defined by 5 U.S.C. 804(2). This rule will be effective on August 21, 2002.

J. Executive Order 13211 (Energy Effects)

This rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

VI. References

USEPA 1998. Underground Injection Control Program: Substantial Modification to an Existing State-Administered Underground Injection Control Program, 63 FR 45810, August 27, 1998.

USEPA 1999. Underground Injection Control Program Revision; Aquifer Exemption Determination for Portions of the Lance Formation Aquifer in Wyoming; Final Rule. 64 FR 14799, March 26, 1999.

USEPA 2001. Underground Injection Control Program: Substantial Modification to an Existing State-Administered Underground Injection Control Program. 66 FR 8234, January 30, 2001.

COGEMA Mining, Inc. 1998(b). ''Submittal of Supplemental Technical Document in Support of Lance Formation Aquifer Exemption; Application for Modification of Class I UIC permit No. 95–241,'' Apr 17, 1998, COGEMA Mining, Inc., 935 Pendell Boulevard, P.O. Box 730, Mills, WY 82644.

''Approval of Programs and Revisions to Approved State Programs, GWPB Guidance #34,'' July 9, 1984, US Environmental Protection Agency, Washington, DC.

WDEQ 2000, ''Public Notice of Draft Permit 00–340,'' Oct 2, 2000, *Casper Star Tribune,* Casper, WY.

WDEQ 2000, ''Public Notice of Draft Permit 00–340,'' Oct 2, 2000, *Buffalo Bulletin,* Johnson County, WY.

List of Subjects in 40 CFR Part 147

Environmental protection, Indians—lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water supply.

Dated: July 12, 2002.

Christine Todd Whitman,

Administrator.

For the reasons set out in the preamble, 40 CFR part 147 is amended as follows:

PART 147—[AMENDED]

1. The authority citation for part 147 continues to read as follows:

Authority: 42 U.S.C. 300h; and 42 U.S.C. 6901 *et seq.*

Subpart ZZ—Wyoming

2. Section 147.2555 is amended by revising the table heading and adding an entry to the table to read as follows:

§ 147.2555 Aquifer exemptions since January 1, 1999.

* * * * *

AQUIFER EXEMPTIONS SINCE JANUARY 1, 1999

Formation	Approximate depth (feet below ground surface)	Location
Lance Formation at indicated depths and locations.	3,800—6,500	Two cylindrical volumes with centers in the wells COGEMA DW No. 2 and COGEMA DW No. 3 respectively, and radius of 1320 feet. Both wells are located in the Christensen Ranch, in Johnson County WY. The COGEMA DW No. 2 is located at approximately 2,290 feet from the North line and 1130 feet from the East line SW1/4 SE1/4 NE1/4 of Section 7, Township 44 North, Range 76 West. The COGEMA DW No. 3 is located approximately 3300 feet from the North line and 1340 feet from the West line center of SW1/4 of Section 5, Township 44 North, Range 76 West.
* * * * * * *		

[FR Doc. 02–18410 Filed 7–19–02; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AI61

Endangered and Threatened Wildlife and Plants; Listing the Sonoma County Distinct Population Segment of the California Tiger Salamander as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Emergency rule.

SUMMARY: We, the Fish and Wildlife Service (Service), exercise our authority to emergency list the Sonoma County Distinct Population Segment of the California tiger salamander (*Ambystoma californiense*), as endangered under the Endangered Species Act of 1973, as amended (Act). Currently, only seven known breeding sites of the Sonoma County population remain. In the past two years, four breeding sites have been destroyed or have suffered severe degradation. Plans to construct a residential development will result in the loss of one of the seven remaining breeding sites and severely impact and further isolate another two of the remaining breeding sites. Because these losses constitute an emergency posing a significant and imminent risk to the well-being of the Sonoma County Distinct Population Segment of the California tiger salamander, we find that emergency listing is necessary.

This emergency rule provides Federal protection pursuant to the Act for a period of 240 days. A proposed rule to list the Sonoma County Distinct Population Segment of the California tiger salamander as endangered is published concurrently with this emergency rule in this same issue of the **Federal Register** in the Proposed Rule Section.

DATES: This emergency rule becomes immediately effective July 22, 2002, and expires March 19, 2003.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W–2605, Sacramento, CA 95825.

FOR FURTHER INFORMATION CONTACT: David E. Wooten, Susan Moore, Amy LaVoie, or Chris Nagano, Sacramento Fish and Wildlife Office, at the address

listed above (telephone 916/414–6600; facsimile 916/414–6713).

SUPPLEMENTARY INFORMATION:

Background

The California tiger salamander was first described as a full species, *Ambystoma californiense,* by Gray in 1853, based on specimens that had been collected in Monterey, California (Grinnell and Camp 1917). Storer (1925) and Bishop (1943) also considered the California tiger salamander to be a species. Dunn (1940), Gehlbach (1967), and Frost (1985) stated the California tiger salamander was a subspecies of the more widespread tiger salamander (*Ambystoma tigrinum*). However, based on recent studies of the genetics, geographic distribution, and ecological differences among the members of the *A. tigrinum* complex, the California tiger salamander is now considered to be a distinct species (Shaffer and Stanley 1991; Shaffer *et al.* 1993; Jones 1993; Shaffer and McKnight 1996; Irschick and Shaffer 1997; Petranka 1998).

The California tiger salamander is a large, stocky, terrestrial salamander with small eyes and a broad, rounded snout. Adults may reach a total length of 208 millimeters (mm) (8.2 inches (in)), with males generally averaging about 203 mm (8 in) in total length, and females averaging about 173 mm (6.8 in) in total length. For both sexes, the average snout-vent length is approximately 91 mm (3.6 in). The small eyes have black irises and protrude from the head. Coloration consists of white or pale yellow spots or bars on a black background on the back and sides. The belly varies from almost uniform white or pale yellow to a variegated pattern of white or pale yellow and black. Males can be distinguished from females, especially during the breeding season, by their swollen cloacae (a common chamber into which the intestinal, urinary, and reproductive canals discharge), more developed tail fins, and larger overall size (Stebbins 1962; Loredo and Van Vuren 1996).

California tiger salamanders are restricted to California and their range does not naturally overlap with any other species of tiger salamander (Stebbins 1985; Petranka 1998). Based on genetic analysis, there are seven populations of California tiger salamanders, which are found on the Santa Rosa Plain in Sonoma County, the Sacramento Valley area (Yolo, Solano, Colusa, Contra Costa, Alameda, and Sacramento Counties), Stanislaus County, the east Central Valley (Madera, Fresno, and north Tulare Counties), the Diablo Range (western Merced and San Benito Counties), the Inner Coast Range (Monterey and San Luis Obispo Counties), and Santa Barbara County (Shaffer *et al.* 1993). The California tiger salamander on the Santa Rosa Plain in Sonoma County inhabits low elevation (below 60 meters (m) (200 feet (ft)) vernal pools and seasonal ponds, associated grassland, and oak savannah plant communities. The historic range of the species also may have included the Petaluma River watershed, as there is one historic record of a specimen from the vicinity of Petaluma from the mid-1800s (Borland 1856, as cited in Storer 1925).

California tiger salamanders on the Santa Rosa Plain in Sonoma County are geographically separated from other California tiger salamander populations. The closest California tiger salamander populations to Sonoma County are located in Contra Costa, Yolo, and Solano Counties, which are separated from the Sonoma County population by the Coast Range, Napa River, and the Carquinez Straits, a distance of about 72 kilometers (km) (45 miles (mi)).

The known breeding sites of the California tiger salamander in Sonoma County are restricted to Huichica-Wright-Zamora and Clear Lake-Reyes soils series/associations as defined by the U.S. Department of Agriculture (USDA 1972, 1990). The poorly drained soils in the Huichica-Wright-Zamora association (yellow outlined in red on Soil Map) are considered prime soils for containing wetlands, and more specifically, prime soils for habitat containing California tiger salamander (P. Northen Sonoma State University pers. comm.). The Huichica-Wright-Zamora association is restricted to the Santa Rosa Plain and the vicinity of the town of Sonoma (USDA 1972, 1990). The poorly drained soils in the Clear Lake-Reyes association are considered suitable to marginal soils for containing wetlands or habitat for California tiger salamander (Northen pers. comm.). The Clear Lake-Reyes association is found from the Cotati region south and east of Petaluma to the tidelands of northern San Francisco Bay where the salt marsh habitat is unsuitable for the California tiger salamander. There are also scattered areas of the Clear Lake-Reyes association found south and southwest of the town of Sonoma (USDA 1972, 1990). There are no known records of the California tiger salamander from the area around the town of Sonoma (D. McGriff California Department of Fish and Game pers. comm.) and there is now extensive urban and agricultural development in this portion of the County. The remainder of areas in Sonoma County outside of the two soil series/associations discussed above contain soils that are well drained, rocky, or otherwise unsuitable for habitat for the California tiger salamander.

Subadult and adult California tiger salamanders spend the dry summer and fall months of the year estivating (a state of dormancy or inactivity in response to hot, dry weather) in the burrows of small mammals, such as California ground squirrels (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) (Loredo and Van Vuren 1996; Petranka 1998; Trenham 1998a). During estivation, California tiger salamanders eat very little (Shaffer *et al.* 1993). Once fall or winter rains begin, they emerge from these retreats on nights of high relative humidity and during rains to feed and migrate to the breeding ponds (Stebbins 1985, 1989; Shaffer *et al.* 1993). The salamanders breeding in, and living around, a seasonal pool or pools, and associated uplands where estivation can occur, constitute a breeding site. A breeding site is defined as a location where the animals are able to successfully breed in years of ''normal'' rainfall and complete their estivation. Normal rainfall in Santa Rosa is 76 centimeters (cm) (30 in) per year (National Weather Service 2002).

Adult California tiger salamanders may migrate up to 2 km (1.2 mi) from their estivation sites to the breeding ponds (Sam Sweet, University of California, Santa Barbara, *in litt.*, 1998). The distance between these areas depends on local topography and vegetation, and the distribution of ground squirrel or other rodent burrows (Stebbins 1989; Lawrence Hunt, consultant, *in litt.*,1998). Males migrate before females (Twitty 1941; Shaffer *et al.* 1993; Loredo and Van Vuren 1996; Trenham 1998b). Males usually remain in the ponds for an average of about 6 to 8 weeks, while females stay for approximately 1 to 2 weeks. In dry years, both sexes may stay for shorter periods (Loredo and Van Vuren 1996; Trenham 1998b). Although most marked salamanders have been recaptured at the pond where they were initially captured, in one study approximately 20 percent were recaptured at different ponds (Trenham 1998b). The rate of natural movement of salamanders among breeding sites depends on the distance between the ponds or complexes of ponds and on the intervening habitat (*e.g.*, salamanders may move more quickly through sparsely covered and more open grassland versus more densely vegetated lands) (Trenham 1998a). As with migration distances, the number of ponds used by an individual over its

lifetime will be dependent on landscape features and environmental factors.

The adults mate in the ponds and the females lay their eggs in the water (Twitty 1941; Shaffer *et al.* 1993). Females attach their eggs singly, or in rare circumstances, in groups of two to four, to twigs, grass stems, vegetation, or debris (Storer 1925; Twitty 1941). In ponds with limited or no vegetation, they may be attached to objects, such as rocks and boards, on the bottom (Jennings and Hayes 1994). After breeding, adults leave the pond and return to the small mammal burrows (Loredo *et al.* 1996; Trenham 1998a), although they may continue to come out nightly for approximately the next 2 weeks to feed (Shaffer *et al.* 1993). In drought years, the seasonal ponds may not form and the adults cannot breed (Barry and Shaffer 1994).

Eggs hatch in 10 to 14 days, with newly hatched larvae ranging from 11.5 to 14.2 mm (0.45 to 0.56 in) in total length. The young salamanders (larvae) are aquatic. They are yellowish gray in color and have broad heads, large, feathery gills, and broad dorsal fins that extend well onto their back. The larvae feed on zooplankton, small crustaceans, and aquatic insects for about 6 weeks after hatching, after which they switch to larger prey (Anderson 1968). Larger larvae have been known to consume smaller tadpoles of Pacific treefrogs (*Pseudacris regilla*) and California red-legged frogs (*Rana aurora*) (J. Anderson 1968; P. Anderson 1968). The larvae are among the top aquatic predators in the seasonal pond ecosystems. The larvae often rest on the pond bottom in shallow water, but also may be found at different layers in the water column in deeper water. The young salamanders are wary and when approached by potential predators will dart into the vegetation on the bottom of the ponds (Storer 1925).

The larval stage of the California tiger salamander usually lasts 3 to 6 months, as most ponds dry up during the summer (Petranka 1998). Amphibian larvae must grow to a critical minimum body size before they can metamorphose (change into a different physical form) to the terrestrial stage (Wilbur and Collins 1973). Individuals collected near Stockton in the Central Valley during April varied from 47 to 58 mm (1.85 to 2.28 in) in length (Storer 1925). Feaver (1971) found that California tiger salamander larvae metamorphosed into terrestrial juveniles and left the breeding ponds 60 to 94 days after the eggs had been laid, with larvae developing faster in smaller, more rapidly drying ponds. The longer the ponding duration, the larger the larvae are able to grow, and the more likely they are to survive as metamorphosed juveniles and reproduce as adults (Semlitsch *et al.* 1988; Morey 1998). The larvae will perish if a site dries before they complete metamorphosis (P.R. Anderson 1968; Feaver 1971). Pechmann *et al.* (1988) found a strong positive correlation between ponding duration and total number of metamorphosed juveniles in five salamander species.

When the metamorphosed juveniles leave their ponds, in the late spring or early summer, before the ponds dry completely, they settle in small mammal burrows at the end of their nightly movements (Zeiner *et al.* 1988; Shaffer *et al.* 1993; Loredo *et al.* 1996). Like the adults, juveniles may emerge from these retreats to feed during nights of high relative humidity (Storer 1925; Shaffer *et al.* 1993) before settling in their selected estivation sites for the dry hot summer months. Juveniles have been observed to migrate up to 1.6 km (1 mi) from breeding ponds to estivation areas (Austin and Shaffer 1992).

Lifetime reproductive success for California and other tiger salamanders is low. Trenham *et al.* (2000) found the average female bred 1.3 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. Preliminary data suggest that most individuals of the California tiger salamanders require 2 years to become sexually mature, but some individuals may be slower to mature (Shaffer *et al.* 1993). Some animals do not breed until they are 4 to 6 years old. While individuals may survive for more than 10 years, many may breed only once, and, in some populations, less than 5 percent of marked juveniles survive to become breeding adults (Trenham 1998b). With such low recruitment, isolated populations can decline greatly from 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 ponds that are too far from other ponds for migrating individuals to replenish the population can function to quickly extirpate a population.

The life history and ecology of the California tiger salamander on the Santa Rosa Plain in Sonoma County make it likely that this population 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 by dispersal (Hanski and Gilpin 1991, 1997; McCullough 1996; Hanski 1999).

We believe habitat loss has reduced the sizes and connectivity between patches of suitable and occupied salamander habitat on the Santa Rosa Plain. The reduction in the extent and amount of suitable water bodies, grasslands, and other suitable upland habitats likely has eliminated connectivity among most of the known breeding sites, making recolonization of some sites more difficult following local extinction. In addition, the reduction of habitat below a certain size threshold has the effect of reducing the quality of the remaining habitat by reducing the size of habitat boundaries, and making effects of other factors such as amount of food, availability of rodent burrows, pesticide use, mortality from vehicles, and predators more pronounced given the smaller area now exposed to such impacts. There is not enough data to determine what the size threshold for habitat might be, whereby any further reduction would lower the quality of the remaining habitat. But it is probable that the acreage is dependent on factors such as the type of building occurring along habitat boundaries (*i.e.,* residential, industrial, community park), number of roads bordering the habitat and the amount of traffic those roads experience, amount of pesticide use within the breeding pool watershed, or whether domestic animals or people have access to the site during periods when salamanders are vulnerable such as migrating to or from estivation sites. It is likely that there is a size beyond which the combination of various impacts will result in the loss of more salamanders than the Sonoma County California tiger salamander population can produce, and thus local extinction will occur.

Previous Federal Action

On September 18, 1985, we published the Vertebrate Notice of Review (NOR) (50 FR 37958), which included the California tiger salamander as a category 2 candidate species for possible future

listing as threatened or endangered. Category 2 candidates were those taxa for which information contained in our files indicated that listing may be appropriate but for which additional data were needed to support a listing proposal. The January 6, 1989, and November 21, 1991, candidate notices of review (54 FR 554 and 56 FR 58804, respectively) also included the California tiger salamander as a category 2 candidate, soliciting information on the status of the species.

On February 21, 1992, we received a petition from Dr. H. Bradley Shaffer of the University of California at Davis (UCD), to list the California tiger salamander as an endangered species. We published a 90-day petition finding on November 19, 1992 (57 FR 54545), concluding that the petition presented substantial information indicating that listing may be warranted. On April 18, 1994, we published a 12-month petition finding (59 FR 18353) that the listing of the California tiger salamander was warranted but precluded by higher priority listing actions. We elevated the species to category 1 status at that time, which was reflected in the November 15, 1994, NOR (59 FR 58982). Category 1 candidates were those taxa for which we had on file sufficient information on biological vulnerability and threats to support preparation of listing proposals.

We discontinued the use of different categories of candidates in the NOR, published February 28, 1996 (61 FR 7596), and defined ''candidate species'' as those meeting the definition of former category 1. We maintained the California tiger salamander as a candidate species in that NOR, as well as subsequent NORs published September 19, 1997 (62 FR 49398), October 25, 1999 (64 FR 57533), and October 30, 2001 (66 FR 54808).

On June 12, 2001, we received a petition dated June 11, 2001, from the Center for Biological Diversity (CBD) and Citizens for a Sustainable Cotati to emergency list the Sonoma County population of the California tiger salamander as an endangered species and to designate critical habitat. On February 27, 2002, CBD filed a complaint for our failure to emergency list the Sonoma County population of the California tiger salamander as endangered (*Center for Biological Diversity* v. *U.S. Fish and Wildlife Service* (Case No. C–02–0558 WHA)). On June 6, 2002, based on a settlement agreement between ourselves and CBD, the court signed an order requiring us to submit for publication in the **Federal Register**, a proposal and/or emergency rule to list the species by July 15, 2002. This emergency listing rule, and the concurrently published proposed rule, complies with the settlement agreement.

Distinct Vertebrate Population Segment

Under the Act, we must consider for listing any species, subspecies, or, for vertebrates, any Distinct Population Segment (DPS) of these taxa if there is sufficient information to indicate that such action may be warranted. To implement the measures prescribed by the Act and its Congressional guidance, we, along with the National Marine Fisheries Service, developed policy that addresses the recognition of DPSs for potential listing actions (61 FR 4722). The policy allows for a more refined application of the Act that better reflects the biological needs of the taxon being considered, and avoids the inclusion of entities that do not require its protective measures. Under our DPS policy, we use two elements to assess whether a population segment under consideration for listing may be recognized as a DPS. The elements are: (1) The population segment's discreteness from the remainder of the species to which it belongs; and (2) the significance of the population segment's to the species to which it belongs. If we determine that a population segment being considered for listing represents a DPS, then the level of threat to the population is evaluated based on the five listing factors established by the Act to determine if listing it as either threatened or endangered is warranted.

Discreteness

A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following two conditions: (1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation; or (2) it is delimited by international governmental boundaries within which significant differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist. The proposed DPS is based on the first condition, the marked separation from other populations.

The Sonoma County population of the California tiger salamander (Sonoma County population) is discrete in relation to the remainder of the species as a whole. The population is geographically isolated and separate from other California tiger salamanders. The Sonoma County population is widely separated geographically from the closest populations which are located in Contra Costa, Yolo, and Solano Counties. These populations are separated from the Sonoma County population by the Coast Range, Napa River, and the Carquinez Straits, a distance of about 72 km (45 mi). There are no known records of the California tiger salamander in the intervening areas (Dee Warenycia, California Department of Fish and Game (CDFG), pers. comm., 2002). There is no evidence of natural interchange of individuals in the Sonoma County population with other California tiger salamander populations. As detailed below, this finding is supported by an evaluation of the genetic variability of the species.

Dr. H. Bradley Shaffer analyzed the population genetics of the California tiger salamander (Shaffer *et al.* 1993). Allozyme variation (distinct types of enzymes (proteins) in the cells, which are formed from an individuals inherited genes) and mitochondrial DNA sequence data indicate that there are seven distinct populations of the California tiger salamander. These seven populations differ markedly from each other in their genetic characteristics, with the Sonoma County population having gene sequences not found in any other populations (Shaffer *et al.* 1993). The sequence divergence between the Sonoma County population was found to diverge on the order of 2 percent from other populations of this species. This high level of genetic divergence indicates that there has been little, if any, gene flow between the Sonoma County population and other California tiger salamanders populations. Shaffer's mitochondrial DNA sequence data (Shaffer and McKnight 1996) suggest that the seven distinct populations differ markedly in their genetic characteristics, with Sonoma County California tiger salamanders having gene sequences not found in other California tiger salamanders. These levels of divergence justify separate species recognition between the Sonoma County population and the other California tiger salamander populations and may warrant separate taxonomic recognition (Shaffer *et al.* 1993; Shaffer and McKnight 1996).

Significance

Under our DPS policy, once we have determined that a population segment is discrete, we consider its biological and ecological significance to the larger taxon to which it belongs. This consideration may include, but is not limited to, evidence of the persistence of the discrete population segment in an ecological setting that is unique for the taxon; evidence that loss of the population segment would result in a

significant gap in the range of the taxon; evidence that the population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; and evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics. We have found substantial evidence that two of these significance factors are met by the population of the California tiger salamander that occurs on the Santa Rosa Plain in Sonoma County.

The extinction of the Sonoma County population would result in the loss of a significant genetic entity and the curtailment of the range of the species. As discussed above, the Sonoma County population is genetically distinct from other populations of California tiger salamanders. Loss of the Sonoma County population would eliminate the most northern coastal extent of the range of the species. The Sonoma County population is geographically isolated. Genetic analysis of the species supports the hypothesis that no natural interchange of the Sonoma County population occurs with other California tiger salamander populations.

Conclusion

We evaluated the Sonoma County population as a DPS, addressing the two elements which our policy requires us to consider in deciding whether a vertebrate population may be recognized as a DPS and considered for listing under the Act. We conclude that the Sonoma County population is discrete, as per our policy, based on its geographic separation and genetic divergence from the rest of the California tiger salamander populations. We conclude that the Sonoma County population of the California tiger salamander is significant because the loss of the species from the Santa Rosa Plain in Sonoma County would result in a significant reduction in the species' range and would constitute loss of a genetically divergent portion of the species. Because the population segment meets both the discreteness and significance criteria of our DPS policy, the DPS qualifies for consideration for listing. An evaluation of the level of threat to the DPS based on the five listing factors established by the Act follows.

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act describe the procedures for adding species to the Federal list. We may determine a species to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Sonoma County DPS of the California tiger salamander (Sonoma County California tiger salamander) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

The Sonoma County California tiger salamander population, as well as the population in Santa Barbara County, which we listed as endangered (65 FR 57242), are considered to be the most vulnerable of the seven populations of the California tiger salamander (Shaffer et al. 1993; LSA Associates 2001). Urban development is the primary threat to the Sonoma County California tiger salamander. The species now occurs in scattered and increasingly isolated breeding sites within a small portion of its historic range on the Santa Rosa Plain in Sonoma County. Four known breeding sites have been destroyed in the last two years. All of the seven known extant breeding sites are distributed in the City of Santa Rosa, and the immediate associated unincorporated areas, an area approximately 8 km (5 mi) by 6 km (4 mi) wide. Within this area and south to the Cotati area, there are scattered records of adult salamanders crossing roads during the fall and winter rains, and also instances of breeding in roadside ditches. However, these roadside ditches likely do not represent viable breeding sites because they either do not have sufficient ponding duration and/or associated uplands for estivation.

The seven known breeding sites are imperiled by the construction of high-density housing, office buildings, road construction, and other development. The survival and viability of the Sonoma County California tiger salamander is directly related to availability of breeding pools with hydrological and other factors conducive to their reproduction. There also must be adequate upland acreage, with associated small mammal burrows, in the vicinity of the Sonoma County California tiger salamander breeding pools to accommodate estivation. The Santa Rosa Plain once contained extensive valley oak woods, native grasslands, riparian, and vernal pools. Vernal pools and seasonal wetlands likely were extensive, due to the flat terrain, clay soils, and relative high rainfall (CH2M Hill 1995). Based on the topography and habitat type of the lands that have been converted to urban development and agriculture on the Santa Rosa Plain, the number of breeding ponds, the extent of upland habitats, and the quality of the remaining habitats has been greatly reduced since Europeans first settled the region.

The extent of the historic range of the California tiger salamander within the Santa Rosa Plain in Sonoma County is uncertain due to limited information collected on this population prior to the 1990s (Shaffer *et al.* 1993; Jennings and Hayes 1994). However, based on the habitat requirements of the species for low elevation, seasonally filled breeding ponds and small rodent burrows, the ecology of the taxon, the general trend of urban development into suitable and occupied habitat, and other adverse factors affecting the species, we believe that it once occupied a more extensive, but still limited area within the Santa Rosa Plain.

There are no available estimates of the total number of individual Sonoma County California tiger salamanders. The difficulty of estimating total California tiger salamander population size has been discussed by a number of biologists (Shaffer *et al.* 1993; Jennings and Hayes 1994). However, estimates have been made for only a few populations in Monterey County (Barry and Shaffer 1994; Trenham *et al.* 1996). This is due to the lack of data about the numbers of individuals of the Sonoma County California tiger salamander, the fact that these amphibians spend much of their lives underground, and the fact that only a portion of the total number of animals migrate to the ponds to breed every year.

A 1990 study of the Santa Rosa Plain found that 25 percent of an 11,300 hectare (ha) (28,000 acres (ac)) study area had been converted to subdivisions, ''ranchettes,'' golf courses, and commercial buildings (Waaland *et al.* 1990). An additional 17 percent of the study area had been converted to agricultural uses. Since 1990, many more acres have been urbanized and converted to intensive agriculture, particularly vineyards. Even relatively minor habitat modifications, such as construction of roads, storm drains, and road curbs that traverse the area between breeding and estivation sites, increase habitat fragmentation, impede or prevent migration, and result in direct and indirect mortality (Mader 1984; S. Sweet, *in litt.,* 1993, 1998; Findlay and Houlahan 1996; Launer and Fee 1996; Gibbs 1998). All of the known Sonoma County California tiger salamander breeding pools are within 450 m (1,476 ft) of roads and residential

development, and five of the seven remaining viable breeding locations are within 100 m (328 ft) of major development activities.

Urban Development

Urban development poses a significant threat to all of the known breeding sites of the Sonoma County California tiger salamander. All of these sites are found in and around the former Santa Rosa Air Center that is located in west Santa Rosa. This area contains one of the largest undeveloped blocks of land within the city limits of Santa Rosa. Urban development is proposed on or near locations containing three of the seven known breeding sites in the Santa Rosa area (Santa Rosa Department of Community Development 1994; EIP Associates 2000). The airport was closed and the property sold to the City of Santa Rosa in the mid-1980s. The City of Santa Rosa is proposing the majority of the area be developed as part of their Southwest Area Plan (Santa Rosa Department of Community Development 1994; EIP Associates 2000). Urban development of this area is proceeding rapidly. Demographic data obtained from the City of Santa Rosa Housing and Community Development Commission indicate that since 1980, Santa Rosa has experienced a greater than 53 percent increase in its population. From 1980 until 1997, the number of housing units grew by 66 percent from 35,403 units in 1980 to 53,558 units by January 1, 1997 (Michael Enright, City of Santa Rosa, pers. comm., 2001).

Four known breeding sites were lost within the past two years, two of which were lost due to urban development/housing with another lost to commercial development. As recently as June 2002, the fourth breeding site near Cotati was destroyed when the pond was filled for unknown reasons (David Cook, The Wildlife Society, *in litt.,* 2002; Liam Davis, CDFG, *in litt.,* 2002). The Cotati location was considered highly productive for salamanders (D. Cook, *in litt.,* 2002).

Roads and Highways

California tiger salamanders require a large amount of barrier-free landscape for successful migration (Shaffer *et al.* 1993; Loredo *et al.* 1996). Roads and highways are permanent physical obstacles that can block the animals from moving to new breeding habitat, or prevent them from returning to their breeding ponds or estivation sites. Road construction can reduce or completely eliminate a breeding site, and in some cases, larger portions of a metapopulation.

All the pools at the known extant Sonoma County California tiger salamander breeding sites are within 460 m (1,509 ft) of roads of various sizes. Findlay and Houlahan (1996) found that roads within 2000m (1.2 mi) of wetlands adversely affected the number of amphibian species. The Federal Emergency Management Agency (FEMA)/Broadmore North Preserve, and Hall Road Preserve are the only lands with known breeding sites where salamanders can access breeding pools from estivation areas without crossing roads.

Large numbers of California tiger salamanders at some locations in the Central Valley, up to 15 or 20 per mile of road (Joe Medeiros, Sierra College, pers. comm., 1993), have been killed as they crossed roads on breeding migrations (Hansen and Tremper 1993; S. Sweet, *in litt.,* 1993). Estimates of losses to automobile traffic range from 25 to 72 percent of the breeding population for several different populations of the species (Twitty 1941; S. Sweet, *in litt.,* 1993; Launer and Fee 1996). Curbs and berms as low as 9 to 13 cm (3.5 to 5 in), which allow salamanders to climb onto the road but can restrict or prevent their movements off the roads, can effectively turn the roads into sources of high mortality (Launer and Fee 1996; S. Sweet, *in litt.,* 1998). Automobile traffic along Stony Point Road in western Santa Rosa has probably quadrupled in the past 5 years (D. Cook, pers. comm., 2002). This was once a moderately used rural road and is now a major route for commuter traffic. Between November 21, 2001, and December 5, 2001, 26 California tiger salamanders were found killed by cars on this road between Santa Rosa and Cotati. Fourteen of these dead California tiger salamanders were found along Stoney Point Road near Meachum Road (D. Cook, pers. comm., 2002).

Description of the Breeding Sites

Except for the Hall Road Preserve and the FEMA/Broadmore North Preserve, all of the known breeding sites of the Sonoma County California tiger salamander are found on small locations in areas being rapidly converted from low-intensity farming, cattle grazing, and low-density housing, to high density housing, and office buildings. The Hall Road Preserve and the FEMA/Broadmore North Preserve have hydrologic regimes that are adequate to provide recruitment for SCTS in normal to dry years. All other known breeding locations are either slated for development or will have their hydrology altered by disrupting the natural runoff from surrounding uplands. A description of the known extant breeding sites of the Sonoma County California tiger salamander is presented below.

(1) *Hall Road Preserve:* This 74 ha (183 ac) site is owned by CDFG. It is the largest preserved area where the Sonoma County California tiger salamander is currently known to occur. It contains two pools with ponding levels adequate for successful breeding during drought years. This preserve contains seven additional breeding pools that are relatively shallow and do not pond water long enough for successful breeding in years of moderate to low rainfall. Surveys conducted over the past 2 years indicate this preserve does not function as a highly productive breeding site (Cook and Northern 2001). The land surrounding the preserve is privately owned, and the City of Santa Rosa has issued permits for urban development. Urban development has occurred on adjacent lands to the east and west, and agriculture to the north of the preserve. Exotic predators of the salamander, such as Louisiana crayfish (*Procrambus clarkii*), sticklebacks (*Gasterosteus aculeatus,* a fish), and possibly bullfrogs (*Rana catesbeiana*) are present at the Hall Road Preserve.

(2) *FEMA/Broadmore North Preserve:* This breeding site consists of two properties, the FEMA Preserve and the Broadmore North Preserve. The 24 ha (59 ac) FEMA Preserve is owned by CDFG and it contains one of the most productive Sonoma County California tiger salamander breeding sites. The 6.5 ha (16 ac) Broadmore North Preserve is a conservation area that was set aside as mitigation by the Bellvue School District. It is also managed by CDFG. The two breeding sites are contiguous and encompass 30 ha (75 ac) containing three breeding pools. The FEMA Preserve has two large, deep pools that remain ponded late in the season. Salamanders probably breed there during most years. The one breeding pool on Broadmore North is shallow and does not contribute salamanders to the population in dry years (i.e., there is no recruitment) (D. Cook, pers. comm., 2001). While there is no hydrological connection between this site and the deeper pools contained on the FEMA Preserve, the FEMA Preserve probably allows the salamanders at the Broadmore North Preserve the opportunity to breed during dry years. Urban development has occurred to the north and east sides of the preserves. Although these breeding sites are protected, urbanization imperils upland habitats on private land to the east and west of them. A new road and housing development on lands adjacent to the

preserves' western boundaries have been permitted by City of Santa Rosa. This new road and construction will eliminate the western migration route between Southwest Air Center and the FEMA and Broadmore North preserves for salamander from this breeding site.

(3) *Northwest Air Center:* This breeding site is composed of one breeding pond and is located on private land. Much of the associated upland has recently been developed. This site is bordered on the west and north by roads subject to heavy traffic from housing developments that have been constructed under the City of Santa Rosa's Southwest Area Development Plan. Housing has eliminated migration routes to the east and south, thus leaving this site as an isolated breeding site with less than 22 ha (55 ac) of remaining undeveloped upland area and pool with private lands surrounding it to the south and east (M. Enright, pers. comm., 2001).

(4) *Southwest Air Center:* This breeding site is located on private land and it contains one breeding pool. The City of Santa Rosa has issued permits for a residential development that likely will result in the elimination of the salamanders at this location. Preparation of this site for construction has been initiated. The grading of the upland areas in the summer dry season likely will eliminate estivating salamanders at this site. The salamanders at this location also may utilize the breeding ponds at the FEMA and Broadmore North preserves by an existing migration corridor to the east. The destruction of this breeding site likely will further isolate the animals inhabiting this location. Loss of this breeding site will contribute to the overall isolation of the remaining breeding sites. Based on the completion time of the construction of other approved projects in the area, the West Air Center breeding site likely will be lost by September 2002.

(5) *North Air Center:* There is one breeding pool on this privately owned site. Recent residential and commercial developments which border this breeding site on three sides severely restrict the potential for migration. The City of Santa Rosa has approved residential and road projects for this location that will adversely affect the salamanders. This site is bordered by houses to the west, a road with high levels of automobile traffic to the north, and a corporate park to the east. There is a small tract of undeveloped private land to the south. No protection exists for the uplands or breeding pool which is located directly south of Sebastopol Road. The upland area is about 15 ha (37 ac). Portions of Sebastopol Road have been widened to four traffic lanes, including the construction of storm drains and curbs. The curbs likely funnel migrating salamanders into storm drains where they perish after being washed into the sewer system. Residential and commercial projects currently are under construction in this area, and this breeding site likely will be significantly degraded and completely isolated by September, 2002.

(6) *Wright Avenue:* This breeding site is located on private land. Approved development described in the City of Santa Rosa's Southwest Area Development Plan will isolate this breeding site through increased automobile traffic and residential development along Wright and Ludwig avenues. Additionally, there is no construction specifically proposed for this property, but no protection exists to prevent the breeding site and associated uplands from being developed.

(7) *South Ludwig Avenue:* This breeding site is located on private land and current threats to the salamanders include increased traffic along Ludwig Avenue due to increasing residential development. The breeding site and associated uplands are currently not protected from potential development on the property.

Conclusion for Factor A

Maintenance of tracts of habitat between breeding sites will likely play a pivotal role in maintenance of the Sonoma County California tiger salamander metapopulation dynamics. If breeding sites are eliminated and the metapopulation becomes so fragmented that individuals are unable to disperse between suitable patches of habitat, the probability of natural recolonization will not offset the probability of extinction, with a result of population extinction. Some of the salamander breeding sites, such as the FEMA Preserve/Broadmore North Preserve and the pools at the Hall Road Preserve, are linked to each other by suitable habitat. If movements through these linkages are disrupted or precluded (e.g., by urban development), then the stability of the metapopulation (i.e., the exchange of individuals between breeding sites) will be affected. Isolation, whether by geographic distance or ecological factors, will prevent the influx of new genetic material, and may result in inbreeding and extinction (Levin 2002). We believe that the Sonoma County California tiger salamander is at risk from increasing fragmentation and isolation that is the result of urban development.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The larvae of non-native tiger salamanders are used as bait by some fishermen and are still sold in California for this purpose. The extent of the use of the Sonoma County California tiger salamander for this purpose is unknown.

Tiger salamanders are considered to be excellent pets by amateur herpetologists (Porras 2002). The Sonoma County California tiger salamander does not appear to be particularly popular among amphibian and reptile collectors; however, Federal listing could raise the value of the species within wildlife trade markets and increase the threat of unauthorized collection above current levels (Special Agent Ken McCloud, Service, pers. comm., 2002). Even limited interest in the species could pose a serious threat to the small population of this species.

C. Disease or Predation

Disease

The specific effects of disease on the Sonoma County California tiger salamanders is not known and the risks to the animal have not been determined. Large numbers of dead and dying California tiger salamanders were observed in a pond in the Los Alamos Valley in Santa Barbara County, but the cause was not determined (S. Sweet, pers. comm., 1998). Several pathogenic (disease-causing) agents, including at least one bacterium (Worthylake and Hovingh 1989), a water mold (fungus) (Kiesecker and Blaustein 1997; Lefcort *et al.* 1997), and a virus (McLean 1998), have been associated with die-offs of tiger salamanders, as well as other amphibian species. Since Sonoma County California tiger salamanders are found in only a few sites in a relatively small area, a disease outbreak could devastate one or all of the known extant breeding sites if introduced into Sonoma County.

Worthylake and Hovingh (1989) described repeated die-offs of tiger salamanders (*Ambystoma tigrinum*) at Desolation Lake in the Wasatch Mountains of Utah. Affected salamanders had red, swollen hind legs and vents, and widespread hemorrhage of the skin and internal organs. The researchers determined that the die-offs were due to infection from the bacterium *Acinetobacter.* The number of bacteria in the lake increased with increasing nitrogen levels as the lake dried. The nitrogen was believed to come from both atmospheric deposition and waste from sheep grazing in the

watershed (Worthylake and Hovingh 1989). *Acinetobacter* are common in soil and animal feces.

Lefcort *et al.* (1997) found that tiger salamanders raised in natural and artificial ponds contaminated with silt were susceptible to infection by the water mold *Saprolegnia parasitica* at a location in Georgia. The fungus first appeared on the feet, spread to the entire leg, and then infected animals died. Die-offs of western toads (*Bufo boreas*), Cascades frogs (*Rana cascadae*), and Pacific treefrogs also have been associated with *Saprolegnia* infections (Kiesecker and Blaustein 1997). *Saprolegnia* is widespread in natural waters and commonly grows on dead organic material (Wise 1995).

In addition to the *Acinetobacter,* viruses associated with die-offs of tiger and spotted salamanders in Maine and North Dakota, have been isolated (McLean 1998). In 1995, researchers reported similar die-offs attributed to an iridovirus in southern Arizona and near Regina, Saskatchewan, Canada (McLean 1998). Iridoviruses are found in both fish and frogs and may have been introduced to some sites through fish stocking programs. Little is known about the historical distribution of iridoviruses in salamander populations. The virus may be carried by birds, such as herons and egrets (Family Ardeidae), that feed on the salamanders. Such a virus could be devastating to the Sonoma County California tiger salamanders.

Predation

Predation and competition by introduced or non-native species potentially affects all of the seven known Sonoma County California tiger salamander breeding sites. Bullfrogs prey on California tiger salamander larvae (P.R. Anderson 1968; Lawler *et al.* 1999). Morey and Guinn (1992) documented a shift in amphibian community composition at a vernal pool complex, with California tiger salamanders becoming proportionally less abundant as bullfrogs increased in number. Although bullfrogs are unable to establish permanent breeding populations in unaltered vernal pools and seasonal ponds, dispersing immature frogs take up residence in pools during winter and spring (Morey and Guinn 1992), and may prey on native amphibians, including larval salamanders. One of the pools at the Hall Road breeding site, and two of the pools contained at the FEMA/Broadmore North preserves, are located within 46 m (150 ft) of ditches or creek channels known to contain bullfrogs or crayfish. Bullfrogs likely occur in Roseland Creek , which is near the FEMA/Broadmore North preserve (D. Cook, pers. comm., 2002). Bullfrogs are likely present in ditches that cross the Hall Road Preserve (D. Cook, pers. comm., 2002).

Mosquito fish (*Gambusia affinis*), rather than pesticides, are often placed into ponds by vector control agencies to eliminate mosquitoes. Salamanders may be especially vulnerable to mosquito fish predation due to their fluttering external gills, which may attract these visual predators (Graf 1993). Loredo-Prendeville *et al.* (1994) found no California tiger salamanders inhabiting ponds containing mosquito fish. Mosquito fish prey on other amphibian species, such as the California newt (*Taricha torosa*) (Gamradt and Kats 1996) and Pacific treefrog (Goodsell and Kats 1999) tadpoles in both field and laboratory experiments, even given the optional prey of mosquito larvae (Goodsell and Kats 1999; Lee Kats, Pepperdine University, pers. comm., 1999). Robert Stebbins observed mosquito fish ingesting and then spitting out California newt larvae, causing severe damage to the newts in the process (Graf 1993). Given the effects of mosquito fish on other amphibian species, they are likely to have similar effects on California tiger salamanders. If they have the same effects, the use of mosquito fish in California tiger salamander habitat threatens the persistence of the species, especially in the isolated and decline Sonoma County California tiger salamander population.

Other fish, such as sticklebacks, may prey on the Sonoma County California tiger salamander. One pool at the Hall Road Preserve appears to have all of the biological components for successful California tiger salamander breeding, but has a small connector to a drainage ditch containing stickleback. Sonoma County California tiger salamanders have never been found at this site, and it is suspected that predation of their eggs and larvae by this fish is the limiting factor (D. Cook, pers. comm., 2002).

Crayfish also apparently prey on California tiger salamanders (Shaffer *et al.* 1993) and may have eliminated some populations (Jennings and Hayes 1994). The crayfish prey on California newt eggs and larvae, in spite of toxins produced by these amphibians, and they may be a significant factor in the loss of newts from several streams in southern California (Gamradt and Kats 1996). These crayfish have been found at both the FEMA/Broadmore North and Hall Road Preserves. At the FEMA property, crayfish were found in the pool (D. Cook, pers. comm., 2002). The crayfish likely came from the adjacent Roseland Creek Channel. Louisiana crayfish have been found in the ditches that cross the Hall Road Preserve, but not at any of the pools known to support Sonoma County California tiger salamander populations (D. Cook, pers. comm., 2002). The presence of both stickleback and crayfish, along with the suspected presence of bullfrogs, could affect the Hall Road Preserve. The Hall Road Preserve is one of only two breeding sites that still contain pools with migration corridors that accommodate the transfer of genetic material between pools, while also allowing for the repopulation of individual pools in the event of a randomly occurring catastrophic event.

California tiger salamander larvae also are preyed upon by many native species. In healthy salamander populations, such predation is probably not a significant threat. But when combined with other impacts, such as predation by non-native species, contaminants, migration barriers, or habitat alteration, it may cause a significant decrease in population viability. Native predators include great blue herons (*Ardea herodias*) and egrets, western pond turtles (*Clemmys marmorata*), various garter snakes (*Thamnophis* spp.), larger California tiger salamander larvae, larger spadefoot toad (*Scaphiopus hammondii*) larvae, and California red-legged frogs (Mike Peters, Service, *in litt.*, 1993; Hansen and Tremper 1993).

D. The Inadequacy of Existing Regulatory Mechanisms

The primary cause of the decline of the Sonoma County California tiger salamander is the loss, degradation, and fragmentation of habitat from human activities. Federal, State, and local laws have been insufficient to prevent past and ongoing losses of the limited habitat of the Sonoma County California tiger salamander.

Federal

Under section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344 *et seq.*), the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material into waters of the United States, including wetlands. Section 404 regulations require applicants to obtain a permit for projects that involve the discharge of fill material into waters of the United States, including wetlands. However, normal farming activities are exempt under the CWA and do not require a permit (53 FR 20764; Robert Wayland III, Environmental Protection Agency (EPA), *in litt.*, 1996). Projects

that are subject to regulation may qualify for authorization to place fill material into headwaters and isolated waters, including wetlands, under several nationwide permits. The use of nationwide permits by an applicant or project proponent is normally authorized with minimal environmental review by the Corps. No activity that is likely to jeopardize the continued existence of a threatened or endangered species, or that is likely to destroy or adversely modify designated critical habitat of such species, is authorized under any nationwide permit. An individual permit may be required by the Corps if a project otherwise qualifying under a nationwide permit would have greater than minimal adverse environmental impacts.

Three federally endangered plants, Sonoma sunshine (*Blennosperma bakeri*), Sebastopol meadowfoam (*Limnanthes vinculans*), and Burke's goldfields (*Lasthenia burkei*) occur on the Santa Rosa Plain of Sonoma County in the vicinity of Sonoma County California tiger salamander. However, little overlap occurs between the viable breeding sites of this species and these federally listed vernal pool species. Any Corps consultation requirement for fill of pools on the Santa Rosa Plain would be triggered by the listed plants. Since the salamander and the federally listed plants do not substantially overlap, salamander breeding pools are unlikely to be protected by presence of the plants or their habitat. Furthermore, even if breeding pools of this animal are avoided due to the presence of a federally listed plant species, this protection may only extend to the pool itself with a small upland buffer. Since Sonoma County California tiger salamanders spend up to 80 percent of their life in small mammal burrows in upland habitats surrounding breeding pools, the protection of the pool itself, with concurrent loss of uplands surrounding the pool, would still result in the loss of local Sonoma County California tiger salamander breeding sites.

Recent court cases may further limit the Corps' ability to utilize the CWA to regulate the fill or discharge of fill or dredged material into the aquatic environment within the current range of the Sonoma County California tiger salamander (*Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Engineers,* 531 U.S. 159 (2001) (SWANCC)). The effect of SWANCC on Federal regulation of activities in wetlands in the area of the Sonoma County California tiger salamander has recently become clear by the Corps' failure to assert its jurisdiction over fill of several wetlands within the range of the Sonoma county California tiger salamander. In a letter from the Corps dated March 8, 2002, concerning the fill of 0.18 ha (0.45 ac) of seasonal wetlands southwest of the intersection of Piner and Marlow Roads (Corps File Number 19736N), the Corps referenced the SWANCC decision and reiterated that the subject wetlands were not ''waters of the United States'' because they were: (1) Not navigable waters; (2) not interstate waters; (3) not part of a tributary system to 1 or 2; (4) not wetlands adjacent to any of the foregoing; and (5) not an impoundment of any of the above. The letter further stated that the interstate commerce nexus to these particular waters is insufficient to establish CWA jurisdiction, and therefore, not subject to regulation by the Corps under section 404 of the CWA. The Corps also cited the SWANCC decision as their reasoning for not taking jurisdiction over fill of Sonoma County California tiger salamander breeding pools at the recently constructed South Sonoma Business Park.

State

The CDFG recognizes the California tiger salamander as a species of special concern. This designation does not provide the species with any protection from actions that injure or kill them, or damage or destroy their habitat. The California tiger salamander is not protected under the California Endangered Species Act.

The California Environmental Quality Act (CEQA) (Public Resources Code Sec. 21000–21177) requires a full disclosure of the potential environmental impacts of proposed projects. The public agency with primary authority or jurisdiction over a project is designated as the lead agency and is responsible for conducting a review of the project and consulting with the other agencies concerned with the resources affected by the project. Section 15065 of the CEQA Guidelines, as amended, requires a finding of significance if a project has the potential to ''reduce the number or restrict the range of a rare or endangered plant or animal.'' Once significant effects are identified, the lead agency has the option of requiring mitigation for effects through changes in the project or to decide that overriding considerations make mitigation infeasible (CEQA Sec. 21002). In the latter case, projects may be approved that cause significant environmental damage, such as destruction of listed endangered species and/or their habitat. Protection of listed species through CEQA is, therefore, dependent upon the discretion of the lead agency involved.

Local

We are not aware of any specific county or city ordinances that provide protection for the Sonoma County California tiger salamander.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Several other factors, including contaminants, ground squirrel and gopher control, hybridization with non-native salamanders, predation, and competition with introduced species may have negative effects on California tiger salamanders and their aquatic and upland habitats. These factors are discussed below.

Contaminants

Sonoma County California tiger salamanders probably are exposed to a variety of pesticides and other chemicals throughout their range. Sonoma County California tiger salamanders also could die from starvation by the loss of their prey base. Hydrocarbon and other contamination from oil production and road runoff; the application of numerous chemicals for roadside maintenance; urban/suburban landscape maintenance; and rodent and vector control programs may all have negative effects on tiger salamander populations, as detailed below.

Road mortality is not the only risk factor associated with roads, as oil and other contaminants in runoff have been detected in adjacent ponds and linked to die-offs and deformities in California tiger salamanders and spadefoot toads, and die-offs of invertebrates that form most of both species' prey base (S. Sweet, *in litt.*, 1993). Lefcort *et al.* (1997) found that oil had limited direct effects on 5-week-old marbled (*Ambystoma opacum*) and tiger salamanders (*A. t. tigrinum*). However, it was found that salamanders from oil-contaminated natural ponds metamorphosed earlier at smaller sizes, and those from oil-contaminated artificial ponds had slower growth rates, than larvae raised in non-contaminated ponds. Their studies did not address effects on eggs and early larval stages, where the effects may be more pronounced.

Hatch and Burton (1998) and Monson *et al.* (1999) investigated the effects of one component of petroleum products and urban runoff (fluoranthene, a polycyclic aromatic hydrocarbon) on spotted salamanders (*A. maculatum*), northern leopard frogs (*Rana pipiens*), and African clawed frogs (*Xenopus laevis*). In laboratory and outdoor experiments, using levels of the

contaminant comparable to those found in service station and other urban runoff, the researchers found reduced survival and growth abnormalities in all species and that the effects were worse when the larvae were exposed to the contaminant under natural levels of sunlight, rather than in the laboratory under artificial light. In Sonoma County, there are a number of records of California tiger salamanders using roadside ditches. Many are in areas where there are no known breeding ponds, and these animals are utilizing the only marginal habitat remaining. Also, many pools in these areas have likely been destroyed, leaving these marginal sites as the only option for breeding. In light of the increased urbanization occurring in this area, with concurrent increases in traffic, the risk factor associated with contaminants in runoff likely will rise in both roadside ditches and across the general landscape.

Agricultural and Landscaping Contaminants

In Sonoma County, over 1.4 million kilograms (3.1 million pounds) of agricultural chemicals were used in 2000 on grapes, apples, rights of way, structural pest control, and landscape maintenance (California Department of Pesticide Regulation (CDPR), Internet Website). Chemical use occurring on or near tiger salamander breeding sites in Sonoma County is primarily associated with rights of way, structural pest control, and landscape maintenance. These chemicals included metam-sodium, methyl bromide, mancozeb, petroleum oil, phosmet, chlorpyrifos, pendimethalin, parathion, paraquat dichloride, fosetyl-aluminum, acephate, cryolite, and malathion, some of which are extremely toxic to aquatic organisms, such as amphibians and the organisms on which they prey.

Even if toxic or detectable amounts of pesticides are not found in the breeding ponds or groundwater, salamanders may still be affected, particularly when chemicals are applied during the migration and dispersal seasons. All of the remaining seven documented salamander breeding sites in Sonoma County may be directly or indirectly affected by toxic landscaping chemicals due to the presence of housing developments within their drainage basins.

Rodent Control

California tiger salamanders spend much of their lives estivating in underground retreats, typically in the burrows of ground squirrels and gophers (Loredo *et al.* 1996; Trenham 1998a). Widespread ground squirrel control programs were begun in California as early as 1910, and are carried out on more than 4 million ha (9.9 million ac) in California (Marsh 1987). It is unclear how effective such control programs were in reducing ground squirrel populations. According to Marsh (1987), when a ground squirrel population is at or near carrying capacity, it must be reduced by at least 90 percent annually for several years to significantly reduce the population. However, it may not be practical to attain such high reduction rates over large areas of rangelands, but it may be possible to reduce populations to low numbers (Salmon and Schmidt 1984). In some primarily agricultural counties, the ground squirrel population has been reduced and maintained at perhaps 10 to 20 percent of the carrying capacity. Rodent control programs are conducted by individual land owners and managers on grazing, vineyard, and crop production lands (Rosemary Thompson, Science Applications International Corporation, *in litt.*, 1998).

Pocket gopher and ground squirrel burrows are most often used by California tiger salamanders in Sonoma County (D. Cook, pers. comm., 2001). Both of these animals are classified as nongame mammals by CDFG. This means that if they are found to be injuring growing crops or other property, including garden and landscape plants, they may be controlled at any time and in any legal manner by the owner or the tenant of the premises (University of California Integrated Pest Management (UCIPM), internet website 2002).

Legal methods of pocket gopher control include trapping, strychnine-treated grain bait, and anticoagulant baits. Poisoned grains (anticoagulant baits) are the most common method used to control ground squirrels around homes and other areas where children, pets, and poultry are present (UCIPM 2002; Jon Shelgrin, CDPR, pers. comm., 2002). Zinc phosphide is highly toxic to freshwater fish and to non-target mammals (EXOTONET 1996). Zinc phosphide, a rodenticide and restricted material, turns into phosgene gas, a toxic gas once ingested by the rodents. There is little risk of California tiger salamanders ingesting any of these baits; however the use of these grains may impact the California tiger salamanders indirectly if washed into burrows or ponds used by the species.

Two of the most commonly used rodenticides, chlorophacinone and diphacinone, are anticoagulants that cause animals to bleed to death. They can be absorbed through the skin and are considered toxic to fish and wildlife (EPA 1985; Extension Toxicology Network (EXTOXNET) 1999). These two chemicals, along with strychnine, are used in Sonoma County to control rodents (R. Thompson, *in litt.*, 1998). Although the effects of these poisons on California tiger salamanders have not been assessed, use along roadways or surrounding residential areas may result in contamination of salamander breeding ponds, with undetermined effects. Gases, including aluminum phosphide, carbon monoxide, and methyl bromide, can be introduced into burrows either by using cartridges or by pumping. When such fumigants are used, all animals inhabiting the burrow are killed (Salmon and Schmidt 1984).

In addition to possible direct effects of rodent control chemicals, control programs probably have an adverse indirect effect on California tiger salamander populations. Control of ground squirrels could significantly reduce the number of burrows available for use by the Sonoma County California tiger salamander (Loredo-Prendeville *et al.* 1994). All of the remaining Sonoma County California tiger salamander breeding locations exist in areas that are likely to experience a heightened degree of rodent control due to landscaping concerns surrounding residential developments. Because the burrow density required to support California tiger salamanders in an area is not known, the loss of burrows as a result of control programs cannot be quantified at this time. However, Shaffer *et al.* (1993) stated that rodent control programs may be responsible for the lack of California tiger salamanders in some areas. Active ground squirrel colonies probably are needed to sustain tiger salamanders because inactive burrow systems become progressively unsuitable over time. Loredo *et al.* (1996) found that burrow systems collapsed within 18 months following abandonment by or loss of the ground squirrels. Although the researchers found that California tiger salamanders used both occupied and unoccupied burrows, they did not indicate that the salamanders used collapsed burrows. Rodent control programs must be analyzed and implemented carefully in California tiger salamander habitat so the persistence of the animals is not threatened. One of the remaining Sonoma County California tiger salamander sites is currently occupied by cattle. Most owners of livestock seek to eliminate ground squirrel burrows because of the threat of cows (*Bos bos*) breaking their legs if they accidentally step into a burrow.

Mosquito Control

A commonly used method to control mosquitoes, used in Sonoma County (Marin/Sonoma Mosquito and Vector Control District, internet website 2002), is the application of methoprene, which increases the level of juvenile hormone in insect larvae and disrupts the molting process. Lawrenz (1984) found that methoprene (Altosid SR–10) retarded the development of selected crustacea that had the same molting hormones (i.e., juvenile hormone) as insects, and anticipated that the same hormone may control metamorphosis in other arthropods. Because the success of many aquatic vertebrates relies on an abundance of invertebrates in temporary wetlands, any delay in insect growth could reduce the numbers and density of prey available (Lawrenz 1984). The use of methoprene could have an indirect adverse effect on the California tiger salamander by reducing the availability of prey. In more recent studies, methoprene did not cause increased mortality of gray treefrog (*Hyla versicolor*) tadpoles (Sparling and Lowe 1998). However, it caused reduced survival rates and increased malformations in northern leopard frogs (*Rana pipiens*) (Ankley *et al.* 1998), and increased malformations in southern leopard frogs (*R. utricularia*) (Sparling 1998). Blumberg *et al.* (1998) correlated exposure to methoprene with delayed metamorphosis and high mortality rates in northern leopard and mink (*R. septentrionalis*) frogs. Methoprene appears to have both direct and indirect effects on the growth and survival of larval amphibians.

Introduced Species

Introduced species can have negative effects on California tiger salamander populations through competition and hybridization (Shaffer *et al.* 1993; H. Bradley Shaffer, UCD, *in litt.*, 1999). Competition from fish that prey on mosquito larvae and other invertebrates can reduce the survival of salamanders. Both California tiger salamanders (Stebbins 1962; J. D. Anderson 1968; Holomuzki 1986) and mosquito fish feed on micro- and macro-invertebrates; large numbers of mosquito fish may outcompete the salamander larvae for food (Graf 1993). As urban areas continue to expand, the introduction of mosquito fish into previously untreated ponds may result in the elimination of California tiger salamanders from additional breeding sites. The introduction of other fish either inadvertently or for recreational fishing or other purposes may also affect the prey base, reducing growth and survival rates of salamanders. They may also prey on tiger salamander larvae, reducing or eliminating populations (Shaffer *et al.* 1993).

The practice of importing the non-native tiger salamander for fish bait is no longer legal in California (CCR Title 14, Division 1, Subdivision 1, Chapter 2, Article 3, Section 4 2000). Non-native tiger salamanders have been documented in Sonoma County, although not in habitat utilized by California tiger salamanders (Shaffer *et al.* 1993). Non-native tiger salamanders were being sold as pets in a store directly across the street from one of the breeding sites (David Wooten, Service, pers. obs., 2002). If salamander population ranges overlap or come in contact through expansion, then hybridization may occur in closely related species and certain subspecies (Rudd 1955). Over time, a population of a subspecies could become genetically indistinguishable from a larger population of an introgressing subspecies such that the true genotype of the lesser subspecies no longer exists (Levin 2002). The Sonoma County California tiger salamander breeding sites in west Santa Rosa may be threatened by hybridization with non-native tiger salamanders because of the ability of the animals to disperse over upland areas, or through intentional introduction to the pools (Cook and Northern 2001).

Introduced salamanders may outcompete the California tiger salamander, or interbreed with the natives (Bury and Lukenbach 1976; Shaffer *et al.* 1993). Evidence suggests that the hybrids are viable, and that they breed with California tiger salamanders (H. Shaffer *in litt.,* 1999). With so few remaining breeding sites of California tiger salamanders in Sonoma County, the loss of any to hybridization, with or competition from, introduced species is of serious concern.

Grazing

Grazing in many cases has positive, or at least neutral, effects on the California tiger salamander (H. B. Shaffer and Peter Trenham, UCD, pers. comm., 1998; S. Sweet, pers. comm., 1998, 1999). By keeping vegetation shorter, grazing can make areas more suitable for ground squirrels, whose burrows are used by California tiger salamanders. Only one of the seven viable Sonoma County California tiger salamander breeding locations is currently being grazed. However, cattle drink large quantities of water, sometimes causing temporary pools to dry faster than they otherwise would (Sheri Melanson, Service, *in litt.,* 1993), and possibly causing breeding pools to dry too quickly for salamanders to be able to metamorphose (Feaver 1971). Melanson (1993) noted that although vernal pool species continued to reproduce under a November-to-April grazing regime, California tiger salamanders were either absent or found in low numbers in portions of pools that were heavily trampled by cattle. Continued trampling of a pond's edge by cattle can increase the surface area of a pond, and may increase water temperature and speed up the rate of evaporation and thus reduce the amount of time the pond contains enough water (S. Sweet, pers. comm., 1998).

Reduction in water quality caused by cattle excrement may negatively affect the California tiger salamanders by increasing nitrogen levels. High nitrogen levels have been associated with blooms of bacteria (Worthylake and Hovingh 1989), and silt has been associated with fatal fungal infections (Lefcort *et al.* 1997) (see Factor C of this section). However, grazing generally is compatible with the continued use of rangelands by the California tiger salamander as long as intensive burrowing rodent control programs are not implemented on such areas, and grazing is not excessive (Thomas Jones, University of Michigan, *in litt.,* 1993; Shaffer *et al.* 1993; S. Sweet, pers. comm., 1998, 1999).

Population Size

The low numbers of Sonoma County California tiger salamander make it vulnerable to risks associated with small, restricted populations. The elements of risk that are amplified in very small populations include: (1) The impact of high death rates or low birth rates; (2) the effects of genetic drift (random fluctuations in gene frequencies) and inbreeding (mating among close relatives); and (3) deterioration in environmental quality (Gilpin and Soule 1986). Genetic drift and inbreeding may lead to reductions in the ability of individuals to survive and reproduce (i.e., reductions in fitness) in small populations. In addition, reduced genetic variation in small populations may make any species less able to successfully adapt to future environmental changes (Shaffer 1981, 1987; Noss and Cooperrider 1994; Primack 1998).

Reason for Emergency Determination

Under section 4(b)(7) of the Act, and regulations at 50 CFR 424.20, we must consider development of an emergency rule to list a species if the threats to the species constitute an emergency posing a significant risk to its continuing survival. Such an emergency listing

becomes effective upon publication in the **Federal Register** and expires 240 days following publication in the **Federal Register** unless, during this 240-day period, we list the species following the normal listing procedures. We discuss the reasons why emergency listing the Sonoma County California tiger salamander as endangered is necessary below. In accordance with the Act, we will withdraw this emergency rule if, at any time after its publication, we determine that substantial evidence does not exist to warrant such a rule.

In making this determination, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the Sonoma County California tiger salamander. As discussed in the Summary of Factors Affecting the Species, the species faces a number of threats. These include habitat destruction, degradation, and fragmentation, collection, invasive exotic species, pesticides, and inadequate regulatory mechanisms. The Sonoma County California tiger salamander also is vulnerable to chance environmental or demographic events, to which small populations are particularly vulnerable. The combination of only seven known breeding sites, small range on the Santa Rosa Plain, and restricted habitat makes the animal highly susceptible to random events, such as drought, disease, and other occurrences.

Drought conditions in the last two years have resulting in many of these ponds drying up earlier in the season than expected. Only three pools were wet long enough to allow for recruitment in 2001. Any extended drought could result in such low numbers of individuals that recovery would be precluded.

Because the Sonoma County California tiger salamander has been reduced to only seven known breeding sites, and all of them are subject to various immediate, ongoing, and future threats as outlined above, we find that the Sonoma County California tiger salamander is in imminent danger of extinction throughout all or a significant portion of its range and warrants immediate protection under the Act. Emergency listing the Sonoma County California tiger salamander as endangered will increase the regulatory protections and resources available to the species.

Critical Habitat

Critical habitat is defined in section 3 of the Act as the—(i) Specific areas within the geographical 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 geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary of the Interior (Secretary) designate critical habitat at the time the species is determined to be endangered or threatened. Our implementing regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform the required analysis of impacts of the designation is lacking, or if the biological needs of the species are not sufficiently well known to allow identification of an area as critical habitat. Section 4(b)(2) of the Act requires us to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretary may exclude any area from critical habitat if she determines that the benefits of such exclusion outweigh the conservation benefits, unless to do so would result in the extinction of the species. In the absence of a finding that critical habitat would increase threats to a species, if any benefits would derive from critical habitat designation, then a prudent finding is warranted. In the case of this species, designation of critical habitat may provide some benefits.

The primary regulatory effect of critical habitat is the section 7 requirement that agencies refrain from taking any action that destroys or adversely modifies critical habitat. While a critical habitat designation for habitat currently occupied by this species would not be likely to change the section 7 consultation outcome because an action that destroys or adversely modifies such critical habitat would also be likely to result in jeopardy to the species, there may be instances where section 7 consultation would be triggered only if critical habitat is designated. Examples could include unoccupied habitat or occupied habitat that may become unoccupied in the future. Designating critical habitat may also produce some educational or informational benefits. Therefore, designation of critical habitat for the Sonoma County California tiger salamander is prudent.

However, our budget for listing activities is currently insufficient to allow us to immediately complete all the listing actions required by the Act. Not designating critical habitat at this time allows us to provide the necessary protections needed for the conservation of the species without further delay. This is consistent with section 4(b)(6)(C)(i) of the Act, which states that final listing decisions may be issued without critical habitat designations when it is essential that such determinations be promptly published. The legislative history of the 1982 Act amendments also emphasized this point: ''The Committee feels strongly, however, that, where biology relating to the status of the species is clear, it should not be denied the protection of the Act because of the inability of the Secretary to complete the work necessary to designate critical habitat. * * * The committee expects the agencies to make the strongest attempt possible to determine critical habitat within the time period designated for listing, but stresses that the listing of species is not to be delayed in any instance past the time period allocated for such listing if the biological data is clear but the habitat designation process is not complete'' (H.R. Rep. No. 97–567 at 20 (1982)). We will prepare a critical habitat designation in the future when our available resources allow.

We will protect the Sonoma County California tiger salamander and its habitat through section 7 consultations to determine whether Federal actions are likely to jeopardize the continued existence of the subspecies, through the recovery process, through enforcement of take prohibitions under section 9 of the Act, and through the section 10 process for activities on non-Federal lands with no Federal nexus.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages conservation actions by Federal, State, and local agencies. The Act provides for possible land acquisition and cooperation with the State and requires that recovery actions be carried out for listed species. We discuss the protection of Federal agencies, considerations for

protection and conservation actions, and the prohibitions against taking and harm for the Sonoma County California tiger salamander, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed to be listed or is listed as endangered or threatened, and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Federal agencies are required to confer with us informally 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. If a species is listed subsequently, 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 agency action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us. Federal agency actions that may affect the Sonoma County California tiger salamanders and may require consultation with us include, but are not limited to, those within the jurisdiction of the Corps, Natural Resources Conservation Service, Federal Farm Bureau, and Federal Highway Administration (FHA).

We believe that protection and recovery of the Sonoma County California tiger salamander will require reduction of the threats from destruction and degradation of wetland and associated upland habitats due to urban development, exotic predators, unnecessary ground squirrel and gopher control, and road construction. Threats from collection and pesticide drift also must be reduced. These threats should be considered when management actions are taken in habitats currently and potentially occupied by the Sonoma County California tiger salamander, and areas deemed important for dispersal and connectivity or corridors between known locations of this species. Monitoring also should be undertaken for any management actions or scientific investigations designed to address these threats or their impacts.

Listing the Sonoma County California tiger salamander provides for the development and implementation of a recovery plan for the species. This plan will bring together Federal, State, and regional agency efforts for the conservation of the species. A recovery plan will establish a framework for agencies to coordinate their recovery efforts. The plan will set recovery priorities and estimate the costs of the tasks necessary to accomplish the priorities. It also will describe the site-specific actions necessary to achieve conservation and survival of the species.

Listing also will require us to review any actions that may affect the Sonoma County California tiger salamander for lands and activities under Federal jurisdiction, State plans developed pursuant to section 6 of the Act, scientific investigations of efforts to enhance the propagation or survival of the animal, pursuant to section 10(a)(1)(A) of the Act, and habitat conservation plans prepared for non-Federal lands and activities pursuant to section 10(a)(1)(B) of the Act.

Federal agencies with management responsibility for the Sonoma County California tiger salamander include the Service, in relation to the issuance of section 10(a)(1)(A and B) permits for habitat conservation plans and other programs. Occurrences of this species could potentially be affected by projects requiring a permit from the Corps under section 404 of the CWA. The Corps is required to consult with us on applications they receive for projects that may affect listed species. Highway construction and maintenance projects that receive funding from the FHA would be subject to review under section 7 of the Act. In addition, activities that are authorized, funded, or administered by Federal agencies on non-Federal lands will be subject to section 7 review.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, codified at 50 CFR 17.21, in part make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt any such conduct), import, export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to our agents and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing on proposed and ongoing activities within a species' range. We believe that, based on the best available information, the following actions are not likely to result in a violation of section 9, provided these actions are carried out in accordance with any existing regulations and permit requirements:

(1) Possession, delivery, including interstate transport and import or export from the United States, involving no commercial activity, of Sonoma County California tiger salamanders that were collected prior to the date of publication of this emergency listing rule in the **Federal Register**;

(2) Any actions that may affect the Sonoma County California tiger salamander that are authorized, funded, or carried out by a Federal agency, when the action is conducted in accordance with the consultation requirements for listed species pursuant to section 7 of the Act;

(3) Any action taken for scientific research carried out under a recovery permit issued by the Service pursuant to section 10(a)(1)(A) of the Act; and

(4) Land actions or management carried out under a habitat conservation plan approved by the Service pursuant to section 10(a)(1)(B) of the Act, or an approved conservation agreement.

Activities that we believe could potentially result in a violation of section 9 of the Act include, but are not limited to:

(1) Unauthorized possession, collecting, trapping, capturing, killing, harassing, sale, delivery, or movement, including intrastate, interstate, and foreign commerce, or harming, or attempting any of these actions, of Sonoma County California tiger salamanders. Research activities where salamanders are trapped or captured will require a permit under section 10(a)(1)(A) of the Act;

(2) Activities authorized, funded, or carried out by Federal agencies that may affect the Sonoma County California tiger salamander, or its habitat, when such activities are not conducted in accordance with the consultation for listed species under section 7 of the Act;

(3) Discharges or dumping of toxic chemicals, silt, or other pollutants into, or other alteration of the quality of waters supporting Sonoma County California tiger salamanders that results in death or injury of the species or that results in degradation of their occupied habitat;

(4) Release of exotic species (including, but not limited to, bullfrogs, tiger salamanders, mosquito fish, bass, sunfish, bullhead, catfish, crayfish) into Sonoma County California tiger salamander breeding habitat;

(5) Destruction or alteration of uplands associated with seasonal pools used by Sonoma County California tiger salamanders during estivation and dispersal, or modification of migration routes such that migration and dispersal are reduced or precluded; and

(6) Activities (e.g., habitat conversion, excessive livestock grazing, road and trail construction, recreation, development, and unauthorized application of herbicides and pesticides in violation of label restrictions) that directly or indirectly result in the death or injury of larvae, sub-adult, or adult Sonoma County California tiger salamanders, or modify Sonoma County California tiger salamander habitat and significantly affect their essential behavioral patterns including breeding, foraging, sheltering, or other life functions. Otherwise lawful activities that incidentally take Sonoma County California tiger salamanders, but have no Federal nexus, will require a permit under section 10(a)(1)(B) of the Act.

Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section). Requests for copies of the regulations regarding listed species and inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Endangered Species Permits, 911 NE 11th Avenue, Portland, OR 97232–4181 (503/231–2063; facsimile 503/231–6243).

National Environmental Policy Act

We have determined that an Environmental Assessment and Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

Paperwork Reduction Act

This rule does not contain any new collections of information other than those already approved by the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and assigned control number 1018–0094, which is valid through July 31, 2004. This rule will not impose record keeping 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 control number.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O. 13211) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule 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.

References Cited

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

Authors

The primary author of this rule is David Wooten, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office (*see* **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record-keeping requirements, Transportation.

Regulation Promulgation

For the reasons given in the preamble, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

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. Amend § 17.11(h) by adding the following, in alphabetical order under AMPHIBIANS, to the List of Endangered and Threatened Wildlife:

§ 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.	*Ambystoma californiense*.	U.S.A. (CA)	U.S.A. (CA–Sonoma County).	E	729	NA	NA
*	*	*	*	*	*	*	

Dated: July 16, 2002.

Marshall P. Jones,

Acting Director, Fish and Wildlife Service.

[FR Doc. 02–18456 Filed 7–19–02; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 011218304–1304–01; I.D. 071702A]

Fisheries of the Exclusive Economic Zone Off Alaska; Northern Rockfish in the Western Regulatory Area of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is prohibiting directed fishing for northern rockfish in the Western Regulatory Area of the Gulf of Alaska (GOA). This action is necessary to prevent exceeding the 2002 total allowable catch (TAC) of northern rockfish in this area.

DATES: Effective 1200 hrs, Alaska local time (A.l.t.), July 17, 2002, through 2400 hrs, A.l.t., December 31, 2002.

FOR FURTHER INFORMATION CONTACT: Mary Furuness, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2002 TAC of northern rockfish for the Western Regulatory Area was established as 600 metric tons (mt) by an emergency rule implementing 2002 harvest specifications and associated management measures for the groundfish fisheries off Alaska (67 FR 956, January 8, 2002, and 67 FR 34860, May 16, 2002).

In accordance with § 679.20(d)(1)(i), the Administrator, Alaska Region, NMFS (Regional Administrator), has determined that the 2002 TAC for northern rockfish in the Western Regulatory Area will be reached before the end of the fishing season or year. Therefore, the Regional Administrator is establishing a directed fishing allowance of 550 mt, and is setting aside the remaining 50 mt as bycatch to support other anticipated groundfish fisheries. In accordance with § 679.20(d)(1)(iii), the Regional Administrator finds that this directed fishing allowance will soon be reached. Consequently, NMFS is prohibiting directed fishing for northern rockfish in the Western Regulatory Area of the GOA.

Maximum retainable bycatch amounts may be found in the regulations at § 679.20(e) and (f).

Classification

This action responds to the best available information recently obtained from the fishery. The Assistant Administrator for Fisheries, NOAA, finds good cause to waive the requirement to provide prior notice and opportunity for public comment pursuant to the authority set forth at 5 U.S.C. 553(b)(B) as such requirement is contrary to the public interest. This requirement is contrary to the public interest as it would delay the closure of the fishery, lead to exceeding the TAC, and therefore reduce the public's ability to use and enjoy the fishery resource.

This action is required by § 679.20 and is exempt from review under Executive Order 12866.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: July 17, 2002.

Virginia M. Fay,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 02–18440 Filed 7–17–02; 4:05 pm]

BILLING CODE 3510–22–S