ac (955 ha) to 1,957 ac (792 ha).

Unit 5 consists of 1,957 ac (792 ha) along the crest and south slope of the west-central portion of the Purisima Hills. The unit encompasses 14 of the 16



documented breeding ponds in the subpopulation. The portion of the Purisima Hills that contains suitable habitat lies upon the lower Careaga Formation, bounded to the east-southeast by outcrops of Sisquoc Formation, and bounded to the west-northwest by badlands topography of sandier horizons within the upper Careaga Formation. Neither the Sisquoc nor the upper Careaga formations will retain water in unlined ponds (PCE 1); thus, ponds require special management in the form of artificial lining with materials such as clay or butyl rubber sheeting. Pond elevations range from 500 to 1400 ft (152 to 427 m). The documented breeding localities are all stock ponds, most of which were constructed in the mid to late 1950s (Thomas Silva, Sr., pers. comm. 2001); of these, only one may have been based on a preexisting natural depression.

This unit contains the primary constituent elements essential for the conservation of the California tiger salamander. Although the occupied ponds in this unit are human made and thus require frequent maintenance, the unit is the most remote of all the units and has the fewest documented threats. Because of the steepness of the topography, conversion to farmland or high-intensity development is not feasible. However, the Service is aware of a recent proposal to develop ranchette-style houses throughout this unit within California tiger salamander dispersal distance of known ponds (Service files). The Service has not received a final proposal. The unit is unique in that it contains habitat unlike the other 5 units; it is steeper terrain and is more densely vegetated than all other units. This location contains the only known California tiger salamander breeding ponds completely surrounded by coastal sage chaparral vegetation. Few other locations in Santa Barbara County are within chaparral or mixed chaparral habitats.

The Purisima Hills Unit is also essential in that it provides a linkage between the Santa Rita Valley Unit to the southwest and the Western Los Alamos/Careaga Unit to the north. Although many of the units may be permanently separated from each other by urban development and State Highway 101, these three units still likely retain some connectivity. Several stockponds that have never been surveyed lie between the units; genetic exchange between the two critical habitat units.

The unit requires special management to address threats of habitat loss.

#### *Unit 6: Santa Rita Valley*

Modifications were made to this unit to exclude an area on the edge of the unit that does not contain the primary constituent elements. This area was included in the proposed designation as a result of a mapping error. This modification resulted in the reduction from 744 ac (301 ha) to 638 ac (258 ha).

This 638-ac (258-ha) unit constitutes the southernmost locality for California tiger salamanders in Santa Barbara County. The unit is bisected by Highway 246, a heavily traveled thoroughfare between the towns of Buellton and Lompoc. Two confirmed breeding locations (representing three ponds) lie in the Santa Rita Valley. However, one of these is a human-made pond isolated from other units and is not included within the boundaries of critical habitat. The other confirmed breeding locality consists of two hydrobasins within 50 ft (15 m) of one another and adjacent to Highway 246. Adult California tiger salamanders were often found dead on roads after rain events during the 1980s. Three ponds on a neighboring property to the east and two ponds on the south side of Highway 246 likely formed a complex with this pond in the past. However, the ponds to the east were degraded by introduced fish and vineyards, while Highway 246 forms a substantial barrier to the southern ponds. The ponds south of Highway 246 have never been surveyed for California tiger salamanders. Although one landowner reported finding a California tiger salamander in a water pump in 2000, we have been unable to obtain permission to conduct surveys to confirm or refute this record.

The known ponds are based on natural features developed on an active syncline in the Careaga Formation east of the Santa Rita-Drum Canyon divide along the north side of California Highway 246. The ponds are natural but have been excavated so that the smaller pond appears to retain water year round.

This unit contains primary constituent elements essential to the conservation of the California tiger salamander because it constitutes the only extant subpopulation remaining within the Santa Rita Valley. As stated previously, given the small number of remaining breeding locations, all six units contain primary constituent elements that are essential. In addition, due to the numbers of salamanders found dead on the roads in the 1980s, the ponds were likely productive in the past. Highway 246 constitutes the main threat to the breeding location.

Furthermore, Caltrans has proposed to widen this road, which would substantially infringe on the footprint of the ponds. Even without widening, the mortality by vehicular traffic and contaminated runoff entering the pond provide substantial threats to the breeding site.

Because of the known threats due to the existence of the highway and the likelihood of section 7 consultations related to its widening it is likely that a number of special management requirements would result from consultations. The precarious position of the pond directly adjacent to a busy road may require measures to reduce the threat of contaminants entering the pond and to enhance survival of California tiger salamanders attempting to cross the road. In addition, connectivity to potential breeding locations to the south of the highway should be facilitated in some manner (PCE 3).

#### **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. In response to recent court decisions invalidating our regulatory definition of adverse modification under 402.2, we are not relying on that definition in this discussion of critical habitat effects. Instead in evaluating whether destruction or adverse modification of critical habitat would occur, we rely on the statutory definition of critical habitat quoted earlier in this rule. We must analyze whether, if a proposed Federal agency action were implemented, critical habitat would remain functional to serve its intended conservation role for the species.

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 reinstatement 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, as 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 this species 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 would impair the functionality of the primary constituent elements within a critical habitat unit to serve their intended conservation role for the species. 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.

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. Actions that may affect critical habitat include, but are not limited to:

(1) 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, erosion control activities and flood control activities. These activities could eliminate or reduce the habitat necessary for the reproduction or growth of California tiger salamanders.

(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 or growth of California tiger salamanders.

(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 the upland habitat and/or dispersal habitat necessary for sheltering and foraging of California tiger salamanders, and necessary for connectivity between aquatic breeding habitats.

(4) Actions that would involve voluntary conservation measures by private landowners funded by the Natural Resources Conservation Service. Such activities could include, but are not limited to, stockpond maintenance and erosion control practices. These activities could eliminate or reduce upland and/or aquatic habitat for the California tiger salamander.

(5) 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 upland and/or aquatic habitat for the California tiger salamander.

(6) 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 California tiger salamanders.

(7) 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 the California tiger salamander.

The six critical habitat units are occupied by the species based on

observations made within the last four years. Additionally, all habitats within this designation are likely to be used by the California tiger salamander, whether for foraging, breeding, growth of larvae and juveniles, dispersal, migration, genetic exchange, or sheltering. Thus, all critical habitat units are 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.

#### *Exclusions Under Section 4(b)(2) of the Act*

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, national security impact, 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 that the benefits of 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.

#### *Conservation Strategies*

We are excluding three properties from this final critical habitat designation that have conservation strategies in place for the California tiger salamander because we believe that they are appropriate for exclusion pursuant to the "other relevant factor" provisions of section 4(b)(2).

One landowner, Mr. Scheller, in Unit 5 (Purisima Hills), has developed a conservation strategy for his property which supports the large natural vernal lake referred to as Laguna Seca (LOAL-11 on the Santa Barbara County California Tiger Salamander Habitat Map, August 2001), its essential associated watershed, and other bodies of water that could potentially be used for breeding by the California tiger salamander. Although Laguna Seca did not contain California tiger salamanders during surveys conducted in 2002, it was likely the natural source of California tiger salamanders for the human-made ponds in the Purisima Hills to the south and southwest of the pond. Largemouth bass (*Micropterus salmoides*) and mosquitofish were recorded during surveys in 2002 (Paul Collins, Santa Barbara Museum of Natural History, pers. comm. 2002). The introduced fish likely preclude successful breeding, although adult California tiger salamanders are likely present in the adjacent uplands, given the successful breeding occurring in the other known ponds in the vicinity. Special management is needed to remove introduced fish from Laguna Seca. In the conservation strategy developed with Mr. Scheller, the landowner proposes special management considerations and protections for the California tiger salamander habitat on his property.

The goals of the above conservation strategy for the Scheller property include:

- (1) Manage livestock grazing activities and maintenance of water sources in a way that is compatible with California tiger salamander in Santa Barbara County;
- (2) Manage to limit sediment input into the known and potential breeding ponds;
- (3) Limited or restricted use of chemicals within the watershed and/or within 2,200 ft (671 m) of the known and potential breeding ponds;
- (4) Use other methods compatible with the California tiger salamander to control the amount of vegetation around the known and potential breeding ponds if livestock are not available; and
- (5) Avoid introducing non-native predators into the known and potential breeding ponds.

Kendall-Jackson Wine Estates, Ltd. (Kendall-Jackson) leases certain property in Unit 3 (Western Los Alamos/Careaga) and Unit 4 (Eastern Los Alamos). The property in Unit 3 (hereinafter, the Sainz property) is owned by the Darwin E. Sainz 1990 Trust, Darwin E. Sainz and Jeanette T. Sainz, trustees (hereinafter, the Sainz

Family). The property in Unit 4 (hereinafter the Los Robles property) is owned by Jackson Family Investments II, LLC, an affiliate of Kendall-Jackson. Kendall-Jackson, in conjunction with each of these property owners, has developed a conservation plan for these properties. The Sainz property includes three known California tiger salamander breeding ponds (SISQ-1, SISQ-2, and SISQ-4, as referenced on the Santa Barbara County California Tiger Salamander Habitat Map, August 2001) and their essential associated watersheds. This area, located in the southeastern half of the Western Los Alamos/Careaga subpopulation, was proposed for conversion to vineyards prior to the listing of the salamander. Since listing, the lessee and the landowner have supported California tiger salamander conservation and have been working towards developing a vineyard proposal that would conserve California tiger salamanders breeding in the known ponds. We have worked with the landowner in this area on an erosion control project within the associated watershed of SISQ-1. In the conservation strategy for this property, special management considerations and protections are proposed for the California tiger salamander habitat.

The Los Robles property in Unit 4 (Eastern Los Alamos) contains all four known California tiger salamander ponds in this subpopulation (LOAL-18, LOAL-19, ZACA-3, and ZACA-5, as referenced on the Santa Barbara County California Tiger Salamander Habitat Map, August 2001). Two of the ponds (LOAL-18 and LOAL-19) are natural structural basin ponds found in depressions. The other two ponds (ZACR-3 and ZACR-5) are bermed agricultural impoundments located in an unnamed, intermittent drainage located 1.0 to 1.5 miles southeast of the two natural ponds. In the conservation strategy for this property, Kendall-Jackson and its affiliate, the property owner, have agreed to special management considerations and protections for the California tiger salamander habitat. The Service and Kendall-Jackson are in the process of discussing further conservation opportunities for this property in connection with a development project recently proposed by Kendall-Jackson.

The goals of the above conservation strategies for the Sainz property and the Los Robles property include:

- (1) Elimination of sediment input into the known and potential breeding ponds;
- (2) Limited or restricted use of chemicals within the watershed and/or

within 2,200 ft (671 m) of the known and potential breeding ponds;

(3) Use other methods compatible with the California tiger salamander to control the amount of vegetation around the known and potential breeding ponds if livestock are not available;

(4) Enhancement of existing aquatic habitat and, in the case of the Los Robles property, creation of new aquatic habitat; and

(5) Avoiding the introduction of non-native predators into the known and potential breeding ponds.

#### (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. All habitats within this designation are occupied. In the absence of critical habitat, any section 7 consultation for potential adverse effects to the species would not ensure adverse modification of critical habitat is avoided; however, the consultation would ensure the proposed action would not jeopardize the continued existence of the species in the wild.

Where conservation strategies are in place, our experience indicates that this benefit is small or non-existent. Currently approved conservation strategies are already designed to ensure the long-term survival of covered species within the plan area. Where we have an approved conservation strategy, lands that we ordinarily would define as critical habitat for covered species will normally be protected by the terms of the conservation strategy. These conservation strategies include management measures designed to protect, restore, and enhance the land's value as habitat for covered species. We have determined that the benefits of designating critical habitat on the three properties covered by the described conservation strategies are small.

#### (2) Benefits of Exclusion

Approximately 80 percent of imperiled species in the United States occur partly or solely on private lands where the Service has little management

authority (Wilcove *et al.* 1996).

Proactive voluntary conservation efforts are necessary to prevent the extinction and promote the recovery of the California tiger salamander on private lands in northern Santa Barbara County.

The Service believes that the California tiger salamander populations 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 (Wilcove *et al.* 1998). Thus, we believe it is essential for the recovery of the California tiger salamander in Santa Barbara County to build on continued conservation activities such as these with a proven partner, and to provide positive incentives for other private landowners in Santa Barbara County who might be considering implementing voluntary conservation activities but have concerns about incurring incidental regulatory or economic impacts.

In addition, recovery actions involving the enhancement and creation of aquatic habitat on private lands requires the voluntary cooperation of the landowner (Bean 2002; James 2002; Knight 1999; Main *et al.* 1999; Norton 2000; Shogren *et al.* 1999; Wilcove *et al.* 1998). Therefore, "a successful recovery program is highly dependent on developing working partnerships with a wide variety of entities, and the voluntary cooperation of thousands of non-Federal landowners and others is essential to accomplishing recovery for listed species" (Crouse *et al.* 2002). The land within this designation that is suitable for conservation of threatened and endangered species is mostly owned by private landowners; therefore, successful recovery of the California tiger salamander in northern Santa Barbara County is especially dependent upon working partnerships and the voluntary cooperation of non-Federal landowners.

#### (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 recent 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 Scheller property in Unit 2, the Sainz property in Unit 3, and the Los Robles property in Unit 4 as critical habitat outweigh the benefits of including them as critical habitat for the California tiger salamander in Santa Barbara County.

This conclusion is based on the following factors:

1. The Scheller, Sainz, and Los Robles properties are currently being managed on a voluntary basis in cooperation with the Service, State, and other private organizations to achieve important conservation goals.

2. Simple regulation of "harmful activities" is not sufficient to conserve these species. Landowner cooperation and support are required to prevent the extinction and promote the recovery of all of the listed species in northern Santa Barbara County due to the need to implement proactive conservation actions such as predator management, weed control, and aquatic habitat enhancement and creation. Exclusion of these properties from this critical habitat designation will help the Service maintain and improve this partnership by formally recognizing the positive contributions of Mr. Scheller, the Sainz Family and Kendall-Jackson and its affiliate to the recovery of the California tiger salamander in Santa Barbara County, and by streamlining or reducing unnecessary regulatory oversight.

3. Given the current conservation strategies created and implemented by Mr. Scheller, the Sainz Family and Kendall-Jackson, 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 all units are already occupied by the California tiger salamander and a section 7 nexus already exists. The Service is unable to identify any other

potential benefits associated with critical habitat for these properties.

4. 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 in northern Santa Barbara County who own lands that could contribute to listed species recovery if voluntary conservation measures on these lands are implemented (Norton 2000; Main *et al.* 1999; Shogren *et al.* 1999; Wilcove and Chen 1998).

In conclusion, we find that the exclusion of critical habitat on Mr. Scheller's property, the Sainz property, and the Los Robles property would most likely have a net positive conservation effect on the recovery and conservation of the California tiger salamander in Santa Barbara County 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 of northern Santa Barbara County without designated critical habitat than there would be with designated critical habitat on these properties.

#### (4) Exclusion of This Unit Will Not Cause Extinction of the Species

In considering whether or not exclusion of these properties might result in the extinction of this species, the Service considered the impacts to the California tiger salamander. For the California tiger salamander populations located within the Western Los Alamos Unit, East Los Alamos Unit, and Purisima Hills Unit, it is the Service's conclusion that the conservation strategies agreed to by the landowners and, where applicable, lessees will provide as much or more net conservation benefits as would be provided if these preserves were designated as critical habitat. These conservation strategies, which are described above, will provide tangible proactive conservation benefits that will reduce the likelihood of extinction for the California tiger salamander in Santa Barbara County and increase its

likelihood of recovery. Extinction for this species as a consequence of this exclusion is unlikely because there are no known threats on these properties due to any current or reasonably anticipated Federal actions that might be regulated under section 7 of the Act. Further, these areas are already occupied and thereby benefit from the section 7 protections of the Act, should such an unlikely Federal threat actually materialize. The exclusion of these preserves will not increase the risk of extinction to this species, and it may increase the likelihood this species will recover by encouraging other landowners to implement voluntary conservation activities as Mr. Scheller, the Sainz Family, and Kendall-Jackson and its affiliate have done. In sum, the above analysis concludes that an exclusion of these properties from final critical habitat for the California tiger salamander in northern Santa Barbara County will have a net beneficial impact with little risk of negative impacts. Therefore, the exclusion of these lands will not cause extinction and should in fact improve the chances of recovery for California tiger salamander.

#### 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 October 7, 2004. We accepted comments on the draft analysis until November 8, 2004.

Our proposed critical habitat rule pertained to the Santa Barbara County population of California tiger salamander. 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 18 comments 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 above.

#### 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 it is not anticipated to 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. We prepared a draft economic analysis of this proposed action to determine the economic consequences of designating the specific area as critical habitat. The draft economic analysis was made available for public comment, and we considered those comments during the preparation of this rule. The economic analysis indicates that this rule will not have an annual economic effect of \$100 million or more. The economic employs a lower and upper scenario approach to the economic costs associated with each unit. The lower scenario is based on the development of all land that is currently zoned for residential, commercial, or industrial development by 2030. The upper scenario, which applies to only units 1, 2, and 4, is based on the possibility that, in addition to the land already zoned for development (lower scenario), large amounts of additional agricultural lands within these units will also be developed. Based on the more certain lower scenario, the annualized economic effects of this designation are estimated to be \$8,962,250; the estimate for the upper scenario is \$35,369,906. We have excluded 2,740 ac (1,109 ha) of privately owned lands analyzed in the draft economic analysis based on non-economic considerations so the direct economic impacts of the final designation is likely to be lower than this estimate. This is based on 26-year estimates.

#### 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. The Small Business Regulatory Enforcement Fairness Act amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic effect on a substantial number of small entities. The Small Business Regulatory Enforcement Fairness Act also amended the Regulatory Flexibility Act to require a certification statement. We are hereby certifying that this rule will not have a significant effect on a substantial number of small entities.

The Small Business Regulatory Enforcement Fairness Act does not explicitly define either "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities is affected by this designation, this analysis considers the relative number of small entities likely to sustain impacts in the area. Similarly, this analysis considers the relative cost of compliance on the revenues/profit margins of small entities in determining whether or not entities incur a "significant economic impact." Only small entities that are expected to be directly affected by the designation are considered in this portion of the analysis. This approach is consistent with several judicial opinions related to the scope of the Regulatory Flexibility Act (*Mid-Tex Electric Co-Op, Inc. v. FERC* and *American Trucking Associations, Inc. v. EPA*).

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5

million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule as well as the types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

To determine if the rule would affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (*e.g.*, housing development, grazing, oil and gas production, timber harvesting, etc.). In estimating the numbers of small entities potentially affected, we also consider whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation.

Designation of critical habitat only affects activities carried out, authorized, or funded by Federal agencies; non-Federal activities are not affected by the designation. In areas where the species are present, Federal agencies are already required to consult with us under section 7 of the Act on activities that they carry out, authorize, or fund that may affect the Santa Barbara population of the California tiger salamander. When these critical habitat designations are finalized, Federal agencies must also consult with us if their activities may affect designated critical habitat. However, in areas where the species are present, we do not believe this will result in appreciable additional regulatory burdens on Federal agencies or their applicants because consultation would already be required because of the presence of the listed species.

Based on the economic analysis, the land development industry and the viticulture industry may contain small entities potentially affected by California tiger salamander conservation activities. We address the potential impacts to small businesses in each of these industries below.

#### **Land Development Small Business Impacts**

The SBA's size standards for private sector firms are based on the North American Industry Classification System (NAICS). The economic analysis identified NAICS Code number 237210

as most appropriate for analysis of land development impacts. According to the SBA size criterion, firms in this industry must have less than \$6 million per year in gross revenues to be considered a small business. Although, under the RFA, individual landowners are not considered businesses, the economic analysis assumes that all landowners affected by California tiger salamander conservation in Santa Barbara County are businesses, which is likely to overstate the actual impacts to small land development firms. Based on this assumption, 97 percent of the land development firms in Santa Barbara County are small businesses. However, the share of total sales in the land development industry attributable to small businesses is approximately 54 percent. Thus, although the small businesses constitute a relatively large share of the total businesses, their share of total sales is significantly lower. For the land development industry, the total small business impact of California tiger salamander conservation is estimated to be about \$4.5 million for the lower scenario in Santa Barbara County. The number of small land developers affected by California tiger salamander conservation annually is 3 percent of the total for the county for the lower scenario. If the upper scenario were to occur, the impacts to small land development firms would be considerably higher.

#### **Viticulture Small Business Impacts**

According to the SBA size criterion, firms in the viticulture industry are considered small when fewer than 500 individuals are employed by the firm. Based on this size classification, all of the viticulture firms in Santa Barbara County are small businesses. For the viticulture industry, the total small business impact of California tiger salamander conservation is estimated to be about \$467,000 in Santa Barbara County. The number of small viticulture firms affected by salamander conservation annually is about 1 percent of the typical annual sales for a small business in this industry.

In summary, we have considered whether this rule would result in a significant economic effect on a substantial number of small entities. We have concluded that this final designation of critical habitat for the California tiger salamander would not affect a substantial number of small entities. Therefore, we are certifying that the designation of critical habitat for the salamander will not have a significant economic impact on a substantial number of small entities, and a final

regulatory flexibility analysis is not required.

#### *Executive Order 13211*

On May 18, 2001, the President issued Executive Order 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 final rule to designate critical habitat for the California tiger salamander 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 does 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, 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 that receive Federal funding, assistance, or permits, or that 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, and the prohibition against take of the species both within and outside of the designated areas, we do not anticipate that this rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

#### *Takings*

In accordance with Executive Order 12630 ("Government Actions and Interference with Constitutionally Protected Private Property Rights"), we have analyzed the potential takings implications of designating critical habitat for the Santa Barbara population of the California tiger salamander in a takings implication assessment, which indicates that this rule would not pose significant takings implications. The takings implications assessment concludes that this final designation of critical habitat for the salamander does not pose significant takings implications.

#### *Federalism*

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with the Department of the Interior policies, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in California. The designation of critical habitat in areas currently occupied by

the Santa Barbara County population of California tiger salamander imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to the States and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

#### *Civil Justice Reform*

In accordance with Executive Order 12988, the Department of the Interior's Office of the Solicitor has determined that this rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Santa Barbara County population of California tiger salamander.

#### *Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act*

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County v.*

*Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996).

*Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and the Department of the Interior's manual at 512 DM 2, we have coordinated with federally recognized Tribes on a Government-to-Government basis. We have determined that there are no tribal lands essential for the conservation of the Santa Barbara County population of California tiger salamander. Therefore, we have not designated any critical habitat for the Santa Barbara County population of

California tiger salamander on Tribal lands.

**References Cited**

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Ventura Fish and Wildlife Office (see ADDRESSES section).

**Author(s)**

The primary author of this package is the U.S. Fish and Wildlife Service.

**List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

**Regulation Promulgation**

■ For the reasons outlined in the preamble, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

**PART 17—[AMENDED]**

■ 1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. In § 17.11(h), revise the entry for "Salamander, California tiger" under "AMPHIBIANS" to read as follows:

**§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	*
AMPHIBIANS							
*	*	*	*	*	*	*	*
Salamander, California tiger, Santa Barbara County Population.	<i>Ambystoma californiense</i> .	U.S.A. (CA) .....	U.S.A. (CA—California).	T	667E, 702, 744	17.95(d)	17.43(c)
*	*	*	*	*	*	*	*

\* \* \* \* \*  
■ 3. Amend § 17.95(d) by adding critical habitat for the California tiger salamander (*Ambystoma californiense*) under "AMPHIBIANS" in the same alphabetical order as the species occurs in § 17.11(h) to read as follows:

**§ 17.95 Critical habitat—fish and wildlife.**

\* \* \* \* \*  
(d) Amphibians.  
\* \* \* \* \*

**California tiger salamander (*Ambystoma californiense*) in Santa Barbara County**

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

(2) The primary constituent elements (PCEs) of critical habitat for the California tiger salamander in Santa

Barbara County are the habitat components that provide:

(i) Standing bodies of fresh water, including natural and man-made (e.g., stock ponds, vernal pools, and dune ponds, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a sufficient length of time (i.e., 12 weeks) necessary for the species to complete the aquatic portion of its life cycle (PCE 1).

(ii) Barrier-free uplands adjacent to breeding ponds that contain small mammal burrows, including but not limited to burrows created by the California ground squirrel (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*). Small mammals are essential in creating the underground habitat that adult California tiger salamanders depend

upon for food, shelter, and protection from the elements and predation (PCE 2).

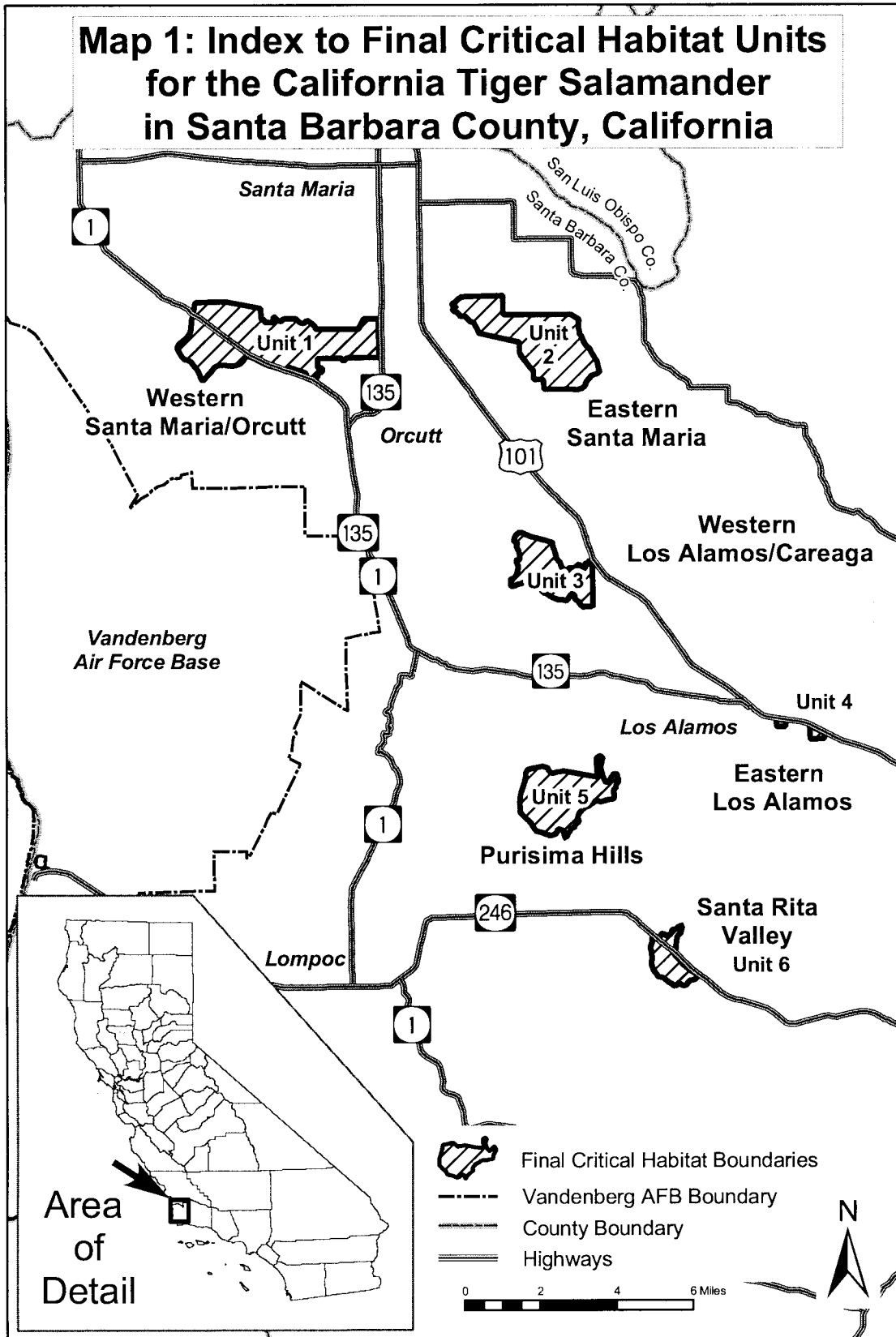
(iii) Upland areas between breeding locations (PCE 1) and areas with small mammal burrows (PCE 2) that allow for dispersal among such sites (PCE 3).

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

(4) Final critical habitat units are described below. Coordinate in UTM Zone 10 with units in meters using North American Datum of 1927 (NAD27).

(5) **Note:** Map 1 (Index map) follows:

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(6) Unit 1: Western Santa Maria/Orcutt Unit, Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle maps Guadalupe, Santa Maria, Orcutt and Casmalia. Lands

bounded by UTM Zone 10, NAD 1927 coordinates (E, N): 727389, 3864869; 727442, 3864843; 727875, 3864859;

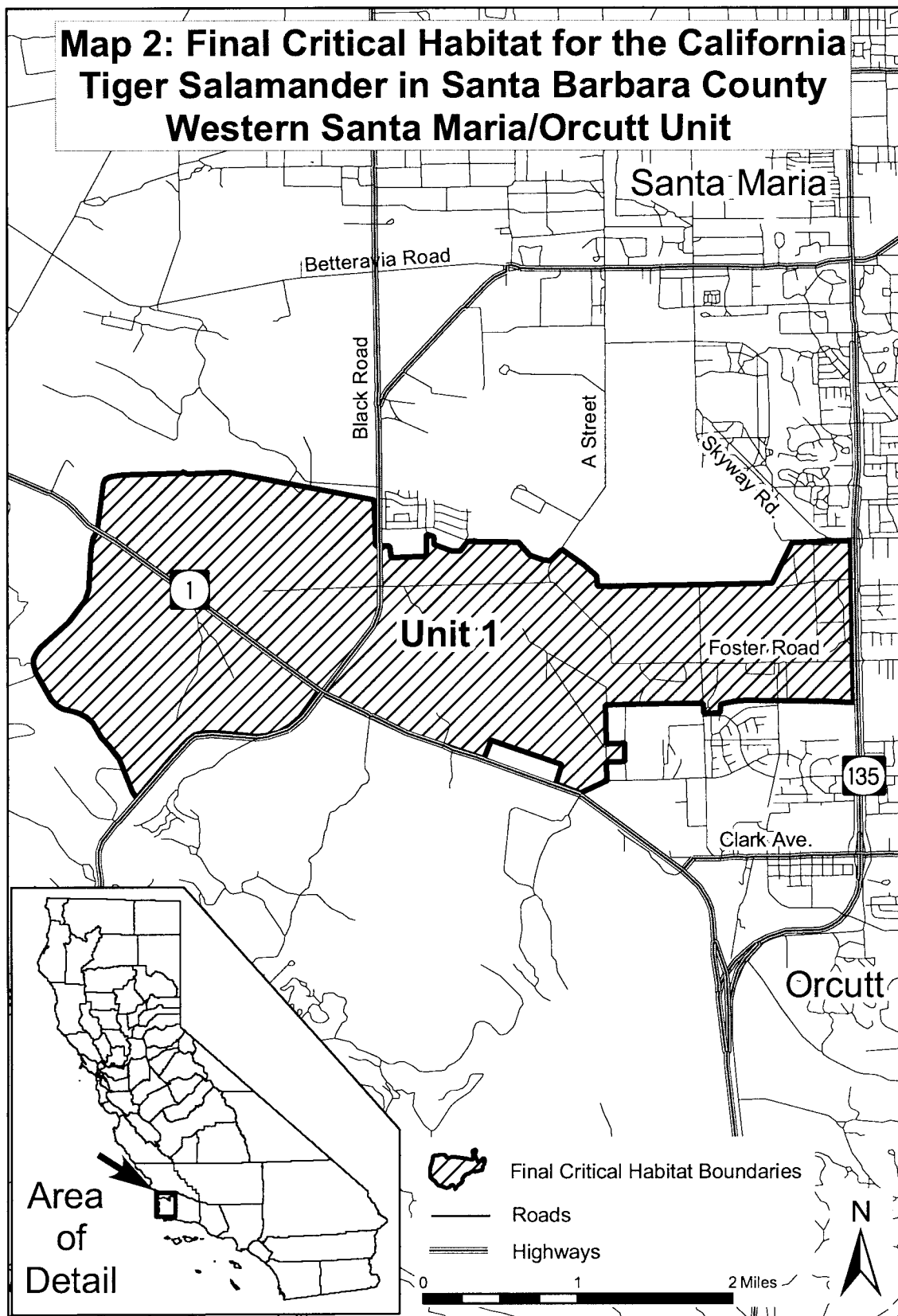


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732789, 3862453; 732392, 3862448;

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726467, 3864173; 726511, 3864261;  
726568, 3864745; 726596, 3864786;  
726638, 3864810; 726727, 3864827;  
726866, 3864836; 727389, 3864850;  
returning to coordinates 727389,  
3864869.

(ii) **Note:** Unit 1 (Map 2) follows:



(7) Unit 2: Eastern Santa Maria Unit, Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle maps Guadalupe, Santa

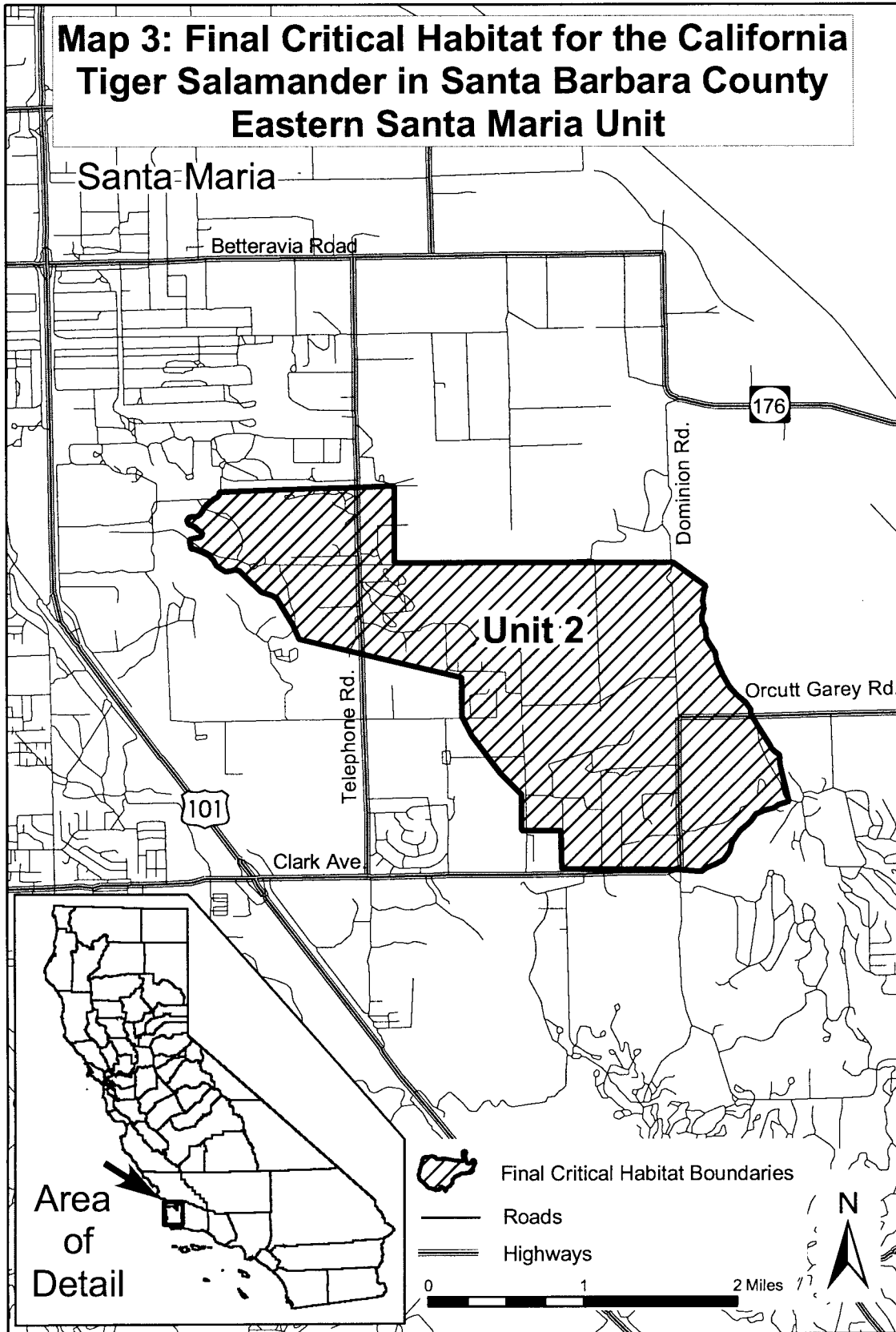
Maria, Twitchell Dam, Orcutt and Sisquoc. Lands bounded by UTM Zone

10, NAD 1927 coordinates (E, N):  
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3864756

(i) **Note:** Unit 2 (Map 3) follows:



(8) Unit 3: Western Los Alamos/  
Careaga Unit, Santa Barbara County,  
California.

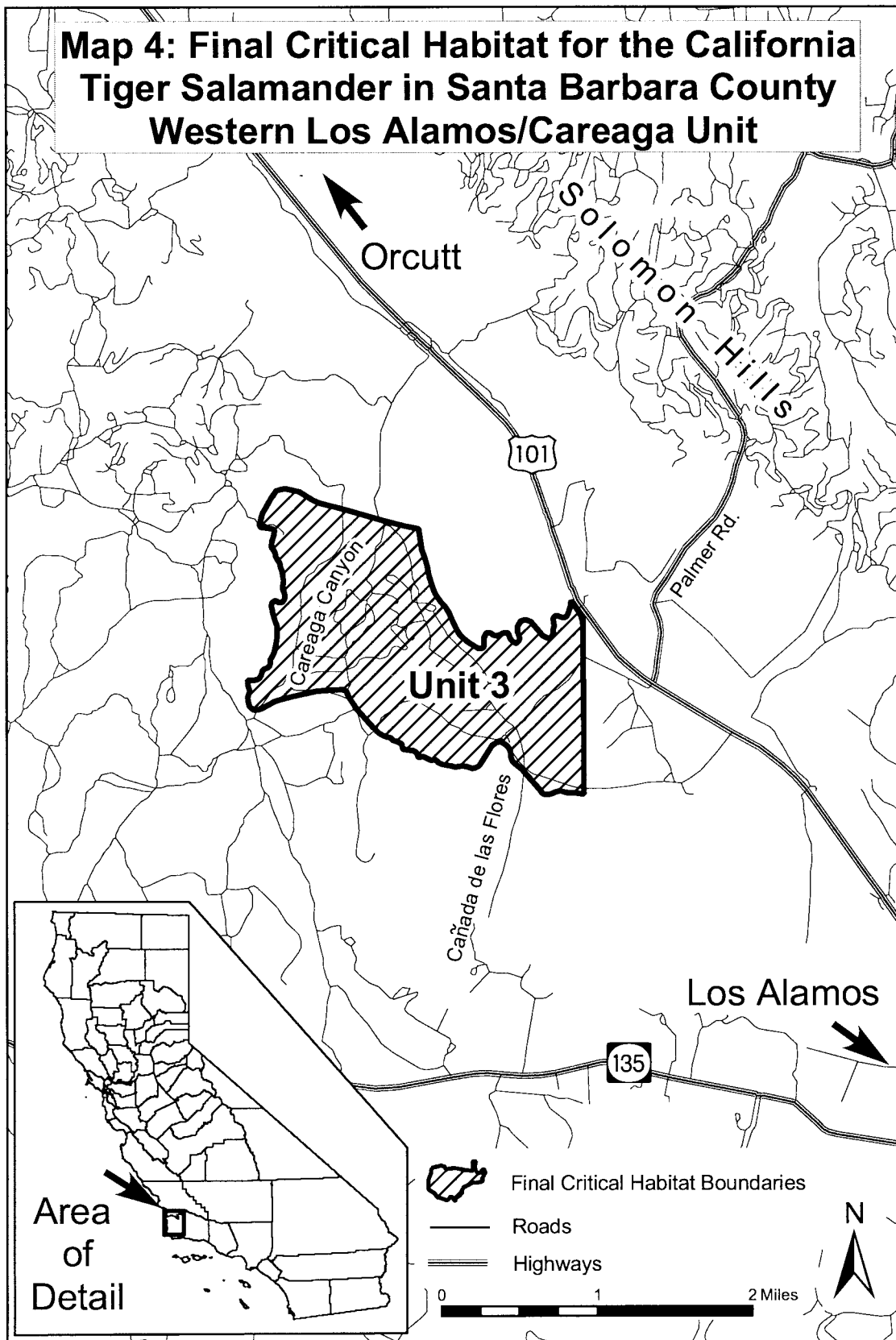
(i) From USGS 1:24,000 scale  
quadrangle maps Orcutt and Sisquoc.  
Lands bounded by UTM Zone 10, NAD  
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3851848; 743035, 3851839; 743001,  
3851841; 742976, 3851860; 742953,  
3851890; 742771, 3852099; 742735,  
3852126; 742695, 3852156; 742663,  
3852192; 742649, 3852236; 742651,  
3852268; 742642, 3852300; 742625,  
3852327; 742598, 3852357; 742575,  
3852378; 742539, 3852388; 742505,  
3852386; 742458, 3852350; 742323,  
3852141; 742287, 3852122; 742251,  
3852112; 742211, 3852124; 742169,  
3852135; 742123, 3852135; 742080,  
3852131; 742051, 3852137; 742006,  
3852145; 741962, 3852148; 741932,  
3852156; 741901, 3852177; 741880,  
3852198; 741859, 3852205; 741829,  
3852198; 741806, 3852207; 741774,  
3852219; 741753, 3852232; 741730,  
3852234; 741709, 3852230; 741694,  
3852238; 741683, 3852257; 741666,  
3852279; 741645, 3852298; 741540,  
3852314; 741527, 3852333; 741521,  
3852365; 741485, 3852388; 741464,  
3852395; 741430, 3852405; 741413,  
3852426; 741362, 3852448; 741324,  
3852462; 741273, 3852494; 741240,  
3852526; 741056, 3852733; 740995,  
3852819; 740969, 3852874; 740948,  
3852919; 740914, 3852929; 740739,  
3852925; 740638, 3852914; 740536,  
3852895; 740395, 3852862; 740249,  
3852823; 740205, 3852807; 740165,  
3852787; 740120, 3852761; 740076,  
3852741; 740029, 3852725; 739996,  
3852721; 739966, 3852736; 739949,  
3852758; 739935, 3852794; returning to  
coordinates 739930, 3852832.

(ii) **Note:** Unit 3 (Map 4) follows:



(9) Unit 4: Eastern Los Alamos Unit, Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle maps Los Alamos and Zaca

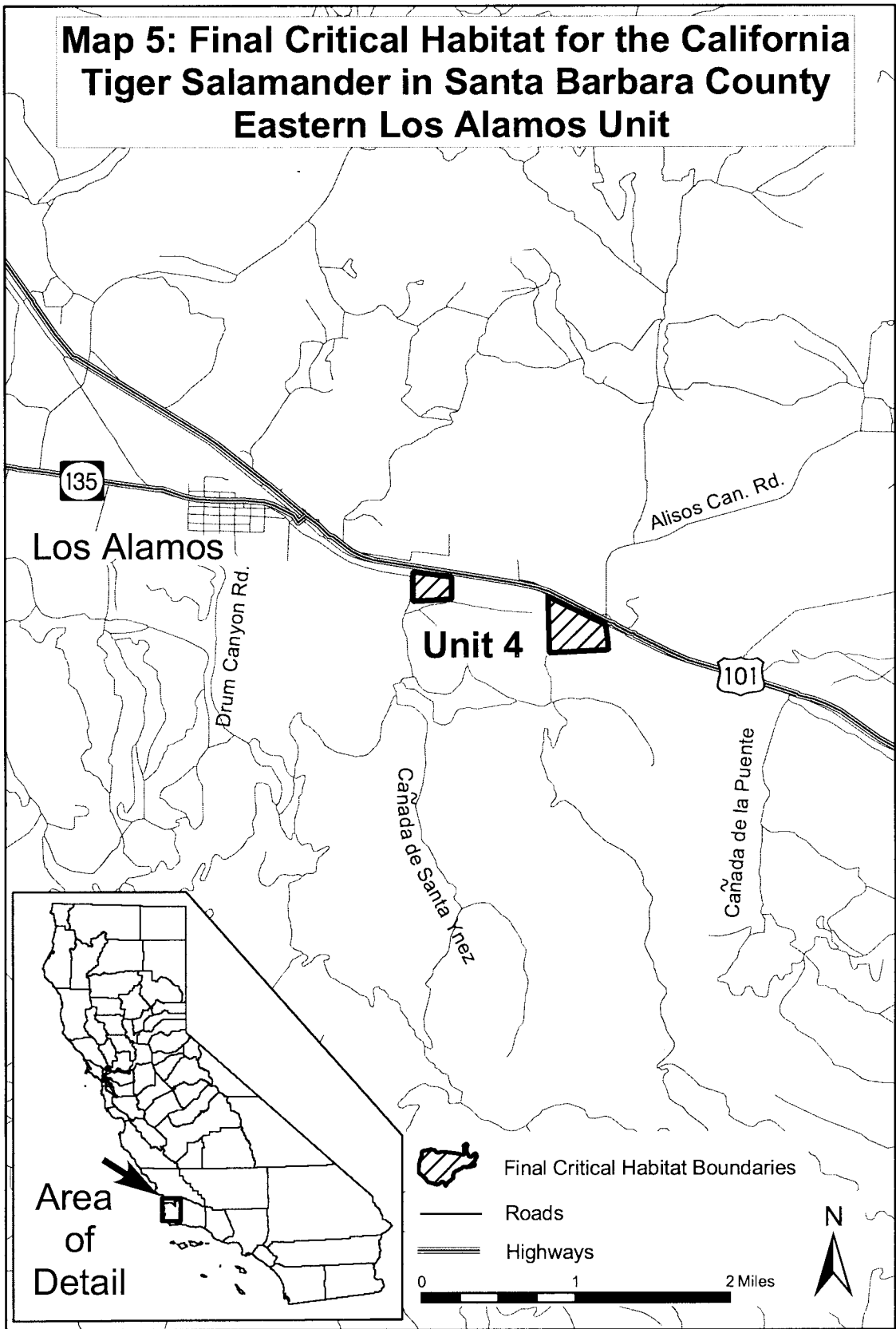
Creek. Lands bounded by UTM Zone 10, NAD 1927 coordinates (E, N): 751549,

3847022; 751555, 3846792; 751152,  
3846766; 751147, 3847077; 751215,  
3847070; return to coordinates 751549,  
3847022; 752562, 3846818; 752566,

3846816; 752568, 3846815; 753162,  
3846522; 753190, 3846371; 753198,  
3846259; 752581, 3846225; 752562,

3846811; returning to coordinates  
752562, 3846818.

(ii) **Note:** Unit 4 (Map 5) follows:





(10) Unit 5 (Purissima Hills) and Unit 6 (Santa Rita Valley), Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle maps Lompoc and Los Alamos. Lands bounded by UTM Zone 10, NAD 1927 coordinates (E, N):

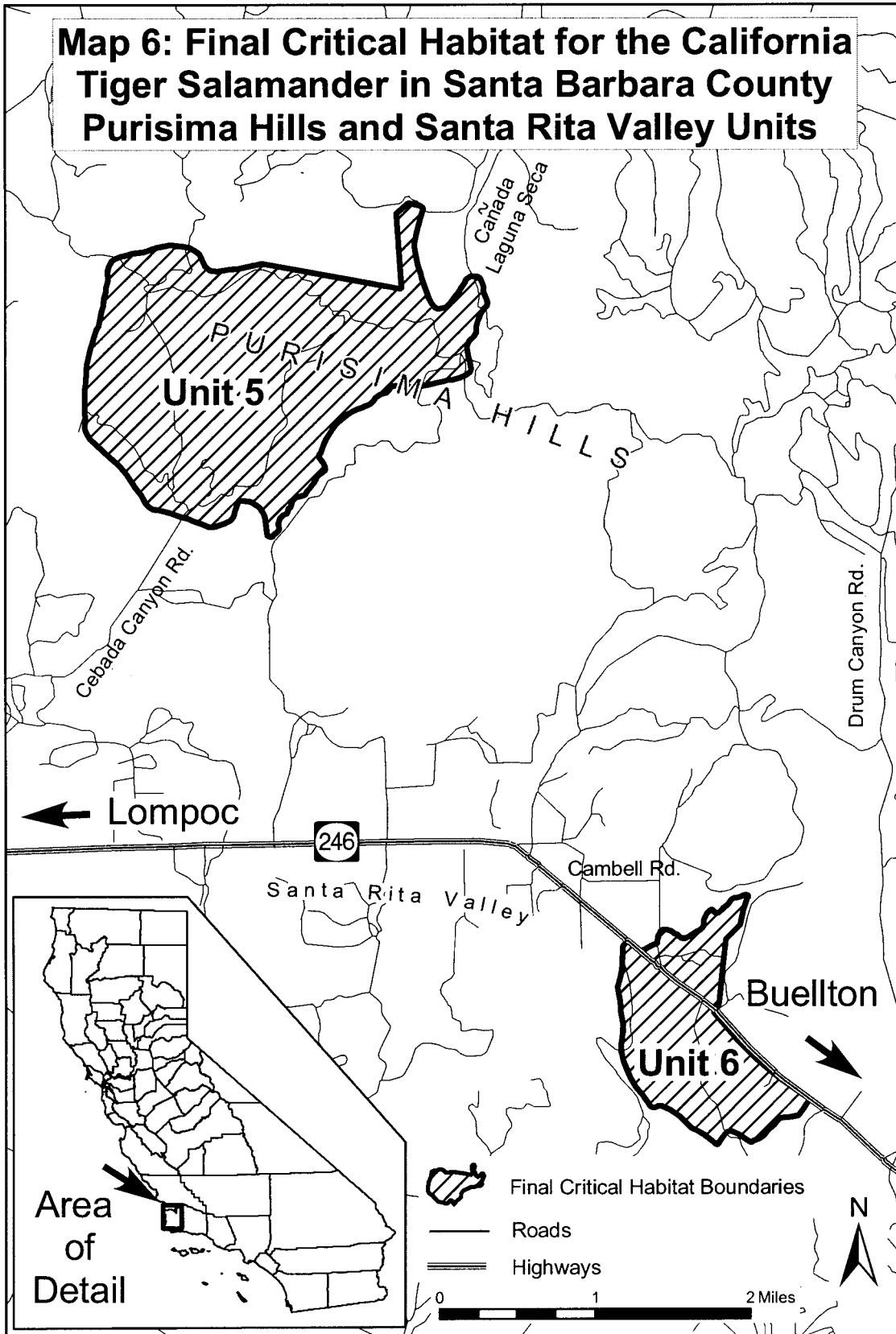
740315, 3843441; 740315, 3843571;  
740333, 3843694; 740344, 3843851;  
740379, 3844016; 740440, 3844211;  
740465, 3844252; 740500, 3844403;  
740514, 3844454; 740523, 3844541;  
740545, 3844615; 740543, 3844650;  
740562, 3844732; 740560, 3844813;  
740574, 3844876; 740605, 3844928;  
740632, 3844951; 740687, 3844979;  
740760, 3844996; 740805, 3845008;  
740854, 3845018; 740926, 3845027;  
740998, 3845045; 741062, 3845070;  
741215, 3845097; 741303, 3845088;  
741330, 3845084; 741406, 3845068;  
741449, 3845049; 741505, 3845008;  
741534, 3844944; 741565, 3844878;  
741622, 3844831; 741696, 3844819;  
741830, 3844848; 741927, 3844856;  
742032, 3844878; 742137, 3844897;  
742187, 3844900; 743020, 3844746;  
743600, 3844639; 743544, 3845422;  
743666, 3845536; 743782, 3845507;  
743804, 3845490; 743820, 3845487;  
743817, 3845472; 743789, 3845364;  
743754, 3845216; 743731, 3845103;  
743737, 3845037; 743766, 3844881;  
743795, 3844800; 743801, 3844755;  
743885, 3844535; 743914, 3844487;  
743935, 3844452; 743955, 3844439;  
743980, 3844433; 744015, 3844435;  
744049, 3844447; 744076, 3844462;  
744101, 3844484; 744191, 3844607;  
744256, 3844716; 744267, 3844736;  
744287, 3844751; 744316, 3844765;  
744347, 3844771; 744379, 3844771;  
744398, 3844763; 744416, 3844745;  
744431, 3844716; 744453, 3844650;  
744443, 3844611; 744459, 3844574;  
744482, 3844523; 744488, 3844488;  
744482, 3844462; 744449, 3844433;  
744425, 3844386; 744406, 3844347;  
744392, 3844304; 744379, 3844255;  
744375, 3844189; 744361, 3844156;  
744334, 3844132; 744306, 3844106;  
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744279, 3843987; 744291, 3843933;  
744308, 3843884; 744316, 3843839;  
744320, 3843801; 744303, 3843764;  
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743327, 3843503; 743319, 3843489;  
743303, 3843462; 743280, 3843443;  
743228, 3843421; 743222, 3843416;  
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743095, 3843367; 743037, 3843328;  
742969, 3843276; 742924, 3843237;  
742891, 3843194; 742856, 3843132;  
742817, 3843073; 742790, 3842998;  
742767, 3842937; 742745, 3842914;  
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742691, 3842619; 742679, 3842599;  
742658, 3842574; 742619, 3842523;  
742600, 3842496; 742580, 3842488;  
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742512, 3842467; 742491, 3842453;  
742469, 3842436; 742460, 3842407;  
742452, 3842376; 742446, 3842358;  
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742360, 3842263; 742347, 3842255;  
742337, 3842238; 742331, 3842214;  
742325, 3842195; 742322, 3842177;  
742333, 3842156; 742333, 3842133;  
742325, 3842113; 742308, 3842100;  
742283, 3842082; 742263, 3842053;  
742215, 3842063; 742205, 3842084;  
742199, 3842144; 742189, 3842214;  
742182, 3842267; 742162, 3842317;  
742131, 3842362; 742065, 3842407;  
742020, 3842428; 741952, 3842434;  
741925, 3842430; 741907, 3842411;  
741884, 3842343; 741859, 3842259;  
741834, 3842222; 741785, 3842199;  
741678, 3842164; 741618, 3842152;  
741524, 3842191; 741449, 3842218;  
741383, 3842245; 741322, 3842265;  
741194, 3842306; 741101, 3842329;  
741029, 3842343; 740984, 3842374;  
740953, 3842407; 740908, 3842494;  
740846, 3842572; 740805, 3842632;  
740760, 3842702; 740681, 3842796;  
740578, 3842885; 740374, 3843079;  
740346, 3843118; 740329, 3843163;  
740321, 3843192; 740323, 3843280;  
740319, 3843359; returning to  
coordinates 740315, 3843441.

(ii) From USGS 1:24,000 scale quadrangle map Los Alamos. Lands bounded by UTM Zone 10, NAD 1927 coordinates (E, N): 745831, 3837355;  
745836, 3837400; 745868, 3837517;  
745882, 3837595; 745885, 3837796;  
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746054, 3837754; 746086, 3837749;  
746174, 3837796; 746193, 3837805;  
746210, 3837817; 746240, 3837814;  
746238, 3837834; 746237, 3837848;  
746238, 3837859; 746246, 3837885;  
746252, 3837904; 746264, 3837925;  
746270, 3837939; 746273, 3837961;  
746333, 3837969; 746362, 3837961;  
746389, 3837952; 746410, 3837932;  
746447, 3837910; 746481, 3837886;  
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746671, 3837958; 746698, 3837971;  
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746754, 3838127; 746774, 3838153;  
746800, 3838178; 746812, 3838172;  
746830, 3838154; 746849, 3838139;  
746872, 3838143; 746890, 3838153;  
746910, 3838175; 746936, 3838195;  
746973, 3838226; 747007, 3838275;  
747028, 3838292; 747042, 3838295;  
747065, 3838297; 747100, 3838307;  
747126, 3838325; 747165, 3838333;  
747192, 3838314; 747175, 3838300;  
747164, 3838280; 747130, 3838159;  
747094, 3838014; 746951, 3837865;  
746923, 3837601; 746880, 3837223;  
746875, 3837182; 746875, 3837180;  
746819, 3837113; 747089, 3836795;  
747166, 3836717; 747266, 3836621;  
747421, 3836483; 747555, 3836383;  
747819, 3836198; 747789, 3836153;  
747755, 3836094; 747708, 3836034;  
747619, 3836017; 747525, 3836009;  
747485, 3835980; 747470, 3835953;  
747470, 3835945; 747428, 3835918;  
747391, 3835882; 747345, 3835822;  
747298, 3835796; 747255, 3835776;  
747202, 3835757; 747159, 3835786;  
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746526, 3835966; 746474, 3836020;  
746369, 3836096; 746284, 3836134;  
746251, 3836133; 746219, 3836119;  
746195, 3836119; 746169, 3836122;  
746153, 3836147; 746086, 3836247;  
746015, 3836335; 745961, 3836422;  
745892, 3836592; 745874, 3836696;  
745868, 3836781; 745884, 3836906;  
745884, 3836988; 745866, 3837121;  
745866, 3837174; 745855, 3837241;  
745837, 3837310; returning to  
coordinates 745831, 3837355.

(iii) **Note:** Units 5 and 6 (Map 6) follow:



\* \* \* \* \*

Dated: November 15, 2004.

**Paul Hoffman,**

*Acting Assistant Secretary for Fish and  
Wildlife and Parks.*

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