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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Casey's June Beetle and Designation of Critical Habitat; Final Rule

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

[Docket No. FWS-R8-ES-2009-0019; MO 92210-0-0009]

RIN 1018-AV91

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Casey's June Beetle and Designation of Critical Habitat****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), determine endangered status for Casey's June beetle (*Dinacoma caseyi*) under the Endangered Species Act of 1973, as amended (Act). We are also designating approximately 587 acres (237 hectares) of land as critical habitat for the species in Riverside County, California.

**DATES:** This rule becomes effective on October 24, 2011.

**ADDRESSES:** The final rule, final economic analysis, and map of critical habitat are available on the Internet at <http://www.regulations.gov> and <http://www.fws.gov/carlsbad/>. Comments and materials received, as well as supporting documentation used in preparing this final rule, will be available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone 760-431-9440; facsimile 760-431-5901.

**FOR FURTHER INFORMATION CONTACT:** Jim Bartel, Field Supervisor, U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011 (telephone 760-431-9440; facsimile 760-431-5901). If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

**SUPPLEMENTARY INFORMATION:****Background**

It is our intent to discuss in this final rule only those topics directly relevant to the listing and designation of critical habitat for Casey's June beetle under the Act (16 U.S.C. 1531 *et seq.*). The genus *Dinacoma* and approximately 90 other genera constitute the New World members of the subfamily Melolonthinae (*i.e.*, May beetles, June beetles, and chafers) of the scarab beetle

family (Scarabaeidae) (Smith and Evans 2005). Despite past references to potentially new species or subspecies of *Dinacoma* (Blaisdell 1930, pp. 173-174; La Rue pers. comm., 2006), Casey's June beetle, *Dinacoma caseyi* Blaisdell, and *D. marginata* (Casey) Casey remain the only described taxonomic entities in the genus (Evans and Smith 2009, p. 44). For additional information on the taxonomy, biology, and ecology of Casey's June beetle, and the history of this rulemaking, refer to the August 8, 2006, 90-day finding (71 FR 44960), the July 5, 2007, 12-month finding (72 FR 36635), the July 9, 2009, proposed listing and critical habitat rule (74 FR 32857), and the March 31, 2010, document making available the draft economic analysis (DEA) (75 FR 16046) published in the **Federal Register**. These documents are available on the Internet at <http://www.fws.gov/Carlsbad>.

*New Species Information*

In our proposed listing and critical habitat rule (74 FR 32857; July 9, 2009), we requested comments on any new species information. One peer reviewer suggested we clarify the fact that female Casey's June beetles are known to be flightless, because our wording in one sentence was not clear in that regard. Information submitted by peer reviewers and an expert in scarab beetles (Hawks, University of California, Riverside, pers. comm. 2010) also disagreed with the appropriateness of primary constituent element (PCE) 2. We have made the appropriate changes to this final listing and critical habitat rule.

*New Species Occupancy and Habitat Information*

Multiple commenters and one peer reviewer further suggested that the species may occupy areas outside proposed critical habitat. To determine if areas outside of the proposed critical habitat designation harbor the Casey's June beetle, we funded a survey of likely habitat within the species' known historical range and beyond. While the survey focused on areas north of Palm Springs (*i.e.*, immediately south of the Chino Cone) and south to Palm Desert, we have yet to receive a final report from the surveyor (*i.e.*, David Hawks). Nonetheless, preliminary survey information received to date primarily supports our determination of the species' current range and population distribution, and modification of PCEs to include disturbed soils and predominantly, but not exclusively, native vegetation (*i.e.*, not the two specific "intact" vegetation types listed

in the proposed rule) (Hawks pers. comm., 2010; see below discussion).

Hawks (pers. comm. 2010, 2011a and b) located two occupied Casey's June beetle sites outside of proposed critical habitat, in natural remnants of the Palm Canyon Wash channel surrounded by golf course landscaping just east of the easternmost section of wash proposed as critical habitat, in the vicinity of Golf Club Drive. These wash habitat remnants total 17 acres (ac) (7 hectares (ha)), and are downstream from the confluence of Palm Canyon Wash and Tahquiz Creek, where additional streamflow occurs following a storm event. Although it is possible these habitat remnants could contribute to species recovery, their ability to support occupancy long-term is questionable because these areas are subject to scouring flood events, which would remove available habitat and displace and most likely extirpate any individuals occupying the sites. In addition, the frequency of scouring flood events likely to extirpate resident individuals is expected to increase with climate change (see *E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species* section below). Therefore, at this time, we have determined that these wash habitat remnants do not meet the definition of critical habitat. However, we will continue to gather information regarding the potential for this wash habitat area to contribute to species recovery.

Hawks' comprehensive survey (pers. comm. 2010) included potential Casey's June beetle habitat remnants identified throughout the City of Palm Springs, including many vacant lots within the developed areas of the cities of Palm Springs and Cathedral City Hawks (pers. comm. 2010) documented numerous female emergence holes and observed many female beetles during his surveys, confirming occupancy of Coachella fine sand series (CpA), and Myoma fine sands (MaB) soil types. Hawks (pers. comm. 2010) stated he never found emergence holes in the Carsitas cobbly sand series (ChC) soil type. However, he believes ChC soil may be occupied if it is an inclusion surrounded by Carsitas gravelly sand series (CdC) soil, and if it is not part of the landscape defining the edge of the floodplain, such as along South Palm Canyon Drive to the west. Based on this information from Hawks (pers. comm. 2010) we determined that ChC soils not 100 percent surrounded by CdC and Riverwash (RA) soils do not meet the definition of critical habitat (see Summary of Changes From the 2009 Proposed Critical Habitat Rule, Physical or Biological Features, and

#### Criteria Used To Identify Critical Habitat sections below).

Hawks' (pers. comm. 2010) positive survey results generally supported our estimation of Casey's June beetle population distribution within proposed critical habitat, with the exception of newly discovered occupied wash habitat remnants described above that represent a slight northeastern distribution extension, and the lack of occupancy in some southern areas that were determined not to meet the definition of critical habitat and therefore were not designated (see Summary of Changes From the 2009 Proposed Critical Habitat Rule, Physical or Biological Features, and Criteria Used To Identify Critical Habitat sections below). In a subsequent communication, Hawks (pers. comm. 2011a) described his survey results from the southern population distribution area: "Adults of both sexes of [Casey's June beetle] as well as emergence holes were observed in the wash and in [adjacent] floodplain areas west of the wash between Bogert Trail and Acanto Drive. Adults of both sexes as well as emergence holes were observed in the wash and in floodplain areas west of the wash from Acanto and south for a few hundred meters. South of this area, [Casey's June beetle] emergence holes were observed in late June 2010 (after the adult emergence period) in both the wash and the floodplain habitat adjacent to the wash as far south as the fence and almost to the small dam and this is as far south as we surveyed. Emergence holes were less common towards the southern extent of this area, and, especially in the wash, they were not apparent in the close vicinity of the dam (within about [328 feet (ft) (100 meters (m))]). The wash [close to the dam] is narrow and much more disturbed (apparently by turbulent water flow), gravelly, and rocky in this area, and is perhaps unsuitable as [Casey's June beetle] habitat." This new information confirms occupancy of the southernmost wash and upland designated critical habitat areas where beetles had not previously been reported (as described in Barrows 1998, p. 1), and increases the highest elevation for a Casey's June beetle observation (southernmost wash area) to approximately 580 ft (177 m).

New survey information shed light on the occupancy and suitability status of lands proposed for critical habitat designation at the southern extreme of the population distribution. Light trap surveys of southern portions of the species' population distribution were conducted by Jim Cornett (2010, pp. 10–11) in upland habitat, from South Palm Canyon Drive south into Indian

Canyons Preserve. Although Cornett (2010, p. 14) did not trap any male Casey's June beetles or observe any females, Hawks' (pers. comm. 2011a) observations do not support Cornett's conclusion that uplands contiguous with the wash south of Acanto Drive are not occupied. Traps on the eastern edge of Cornett's "Area 3" (Cornett 2010, p. 10), where he sampled in April, were within approximately 660 ft (200 m) of locations where Hawks reported Casey's June beetle occupancy in May. Cornett did not survey for females or emergence holes in 2010. Conversely, the results of Hawks' (pers. comm. 2011b) and Cornett's (2010, pp. 10 and 14) surveys in western areas adjacent to South Palm Canyon Drive were all negative. Furthermore, Hawks (pers. comm. 2011b) reported unsuitable habitat conditions for this western area, similar to those described by Hovore (1997a, p. 3) and evident on current aerial imagery. Therefore, we believe habitat in this southwestern portion associated with South Palm Canyon Drive is not occupied and not likely occupiable. However, as noted in the preceding paragraph, Hawks' (pers. comm. 2011a and b) new information does indicate occupancy in the southernmost mapped contiguous CdC and RA soil areas.

New habitat information resulted in changes to our habitat area estimates. Hawks' (pers. comm. 2010) discovery of 17 ac (7 ha) of occupied Casey's June beetle habitat outside of proposed critical habitat in Palm Canyon Wash increased our estimates of extant and historic occupied habitat. However, based on the currently available information, we have determined that this newly discovered occupied habitat does not meet the definition of critical habitat (see above discussion). Multiple tribal commenters further suggested the species may no longer occupy areas within the southern portion of the proposed critical habitat unit, and that these habitat areas were no longer suitable for Casey's June beetle occupancy (see *Comments 5 and 8* below in the Summary of Comments and Recommendations section). Survey information from 2010 supports this hypothesis for areas in the southwestern portion of the proposed critical habitat unit associated with South Palm Canyon Drive (see above discussion). The determination that the southwestern portion of the proposed critical habitat unit associated with South Palm Canyon Drive is no longer occupied or contains suitable habitat decreased the total area estimate of remaining suitable habitat (despite the addition of the two newly discovered occupied sites in a natural

remnant of the Palm Canyon Wash channel discussed above). As a result of this new information, we have made appropriate changes to this final rule.

#### *New Information on Casey's June Beetle Diet and Movement*

We found one new study on the diet of another endangered June beetle, and some new information on June beetle movement distances. Hill and O'Malley (2009, p. 1) found that the frass pellets (pelletized fecal matter) of larvae of the Mount Hermon June beetle (*Polyphylla barbata*) contained a variety of plant species and fungi material demonstrating that they are not specialist host plant feeders but are microhabitat specialists. Hawks' (pers. comm. 2010) observations at Smoke Tree Ranch indicate Casey's June beetle may be similar when he stated that, "We did not observe females at Smoke Tree [Ranch], but many hundreds of emergence holes associated with native vegetation [and nonnative vegetation such as] irrigated tamarisk, fan palms, oleander, and olive. We still are not sure what plants of any sort mean to [Casey's June beetle] grubs. \* \* \*" These results support our hypothesis that Casey's June beetles do not require particular species of host plants for feeding. However, native plant species likely are important habitat components in other ways not fully understood at this time, because native plant species are an integral component of the ecosystem in which Casey's June beetle evolved. We incorporated this information into the Primary Constituent Elements for Casey's June Beetle section below.

The observation of a male Casey's June beetle at a street light in a suburban neighborhood approximately 750 ft (230 m) from the nearest suitable habitat (Hovore 2003, p. 6; Google Earth historical imagery 1996 and 2002) indicates that movement of males among occupied areas occurs over at least that distance, and it is likely that potential movement is much farther. The maximum male dispersal distance recorded for male Mount Hermon June beetles, a related species that also has flightless females, is 923 ft (281 m) (Arnold, Entomological Consulting Services, Ltd., pers. comm. 2011). Arnold (pers. comm. 2011) noted this datum was from a mark-release-recapture study limited to his study site, and therefore it is "entirely possible" adult male June beetles are capable of making longer distance movements. This information supports the conclusion articulated in our Criteria Used To Identify Critical Habitat section below that all lands meeting the definition of critical habitat are likely

occupied at the population level and fall within the distribution of a single population. Please see Summary of Comments and Recommendations section below for further discussion of comments and information received.

#### Previous Federal Actions

In our July 5, 2007, 12-month finding (72 FR 36635), we determined that listing Casey's June beetle as an endangered species was warranted but precluded. Because of the lack of funding for the large number of candidate species we were unable to propose and finalize the listing for Casey's June beetle at that time. In Fiscal Year 2007, we had more than 120 species with a listing priority number (LPN) of 2, based on our September 21, 1983, guidance for assigning an LPN for each candidate species (48 FR 43098). Although funding to work on a proposed listing determination was not available at the time of the 12-month finding, we subsequently received funding for development of proposed and final listing with critical habitat rules. On July 9, 2009 (74 FR 32857), we published in the **Federal Register** a proposal to list Casey's June beetle as endangered and to designate critical habitat. In this final rule, we determine endangered status for Casey's June beetle and designate critical habitat.

#### Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for adding species to Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. Listing actions may be warranted based on any of the above threat factors, singly, or in combination. Each of these factors is discussed below.

##### A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

Casey's June beetle is part of a genus of beetles that has naturally restricted ranges (LaRue, University of California, Riverside, pers. comm. 2006). Casey's

June beetle is adapted to specialized habitat and soil types found in the Palm Canyon Wash area of Palm Springs, California. We do not know the exact historical population footprint of Casey's June beetle due to the generality and paucity of location descriptions from early collection records (see discussion in the 90-day finding (71 FR 44962; August 8, 2006)). However, museum specimen records indicate the historical range can be described as the eastern foothills of the San Jacinto Mountains from the City of Palm Springs south to the community of Indian Wells. This historical range, while far greater than the current known population distribution, is nonetheless relatively restricted compared to most species.

We used soils data correlated with occupancy data to estimate the historical suitable habitat distribution of Casey's June beetle. Our review of the soil and occupancy data showed that over 97 percent of habitat likely to have been included in Casey's June beetle historical population distributions has been converted to development or rendered unsuitable by the impacts of adjacent development. Of the approximately 605 ac (245 ha) of remaining extant suitable habitat, approximately 70 percent remains relatively unprotected by existing regulations (see *D. The Inadequacy of Existing Regulatory Mechanisms* section below). Approximately 50 percent of the unprotected habitat areas are tribal reservation lands and 30 percent are in private ownership. The remaining approximately 20 percent is owned by local entities (City of Palm Springs and County Flood Control) for roads, flood control, and water facilities. Casey's June beetle habitat on tribal reservation land consists of approximately 11 ac (4 ha) in tribal trust, and 152 ac (62 ha) in fee-title and allotted lands. The majority of tribal reservation lands are at risk of development, as are any undeveloped portions of the relatively unprotected lands owned by local governments and private landowners.

The population of the City of Palm Springs increased from 42,805 to 47,251 between 2000 and 2008, an increase of 10 percent (CDF 2008, Table 1, Table E-1). The City is predicted to grow by 25 percent between 2000 and 2020 (SCAG 2004, Table 2004GF). The current growth rate has increased development pressure on properties zoned for residential and commercial use, uses which would encroach upon Casey's June beetle habitat.

#### Development

We analyzed suburban development within southern Palm Springs from 2003 to 2007 to determine the habitat impacts of completed and pending projects as cited in the petition to list Casey's June beetle (Wright *et al.* 2004, pp. 8–9) and referenced in the July 5, 2007, 12-month finding (72 FR 36635). We were unable to identify all projects cited in the petition, as the petitioners did not provide specific geographic descriptions, and the extent of area of proposed development projects cited did not exactly match calculations in our most recent analysis. However, based on site visits and digital aerial photographs, we identified at least seven projects that removed or impacted occupied and likely occupied habitat within the distribution described above in the 5 years between 2003 and 2007. Habitat disturbance activities such as development can result in direct mortality of larvae and adults.

The Monte Sereno project north of Bogart Trail adjacent to Palm Canyon Wash (tribal reservation lands) impacted approximately 39 ac (16 ha) of occupied habitat in 2005. Expected mitigation measures described by Dudek and Associates (2001, p. 24) for impacts to Casey's June beetle habitat were an in-lieu payment of \$600 per ac (\$240 per ha) (total of \$21,960) to the City of Palm Springs or a habitat conservation entity designated by the City for loss of approximately 37 ac (15 ha) of "creosote bush scrub habitat" (no specified use of these funds), and re-creation of 9 ac (4 ha) of lost "desert wash scrub habitat" (no specified cost). To our knowledge, no appropriate habitat has yet been conserved or restored for Casey's June beetle to offset the Monte Sereno project impacts.

In 2006, the City of Palm Springs issued a mitigated negative declaration for Smoke Tree Ranch Cottages (City of Palm Springs 2006, p. 2) ("Casitas" development cited in the 90-day finding (71 FR 44960; August 8, 2006)), finding "no significant impact" to Casey's June beetle. However, at least 7 ac (3 ha) of occupied habitat were developed (Cornett 2004, pp. 18–27). The Smoke Tree Commons shopping center impacted approximately 18 ac (7 ha) of habitat for Casey's June beetle. The project's environmental impact report (EIR) stated that the City of Palm Springs was responsible for enforcing and monitoring Casey's June beetle mitigation measures prior to issuing a grading permit to the developer, including recording a conservation easement and developing a management plan for Casey's June beetle on

conserved habitat (Pacific Municipal Consultants 2005, p. 9). A conservation easement was established; however, a management plan was not drafted prior to issuance of the grading permit, and monitoring and management activities for Casey's June beetle are not assured (Ewing, City of Palm Springs, pers. comm. 2007).

The other four identified projects that removed or impacted occupied and likely occupied habitat are: (1) The 2-ac (1-ha) Desert Water Agency wells and pipeline project in the Smoke Tree Ranch development; (2) the 34-ac (14-ha) Alta project north of Acanto Drive and west of Palm Canyon Wash on tribal reservation lands; (3) the 24-ac (10-ha) Estancias subdivision north of Acanto Drive; and (4) the 3-ac (1-ha) Palm Canyon project at South Palm Canyon Drive and Murray Canyon Drive.

These seven projects resulted in the loss of, or impacts to, approximately 126 ac (51 ha) of occupied and likely occupied Casey's June beetle habitat from 2003 to 2008. An additional 5 ac (2 ha) of Casey's June beetle habitat has been impacted by small projects (for example, single home lots and pipeline development). Hovore (2003, p. 4) hypothesized that the destruction and isolation of occupied habitat caused by the Monte Sereno and Alta projects in 2003 " \* \* \* overall may reduce the known range and extant population of [Casey's June beetle] by about one third." Streit (2009, pp. 12–13) noted that although Hovore was always conscientious and reported any Casey's June beetle observation, not all biologists do so, and in at least one case a biologist apparently omitted Casey's June beetle observations from their environmental impact report for a proposed golf course project in the early 1990s. Streit (2009, pp. 12–13) did not identify the exact location he referenced, although his description that it is found in "the vicinity of the mouth of Palm Canyon, adjacent to Palm Springs, Riverside County, California," and approximate construction dates of golf course projects based on digital aerial photography indicate the referenced project is the current Indian Canyons Golf Resort, located between Smoke Tree Ranch and the Monte Sereno project north of Bogart Trail and adjacent to Palm Canyon Wash (tribal reservation lands).

We conducted an analysis for the 12-month finding (72 FR 36635) that used available digital aerial photographs taken at various intervals from 1991 to 2005 (Anderson and Love 2007, pp. 1–2) and 2006 field surveys (Anderson 2006, pp. 1–36), which determined that Casey's June beetle experienced an

approximate 25 percent reduction in contiguous occupied habitat from 770 ac (312 ha) in 1991 to 576 ac (233 ha) in 2006. Based on new biological surveys and information provided to us since 2006, we now know an area larger than 770 ac (312 ha) was occupied by Casey's June beetle in 1991. With this new information and 2008 digital aerial photographs, we determined that there was approximately 1,018 ac (412 ha) of occupied habitat in 1991. Therefore, our new analysis showed that Casey's June beetle has experienced an approximately 22 percent reduction in occupied habitat from 1,018 ac (412 ha) in 1991 to 794 ac (314 ha) in 2008. Our updated calculations accounted for these additional acres and revealed that habitat was lost at a rate of 1.6 percent per year from 1991 to 1996, at a rate of 0.6 percent per year from 1996 to 2003, at a rate of 3.8 percent per year from 2003 to 2005, and at a rate of 0.7 percent per year from 2005 to 2008 (dates based on available photographs). Although habitat loss since 2005 has slowed (likely due to the economic downturn), after our 2008 analysis was completed (post-12 month finding; 72 FR 36635, July 5, 2007) we discovered approximately 5 ac (2 ha) of habitat where two adjacent development pads were cleared on the Agua Caliente Band of Cahuilla Indian's reservation south of Acanto Drive, removing the PCEs from the majority of the parcel (per available satellite imagery). The loss of this graded area is of particular concern because it comprises approximately one-fourth of a formerly contiguous occupied upland habitat area adjacent to an area of the wash.

Since publication in the **Federal Register** of the July 5, 2007, 12-month finding (72 FR 36635), the City of Palm Springs completed the California Environmental Quality Act (CEQA) environmental review process for the 80- to 100-ac (32 to 40 ha) Eagle Canyon residential development project planned on tribal reservation lands (Davis, Agua Caliente Band of Cahuilla Indians, pers. comm. 2007; Park, Agua Caliente Band of Cahuilla Indians, pers. comm. 2007). The project is in the area containing CdC soils west of South Palm Canyon Drive near Bogart Trail and Acanto Drive (tentative tract number 30047) (City of Palm Springs 2008, p. 14). We believe this area is not likely to be occupied by Casey's June beetle or occupiable in the future based on historical and recent disturbances (Hovore 1997a, p. 3; Google Earth imagery 2011) (see *New Species Information* section above), and because recent surveys conducted within and

adjacent to the Eagle Canyon project area (Osborne 2008a, p. 3, Cornett 2010 p. 10 and 14; Hawks pers. comm. 2011b) where occupancy was previously documented (Hovore 1995, pp. 4–5) were negative.

Extant habitat estimations include wash habitat where Casey's June beetle may not be able to maintain occupancy following severe flood events (Hovore 2003, p.11; Cornett 2004, p. 14). Of the total 794 ac (321 ha) of estimated remaining habitat in 2008, only 523 ac (212 ha) was upland habitat. Upland habitat refers to any upland terrace area that is outside of the wash and does not occur on Riverwash (RA) soils. According to data from the Coachella Valley General Plan (Riverside County 2005), all remaining upland habitat on tribal land north of Acanto Drive is projected to be developed at a density of two homes per ac (0.5 per ha) by the year 2020, even though some parcels designated as parks and recreation in the 2020 General Plan (code GP2020 = "1145") have already been developed with three homes per ac (7.5 per ha). Undeveloped habitat on tribal reservation land south of Acanto Drive has the same initial land use designation as adjacent land north of Acanto Drive (LU93 = "3100") (Riverside County 2005, pp. 94–120) in the East Bogart Trail area, except that it is outside the city limit of Palm Springs (code GP2020 = "58"). Code GP2020 = "58" signifies tribal land or open space in the General Plan; lands with this code have been developed at a density as high as 3 homes per ac (more than 7 homes per ha). Land use projections (Riverside County 2005) indicate that more than 48 percent of the approximately 523 ac (212 ha) of upland Casey's June beetle habitat that we estimated to be extant in 2008 could be impacted by development.

Further indicating that development in Casey's June beetle habitat is likely, the Director of Planning Services for the City of Palm Springs stated in a communication to economists writing the DEA (Ewing pers. comm. 2009) that " \* \* \* much of the [proposed critical habitat] is within the urban boundaries of the city and along a major thoroughfare (and former state highway). These lands are of significant economic value to the community and have already been the subject of entitlement applications, processing, and approval."

Development is the greatest threat to habitat in upland CdC soils that are believed to support Casey's June beetle; however, development threats are not limited to upland terrace habitat. For example, entire sections of Palm Canyon

Wash east of occupied habitat near Gene Autry Trail have been converted to golf course landscaping (Anderson and Love 2007, p. 3). LaRue (pers. comm. 2006) emphasized the magnitude of development threats to *Dinacoma* spp. population survival: "Most *Dinacoma* [spp.] have experienced range reduction because of unprecedented habitat destruction and modification for recreational, residential and urban development resulting in serious distributional fragmentation throughout [their] former already naturally limited ranges. Consequently, several populations [of the genus *Dinacoma*] have been extirpated, especially those that once existed in Los Angeles County (for example, Glendale, Eaton Canyon)." Therefore, habitat modification for recreational, residential, and urban development reduces an already limited range for Casey's June beetle and poses a substantial threat to this species' survival, both now and in the foreseeable future.

#### Soil Disturbance

In addition to the threat of habitat loss, soil disturbance activities may degrade habitat quality and can cause direct Casey's June beetle mortality (also see *E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species* below). Analysis of 2008 aerial photography in Palm Canyon Wash indicates numerous land-disturbance activities affecting occupied wash habitat managed by the Riverside County Flood Control and Water Conservation District (Riverside County FCWCD). In the vicinity of the State Route 111 bridge and Araby Drive, there are road maintenance and flood control activities, as well as unregulated off-road vehicle (ORV) disturbance (based on examination of Google Earth imagery, both current and historical). Cornett (2004, p. 12) noted similar ORV impacts during Casey's June beetle surveys on a nearby site adjacent to Whitewater Wash and the Palm Springs Airport. ORV use impacts desert soils and associated biota by increasing erosion (Snyder *et al.* 1976, pp. 29–30; Rowlands 1980, p. 169), reducing both plant and vertebrate diversity (Bury *et al.* 1977, Table 4, Figure 6; Rowlands 1980, pp. 63–74; Lathrop 1983, pp. 153–166; Cornett 2004, p. 15), and changing soil density through compaction, which may also influence soil water retention capacity (Adams *et al.* 1982, pp. 167–175; Lathrop and Rowlands 1983, pp. 144–145; Webb 1983, pp. 51–79). Indirect evidence suggests that land disturbance impacts the species' burrows and larvae that occur in the soil and the flightless females when they

rest at the top of the burrows (Cornett 2004, p. 15). Any activities that cause direct adult mortality, compact or disturb soils when adult beetles are active, or affect soils to a depth where immature stages or resting adults are found may affect the species' persistence in those areas or dispersal to adjacent areas. Waste dumping at habitat edges, as discovered through review of digital aerial photography of proposed critical habitat areas and described in the Summary of Comments and Recommendations section (see *Comment 12*) below, or frequent use for horseback riding by local riding clubs (as described by Hawks pers. comm. 2011b) can also cause direct mortality of adult females and may have detrimental effects on habitat. Therefore, land disturbance activities likely pose a threat to the species' survival; however, the magnitude of impacts is unknown.

#### Habitat Fragmentation

Casey's June beetle habitat in Palm Springs has been increasingly fragmented by development in recent years (see above discussion regarding development). Continued fragmentation of already limited, remnant habitat compromises the ability of various species to disperse and establish new, or augment declining, populations (Collinge 2000, pp. 2211–2226; Freemark 2002, pp. 58–83; Driscoll and Weir 2005, pp. 182–194) and can isolate segments of a population (Pickett and White 1986, pp. 189–192). Elimination of dispersal areas and isolation of population segments increase chances of extirpation by stochastic events (Hanski *et al.* 1995, pp. 21–28; Collinge 2000, pp. 2211–2226). This process, as it applies to Casey's June beetle, is evident in the development history of the City of Palm Springs and the distribution of Casey's June beetle populations (Cornett 2004, pp. 11, 14). Casey's June beetle is especially impacted by smaller-scale habitat fragmentation because females are flightless and unable to move between fragmented patches (Hovore 1995, p. 7). Although male beetles can move between habitat patches, thereby maintaining genetic mixing on a population scale, fragmented patches that no longer support any female Casey's June beetles may be attractive to male beetles and act as population sinks. The risk of local extinction is widely noted to increase as the fraction of occupied habitat patches, occupied patch area, and density of occupied patches decrease (Forman and Godron, 1986, pp. 87–91; Hanski 1991, pp. 17–38; Hanski *et al.* 1995, pp. 21–28; Hokit and Branch 2003, pp. 1060–1068).

Hovore (2003, p. 3) indicated that population movement would be "slow and indirect," and suggested the population structure for Casey's June beetle in any given area could be described as "clusters of individuals around areas of repeated female emergence." This would, in Hovore's (2003, p. 4) assessment, make the species "susceptible to extirpation resulting from land use changes that would remove or alter surface features" that isolate colonies into non-contiguous habitat fragments. Although fragmentation of habitat occupied by females within a population still allows mixing of genes by males visiting multiple habitat fragments (habitat is not fragmented with regard to male movement), it would preclude recolonization of an area if all flightless females were eliminated from that fragment. Fragmentation of suitable habitat into smaller patches increases the risk of colony loss and decreases the probability of the species' survival.

#### Current Conservation Measures

##### Indian Canyons Master Plan

We reviewed the Indian Canyons Master Plan (Master Plan; ACBCI 2007) and the zoning designations in it to determine what type of protective measures it provides Casey's June beetle and its habitat. Upon review of the Master Plan we noted that the planning area encompasses all Casey's June beetle habitat south of Acanto Drive (including some trust, fee, and allotted lands). The majority of this habitat falls within allotted lands owned by tribal members (ACBCI 2007, p. 17). According to acquisition priorities articulated in the Master Plan, some parcels identified as Casey's June beetle habitat (south of the east-west aligned portion of South Palm Canyon Drive) represent the highest priority for acquisition because they contain valuable cultural, natural, and scenic resources, and have the highest potential for future development plans that are incompatible with resource protection goals (ACBCI 2007 pp. 27 and 29). Allotted lands identified as Casey's June beetle habitat within Palm Canyon Wash between Acanto Drive and the east-west aligned portion of South Palm Canyon Drive fall within the Master Plan Low Density Residential (2 single family dwellings per acre (0.4 ha)) land use category (ACBCI 2007 pp. 35 and 37). In summary, the Master Plan provides some protection of some Casey's June beetle habitat on tribal land, but does not assure protection.

The Agua Caliente Band of Cahuilla Indians prepared and submitted a draft habitat conservation plan (HCP) to the

Service, which has undergone public review in accordance with the National Environmental Policy Act (72 FR 58112; October 12, 2007). The Tribe informed us in an October 28, 2008, letter that they removed Casey's June beetle from the list of species addressed in the draft Tribal HCP; however, they indicated they will "continue to informally coordinate with the Service regarding this species where it occurs on the Reservation." The Tribe stated they are deferring to the Service to allow "the Service to take the lead in addressing how to effectively conserve and protect this species" (ACBCI 2008, p. 1). Although the Tribe has suspended their pursuit of a section 10(a) permit (ACBCI 2010a, p. 1), they are continuing to implement the draft HCP and will continue to protect and manage natural resources within the Tribe's jurisdiction (ACBCI, 2010a, p. 1; ACBCI 2010b, p. ES-1). We will continue to work cooperatively with the Tribe on efforts to conserve Casey's June beetle.

Our analysis indicates that although some tribal environmental policies do exist (ACBCI 2000; ACBCI 2007) that provide some conservation benefit for the species and its habitat, they do not adequately protect Casey's June beetle and its habitat. Therefore, we do not believe that existing tribal regulatory documents ensure conservation of Casey's June beetle. The Service will continue to work with the Tribe to obtain any other information that illustrates how tribal actions or policies would help conserve Casey's June beetle habitat and protect the species. Currently, we do not have information documenting how occupied or potentially occupied habitat for Casey's June beetle is protected from development and other impacts on all tribal reservation lands.

#### Coachella Valley Multiple Species Habitat Conservation Plan (Coachella Valley MSHCP)

Some non-Federal lands within the purported historical range of Casey's June beetle are proposed for management under the Coachella Valley Multiple Species Habitat Conservation Plan (Coachella Valley MSHCP). The Service issued a single incidental take permit (Service file: TE-104604-0 (Service 2008)) under section 10(a)(1)(B) of the Act to 19 permittees under the Coachella Valley MSHCP for a period of 75 years on October 1, 2008. Although Casey's June beetle was initially considered for coverage under the Coachella Valley MSHCP, the 10(a)(1)(B) permit did not include Casey's June beetle as a covered species. Because it is not a covered species, the

Coachella Valley MSHCP does not provide specific measures for the protection or conservation of the species and its habitat, nor does the incidental take permit authorize take of the species. We are working with individual permittees within the species' range to address the species' needs in their planned projects. We are engaged in discussions with the City of Palm Springs, Riverside County FCWCD, and the California Department of Transportation (Caltrans) to avoid, minimize, and offset impacts to the species appropriately. However, actions taking place after the effective date of this final rule would require any take associated with their activities be exempted from the prohibitions of section 9 of the Act through section 7 consultation (where appropriate) or permitted under an amendment to the Coachella Valley MSHCP or a separate HCP focused on the Casey's June beetle. No such amendment or permit is currently in place.

#### Summary of Factor A

Within the historical distribution of Casey's June beetle, we estimate that over 97 percent of habitat likely to have been occupied by Casey's June beetle has been converted to development or rendered unsuitable due to impacts of adjacent development. Loss of occupied habitat has continued since the early 1990s. Twenty-eight percent (287 ac (116 ha)) of the 1,018 ac (412 ha) of contiguous suitable habitat for Casey's June beetle identified as extant (based on 1991 aerial photographs) has been lost to development. From 2003 to 2005, the loss of occupied Casey's June beetle habitat occurred at a rate of 3.8 percent per year. Although habitat loss since 2005 has slowed (likely due to the economic downturn), development and habitat impact trends are continuing (see above discussion of Eagle Canyon project approved by the City of Palm Springs), and we anticipate additional upland habitat for the beetle may be impacted or lost in the foreseeable future. Based on recent information and calculations, we estimate the amount of undeveloped habitat currently occupied by the species is approximately 605 ac (245 ha) (including all non-contiguous habitat containing any soil types used by the species). Based on current projected development and habitat impacts, the loss of historically occupied locations, the limited distribution of Casey's June beetle, existing and future habitat fragmentation, habitat disturbance, and land use changes associated with urbanization, we find that the threats associated with the present and

threatened destruction, modification, and curtailment of Casey's June beetle habitat are significant. These threats are currently ongoing and will continue into the foreseeable future.

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

We are not aware of any information regarding overutilization of Casey's June beetles for commercial, recreational, scientific, or educational purposes and do not consider collection for these activities to be a threat to the species at this time.

#### C. Disease or Predation

We are not aware of any information regarding threats of disease or predation to Casey's June beetle and do not consider disease or predation to be a threat to the species at this time.

#### D. The Inadequacy of Existing Regulatory Mechanisms

Existing regulatory mechanisms that could provide some protection for Casey's June beetle include: (1) Federal laws and regulations; (2) State laws and regulations; and (3) local land use processes and ordinances (for example, tribal environmental policies). However, these regulatory mechanisms are not preventing continued habitat modification and fragmentation. There are no regulatory mechanisms that specifically or indirectly address the management or conservation of habitat for Casey's June beetle. However, there are regulatory mechanisms that could provide incidental benefit to Casey's June beetle. The following section discusses these mechanisms.

#### Federal Laws

All Federal agencies are required to adhere to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) of 1970 for projects they fund, authorize, or carry out. The Council on Environmental Quality's regulations for implementing NEPA (40 CFR parts 1500-1518) state that, in their environmental impact statements, agencies shall include a discussion on the environmental impacts of the various project alternatives (including the proposed action), any adverse environmental effects which cannot be avoided, and any irreversible or irretrievable commitments of resources involved (40 CFR part 1502). NEPA itself is a disclosure law that provides an opportunity for the public to submit comments on the particular project and propose other conservation measures that may directly benefit listed species; however, it does not require subsequent

minimization or mitigation measures by the Federal agency involved. Any such measures are typically voluntary in nature and are not required by the statute. Activities are subject to NEPA regardless of ownership if there is a Federal nexus, such as under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) and tribal lands held in trust by the Bureau of Indian Affairs.

The Clean Water Act (CWA) is the primary mechanism in the United States for surface water quality protection. It establishes the basic structure for regulating discharges of pollutants into waters of the United States. It employs a variety of regulatory and non-regulatory tools to reduce direct water quality impacts, finance water treatment facilities, and manage polluted run-off. The CWA made it unlawful to discharge any pollutant from a point source into navigable water unless a permit was obtained. The EPA's National Pollutant Discharges Eliminations System permit program controls discharges. The EPA determines water quality standards for each State, and the CWA requires States to either adopt this level or determine another with documentation (EPA 2000, p. 31682). Under section 404, the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material into waters of the United States, which include navigable and isolated waters, headwaters, and adjacent wetlands (33 U.S.C. 1344). In general, the term "wetland" refers to areas meeting the Corps' criteria of hydric soils, hydrology (either sufficient annual flooding or water on the soil surface), and hydrophytic vegetation (plants specifically adapted for growing in wetlands). Any action with the potential to impact waters of the United States must be reviewed under the CWA. These reviews require consideration of impacts to water quality and recommendations for mitigation of significant impacts. Most wash habitat suitable for Casey's June beetle could meet the definition of waters of the United States; thus some impacts to this sensitive taxon and its habitat within the wash could potentially fall under Corps' jurisdiction and be averted. However, the CWA has not proven sufficient to alleviate threats to Casey's June beetle and its habitat to date.

#### State Laws

The California Environmental Quality Act (CEQA) requires disclosure of potential environmental impacts resulting from public or private projects carried out or authorized by all non-Federal agencies in California. The CEQA guidelines require a finding of significance if a project has the potential

to "reduce the number or restrict the range of an endangered, rare or threatened species" (CEQA Guideline 15065). As a candidate species for Federal listing, Casey's June beetle is considered rare under CEQA Guideline 15380. The lead agency can either require mitigation for unavoidable significant effects or decide that overriding considerations make mitigation infeasible (CEQA Guideline 21002). Although such overrides are rare, the possibility remains that projects that cause significant environmental damage, such as taking of endangered species or destruction of their habitat, will be approved. Therefore, protection of listed species through CEQA is dependent upon the discretion of the agency involved. Furthermore, because the availability of occupied and suitable Casey's June beetle habitat is extremely limited, regulatory protections such as CEQA that do not prohibit mortality or habitat loss, nor require acquisition of available habitat to mitigate such losses, would not be sufficient to reduce threats or prevent the species' extinction.

The California Endangered Species Act (CESA) provides protections for many species of plants, animals, and some invertebrate species. However, insect species, such as Casey's June beetle, are not afforded protection under CESA. Therefore, this existing regulatory mechanism does not provide for the protection of Casey's June beetle or its habitat.

#### Existing Tribal Regulatory Mechanisms

Based on occurrence of soil types and species collection records, historically (pre-European settlement), Casey's June beetle potentially occupied 5,834 ac (2,361 ha) (18 percent) of tribal land. Lands within the Agua Caliente Band of Cahuilla Indians' reservation encompass 274 ac (111 ha), or approximately 45 percent of the estimated extant Casey's June beetle habitat. All post-1996 development of occupied habitat, with the exception of the Smoke Tree Commons and Cottages projects, has occurred on Agua Caliente Band of Cahuilla Indians' reservation land. The remaining undeveloped suitable upland habitat on the Agua Caliente Band of Cahuilla Indians' reservation land is relatively flat and adjacent to, or surrounded by, recent development (Anderson and Love 2007, pp. 1–3), and some of these lands are approved for development by the City of Palm Springs and will likely be developed (see the discussion of the Eagle Canyon project under *A. The Present or Threatened Destruction, Modification, or Curtailment of the*

*Species' Habitat or Range* section above).

In a letter to the Carlsbad Fish and Wildlife Office's Field Supervisor dated October 10, 2006, the Tribe stated they had " \* \* \* enacted a Tribal Environmental Policy Act to, among other things, ensure protection of natural resources and the environment. See Tribal Ordinance No. 28 at I.B., (2000)." The referenced Tribal Environmental Policy Act (Tribal Act) (ACBCI 2000) states that the Agua Caliente Band of Cahuilla Indians (Tribe) is the lead for preparing environmental review documents, and that tribal policy is to protect the natural environment, including "all living things." According to the Tribal Act (ACBCI 2000, p. 4), the Tribe will consult with any Federal, State, and local agencies that have special expertise with respect to environmental impacts. In a second letter dated April 29, 2010, the Tribe further stated they have chosen not to delegate land use authority to a local agent (such as the City of Palm Springs) in the area of the reservation south of Acanto Drive. Instead, the Tribe stated they directly regulate land use in this area through the Indian Canyons Master Plan and tribal zoning designation.

Several projects implemented on tribal reservation lands since the enactment of the Tribal Act have impacted Casey's June beetle habitat. Casey's June beetle occupancy of the Bogert Trail site in the vicinity of South Palm Canyon Drive on tribal land (Duff 1990, pp. 2–3, 4; Hovore 1997b, p. 4; Barrows and Fisher 2000, p. 1; Hovore 2003, p. 4; Cornett 2004, p. 3) has been greatly reduced, if not eliminated, by development since our receipt of the petition to list the Casey's June beetle in 2004 (see *A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range* above). The Alta and Monte Sereno development projects eliminated most of the species' upland habitat estimated to have been occupied in 2003 outside of Smoke Tree Ranch. Hovore (2003, p. 4) estimated that grading for the Alta project near South Palm Canyon Drive and Bogert Trail in May 2003 reduced the known extant Casey's June beetle population size by "about one-third."

No Federal, State, or local agencies that have special expertise with respect to environmental impacts to Casey's June beetle were consulted and no review documents were prepared by the Tribe prior to the recent development of the Alta and Monte Sereno projects in occupied Casey's June beetle habitat. Therefore, our conclusion is that the



Tribal Act does not effectively protect the species' habitat. The Chief Planning and Development Officer for the Tribe (Davis, pers. comm. 2007) affirmed that the Tribal Act does not apply to all tribal reservation lands; for example, the currently planned Alturas development project (see *A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range* above) is not covered, because it is "fee land." Although State environmental review documents (CEQA Environmental Impact Reports) were prepared by private consultants and reviewed by the City of Palm Springs for the Eagle Creek development project, the Tribe did not participate in the review or comment with regard to Casey's June beetle (Davis, pers. comm. 2007). Summary of Factor D

Existing regulatory mechanisms are not adequate to protect Casey's June beetle or its habitat. Occupied habitat continues to be lost to development projects, such as those in the Bogert Trail area, which were constructed without any Casey's June beetle mitigation. Because existing regulatory mechanisms do not provide adequate protection for this species or its habitat throughout its range, we believe this presents a significant threat to the survival of Casey's June beetle, both now and in the foreseeable future.

#### *E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species*

The Casey's June beetle population may be impacted by other natural or anthropogenically influenced factors, such as changing environmental conditions resulting from climate change, increased intensity and frequency of scouring events in wash habitat, and indirect effects associated with adjacent development. However, there are no species-specific, scientific, published models describing or predicting the magnitude of these threats, and this should be the subject of future research.

#### Stream Channelization

Past and ongoing development adjacent to Palm Canyon Wash, channelization of the wash to protect development, and development of associated flood-control levees are all likely to increase Casey's June beetle mortality during flood events. Urban development adjacent to natural creek beds or washes concentrates stream flow by constraining channel width, thereby increasing the speed of water flowing past a given location (Poff *et al.* 1997, p. 772). Therefore, scouring events that cause species mortality are likely to

occur more frequently today than they did prior to development. Scouring events may temporarily eliminate Casey's June beetles within Palm Canyon Wash (Hovore 2003, p. 9; Cornett 2004, p. 14). After scouring or long-term inundation events, depopulated wash habitats would be slowly repopulated by females from neighboring occupied, higher elevation habitat. However, if scouring events increase in frequency, there may be insufficient time for females to emigrate from higher elevation refugia between scouring flow events. We do not know how far or how fast females can emigrate from upland refugia; however, we expect that travel across land would be relatively slow and occur over short distances compared to males that can fly. Should these recolonization events fail, Casey's June beetles may become extirpated from Palm Canyon Wash, which comprises a significant portion of the known occupied habitat area. We believe the increased frequency of scouring events due to indirect effects of development adjacent to the Wash poses at least a moderate threat to Casey's June beetle, both now and in the foreseeable future.

#### Climate Change

Casey's June beetle is sensitive to changes in climate factors, such as increased windspeed and temperatures (that dry alluvial soils and disperse female pheromones), and increased catastrophic flood events (Noss *et al.* 2001, p. 42; LaRue pers. comm. 2006). As discussed above, increased intensity and frequency of flooding and scouring events from habitat modification in Palm Canyon Wash is of particular concern for Casey's June beetle. However, this increased flooding and scouring may also result from changes in climatic conditions. The global frequency of heavy precipitation events has increased since 1960, consistent with warming and observed increases of atmospheric water vapor, and it is "very likely" (90 percent confidence) that heavy precipitation will generally become even more frequent over most land areas (IPCC 2007, pp. 2 and 8–9). A review of literature and historic climate data specific to the area of Casey's June beetle (Anderson 2007, pp. 1–6) indicated temperature, precipitation, peak stream flow (NWIS 2008), and other weather patterns since 1950, are consistent with global patterns described and predicted by the IPCC (2007 p. 2, pp. 8–9, and 15). General Circulation Models predict a 1 to 3 °Fahrenheit (°F) (0.5 to 1.7 °Celsius (°C)) rise in temperature and at least a 25 percent increase in precipitation by

2050, to as much as a 50 percent increase in precipitation as early as 2030 for California (Giorgi *et al.* 1994, pp. 375–399; Field *et al.* 1999, pp. 5–10), and increasing intensity of flood and drought events (Giorgi *et al.* 1994, pp. 375–399; Dessens 1995, pp. 1241–1244). Downscaled average climate model predictions for Casey's June beetle habitat calculated using Climate Wizard (Maurer *et al.* 2007; medium A1 scenario for 2050) predict an increase in temperature of 5 °F (2.8 °C) and a 5 percent increase in annual precipitation. Increased temperatures, combined with concentration of total annual precipitation into more extreme storm events with associated high wind speeds should cause soil drying, as a result of increased evaporation and runoff, regardless of an increase in total annual precipitation (Field *et al.* 1999; pp. 9 and 20). Therefore, per Field *et al.* (1999, pp. 9 and 20) and the above Climate Wizard predictions, drought frequency, soil dryness, and the frequency of flash flood scouring events over saturated winter soils are expected to increase in the future. Alternating drought and flash flood events may exacerbate threats already facing the species as a result of its small population size and threats to its habitat.

The Application of the NatureServe Climate Change Vulnerability Index (NatureServe 2010) ranked Casey's June beetle as extremely vulnerable (abundance and range extent within geographical area assessed extremely likely to substantially decrease or disappear by 2050) based primarily on climate model predictions, dependence on a moisture regime, vulnerability to disturbance regime change, restricted mobility, historical reduction of occupied habitat, and its narrow endemic status (Anderson 2010, p. 1). Therefore, the best available science indicates ongoing changing environmental conditions resulting from climate change effects pose a significant threat to Casey's June beetle, both now and in the foreseeable future.

#### Artificial Light

Insect surveys using light traps have recorded male Casey's June beetles traveling up to 328 ft (100 m) to artificial light sources (Osborne, Osborne Biological Consulting, pers. comm. 2008a). Such artificial light sources as black lights or mercury vapor lights may draw males in a line-of-sight radius from existing habitat (Hovore 2003, p. 3). As males fly in search of female pheromone plumes (Domek *et al.* 1990, pp. 271–276), they may become distracted by light sources that attract

them to sites that are out of suitable habitat for this species where they are preyed upon, or to local swimming pools, that are also an unnatural source of light even if it is only reflected, where they end up in pool skimmers and often drown. Swimming pools are one common source for male Casey's June beetle specimens (Barrows 1998, p. 1; Barrows and Fisher 2000, p. 1; Cornett 2004, p. 5) and may serve as a genetic sink for this species. If large numbers of male Casey's June beetles are lost as a result of these indirect effects of development, there could be reduced genetic diversity in males available for mating. Male beetles located at habitat patch edges closer to light sources would be more susceptible to distraction than those located at the center of patches. The loss of large numbers of these male Casey's June beetles would diminish the overall genetic diversity of the population. We believe that loss of male beetles due to unnatural light sources attracting beetles into development adjacent to upland habitat poses at least a moderate threat to Casey's June beetle, both now and in the foreseeable future.

#### Soil Disturbing Activities

Foot, vehicle, and horse traffic and other soil disturbing activities from adjacent developed areas are likely to cause direct mortality of adults because adult female Casey's June beetles are flightless. It is also likely that vehicle traffic could compress or compact soils to a depth deep enough to kill Casey's June beetle larvae. Discing, grading, soil removal, and soil filling all have the potential to harm individuals below the soil surface. These activities are a common occurrence, as evidenced by eyewitness accounts (Anderson 2006, pp. 17, 20, 22; Hawks pers. comm. 2011b) and aerial imagery from multiple years.

#### Small Population Size and Restricted Range

As stated above, Casey's June beetle is part of a genus of beetles that have naturally restricted ranges, and it is adapted to specialized habitat and soil types within the eastern foothills of the San Jacinto Mountains from the City of Palm Springs south to the community of Indian Wells. Casey's June beetle occupies only a portion of this area, and the majority of the occupied area is threatened by development, habitat fragmentation, or other anthropogenic or natural factors. In addition to having a restricted range and small population size, the species also has limited dispersal capabilities (Hovore 2003, p. 3). These conditions most likely

increase the degree of threat due to chance events, such as floods or drought, that are beyond the natural variability of the ecosystem (Lande 1993, p. 912). The risk of local extinction is widely noted to increase as the fraction of occupied habitat patches, occupied patch area, and density of occupied patches decrease (Forman and Godron, 1986, pp. 87–91; Hanski 1991, pp. 17–38; Hanski *et al.* 1995, pp. 21–28; Hokit and Branch 2003, pp. 1060–1068).

#### Summary of Factor E

Casey's June beetle is negatively affected by increased intensity and frequency of catastrophic flood events; environmental effects resulting from changing climatic patterns; loss of individuals due to foot, vehicle, horse traffic and other soil disturbing activities; and loss of individuals due to attraction to light sources. We conclude from available information that climate change is likely to reduce Casey's June beetle population densities by increasing scouring events and decreasing water retention in the soil. Additional development within or adjacent to Casey's June beetle habitat will likely increase traffic into habitat areas and include external lighting and swimming pools, all of which may result in additional losses and will continue to adversely affect the existing population. Therefore, we find that other natural or manmade factors in total pose a significant threat to the continued existence of Casey's June beetle, both now and in the foreseeable future.

#### Determination

Section 3 of the Act, defines the term "endangered species" to mean any species which is in danger of extinction throughout all or a significant portion of its range. The term "threatened species" is defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

We carefully assessed the best available scientific and commercial information regarding the past, present, and future threats to Casey's June beetle. We also consulted with recognized Casey's June beetle experts on the species' status and trends. Although quantification of population numbers has not been possible, given the cryptic nature of this species and limited historical survey data, this species' highly restricted geographic range relative to its historical distribution (as evidenced by documented loss of occupied habitat; see above discussion), ongoing habitat impacts and losses, and

slow female dispersal rate make it particularly susceptible to extinction from random events such as flood scouring or isolation through habitat fragmentation.

As described in detail above, projections for human population growth extend out to 2030 in Palm Springs (SCAG 2004). Such projections frame our analysis as they help us understand what factors can reasonably be anticipated to meaningfully affect the species' future conservation status. We updated our original analysis by Anderson and Love (2007, pp. 1–2) to determine rates of habitat loss in southern Palm Springs from 1991 to 2008. During that time, Casey's June beetle experienced an approximate 22 percent reduction in contiguous, undeveloped habitat from 1,001 ac (405 ha) in 1991 to 794 ac (321 ha) in 2008. Habitat loss was greatest in the 2003 to 2005 time period, and impacts have continued to occur. Habitat has been lost at a rate of 1.6 percent per year from 1991 to 1996, 0.6 percent per year from 1996 to 2003, 3.8 percent per year from 2003 to 2005, and 0.7 percent per year from 2005 to 2008. These habitat loss estimates do not include the area west of South Palm Canyon Drive that we determined is not likely suitable habitat (see *New Species Information* section above and Summary of Changes From the 2009 Proposed Critical Habitat Rule section below).

In summary, the most significant threat to Casey's June beetle, as described in the Factor A discussion, is loss of its habitat. This species faces immediate and continuing threats from development of habitat and habitat fragmentation and degradation. Additionally, a variety of other threat factors (which fall under Factor E) continue to negatively affect the species (including changes in environmental conditions resulting from climate change impacts, attraction to artificial light sources, swimming pools, and other sources of direct mortality). Furthermore, as described in the Factor D discussion, existing regulatory mechanisms provide insufficient protection of Casey's June beetle habitat, the loss of which is the most significant threat to the species. The threats described above for Casey's June beetle occur uniformly across its entire range, resulting in a negative impact on the species' distribution, abundance, and survivability. As discussed in the July 9, 2009, proposed rule (74 FR 32859), what we believe is a single remaining Casey's June beetle population (fragmented into several areas) may already have reached the point where it is not naturally sustainable.

Therefore, based on the best available scientific and commercial information that has identified the species as having an extremely restricted range and uniformly facing ongoing and projected threats, we find that Casey's June beetle is in danger of extinction throughout all of its range. The threats that Casey's June beetle face are currently occurring, and we see evidence that the threats have already negatively impacted the species, and that the species is endangered now. The threats to its continued existence are not commencing in the foreseeable future, which would result in a status determination of threatened. Consequently, we are listing Casey's June beetle as an endangered species under the Act.

#### 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 results in public awareness and conservation by Federal, State, and local agencies; private organizations; and individuals. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection measures required of Federal agencies and the prohibitions against certain activities are discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as

described in the preceding paragraph include, but are not limited to, management and any other landscape-altering activities on Federal lands administered by agencies such as the Department of Defense, U.S. Fish and Wildlife Service, Bureau of Land Management, and U.S. Forest Service; issuance of section 404 Clean Water Act permits by the U.S. Army Corps of Engineers; leases on Tribal Trust lands that require Bureau of Indian Affairs approval; construction and management of gas pipeline and power line rights-of-way by the Federal Energy Regulatory Commission; and construction and maintenance of roads or highways by the Federal Highway Administration. We are engaged in discussions with Caltrans (designated non-Federal representative for the Federal Highway Administration) to avoid, minimize, and offset impacts to Casey's June beetle as part of projects funded by that agency.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. The prohibitions, codified at 50 CFR 17.21 for endangered wildlife, 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 to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered or threatened wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered species, and at 17.32 for threatened species. With regard to endangered wildlife a permit must be issued for the following purposes: For scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. We are engaged in discussions with the City of Palm Springs, Riverside County FCWCD, and Caltrans to avoid, minimize, and offset impacts to the species resulting from activities undertaken by those entities under an amendment to the Coachella Valley MSHCP or a separate HCP focused on the Casey's June beetle, but no such

amendment or permit is currently in place.

#### Critical Habitat Designation for Casey's June Beetle

##### *Critical Habitat Background*

It is our intent to discuss below only those topics directly relevant to the designation of critical habitat for Casey's June beetle in this section of the final rule.

Critical habitat is defined in section 3 of the Act as:

(1) The 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

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot otherwise be relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies insure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner seeks or requests Federal agency funding or authorization for an action that may affect a listed species or

critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it is listed must contain the physical or biological features that are essential to the conservation of a species and which may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat), focusing in on the principal biological or physical constituent elements (primary constituent elements) within the defined area that are essential to the conservation of the species (such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type). Primary constituent elements are the elements of physical or biological features that are essential to the conservation of the species.

Under the Act, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. According to regulations at 50 CFR 424.12, we designate critical habitat in areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species. When the best available scientific data do not demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species. An area currently occupied by the species but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act, (published in

the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include any potential recovery planning for the species, articles in peer-reviewed journals, conservation plans developed by States and counties for this or similar species, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. Climate change will be a particular challenge for biodiversity because the interaction of additional stressors associated with climate change and current stressors may push species beyond their ability to survive (Lovejoy 2005, pp. 325–326). The synergistic implications of climate change and habitat fragmentation are the most threatening facet of climate change for biodiversity (Hannah *et al.* 2005, p. 4). Current climate change predictions for terrestrial areas in the Northern Hemisphere indicate warmer air temperatures, more intense precipitation events, and increased summer continental drying (Field *et al.* 1999, pp. 1–3; Hayhoe *et al.* 2004, p. 12422; Cayan *et al.* 2005, p. 6; Intergovernmental Panel on Climate Change (IPCC) 2007, p. 1181). Climate change may lead to increased frequency and duration of severe storms and droughts (McLaughlin *et al.* 2002, p. 6074; Cook *et al.* 2004, p. 1015; Golladay *et al.* 2004, p. 504). See discussion regarding climate change and impacts on Casey's June beetle and its habitat under *E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species* above.

We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas

that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) the prohibitions of section 9 of the Act if actions occurring in these areas may affect the species. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

#### Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the species and which may require special management considerations or protection. These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
  - (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
  - (3) Cover or shelter;
  - (4) Sites for breeding, reproduction, and rearing (or development) of offspring; and
  - (5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.
- We derive the specific physical or biological features required for Casey's

June beetle from studies of the species' habitat, ecology, and life history as described in the Critical Habitat section of the proposed rule published in the **Federal Register** on July 9, 2009 (74 FR 32857).

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

Casey's June beetle is associated with native Sonoran (Coloradan) desert vegetation located on desert alluvial fans and bajadas (compound alluvial fans) at the base of the Santa Rosa Mountains in the Coachella Valley, Riverside County, California. Sonoran desert habitat is characterized as scattered assemblages of broad-leaved microphyll shrubs with an open canopy (Mayer and Laudenslayer 1988, p. 114). The open canopy provides space for male beetles to fly in search of females and fulfill normal life-history activities. Disturbed and altered habitats harboring nonnative species that are dominated by native vegetation also support the species (see Summary of Changes From the 2009 Proposed Critical Habitat Rule section below). This habitat also provides the micro-habitat space inhabited by Casey's June beetle. Individual shrubs provide refugia for the underground stage of the beetle's life history, protecting emergence holes from anthropogenic disturbance and enhancing survival of individuals.

Habitats utilized by Casey's June beetles experience varying levels and types of anthropogenic disturbance. In general, the species uses soil surfaces to burrow and deposit eggs. After beetles emerge, emergence holes are easily detectable beneath shrub canopies where they are protected from human activity. Many emergence holes do occur in the open, but are apparently destroyed or disturbed by "equestrians, vehicles, and other human activities" (Hovore 2003, p. 3). Therefore, the habitat where subterranean larvae, and females waiting on the surface for mates, are protected from human impacts is clustered around trees and shrubs where there is intact crustal soil (Hovore 2003, p. 3). These individual shrubs are refugia for the underground and reproductive stages of the beetle's life history, which protect them from anthropogenic disturbance. The emergence holes in undisturbed soil do not reflect the entire distribution of the emergence holes (the primary indicator of occupancy) because disturbance easily destroys evidence of the hole, but instead represent the remaining intact holes observable following a disturbance (Hovore 2003, p. 3; Hawks pers. comm. 2011b). Driscoll and Weir (2005, pp. 182–194) reported that

flightless or subterranean beetle species that lived in disturbed, fragmented habitats were at greater risk of extirpation compared to those in intact, less-disturbed habitats. See the *Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements* section for more specific information on soil characteristics and nutritional requirements.

In addition to anthropogenic disturbance, Casey's June beetle habitat undergoes natural disturbance. Palm Canyon Wash experiences intense flooding and scouring about once every 10 years (Cornett 2004, p.14), with turbulence that can excavate and unearth sand where the species may occur (Wright, independent biological consultant, pers. comm. 2003; NWIS 2008). These events are likely to extirpate Casey's June beetles from locations within the wash; however, these areas may subsequently be recolonized by beetles from surrounding upland areas or local refugia. It is hypothesized that the wash serves as a sink area (an area where the rate of immigration exceeds emigration and the population segment is dependent on immigration to maintain a nonnegative growth rate) for Casey's June beetle (Cornett 2004, p.14), but wash habitat may also serve as a source area when population densities are high between flooding events. If correct, these concepts indicate the need to conserve both upland and wash habitat to achieve conservation of the species.

*Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements*

Vegetation, soil, and climate contribute to the nutritional and physiological requirements of Casey's June beetle. It is hypothesized that beetle larvae feed on organic matter and detritus below ground (Hovore 2003, p. 2; LaRue pers. comm. 2004). Observations of adult Casey's June beetles feeding underground have not yet occurred (Hovore 1995, p. 2); however, accumulation of leaves around shrubs contribute to surface litter and subsurface detritus. Additionally, annual plants and grasses growing in association with these desert scrubs also contribute to surface litter and likely provide an additional food source such as radicum (plant rootlets) (Simpson 1968, p. 500; LaRue, pers. comm. 2004). Hill and O'Maly (2009, p. 1) found that the frass pellets of larvae of another endangered June beetle (Mount Hermon June Beetle) contained a variety of plant species and fungi material demonstrating that they are not specialist host plant feeders but are

microhabitat specialists. Hawk's (2010, p. 2) observations at Smoke Tree Ranch indicate Casey's June beetle may be similar, "We did not observe females at Smoke Tree [Ranch], but many hundreds of emergence holes associated with native vegetation, irrigated tamarisk, fan palms, oleander, and olive. We still are not sure what plants of any sort mean to [Casey's June beetle] grubs \* \* \*." Therefore, the hypothesis that Casey's June beetles feed on organic matter and detritus below ground is supported by the best available scientific information.

The Palm Springs area has slightly higher precipitation than surrounding areas in the eastern Coachella Valley, due to its proximity to the base of the San Jacinto and Santa Rosa Mountains (LaRue pers. comm. 2006). This precipitation keeps the underlying soil damp, which is an important component for Casey's June beetle life history because they, like many other subterranean scarab beetles, prefer the interface between surface soil and damp subsoil (Hovore 1995, p. 6; LaRue pers. comm. 2008). The depth of the damp soil is generally between 4 inches (in) (10 centimeters (cm)) to 8 in (20 cm) (Hovore 1995, p. 5) and averages 72 to 78 °F (22 to 26 °C) (USDA 1980, p. 11). This depth coincides with the depth at which larvae are usually found (2 in (5 cm) to 8 in (20 cm)) (LaRue pers. comm. 2004). Individual scrub plant architecture has developed for maximum capture of precipitation, channeling water along stems to the central root system. Moisture in the soil layer prevents desiccation of larvae and eggs and maintains a constant temperature (LaRue pers. comm. 2008). Additionally, areas with higher soil moisture are associated with a higher density of vegetation and microorganisms, such as fungi and bacteria believed to provide a more diverse food source for beetle larvae (LaRue pers. comm. 2008).

The Sonoran desert plant community endemic to the Palm Canyon Wash and adjacent terraces also serves to maintain habitat consistency. The Carsitas series soils have a water table located from 2 to 6 ft (0.6 to 1.9 m) deep. Shrubs are important in water and nutrient cycling in desert ecosystems (Sala *et al.* 1989, pp. 501–505; McAuliffe 1994, pp. 111–148). Desert shrubs have deeper root systems that bring water from lower levels up to higher levels, cycle nutrients through the soil, and mediate diurnal temperature variations. Midday temperatures are lower near the center of desert scrub patches than in areas outside the canopy (Weins 1985, pp. 174–176). The combination of moisture

cycling, diurnal temperature variation, and seasonal climate variation (Rosenburg 1974, pp. 66–74) may provide beetle larvae with a gradient of micro-environments to inhabit in the subsoil through the year, thereby allowing them to maintain optimal body temperature and humidity levels. Therefore, the precipitation within the Palm Canyon area, and its influence on the local plant community, may be a unique factor required for Casey's June beetle.

Soils associated with known occurrences of Casey's June beetles are described by Hovore (2003, p. 2) as almost entirely of the Carsitas Series (CdC), typically gravelly sand, single grain, slightly effervescent, moderately alkaline (pH 8.4), loose, non-sticky and non-plastic, and deposited on 0 to 9 percent slopes. These soils show light braiding and some organic deposition on alluvial terraces and where they occur within washes, although they generally do not receive scouring surface flows (Hovore 2003, p. 2). Additionally, Casey's June beetle is associated with RA and ChC soils (Anderson 2007, p.1), usually occurring in these soils when they are contiguous with CdC soil. The CdC type soils may also contain small inclusions of fine or coarse soils, such as MaB and CpA (USDA 1980, pp. 11–12, 16, and 23).

Riverwash (RA) soil is also an important component of Casey's June beetle habitat because organic matter and vegetation is uprooted, redistributed, and buried in the wash during flood events. Debris deposited by these hydrological processes and periodic flooding are essential to maintain alluvial soils in Palm Canyon Wash and may serve as new or re-conditioned habitat.

#### *Cover or Shelter*

The upland terraces and Palm Canyon Wash are the majority of remaining areas known to be inhabited by Casey's June beetle. The upland terraces offer the only known shelter from flooding and scouring events and ORV impacts, as vehicles tend to remain within the wash. Because the Palm Canyon Wash experiences periodic flooding and scouring that is likely to impact the species, upland terraces are essential to the conservation of Casey's June beetle for long-term maintenance of the population. Systematic surveys in wash areas contiguous with upland habitat indicate this area is also important to the long-term survival of the species (per above discussion, when population segment numbers have increased to the point where the emigration rate exceeds immigration and the habitat is a

“source”). Both the upland terraces and Palm Canyon Wash contain soil types and vegetation conducive to burrowing and support the nutritional and physiological processes essential for the species.

#### *Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring That Are Protected From Disturbance*

Casey's June beetle breeding and dispersal mechanisms require specific habitat important to species' reproduction. During breeding, adults of the species are most active at dusk. Females emit pheromones to attract males to burrows for the purposes of mating. Breeding success depends on males' ability to detect pheromones and ability to maneuver to remain in contact with the pheromone plume (Domek *et al.* 1990, pp. 271–276). The southern Palm Springs area is surrounded by mountains and ridges that protect the area from the high winds that are frequent in the Coachella Valley (Wright pers. comm. 2004), thus providing conditions that are conducive to successful male flight, and pheromone detection and tracking. Therefore, successful reproduction depends on shelter provided by the surrounding mountains and ridges.

Hawks (pers. comm. 2011a and b) noted that RA soil in the Palm Canyon Wash above approximately 580 ft (177 m) in elevation (just below the dam) becomes too disturbed, likely by natural scouring, to support Casey's June beetle. These data indicate suitable habitat associated with the wash is likely limited to soils contiguous with the wash up to 580 ft (177 m) in elevation (this includes some CdC soils contiguous with the wash at 580 ft (177 m) that extend up to approximately 620 ft (189 m) in elevation). These data also indicate relatively small patches of CdC soil that are only contiguous with more disturbed portions of the wash above 580 ft (177 m) in elevation in Palm Canyon are not likely to support Casey's June beetle occupancy because they appear isolated with regard to female immigration and are especially vulnerable to flood scouring. Hawks (pers. comm. 2011a) also noted that he had never observed emergence holes in ChC soil and expressed doubt that ChC soil not distributed as an inclusion in CdC soil provided habitat for Casey's June beetle.

Dispersal of Casey's June beetle is also limited by the flightlessness of females. This adaptation significantly hinders this species' ability to disperse or recolonize an area. Because female Casey's June beetles are flightless, the species' breeding system and the ability

of females to disperse over land (which is uncertain but much reduced compared to flight-capable males) is restricted geographically to a relatively small area. Females appear to emerge from burrows and remain on the surface nearby and then either re-enter these burrows or dig new burrows to lay eggs. If an isolated portion of the population were extirpated it would be difficult if not impossible for females to recolonize that area depending on the nature and extent of isolating factors (de Vries *et al.* 1996, pp. 332–342; Driscoll and Weir 2005, pp. 192–193) because flightless females disperse only by crawling and likely by water flow in wash areas (although it is unclear what the survival rate would be under water-flow dispersal). Because male Casey's June beetles cannot repopulate an area by themselves, and females are flightless, habitat fragmentation and isolation are significant threats to gene flow in this species. Therefore, connectivity of suitable habitats that provides for dispersal over multiple generations is essential to the conservation of the species.

Minimally disturbed suitable habitat is also essential to Casey's June beetle. As stated above, the adults of this species burrow in alluvial soils to lay eggs and the larval stages are known to live out this life stage in alluvial soil as well. Surfaces such as highly manipulated nonnative ornamental landscaping do not serve the same function as native or minimally disturbed habitat. Although Casey's June beetles are documented to occur in abundance within the residential community of Smoke Tree Ranch (Cornett 2004, Table 1; Hawks pers. comm. 2010), it is likely that breeding and female movement is largely restricted to the relatively undisturbed natural areas within the Smoke Tree Ranch property, and species abundance is primarily the result of: (1) Minimal past disturbance within a regulated and gated community; (2) a relatively large, contiguous, occupied, minimally disturbed, upland habitat area dominated by native plants; and (3) supplemental soil moisture from landscape watering.

#### *Primary Constituent Elements for Casey's June Beetle*

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of Casey's June beetle within the geographical area occupied at the time of listing, focusing on the features' primary constituent elements. We consider primary constituent elements to be the specific

elements of physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the species' life-history processes, we determine that the primary constituent elements (PCEs) specific to Casey's June beetle are:

(1) Soils of the Carsitas (CdC) gravelly sand and Riverwash (RA) series, or inclusions of Carsitas cobbly sand (ChC) series soils, or inclusions of Myoma fine sands (MaB) or Coachella fine sands (CpA) within CdC soils, at or below 620 ft (189 m) in elevation, associated with washes and alluvial fans deposited on 0 to 9 percent slopes to provide space for population growth and reproduction, moisture, and food sources; and

(2) Predominantly native desert vegetation, to provide shelter from traffic-related mortality and food for the species.

#### *Special Management Considerations or Protection*

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain the features that are essential to the conservation of the species and which may require special management considerations or protection. Special management of the physical or biological features is required in these areas to reduce threats to habitat. Major threats to Casey's June beetle habitat include: (1) Habitat disturbance; (2) habitat loss and fragmentation associated with development (such as grading, building roads and other infrastructure, and constructing commercial and residential structures); and (3) recreational activities (for example, ORV use and equestrian activities) as described in the Factor A and Factor E discussions in the Summary of Factors Affecting the Species section above.

Anderson and Love (2007) examined the rate of habitat loss since 1996, and additional analyses identified continuing habitat loss over the last 2 years. Because Casey's June beetle is now restricted to a relatively small area compared to its known historical range, and habitat loss and fragmentation are threats to the long-term viability of Casey's June beetle, special management considerations or protection of the PCEs are needed to address development or urban expansion impacts. Urban expansion should be avoided within or adjacent to Casey's June beetle habitat and linkage corridors between habitat

patches should be provided to address the protection necessary for this species at this time. Preserving habitat and corridors linking habitat patches have been shown, in general, to be vital for the conservation of many species, and it stands to reason this is true for a species such as Casey's June beetle that has flightless females.

#### **Criteria Used To Identify Critical Habitat**

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available to designate critical habitat. We reviewed available information pertaining to the habitat requirements of this species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we considered whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—is necessary to ensure the conservation of the species.

We designated critical habitat in areas we determined are within the species' present range and contain the physical or biological features essential to the conservation of the species. When determining the possible distribution of areas that meet the definition of critical habitat for Casey's June beetle, we considered all possibly suitable habitat patches remaining within the species' historical range, from the northeastern San Jacinto Mountain foothills, south to the City of Palm Desert. For Casey's June beetle, we limited critical habitat to the known present population distribution of the species (occupied habitat), because the only potentially suitable habitat patches outside that area occur primarily in small, fragmented, disjunct parcels, and many are highly disturbed. In this designation we have included both upland and wash habitats as well as connecting habitats which we determined are essential to the conservation of the species. Additional potential habitat outside the species' known present range (unoccupied areas) is relatively remote in relation to the likely flight movement distances of male beetles or terrain through which female beetles are likely to travel from occupied areas. Based on the best scientific information currently available, including recent negative surveys (see New Species Information section above), it is unlikely that these disjunct habitat patches would be capable of supporting reintroduced populations or remain viable due to their isolated, fragmented, and sometimes disturbed nature.

We consider all known occurrences of Casey's June beetle to constitute a single

population based on currently available data. Because of the limitations of surveys to detect insect occupancy, the population level is the appropriate scale at which to determine occupancy of areas designated as critical habitat. We assume all known occupied areas are within the same population distribution based on the potential for male movement among sites that contain the physical or biological features (see *New Species Information* section above). We determined all existing CdC and RA soils, and inclusions (all relatively small) of ChC, MaB, or CpA soils within CdC soils, that are contiguous with soils containing Casey's June beetle observation locations are occupied. We made this determination because larval and adult male and female occupancy of CdC and RA soils, and the likelihood of adult female and male movement within all these PCE soils defines occupancy appropriately for this species with regard to the definition of critical habitat. Therefore, we have determined all areas we are designating as critical habitat are currently occupied.

We used the following factors to delineate critical habitat: All areas (1) comprised of contiguous CdC or RA soils containing recent occurrence locations (1995 to present), or within the flight range of adult male Casey's June beetles from these recent locations; or (2) comprised of ChC, MaB, and CpA soils contiguous with these CdC or RA soils; and (3) that were not denuded, graded or landscaped; and (4) that are below 620 ft (189 m) in elevation; and (5) that were not otherwise determined to be unsuitable due to development-associated degradation (e.g., isolation, soil compaction). The designated critical habitat is designed to encompass the estimated Casey's June beetle population distribution and the soils and native vegetation needed for its long-term conservation. Changes to the PCEs from those described in the proposed rule (see Summary of Changes from the 2009 Proposed Critical Habitat Rule, below) did not affect our criteria, because areas containing the revised PCEs were already included in proposed critical habitat.

We delineated the critical habitat boundaries using the following steps:

(1) We mapped observations of Casey's June beetles from Bruyee (2006), Cornett (2004), Hovore (1997), Hovore (1995), Powell (2003), and Simonsen-Marchant (2000, 2001). These records were initially mapped over digital aerial photographs of the Palm Canyon area in the City of Palm Springs, California, acquired in June 2005 with a ground resolution of 3.28 ft (1 m). We believe these surveys are the best available data

on Casey's June beetle current distribution and provide a logical starting point for the delineation of critical habitat.

(2) We incorporated digital soil data produced by the USDA Natural Resources Conservation Service for all soils in the Palm Canyon area (USDA 2000). These data delineated CdC, RA, ChC, MaB, and CpA soils. We included areas where CdC soils were within the likely flight range of adult male Casey's June beetles from recent occurrence locations (1995–present). This mapping delineated the soils that are suitable for, and occupied by, the beetle.

(3) After mapping the soils, we examined the elevations of all Casey's June beetle observations. We determined the highest elevation of an occurrence was 580 ft (177 m), and we extended the boundary elevation 40 ft (12 m) to account for gradients between soil types and to include CdC soils contiguous with portions of the wash that are known to be occupied. As a result, we are limiting designation of critical habitat to areas below the 620-ft (189-m) contour.

(4) We utilized digital aerial photographs acquired in April 2008 with a ground resolution of 6 in (15 cm) to closely examine remaining areas to ensure they captured the physical or biological features necessary to support Casey's June beetle life-history functions. Specifically, we removed areas that did not have appropriate soils (such as golf course greens) or that contained large denuded or graded areas to eliminate areas that likely do not and could not support Casey's June beetles.

(5) We reviewed new scientific information regarding the species' southern population distribution limits and determined some areas were not likely to support occupancy now or in the foreseeable future and therefore did not meet the definition of critical habitat. Based on Hawk's (pers. comm. 2011a) observation that wash habitat soil suitability and occupancy ended at approximately 580 ft (177 m) in elevation, and did not extend south of the small dam in Palm Canyon, we determined that non-contiguous patches of CdC soils at the southern extreme of the area proposed as critical habitat are not likely within the current population distribution of the species, and are not likely to support occupancy in the future (see *New Species Information and Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring that are Protected from Disturbance* sections above). We further determined that the western isolated fragments of formerly occupied habitat associated with South Palm Canyon Drive and

Bogert Trail in the southern portion of the species' distribution were no longer occupied, and were too isolated by development and disturbed to support occupancy in the future (see *New Species Information* section above). Therefore, these areas were removed.

(6) Based on Hawks' (pers. comm. 2011a) observation that no burrow holes have ever been observed in ChC soil (see *New Species Information* section above), we removed all patches of ChC soil not completely surrounded by CdC and RA soils.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas, such as lands covered by buildings, pavement, and other structures, because such lands lack physical or biological features for Casey's June beetle. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this designated critical habitat are excluded by text in this final rule. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action may affect the physical or biological features in the adjacent critical habitat.

We are designating as critical habitat lands that we consider to be occupied at the time of listing and contain sufficient physical or biological features to support life-history processes essential to the conservation of Casey's June beetle.

#### **Summary of Changes From the 2009 Proposed Critical Habitat Rule**

Based on comments received during the public comment periods (see *Comments 2* and *4* in the Summary of Comments and Recommendations section below), and new survey information, we added explanations in the *New Species Information* and *Criteria Used To Identify Critical Habitat* sections above to better characterize our knowledge of the species' present range and the potential for occupied habitat outside the known present range.

The most significant changes from the 2009 proposed critical habitat rule to this final rule include:

(1) We determined two areas included in the proposed critical habitat designation do not contain the physical or biological features essential to the conservation of the species and,

therefore, do not meet the definition of critical habitat (see Critical Habitat Background section above for the definition of critical habitat). We determined the easternmost proposed critical habitat polygon located on State Route 111 between Broadmoor Drive and Golf Club Drive did not contain areas mapped as Carsitas (CdC) gravelly sand soil series (PCE 1). Based on new information submitted by a commenter and examination of digital aerial photography, we also determined a portion of land in the vicinity of Araby Drive was composed of elevated fill dirt and, therefore, did not contain the physical or biological features essential to the conservation of the species (see Summary of Comments and Recommendations section, *Comment 12*, below). The edge of the elevated fill dirt correlated with the parcel map boundary. Based on recent survey and habitat information (see *New Species Information* and *A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range* sections above) we determined that formerly occupied CdC and associated soils adjacent to and west of South Palm Canyon Drive are no longer likely to be occupied or to support occupancy in the future, and are therefore not essential for the conservation of the species. Therefore, these areas do not meet the definition of critical habitat. We further determined that the southernmost non-contiguous patches of CdC soil in Palm Canyon and two areas of ChC soil (in Palm Canyon and near Araby Drive) not completely surrounded by CdC and RA soil do not meet the definition of critical habitat. See *New Species Information* and *Criteria Used To Identify Critical Habitat* sections above for further discussion. Removal of these lands that were determined not to meet the definition of critical habitat resulted in a total reduction of 179 ac (73 ha) from the areas proposed for critical habitat designation in 2009.

(2) Per peer reviewer *Comment 2* in the Summary of Comments and Recommendations section below (see also *Comment 10*), satellite image assessment, and field survey information provided by David Hawks (pers. comm. 2010), we modified PCE 2 to include other Sonoran vegetation types and disturbed habitat. In the proposed rule it specified "Intact, native Sonoran (Coloradan) desert scrub vegetation and native desert wash vegetation that provide shelter and food for the species." In this rule, we specify PCE2 as, "Predominantly native desert vegetation, to provide shelter from



traffic-related mortality and food for the species.” This change to PCE 2 did not change areas identified as meeting the definition of critical habitat. The altered PCE more accurately characterized lands we had already determined met the definition of critical habitat.

(3) In the 2009 proposed rule, we stated we were not considering or proposing for exclusion under section 4(b)(2) of the Act tribal lands owned or managed by the Agua Caliente Band of Cahuilla Indians. Following review of tribal comments and an evaluation of our partnership with the Tribe, we determined that the benefits of exclusion outweigh the benefits of inclusion for tribal trust reservation lands (i.e., non-fee, non-allotted lands), and that exclusion of these lands will not result in extinction of the species. We believe that excluding Agua Caliente Band of Cahuilla Indians tribal trust reservation lands from this final critical habitat will preserve our partnership with the Tribes and foster future development of habitat management

plans with Agua Caliente Band of Cahuilla Indians and other tribes, thus positively affecting other listed species. Therefore, the Secretary is exercising his discretion to exclude a total of approximately 11 ac (4 ha) of non-fee, non-allotted tribal lands owned or managed by the Agua Caliente Band of Cahuilla Indians in this final critical habitat designation. For a complete discussion of the benefits of inclusion and exclusion, see *Application of Section 4(b)(2) of the Act*, below.

Of the approximately 777 ac (314 ha) of land proposed for critical habitat designation in 2009, approximately 587 ac (237 ha) are included in this final critical habitat designation. Our decision to not designate all of the proposed critical habitat does not imply that these non-designated areas are unimportant to Casey’s June beetle. Projects with a Federal nexus that occur in these areas, or other areas potentially occupied by Casey’s June beetle, which may affect the beetle must still undergo section 7 consultation. Our decision to

not designate critical habitat in these areas does not reduce the consultation requirement for Federal agencies participating in, funding, permitting, or carrying out activities in these areas.

**Final Critical Habitat Designation**

We are designating one unit as critical habitat for Casey’s June beetle. The critical habitat area described below constitutes our best assessment at this time of areas that meet the definition of critical habitat.

The approximate area of designated critical habitat for Casey’s June beetle is shown in Table 1 and totals 587 ac (237 ha), including 152 ac (62 ha) of tribal allotment and fee land, 141 ac (57 ha) of local government land, and approximately 301 ac (122 ha) of private and quasi-public (flood control and water conservation district) land. Area estimates reflect all land within the critical habitat unit boundaries. Area values were computer-generated using GIS software, rounded to nearest whole number, and then summed.

TABLE 1—DESIGNATED CRITICAL HABITAT FOR CASEY’S JUNE BEETLE

Location	Federal and state lands ac (ha)	Local government ac (ha)	Tribal allotment and fee lands ac (ha)	Private ac (ha)	Total ac (ha)
Palm Springs .....	0 (0)	141 (57)	152 (62)	301 (122)	587 (237)
Total Area Final Critical Habitat .....	0 (0)	141 (57)	152 (62)	301 (122)	587 (237)

**Note:** Area sizes may not sum due to rounding.

We present a brief unit description, and reasons why the unit meets the definition of critical habitat for Casey’s June beetle, below.

*Palm Springs Unit*

The unit consists of 587 ac (237 ha) and is located in Riverside County, California, and extends from the confluence of Andreas Canyon Wash with Palm Canyon Wash northward along the toe of slope northeastward (downstream) along Palm Canyon Wash, crossing East Palm Canyon Drive to south and east of Gene Autry Trail. The unit includes Palm Canyon Wash and contiguous suitable soils from the entrance of Indian Canyons north to Calle Arriba, and one area south of and adjacent to East Palm Canyon Drive (SR 111) west of Gene Autry Trail.

The entire critical habitat unit is considered occupied by Casey’s June beetle and contains the physical or biological features essential to the conservation of the species, including alluvial soils of the CdC, RA, ChC (if mapped as completely surrounded by

CdC and RA soils), MaB, and CpA soil series at or below 620 ft (189 m) in elevation, associated with washes and alluvial fans deposited on 0 to 9 percent slopes (PCE 1), and predominantly native desert vegetation (PCE 2).

Habitat in the unit is threatened by development, soil disturbance, fragmentation, effects of stream channelization, and effects of climate change. Specifically, urban expansion, in-fill development, and recreational activities continue to result in the loss and degradation of habitat. Therefore, the features essential to the conservation of the species in this unit require special management considerations or protection to minimize impacts resulting from these threats (see Special Management Considerations or Protection section above).

Approximately 25 percent of this unit (152 ac (62 ha)) is on Agua Caliente Band of Cahuilla Indians reservation land. As described above (see Factor D), the Tribe informed us in an October 28, 2008, letter that they removed Casey’s June beetle from the list of species

addressed in the draft Tribal HCP; however, they indicated they will “continue to informally coordinate with the Service regarding this species where it occurs on the Reservation.” The Tribe stated they are deferring to the Service to allow “the Service to take the lead in addressing how to effectively conserve and protect this species” (ACBCI 2008, p. 1). We continue to work with the Agua Caliente Band of Cahuilla Indians to encourage management of Casey’s June beetle habitat. We determined that at this time it is appropriate to exclude 11 ac (4 ha) tribal trust reservation lands (i.e., non-fee and non-allotted lands) from the critical habitat unit (see *Tribal Reservation Lands* under Exclusions section below).

**Effects of Critical Habitat Designation**

*Section 7 Consultation*

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened

species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the Fifth and Ninth Circuit Courts of Appeals have invalidated our regulatory definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain those physical or biological features that relate to the ability of the area to periodically support the species) to serve its intended conservation role for the species.

Federal activities that may affect Casey's June beetle or its critical habitat require section 7 consultation under the Act. Examples of actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

- (1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or
- (2) A biological opinion for Federal actions that are likely to adversely affect listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define "Reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

- (1) Can be implemented in a manner consistent with the intended purpose of the action,
- (2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- (3) Are economically and technologically feasible, and
- (4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

#### *Application of the "Adverse Modification" Standard*

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical or biological features to an extent that appreciably reduces the conservation value of critical habitat for Casey's June

beetle. As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species. Generally, the conservation role of Casey's June beetle's critical habitat unit is to support a viable, self-sustaining population of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Examples of activities that, when authorized, funded, or carried out by a Federal agency, may affect critical habitat and, therefore should result in consultation for Casey's June beetle include, but are not limited to, actions that would cause disturbance, loss, or fragmentation of critical habitat. Such activities could include, but are not limited to, development, grading, building roads and other infrastructure, constructing commercial and residential structures, and recreational activities (for example, ORV use and equestrian activities). These activities could permanently destroy critical habitat, compact soil, or alter soil moisture levels. Compacted or dry soils do not allow the species to burrow into, move, and feed in the soil as needed during the time they are underground. Please see Summary of Factors Affecting the Species section above for a more detailed discussion of the impacts of these actions to the listed species.

#### **Exemptions**

##### *Application of Section 4(a)(3) of the Act*

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- (1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- (2) A statement of goals and priorities;
- (3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: “The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.”

There are no Department of Defense lands within the designation. Therefore, we are not exempting lands from this critical habitat designation for Casey’s June beetle pursuant to section 4(a)(3)(B)(i) of the Act.

#### Exclusions

##### *Application of Section 4(b)(2) of the Act*

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In addition, we look at any tribal issues, and consider the government-to-

government relationship of the United States with tribal entities. In considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination, then we can exclude the area only if such exclusion would not result in the extinction of the species.

When considering the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

##### *Tribal Reservation Lands*

In accordance with the Secretarial Order 3206, “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” (June 5, 1997); the President’s Memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 22951); President’s Memorandum of November 5, 2009, “Tribal Consultation” (74 FR 57881); Executive Order 13175; and the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2), we believe that fish, wildlife, and other natural resources on tribal lands are more appropriately managed under tribal authorities, policies, and programs than through Federal regulation wherever possible and practicable. In most cases, designation of tribal lands as critical habitat provides very little additional conservation benefit to endangered or threatened species. Conversely, such designation is often viewed by tribes as an unwarranted and unwanted intrusion into tribal self-governance, and may negatively impact a positive government-to-government relationship between the Service and tribal

governments essential to achieving a mutual goal of successfully managing ecosystems upon which endangered and threatened species depend. When conducting our analysis under section 4(b)(2) of the Act, we consider our existing and future partnerships with tribes and existing conservation actions that tribes have implemented or are currently implementing. We also take into consideration conservation actions that are planned as a result of ongoing government-to-government consultations with tribes.

##### *Agua Caliente Band of Cahuilla Indians*

A Federal Indian reservation is an area of land reserved for a tribe or tribes under treaty or other agreement with the United States, Executive Order, or Federal statute or administrative action as permanent tribal homelands, and where the Federal government holds title to the land in trust on behalf of a tribe. The Agua Caliente Indian Reservation consists of a checkerboard of parcels found primarily in the City of Palm Springs, and the Cities of Cathedral City and Rancho Mirage, and unincorporated Riverside County, California. Lands within the Agua Caliente Indian Reservation boundary include Tribal trust land, allotted trust land, Tribe-owned fee land, privately owned (Tribal members and non-Indians) fee land, and public land. Individual sections of Agua Caliente Indian Reservation land are interspersed with public land owned or under the control of various Federal and State agencies, and privately owned land under the jurisdiction of the County and/or one of the three municipalities (ACBCI 2010b p. 1–1). Tribal trust reservation lands are those lands that are under the sovereign control of the Tribe. Through our ongoing coordination with the Tribe, we have established a partnership that has benefitted natural resource management on tribal lands. For our 4(b)(2) balancing analysis we considered our partnership with the Tribe and, therefore, analyzed the benefits of including and excluding those lands under the sovereign control of the Tribe (tribal trust reservation lands) that met the definition of critical habitat. Because Tribe-owned fee, private fee, or allotted lands are potentially subject to other jurisdictions and not under the sovereign control of the Tribe, we did not include these lands in our exclusion analysis.

Based on the detailed analysis presented below, the Secretary is exercising his discretion under section 4(b)(2) of the Act to exclude approximately 11 ac (4 ha) of Agua Caliente Band of Cahuilla Indians tribal

trust reservation lands (*i.e.*, non-fee, non-allotted land held in trust by the Federal government for the Tribe) from this final critical habitat designation for Casey's June beetle.

#### Benefits of Inclusion—Agua Caliente Band of Cahuilla Indians

The principle benefit of including an area in a critical habitat designation is the requirement for Federal agencies to ensure actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of any designated critical habitat, the regulatory standard of section 7(a)(2) of the Act under which consultation is completed. Federal agencies must also consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species. The analysis of effects of a proposed project on critical habitat is separate and different from that of the effects of a proposed project on the species itself. The jeopardy analysis evaluates the action's impact to survival and recovery of the species, while the destruction or adverse modification analysis evaluates the action's effects to the designated habitat's contribution to conservation. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. This will, in many instances, lead to different results and different regulatory requirements. Thus, critical habitat designations may provide greater benefits to the recovery of a species than would listing alone. However, for some species, and in some locations, the outcome of these analyses will be similar, because effects to habitat will often also result in effects to the species. All lands considered for exclusion are currently considered occupied by Casey's June beetle and will be subject to the consultation requirements of the Act in the future. Although a jeopardy and adverse modification analysis must satisfy two different standards, because any modifications to proposed actions resulting from a section 7 consultation to minimize or avoid impacts to Casey's June beetle will be habitat-based, it is not possible to differentiate any measures implemented solely to minimize impacts to the critical habitat from those implemented to minimize impacts to the beetle. Additionally, this species' highly restricted geographic range relative to its historical distribution (as evidenced by documented loss of occupied habitat), ongoing habitat impacts and losses, and slow female dispersal rate, increase the likelihood an action that adversely

affects Casey's June beetle will jeopardize the continued existence of the species. Therefore, in the case of Casey's June beetle, we believe the benefits of critical habitat designation are very similar to the benefits of listing, and in some respects would be indistinguishable from the benefits of listing.

Public education is often cited as another possible benefit of including lands in critical habitat as it may help focus conservation efforts on areas of high value for certain species. Partnership efforts with the Agua Caliente Band of Cahuilla Indians to conserve Casey's June beetle and other federally listed species addressed in their draft tribal HCP have resulted in heightened awareness about the species. However, we believe there is little, if any, educational benefit attributable to critical habitat beyond those achieved from listing of Casey's June beetle under the Act, and the Tribe's efforts to develop a HCP. The Service is conducting ongoing coordination with Agua Caliente Band of Cahuilla Indians and other southern California tribes. Service coordination includes attending meetings with tribal representatives to discuss ongoing projects, management plans, and other issues as they arise. We believe our continuing coordination with the Agua Caliente Band of Cahuilla Indians will further promote awareness of the species and its conservation needs, and will facilitate development of additional management plans (beyond those already in existence), as well as address Casey's June beetle conservation on tribal lands.

We believe existing tribal regulations, the Indian Canyons Master Plan, and current management of Heritage Park will ensure any land use actions, including those funded, authorized, or carried out by Federal agencies, are not likely to result in the destruction or adverse modification of all lands considered for exclusion. For example, in a letter dated April 29, 2010 (ACBCI 2010c, p. 3), the Tribe stated that, rather than delegating land use authority to a local agent such as the City of Palm Springs in the Planning Area (*i.e.*, in Casey's June beetle habitat south of Acanto Drive), the Tribe will directly regulate land use in this area through its Indian Canyons Master Plan and tribal zoning. The Tribe indicated they would use their existing regulatory structure and active role in regulating land use and development in this area to protect Casey's June beetle and its habitat (ACBCI 2010c, p. 3). Furthermore, all lands being excluded are included in Heritage Park (ACBCI 2007, p. 5), an area within Indian Canyons acquired

with funds from the 1988 California Wildlife, Coastal, and Park Land Conservation Act (1988 Bond Act) (ACBCI 2007, p. 2). The 1988 Bond Act requires Heritage Park to be managed to preserve Indian heritage and native palms and other plants. The 1988 Bond Act further stipulated that: "[a]fter that acquisition, the state shall convey title to all those lands to the United States in trust for the [Tribe] as part of the [Agua Caliente Indian Reservation] on the conditions that \* \* \* the lands be open to the public, subject to reasonable restrictions \* \* \* and the lands be used for protection of wildlife habitat and other resources." Any potential impacts to Casey's June beetle from future proposed activities on the tribal trust reservation lands will be addressed through the Indian Canyons Master Plan or through a section 7 consultation using the jeopardy standard, and such activities would also be subject to the take prohibitions in section 9 of the Act. As a result we believe the regulatory benefits of critical habitat designation on tribal trust reservation land would largely be redundant with the combined benefits of listing and existing tribal regulations.

The designation of Casey's June beetle critical habitat may strengthen or reinforce some Federal laws, such as NEPA or Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental law; however, the listing process, HCP planning efforts, and consultations (which included conferencing on effects to Casey's June beetle) that have already occurred will provide this benefit. Therefore, in this case we view this benefit as redundant with the benefit the species will receive from listing under the Act.

In summary, we do not believe that designating critical habitat within Agua Caliente Band of Cahuilla Indians tribal trust reservation lands will provide additional benefits for Casey's June beetle. Projects on these lands with a Federal nexus (*e.g.*, funded, approved, or carried out by Federal agencies, such as the Bureau of Indian Affairs, Indian Health Services, or U.S. Army Corps of Engineers) will require section 7 consultation with the Service (regardless of critical habitat designation) because the habitat is occupied (see *New Species Information* section above) by Casey's June beetle. Furthermore, a high level of protection is already provided to tribal trust reservation lands that meet the

definition of critical habitat by existing conservation, regulations, and management. The ongoing coordination between the Service and the Tribe has already raised the level of awareness about the species, and we believe our ongoing coordination with the Tribe will facilitate development of species-specific management actions for these lands to address the conservation of Casey's June beetle.

#### Benefits of Exclusion—Agua Caliente Band of Cahuilla Indians

Under Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities and the Endangered Species Act, we recognize that we must carry out our responsibilities under the Act in a manner that harmonizes the Federal trust responsibility to tribes and tribal sovereignty while striving to ensure that tribes do not bear a disproportionate burden for the conservation of listed species, so as to avoid or minimize the potential for conflict and confrontation. In accordance with the Presidential memorandums of April 29, 1994, and November 9, 2009, we believe that, to the maximum extent possible, tribes are the appropriate governmental entities to manage their lands and tribal trust resources, and that we are responsible for strengthening government-to-government relationships with tribes. Federal regulation through critical habitat designation will adversely affect the tribal working relationships we now have and which we are strengthening throughout the United States.

Maintaining positive working relationships with tribes is key to implementing natural resource programs of mutual interest, including habitat conservation planning efforts. In light of the above-mentioned orders and for a variety of other reasons described in their comment letters and communications, critical habitat designation is typically viewed by tribes as an unwarranted and unwanted intrusion into tribal self-governance. In comments submitted during the public comment periods on this proposed rule, and in comments submitted on other proposed critical habitat rules (such as the 2009 proposed revised critical habitat designation for arroyo toad (*Anaxyrus californicus*) (74 FR 52611; October 13, 2009)), several tribes stated that designation of critical habitat would negatively impact government-to-government relations.

In the case of the Casey's June beetle proposed critical habitat, the Agua Caliente Band of Cahuilla Indians submitted comments indicating they are opposed to critical habitat designation

and believe reservation lands should be excluded. The Agua Caliente Band of Cahuilla Indians cited Executive Order 13175, Secretarial Order 3206, and the President's Memorandum on Tribal Consultation (74 FR 57881; November 9, 2009) in their comments to the Service and their interpretation of these Federal enactments as meaning "no Federal agency, and especially not any agency of the Department of the Interior, such as the Service, will inflict regulatory, economic, or governmental burdens on tribes and their members when adequate alternatives exist, such as avoidance, cooperation on a government-to-government basis, or reliance on tribal measures" (ACBCI 2010c, p. 4). In their comments to the Service on the proposed rule, the Tribe indicated they would use their existing regulatory structure and active role in regulating land use and development in this area to protect Casey's June beetle and its habitat (ACBCI 2010c, p. 3). These communications clearly indicate that designation of tribal trust reservation lands as critical habitat for Casey's June beetle would impact future conservation partnership opportunities with the Tribe. Therefore, a critical habitat designation could potentially damage our relationship with the Agua Caliente Band of Cahuilla Indians.

We believe significant benefits would be realized by forgoing designation of critical habitat on tribal trust reservation (*i.e.*, non-fee, non-allotted) lands managed by the Agua Caliente Band of Cahuilla Indians. These benefits include:

(1) Continuing and strengthening of our effective relationship with the Tribe to promote conservation of Casey's June beetle and its habitat;

(2) Allowing continued meaningful collaboration and cooperation in working toward recovering this species, including conservation actions that might not otherwise occur; and

(3) Encouraging other tribes to complete management plans in the future on other reservations for other federally listed and sensitive species and engage in meaningful collaboration and cooperation.

Because the Tribe is the entity that enforces protective regulations on tribal trust reservation land, and we have a working relationship with them, we believe exclusion of these lands will yield a significant partnership benefit. There has been a substantial amount of government-to-government consultation between the Tribe and Service on developing the draft Tribal HCP and this rulemaking process for Casey's June beetle. Although the Tribe informed us in an October 28, 2008, letter that they

removed Casey's June beetle from the list of species addressed in the draft Tribal HCP, they indicated they will "continue to informally coordinate with the Service regarding this species where it occurs on the Reservation." The Tribe stated they are deferring to the Service to allow "the Service to take the lead in addressing how to effectively conserve and protect this species" (ACBCI 2008, p. 1). Although the Tribe has suspended their pursuit of a section 10(a) permit (ACBCI 2010a, p. 1), they are continuing to implement the draft HCP and will continue to protect and manage natural resources within the Tribe's jurisdiction (ACBCI, 2010a, p. 1; ACBCI 2010b, p. ES-1). We will continue to work cooperatively with the Tribe on efforts to conserve Casey's June beetle.

Therefore, excluding these lands from critical habitat provides the significant benefit of maintaining and strengthening our existing conservation partnerships and the potential of fostering new tribal partnerships.

#### Weighing Benefits of Exclusion Against Benefits of Inclusion—Agua Caliente Band of Cahuilla Indians

We reviewed and evaluated the benefits of inclusion and the benefits of exclusion of Agua Caliente Band of Cahuilla Indians tribal trust reservation lands as critical habitat for Casey's June beetle. We believe past, present, and future coordination with the Agua Caliente Band of Cahuilla Indians has provided and will continue to provide sufficient education regarding Casey's June beetle habitat conservation needs on tribal trust lands, such that there would be no additional educational benefit from designation of critical habitat. Further, because any potential impacts to Casey's June beetle from future projects will be addressed through the Indian Canyons Master Plan or through a section 7 consultation with us under the jeopardy standard, we believe critical habitat designation on tribal trust reservation land would largely be redundant with the combined benefits of listing and existing tribal regulations and management. Therefore, the benefits of designating critical habitat on tribal trust reservation lands are not significant.

On the other hand, the benefits of excluding Agua Caliente Band of Cahuilla Indians tribal trust reservation lands from critical habitat are significant. Exclusion of these lands from critical habitat will help preserve and strengthen the conservation partnership we have developed with the Tribe, reinforce those we are building with other tribes, and foster future partnerships and development of

management plans; whereas inclusion will negatively impact our relationships with the Tribe and other southern California tribes. We are committed to working with the Agua Caliente Band of Cahuilla Indians to further the conservation of Casey's June beetle and other endangered and threatened species. The Tribe will continue to use their existing regulatory structure and active role in regulating land use and development in this area to protect Casey's June beetle and its habitat (ACBCI 2010c, p. 3). The Tribe continues to provide for some indirect conservation of Casey's June beetle by implementing provisions of the draft HCP. Therefore, in consideration of the relevant impact to our partnership and our government-to-government relationship with the Agua Caliente Band of Cahuilla Indians, and the ongoing conservation management practices of the Tribe and our current and future conservation partnerships with other tribes, we determined the significant benefits of exclusion outweigh the benefits of inclusion in the critical habitat designation.

In summary, we find that excluding Agua Caliente Band of Cahuilla Indians tribal trust reservation lands from this final critical habitat will preserve our partnership and may foster future habitat management and species conservation plans with the Tribe and with other tribes now and in the future. These partnership benefits are significant and outweigh the insignificant additional regulatory and educational benefits of including these lands in final critical habitat for Casey's June beetle.

#### Exclusion Will Not Result in Extinction of the Species—Tribal Lands

We determined that the exclusion of 11 ac (4 ha) of tribal trust reservation lands from the designation of Casey's June beetle critical habitat will not result in extinction of the species. The jeopardy standard of section 7 of the Act and routine implementation of conservation measures through the section 7 process due to Casey's June beetle occupancy and protection provided by the Indian Canyons Master Plan provide assurances that this species will not go extinct as a result of excluding these lands from the critical habitat designation. Therefore, based on the above discussion the Secretary is exercising his discretion to exclude approximately 11 ac (4 ha) of tribal trust reservation lands managed by the Agua Caliente Band of Cahuilla Indians from this final critical habitat designation.

#### Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared a draft economic analysis (DEA) of the critical habitat designation and related factors (Industrial Economics, Incorporated (IEc) 2010A, pp. 1–75). The DEA, dated February 22, 2010, was made available for public review from March 31, 2010, through April 30, 2010 (75 FR 16046). Following the close of the comment period, a final analysis (dated June 1, 2010) of the potential economic effects of the designation was developed taking into consideration the public comments and any new information (IEc 2010b, pp. 1–84). Substantive comments and information received on the DEA are summarized in the Summary of Comments and Recommendations section below.

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for Casey's June beetle; some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both "with critical habitat" and "without critical habitat." The "without critical habitat" scenario represents the baseline for the analysis, considering protections already in place for the species (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The "with critical habitat" scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks at baseline impacts expected to occur due to listing and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government

agencies, private businesses, and individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA looks and considers those costs that may occur in the 20 years following listing and the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe. The FEA quantifies economic impacts of Casey's June beetle conservation efforts associated with the following categories of activity: (1) Residential and commercial development, and (2) flood damage reduction. Baseline impacts include the potential economic impacts of all actions relating to the conservation of the Casey's June beetle, including costs associated with sections 7, 9, and 10 of the Act. Baseline impacts also include the economic impacts of protective measures taken as a result of other Federal, State, and local laws that aid habitat conservation in the area evaluated in the DEA. In other words, baseline impacts include those impacts associated with the listing of the species and not associated with critical habitat. Incremental impacts are those potential future economic impacts of conservation actions relating to the designation of critical habitat; these impacts would not be expected to occur without the designation of critical habitat.

Baseline economic impacts are those impacts that result from listing and other conservation efforts for Casey's June beetle. Conservation efforts related to development activities constitute the majority of total baseline costs to areas proposed for critical habitat (approximately 86 percent). Impacts to flood control activities compose the remaining approximately 12 percent of impacts. Total future baseline impacts are estimated to be \$19,242,100 in present value terms using a 7 percent discount rate over the next 20 years (2010 to 2029) in the areas proposed as critical habitat.

Approximately 100 percent of incremental impacts attributed to the critical habitat designation are expected to be related to development activities. The FEA estimates total potential

incremental economic impacts in areas proposed as critical habitat over the next 20 years (2010 to 2029) to be \$6,173,340 in present value terms using a 7 percent discount rate, equivalent to \$582,320 in annualized economic impact over the analysis timeframe. This value is based on an assumption of total avoidance of designated acres and thus represents the upper-bound potential cost for each project. As such, it likely overstates the expected absolute cost of future actions to protect critical habitat.

The FEA considers both economic efficiency and distributional effects. In the case of habitat conservation, efficiency effects generally reflect the “opportunity costs” associated with the commitment of resources to comply with habitat protection measures (such as lost economic opportunities associated with restrictions on land use). The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA estimates lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the critical habitat designation might unduly burden a particular group or economic sector.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary has determined not to exercise his discretion to exclude any areas from this designation of critical habitat for Casey’s June beetle based on economic impacts.

A copy of the FEA with supporting documents may be obtained by contacting the Carlsbad Fish and Wildlife Office (see **ADDRESSES**) or by downloading from the Internet at <http://www.regulations.gov>.

#### *Exclusions Based on National Security Impacts*

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense (DOD) where a national security impact might exist. In preparing this final rule, we have determined that the lands within the designation of critical habitat for Casey’s June beetle are not

owned or managed by the Department of Defense, and, therefore, we anticipate no impact on national security. Consequently, the Secretary is not exercising his discretion to exclude any areas from this final designation based on impacts on national security.

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

We requested written comments from the public and contacted appropriate Federal, State, and local agencies; tribes; scientific organizations; and other interested parties and invited them to comment on the proposed rule to list Casey’s June beetle as endangered and designate critical habitat during two comment periods. The first comment period associated with the publication of the proposed rule (74 FR 32857) opened on July 9, 2009, and closed on September 8, 2009. We also requested comments on the proposed critical habitat designation and associated draft economic analysis during a comment period that opened March 31, 2010, and closed on April 30, 2010 (75 FR 16046). We did not receive any requests for a public hearing, with the exception of one that specified it be conducted only in the event their property was not excluded from critical habitat (see response to *Comment 18* below). During the comment periods, we requested all interested parties submit comments or information related to the proposed revisions to critical habitat, including (but not limited to) the following: Unit boundaries; species occurrence information and distribution; land use designations that may affect critical habitat; potential economic effects of the proposed designation; benefits associated with critical habitat designation; areas proposed for designation and associated rationale for the non-inclusion or considered exclusion of these areas; and methods used to designate critical habitat.

During the first comment period, we received 11 comments addressing the proposed listing and critical habitat designation: 5 from peer reviewers, 5 from public organizations or individuals, and one from a Native American tribe. During the second comment period, we received 14 comments addressing the proposed listing and critical habitat designation and the DEA. Of these latter comments, 3 were from Native American tribes and tribal members, and 11 were from public organizations or individuals.

We reviewed all comments we received from the peer reviewers and the public for substantive issues and new information regarding Casey’s June beetle listing and critical habitat

designation. All comments are addressed in the following summary and incorporated into the final rule as appropriate.

#### *Peer Review*

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from six knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles pertinent to the species. We received responses from five peer reviewers who provided additional information, clarifications, and suggestions.

We reviewed all comments received from the peer reviewers for substantive issues and new information regarding the listing and designation of critical habitat for Casey’s June beetle. The peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve the final critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

#### *Peer Reviewer Comments*

*Comment 1:* All five peer reviewers expressed general and specific support of our proposal to list Casey’s June beetle and designate critical habitat. Support of the proposed rule includes the following:

(a) The first peer reviewer stated that the peer reviewer’s collection data support our estimated population distribution. The first peer reviewer further concluded: (1) The cooler, more moist, and wind-protected environment found in the southwestern corner of Palm Springs is a required component of suitable habitat; (2) Casey’s June beetle daily and seasonal activity is dependent on specific temperature and wind conditions; and (3) a single night “or more” (unspecified) of negative survey results are not sufficient to demonstrate absence.

(b) The second peer reviewer stated “Given the natural history of the beetle and the accelerated fragmentation, modification, and loss of habitat, this species is in imminent danger of extirpation in part of its currently known range, and possibly extinction.” The peer reviewer agreed that Factor A threats likely negatively affect all life stages of Casey’s June beetle throughout the year, and generally agreed with our analyses for threat Factors B, C, and D. This reviewer further stated that even the slightest disturbance to relatively

small upland habitat areas is likely to have a significant and lasting effect on the patchily distributed sedentary females and larvae. The second peer reviewer also expressed the opinion that the central portion of Palm Canyon Wash is unlikely to support reproduction and larval development, and at best is used by males for movement. The peer reviewer believed it is prudent and biologically sound to treat all of the known occurrences of Casey's June beetle as a single population, and that the basic soil and vegetation types associated with Casey's June beetle are appropriate PCEs. Finally, the peer reviewer indicated that all Casey's June beetle habitat proposed as critical habitat currently under the jurisdiction of the Agua Caliente Band of Cahuilla Indians met the definition of critical habitat.

(c) The third peer reviewer believed our case for listing was compelling. The reviewer expressed concern that Casey's June beetle listing appears overdue because the species is found in such a small area with rapidly shrinking available habitat, also noting that this species is arguably the most habitat-restricted scarab beetle in the United States. The reviewer agreed that the continued survival of the species cannot depend on occupancy at a single locality (such as Smoke Tree Ranch) because of the possibility of stochastic events eliminating local occupancy. This reviewer argued that because the continued survival of Casey's June beetle depends on persistence in multiple locations, remaining available habitat meets the definition of critical habitat.

(d) The fourth peer reviewer agreed the present distribution of Casey's June beetle is well-known based on numerous formal and informal surveys conducted during the past several years by qualified biologists. The reviewer further stated that because of its present restricted distribution and imminent threats to remaining habitat, Casey's June beetle is one of the most imperiled species of insects, and probably the most endangered scarab beetle.

(e) The fifth peer reviewer stated the current distribution of Casey's June beetle was well-documented in the proposed rule, as was its soil type association and land use trends within the species' range. The reviewer noted that given Casey's June beetle's extremely limited area of occurrence and ongoing habitat loss, it clearly ranks as Critically Endangered under the current International Union for the Conservation of Nature and Natural Resources (IUCN) criteria; therefore, Casey's June beetle's long-term

persistence requires the highest level of protection possible under the law. The reviewer further noted our methods to determine what lands meet the definition of critical habitat seem robust enough to capture lands where probability of long-term persistence of the species is highest.

*Our Response:* We appreciate the peer reviewers' critical review. Because all peer reviewers generally agreed on the validity of our methods and determinations, we believe the proposed listing and critical habitat designation is well-supported. With regard to the specific recommendation to include Agua Caliente Band of Cahuilla Indians reservation lands in critical habitat, we received some new information indicating some areas proposed as critical habitat on the reservation do not meet the definition of critical habitat. We further considered the possible benefits of including and excluding Agua Caliente Band of Cahuilla Indians' tribal trust reservation lands that met the definition of critical habitat. Because benefits provided by critical habitat designation in this instance are very similar to the benefits of listing, and in some respects would be indistinguishable from benefits provided by listing and existing regulations (to minimize the benefits of inclusion), we find that excluding Agua Caliente Band of Cahuilla Indians tribal trust reservation lands from this final critical habitat will preserve our partnership with the Tribe and foster future development of habitat management plans with Agua Caliente Band of Cahuilla Indians and other tribes. Furthermore, we determined that exclusion of tribal trust reservation lands would not result in the extinction of the species. Therefore, we are excluding 11 ac (4 ha) of tribal trust reservation (*i.e.*, non-fee, non-allotment) lands from this final critical habitat designation (see also *Comment 7* below).

We agree with the third peer reviewer's statement that continued survival of the species cannot depend on occupancy at a single locality (such as Smoke Tree Ranch) because of the possibility of stochastic events eliminating local occupancy. We believe the species may be threatened by natural or anthropogenically influenced factors, such as climate change, increased intensity and frequency of scouring events in wash habitat, and small population size. However, we note that no species-specific, scientific, published models describing or predicting the magnitude of these threats have yet been conducted, and

these threats should be the subject of future research (see below).

*Comment 2:* Four peer reviewers supplied information or opinions regarding species' biology, and some suggested associated edits or revisions to proposed critical habitat.

(a) The first peer reviewer agreed that additional studies are needed to determine the effects of flooding on Casey's June beetle within its critical habitat. The reviewer also believes one of the greatest threats posed by developed areas adjacent to critical habitat is artificial lighting in habitat corridors during Casey's June beetle flight season because potentially large numbers of males are drawn away from females and die before they can mate. The peer reviewer stated that artificial light sources could lead to unnatural concentrations of Casey's June beetle occupancy that makes them more vulnerable to catastrophic events. The reviewer also stated that based on the known larval habits of other members of the tribe Melolonthini, Casey's June beetle larvae most likely feed on roots. The peer reviewer noted all surveys for Casey's June beetle have occurred in undeveloped upland habitats, and their observation of a small number of beetles along State Route 111 one night 30 years ago leads the peer reviewer to think there might still be small pockets of occupancy that persist within some of the more developed areas of Palm Springs west and south of State Route 111. They believe that knowing if and where these pockets exist would help biologists understand Casey's June beetle tolerance of landscaping and other land disturbance. The peer reviewer suggested future surveys should include storefronts, pools, and other established light sources within the urban landscape. The peer reviewer also suggested changing the wording of PCE 2 (74 FR 32874; July 9, 2009) because Casey's June beetle continues to occupy a few highly disturbed, weedy, and even previously graded or disked fields along State Route 111. They asserted that desert scrub or wash vegetation is not a requirement for Casey's June beetle presence and survival. Finally, the peer reviewer expressed the opinion that given the extent of the known population, conservation of anything less than proposed critical habitat would likely result in eventual extinction of the species.

(b) The second peer reviewer emphasized the most important single factor for continued species' survival is that female beetles are flightless. Introduction of females would be the only way to reestablish the species in



isolated suitable areas where occupancy has been eliminated; therefore, locations where breeding females are currently found must be protected. The peer reviewer also stated persistence of the species at Smoke Tree Ranch (despite the annual death of many males due to lighting) indicates the number of males that survive has been sufficient to support continued reproduction; however, such a chronic drain on the number of males could eventually have long-term effects on species' survival.

(c) The third peer reviewer stated that potential Casey's June beetle habitat is best characterized as any open space still existing within its former known distributional boundaries. They further clarified that they believe the species' known distribution is defined by female flightlessness and factors of soil type which are historical biogeographic factors that may never be fully understood.

(d) The fourth peer reviewer stated that because Casey's June beetle has experienced the loss of 97 percent of its original habitat, they recommend including additional isolated patches of suitable habitat outside the current known range in critical habitat where reintroduction could potentially maintain population size in the "medium term." They suggested including habitat patches located on upland sites above floodplain areas vulnerable to periodic washout in critical habitat.

*Our Response:* Regarding the first peer reviewer's concern about artificial lighting, we understand that artificial lighting likely has some negative impact on Casey's June beetle and therefore, should be addressed through management actions to avoid take in occupied habitat (see *E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species* section above). Artificial lighting attracts only males in flight, often resulting in their death, but not necessarily impacting the abundance of female and immature individuals. Artificial lighting has no effect on the distribution of flightless females, and this life stage determines the spatial concentration of all other life stages. We agree that unnatural light sources attracting beetles into development adjacent to upland habitat poses at least a moderate threat to Casey's June beetle.

We agree with the all the peer reviewers that the following issues should be research priorities for this species' recovery: (1) The impact of male mortality on population abundance and fitness; (2) species' occupancy patterns within Palm Canyon Wash; (3) the effects of periodic flooding

on individual mortality and movement; (4) delineation and protection of breeding areas; and (5) larval diet. As discussed in the proposed rule, one expert particularly familiar with the biology and taxonomy of the genus *Dinacoma* stated Casey's June beetle " \* \* \* exhibits no specific host preferences and larvae likely consume any available organic resources—including stratified detritus—encountered within the alluvial habitat" (LaRue pers. comm. 2006). Furthermore, Hill and O'Maly (2009, p. 1) recently found that the frass pellets of larvae of another endangered June beetle (Mount Hermon June Beetle, *Polyphylla barbata*) contained a variety of plant species and fungi material, demonstrating that they are not specialist feeders but are microhabitat specialists. Therefore, while they will be helpful in prioritizing research objectives, we do not believe any of the peer reviewers' comments on research priorities require revisions to text in the *New Species Information* section above.

We agree with the first peer reviewer that more surveys should occur to validate our current knowledge of habitat occupancy. Most surveys that have occurred in the past have had variable methodologies and durations, and focused almost exclusively on attracting males in flight from an unknown distance to light traps. We will develop recommendations regarding where and how surveys should be done, and will likely require 10(a)(1)(A) recovery permit holders to follow a survey protocol that maximizes the likelihood of male and female Casey's June beetle detection at occupied sites. We will also continue to facilitate and fund surveys outside of designated critical habitat (Service 2009, p. 3) and encourage biologists and the public to examine urban light sources and report any observations of male Casey's June beetles to us for analysis.

We considered the first peer reviewer's recommendation to change proposed PCE 2 to not include desert scrub or wash vegetation to allow for incorporation of disturbed, weedy, and previously graded or disked fields. In order to confirm the validity of this recommendation, we reviewed satellite imagery of the sites where occupancy was recently documented that best fit the description of "disturbed, weedy, and previously graded or disked fields" and noted the presence or absence of desert scrub or wash vegetation. We also obtained field survey information regarding habitat conditions (Hawks pers. comm. 2010). We determined the peer reviewer had raised a valid point and edited PCE 2 to include other

Sonoran vegetation types and disturbed habitat (as long as they were not isolated by development and unlikely to return to their natural state). In the proposed rule we specified PCE 2 to include "Intact, native Sonoran (Coloradan) desert scrub vegetation and native desert wash vegetation \* \* \*." In this final rule we use the more inclusive language of "predominantly native desert vegetation."

Regarding the fourth peer reviewer's recommendation to include additional areas as critical habitat, we carefully considered all patches of apparently suitable habitat within the species' historical (versus current) range for proposal as critical habitat, even areas of suitable habitat where reintroduction of beetles would be necessary for them to be utilized (see *Criteria Used To Identify Critical Habitat* section). We emphasized the importance of upland sites least likely to be subject to periodic flooding and explained their value as refugia (see *Background* section of proposed rule). However, the amount of remaining undeveloped land within the species' historical range that meets the definition of critical habitat is extremely limited. All areas designated as critical habitat are within likely flight distance of occupied habitat for male Casey's June beetles (considered occupied at the population level); as a result several relatively small non-contiguous habitat areas without occupancy records were also designated as critical habitat. No unoccupied habitat patches outside the likely flight range of adult males were clearly large enough or otherwise suitable to support an independent population based on our current knowledge of the species; therefore, we did not determine that any of these areas met the definition of critical habitat.

*Comment 3:* One peer reviewer emphasized they felt it is important for the Service to work closely with the Agua Caliente Band of Cahuilla Indians to develop a management and public education plan for the species and for habitat on tribal reservation lands. The reviewer also stated development and implementation of an overall management plan that simultaneously provides guidance for the restoration and enhancement of existing critical habitat and educates citizens about the importance of conserving Casey's June beetle is crucial to the species' survival. The peer reviewer asserted that a public education program must be developed along with habitat management guides and plans.

*Our Response:* We agree that management and conservation planning and public outreach are important

aspects of endangered species recovery planning. As stated above, we believe our continuing coordination with the Agua Caliente Band of Cahuilla Indians should provide sufficient future education, facilitate development of additional management plans (beyond those already in existence on the reservation), and help promote Casey's June beetle conservation on tribal reservation lands. In the Spotlight Species Action Plan (Service 2009, p. 2), we state that in order to reduce or eliminate threats to Casey's June beetle we will need to determine current occupancy (presence or absence) within portions of the population distribution (which was done in 2010, see *New Species Occupancy and Habitat Information* above), conserve occupied habitat, and gain scientific information required to inform recovery criteria. Actions recommended in the Spotlight Species Action Plan (Service 2009, p. 3) include developing agreements with landowners to conserve habitat. We will continue to work with all stakeholders, including the Agua Caliente Band of Cahuilla Indians, to conserve habitat, conduct public outreach, and recover Casey's June beetle.

*Comment 4:* One peer reviewer had specific text edit recommendations. They suggested changing the word "considered" under the *Life History and Habitat* section on page 32858 of the proposed rule to "known to be," because it is a fact that the females are flightless, and the word "family" on page 32859, line 1 under Factor A, to "genus" (74 FR 32857; July 9, 2009).

*Our Response:* We agree with the suggested text and taxonomic corrections and made edits to the *New Species Information* above and the Factor A discussion in the Summary of Factors Affecting the Species section, above.

#### Comments From States

Section 4(i) of the Act states, "the Secretary shall submit to the State agency a written justification for his failure to adopt regulations consistent with the agency's comments or petition." We did not receive any comments from the State regarding the listing of Casey's June beetle or the designation of its critical habitat.

#### Public Comments

##### Comments From Tribes

*Comment 5:* The Agua Caliente Band of Cahuilla Indians (Tribe) asserted there is not enough information known regarding the biology of the species or its distribution to justify listing. They argued it is not known what the species

eats or how long it remains in the soil, and the species' distribution may be significantly greater than estimated in the proposed rule. They argued specifically that soils named in the PCEs are widely distributed throughout the Coachella Valley where more Casey's June beetles might be found and are not appropriate to use as PCEs. They further stated there has been no systematic effort to locate Casey's June beetle elsewhere in the Coachella Valley or desert areas further south, and that they know of a Casey's June beetle captured "well outside" the proposed critical habitat and another report of what may be a Casey's June beetle from a site near the City of Yuma, Arizona. The Tribe concluded the Service needs to conduct or fund new surveys to determine the species' range before listing is justified.

The Tribe claimed no recent surveys have detected the species south of Bogert Trail or west of South Palm Canyon Drive, and indicated they believe unoccupied land should, therefore, not be designated as critical habitat. The Tribe further indicated they believe the data on which the proposed rule was based should have been subject to peer review prior to publication of the draft rule.

Finally, the Tribe stated that in drawing the conclusion that existing tribal regulatory structure is not adequate to protect Casey's June beetle, the Service did not consider the Tribe's active role in regulating land use and development. They cited the Indian Canyons Master Plan and tribal development zoning that apply to reservation lands south of Acanto Drive.

*Our Response:* A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act (see Summary of Factors Affecting the Species section above). As required by section 4(b)(1)(A) of the Act the Secretary shall determine whether any species is an endangered or a threatened species solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure our decisions are based on the best scientific data available. We used primary and original

sources of information as the basis for our recommendations. We acknowledge the Tribe's concern that little information is known about Casey's June beetle life habits. While lifespan and diet information will help inform species recovery actions, we believe the status of the species is clear without this knowledge. Species' decline and habitat loss, as well as the imminence of threats to species' habitat and survival for Casey's June beetle have been clearly demonstrated (see Summary of Factors Affecting the Species section and *Comment 1* above). Furthermore, the need for listing is determined "solely on the basis of the best scientific and commercial data available," even though biological information is typically incomplete for rare species in need of protection. Therefore, we believe our determination that Casey's June beetle is in danger of extinction throughout all of its range is supported by the best available scientific and commercial information.

We respectfully disagree with the Tribe's comment that Casey's June beetle has a wider distribution than estimated. As required by section 4(b)(1)(A) of the Act, the Secretary shall determine whether any species is an endangered or a threatened species solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species. Two researchers have undertaken recent and relatively widespread assessments of Casey's June beetle occupancy and habitat distribution (Hovore 1997a, p. 1-3; 1997b, p. 1-3; 1997c, p. 2-17; Cornett 2004, p. 8). Both studies generally agree with our conclusions regarding the limited distribution of Casey's June beetle habitat, and both concluded the distribution was more restricted than we described in our proposed rule (Hovore 1997b, p. 1-3; 1997c, p. 2-17; Cornett 2004, p. 13). A species expert has examined specimens and populations of *Dinacoma* species found in locations as proximal as Joshua Tree National Park and the City of Hemet and described them as different species (LaRue pers. comm. 2006). We are also aware of a collection (one individual) by Cornett (Anderson, Service, pers. comm. 2009) that resembled Casey's June beetle from a site near the City of Yuma, Arizona. We have communicated with the collector, and they confirmed it resembles Casey's June beetle. However, they have not determined the taxonomic identity of this specimen, nor have they had taxonomic experts examine it (Anderson, pers. comm. 2009; Cornett, James Cornett Biological Consultants,

pers. comm. 2009a, 2009b). We do not believe this specimen will be identified as a Casey's June beetle because it was collected far from known collection locations, and in an area topographically different from areas known to support Casey's June beetle (see *Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements and Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring that are Protected from Disturbance* sections above for further discussion). Most recently, David Hawks conducted a survey in 2010 funded by the Service specifically focused on surveying suitable soils north (just south of the Chino Cone in the City of Palm Springs) and south (past Palm Desert as far as La Quinta) of the current known species distribution. Hawks did collect Casey's June beetles outside the current known range (see *New Species Information* section above for more information), but only within a patch of remnant wash channel just outside of proposed critical habitat and still within the City of Palm Springs (Hawks pers. comm. 2010).

Regarding the Tribe's assertion that we used widely distributed soil types to inappropriately define critical habitat, we do not agree. To clarify, Casey's June beetle critical habitat is first defined by other environmental factors (such as soil moisture and wind conditions) unique to the base of the San Jacinto and Santa Rosa mountains (see *Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements* section and our response to *Comment 1* above). We identify critical habitat by first defining the area of occupancy or potential occupancy (which is by default limited to those areas where the unique environmental factors mentioned above are found), then second by "focusing in on the principal biological or physical constituent elements (primary constituent elements) within the defined area" (see *Critical Habitat Background* section above). PCEs are only one component of the definition of critical habitat (see *Critical Habitat Background* section above). Therefore, based on the best scientific information available regarding species' taxonomy and distribution, it is likely the species was not historically distributed beyond the eastern San Jacinto Mountain foothills outside of the City of Palm Springs. We will continue to recommend and facilitate surveys to refine our knowledge of the species' distribution, but we believe our current biological conclusions and the need to list Casey's June beetle as endangered under the Act are well supported by the

best available scientific and commercial data.

The Tribe's comment that no recent surveys have detected the species south of Bogert Trail or west of South Palm Canyon Drive is not supported by available occupancy data. Most recently, David Hawks (pers. comm. 2010; 2011a; 2011b) detected numerous adult male and female Casey's June beetles in Palm Canyon Wash south of Bogert Trail and south of Acanto Drive (south of Acanto Drive these observations were made incidentally without the aid of light traps), indicating this area is a current population density center (see *New Species Information* section above for more information). In 2004, Cornett (2004, p. 8) detected Casey's June beetle south of Bogert Trail, north of Acanto Drive, and midway between South Palm Canyon Drive and Palm Canyon Wash. In 2001, Simonsen-Marchant (2001, p. 6) detected Casey's June beetles south of Bogert Trail and north of Acanto Drive in upland habitat adjacent to Palm Canyon Wash; this area remains undeveloped. It is true no Casey's June beetles have been recently detected west of South Palm Canyon Drive, and the sparse remaining suitable soils are heavily degraded. Furthermore, two separate surveys in 2010 (Hawks, pers. comm. 2011; Cornett 2010, pp. 10 and 14) in areas adjacent to and west of South Palm Canyon Drive were negative (see *New Species Information* section above). Therefore, based on the best available data we believe the majority of lands proposed for designation south of Bogert Trail are occupied and meet the definition of critical habitat. However, lands adjacent to and west of South Palm Canyon Drive approximately west of Via Fortuna, and the southernmost non-contiguous patches of CdC soil within Palm Canyon, are not occupied nor appear to be occupiable and therefore do not meet the definition of critical habitat because they would not contribute to the conservation of the species (see *Summary of Changes From the 2009 Proposed Critical Habitat Rule*, above).

With regard to the Tribe's question of our peer review practices, the purpose of a proposed rule is to allow peer and public review of data and conclusions drawn from the data, so that we can make appropriate adjustments prior to publication of the final rule. It is our policy that peer review be conducted during the public comment period (Policy for Peer Review in Endangered Species Act Activities, July 1, 1994, 59 FR 34270); we can not allow outside review of pre-decisional internal draft proposed rules. Nevertheless, we do commonly, and did in this case, discuss

the data we use and the biological implications of those data with species experts who collect it in a scientific context as needed prior to publication of the proposed rule. We believe we followed the best scientific practices in writing the proposed and final rules.

Finally, regarding the Tribe's assertion that existing tribal regulatory structure is adequate to protect Casey's June beetle, we subsequently considered the Tribe's active role in regulating land use and development via the Indian Canyons Master Plan and tribal development zoning (as articulated by the Master Plan) that apply to reservation lands south of Acanto Drive. We did not determine these documents were adequate to address the threats placing the species in danger of extinction and, therefore, meeting the definition of an endangered species (see *A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range* section above).

*Comment 6:* The Tribe asserted that critical habitat should include only the minimum amount of habitat needed to avoid short-term jeopardy to the species. The Tribe further stated that designation of critical habitat on their reservation is not needed because they are required to conduct section 7 consultations for many activities that might potentially pose a threat to the species.

*Our Response:* As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available to designate critical habitat (see *Critical Habitat Background and Criteria Used To Identify Critical Habitat* above). Critical habitat is defined as the specific areas within the geographical area occupied by a species, at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection, and specific areas outside the geographical area occupied by a species at the time it is listed that are essential for the conservation of the species.

"Conservation" means all methods and procedures necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary (the recovery standard, see *Critical Habitat Background* section above). Therefore, critical habitat is not defined as the minimum amount of habitat needed to avoid short-term jeopardy to the species. Whether or not section 7 consultation is required is not a factor in determining those areas that meet the definition of critical habitat. However, when we analyze the benefits of

including versus excluding an area as critical habitat, we do consider, among other relevant factors, whether the regulatory benefit of designation may be largely redundant with listing.

*Comment 7:* The Tribe stated that if the Casey's June beetle is listed, the Service should at least find the benefits of excluding "the lands of the Agua Caliente Indian Reservation" outweigh the benefits of including them in critical habitat. The Tribe cited multiple regulatory and tribal sovereignty documents including Secretarial Order 3206 (June 5, 1997), Executive Order 13175 (65 FR 67249; November 9, 2000), and two other critical habitat rules where tribal land was excluded based on partnerships in support of their request for exclusion. The Tribe stated the "relevant thrust" of the cited Federal enactments is that no agency of the Department of the Interior will inflict regulatory, economic, or governmental burdens on tribes and their members when adequate alternatives exist.

*Our Response:* We considered the Tribes' request that reservation lands be excluded from critical habitat based on partnership benefits and the existence of adequate alternatives to the regulatory, economic, and governmental burdens of designating Casey's June beetle critical habitat. The Act specifies that the Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor (see Exclusions section above).

We considered the possible benefits of including and excluding Agua Caliente Band of Cahuilla Indians' tribal trust reservation lands that met the definition of critical habitat. For our exclusion analysis we considered our partnership with the Tribe and, therefore, analyzed the benefits of including and excluding those lands under the sovereign control of the Tribe (tribal trust reservation lands) that met the definition of critical habitat. Because Tribe-owned fee, private fee, or allotted lands are potentially subject to other jurisdictions and not under the sovereign control of the Tribe, we did not include these lands in our exclusion analysis (see Agua Caliente Band of Cahuilla Indians under *Tribal Reservation Lands*, above).

We find that existing regulations and listing provide habitat protection of tribal trust reservation lands and are largely redundant with protections that would be provided by critical habitat designation (minimizing the benefits of inclusion), and we find that excluding Agua Caliente Band of Cahuilla Indians tribal trust reservation lands from this final critical habitat will help preserve our partnership with the Tribe and foster future development of habitat management plans with Agua Caliente Band of Cahuilla Indians and other tribes (maximizing the benefits of exclusion). Furthermore, we determined that exclusion of tribal trust reservation lands would not result in the extinction of the species. Therefore, we are excluding 11 ac (4 ha) of tribal trust reservation (*i.e.*, non-fee, non-allotment) lands from this final critical habitat designation. See *Tribal Reservation Lands* under Exclusions, above, for further discussion.

*Comment 8:* Two members of the Tribe who own allotted land in proposed critical habitat south of Acanto Drive, north and adjacent to South Palm Canyon Drive commented that: (1) The reasoning that the soil type "lends itself to potential habitat" is not sufficient scientific evidence their land meets the definition of critical habitat and sounds speculative; (2) their properties are not occupied because surveys of one commenter's parcel were negative, and the second commenter's parcel is adjacent to the surveyed parcel; (3) the proposed designation would affect tribal reservation land in a disproportionate manner since over 60 percent of the land identified is on the reservation; and (4) their land is too far from the wash to meet the definition of critical habitat. The commenters submitted a tract map and two letters from a consultant in support of their statements.

Another apparent tribal allottee expressed similar concerns. The commenter made the following statements with regard to their property: (1) Surveys by James Cornett were negative; (2) in order to occupy on-site habitat, Casey's June beetles would have to travel a distance greater than 1 mi (2 km) over several concrete dams and a concrete dike; (3) 75 percent is rock or hillside, and 10 to 15 percent of the remainder is imported material behind a 100-year flood wall; and (4) Riverside County FCWCD periodically removes several feet of material from behind the flood wall to maintain the wash depth. They concluded that for the above reasons their property should not be designated as Casey's June beetle critical habitat.

*Our Response:* The commenters gave several reasons for why they believed their lands should not be designated as critical habitat. We address their reasons in this response in the order presented. We could not find the quoted language regarding soil type in our proposed rule to which objection was made. Nonetheless, we understand the comment did not agree with the soil type associations articulated in the PCEs. We believe language in the text of this rule clearly reflects the strong relationship of soil type (PCE 1) to habitat suitability (see *Primary Constituent Elements for Casey's June Beetle*, and *Comment 1* above). Historical occupancy data (Hovore 1997, p. 4; Hovore 2003, p. 4), 2004 survey data (Cornett 2004, p. 8), 2010 survey data (Hawks pers. comm. 2010, 2011a and b), and soil maps indicate some properties south of Acanto Drive fall within currently occupied Casey's June beetle habitat. Furthermore, documented occupancy of a particular site is not required for land to meet the definition of critical habitat; however, if the particular site is within the geographical area occupied by the species at the time of listing, it must support physical or biological features essential to the conservation of the species (see Critical Habitat Background, above).

We understand the first two commenters' concern that a relatively large amount of proposed critical habitat falls within the Tribe's reservation. It is not our intent to designate critical habitat in a disproportionate manner. Rather, the distribution of lands that meet the definition critical habitat on tribal land is a result of past biological and social factors we cannot change. However, based on new scientific information we determined these commenters' lands did not meet the definition of critical habitat, and therefore they are not included in this critical habitat designation for that reason (see *New Species Information and Criteria Used To Identify Critical Habitat* sections above). We further excluded all tribal trust reservation land from critical habitat, thus reducing the amount of reservation designated as critical habitat (see *Tribal Reservation Lands* under Exclusions above). Therefore, we believe these commenters' concerns have been addressed to the extent appropriate.

The third commenter stated their property is not occupied and is situated such that Casey's June beetle immigration is precluded. In order to assess the validity of these comments we would need to know the exact location of the commenter's property

and details of any surveys conducted. We were not able to determine the precise location of the commenter's property based on the information provided. Furthermore, the commenter did not provide survey documentation, nor a date surveys were conducted. Therefore, we were not able to assess the validity of the commenter's statements with regard to occupancy.

The third commenter generally described their property as not containing the PCEs. All areas proposed as Casey's June beetle critical habitat were defined as the specific areas within the geographical area occupied by the species on which are found the physical or biological features essential to the conservation of the species (see Critical Habitat Background, above). Without knowing exactly where the property is located, we are not able to make a determination on the characteristics of the site. However, we based our designation partly on the soil type and landscape-level characteristics we determined are important for the beetle and consider all areas occupied by the species and to contain the PCEs. Any developed lands that do not contain the PCEs inadvertently left inside critical habitat boundaries shown on the maps of this designated critical habitat are excluded by text in this final rule (see Criteria Used To Identify Critical Habitat section above).

#### Comments Related to Biological Information That Informed Our Listing or Critical Habitat Determinations

*Comment 9:* Three commenters stated that Casey's June beetle is more widely distributed than the proposed rule described, based on observations of Casey's June beetles at their homes. The first commenter from the City of Palm Desert said they observed many Casey's June beetles during the early morning at their home during a 3-week period in June, dropping off the first week of July. The second commenter said they observed Casey's June beetle at their home in La Quinta several times during the late spring and early summer months of 2009. The third commenter said they had observed Casey's June beetle "a few miles north of the reported [proposed critical habitat] boundary" and at 393 West Mesquite Ave in the City of Palm Springs. They stated they hope this information helps protect the species because they believe it is important no species become extinct.

*Our Response:* There are other species of June beetles in the Palm Desert and La Quinta areas that are related and similar in appearance to Casey's June beetle (Cornett 2004, pp. 4–5). As stated in the proposed rule, Casey's June

beetles are crepuscular, meaning they are active at dusk, not in the early morning (Hovore 2003, p. 3). Although it is commonly called a "June" beetle, peak abundance for this species typically occurs in April and May, not during the summer months of June and July (Cornett 2004, pp. 4, 18–26). The timing of the first two commenters' observations indicates the beetles they observed were a species of common June beetle in the genus *Phyllophagia* (see Cornett 2004, p. 4–5). Additionally, none of the commenters provided any substantiating information to support the comment they had observed Casey's June beetles, such as identifying characteristics of specimens, or experience on which their ability to identify Casey's June beetle was based. Casey's June beetle surveys were conducted in 2010, during the flight season in potential habitat in the areas described by the third commenter (vicinity of Tahquitz Creek in western foothills of the City of Palm Springs); however, no Casey's June beetles were detected (Hawks pers. comm. 2010). Therefore, we believe it is unlikely that beetles observed by the commenters were Casey's June beetles.

*Comment 10:* Four commenters argued there is not enough information known regarding the biology of the species or its distribution to justify listing. They argued it is not known what the species eats or how long it remains in the soil, and the species' distribution may be significantly greater than estimated in the proposed listing and critical habitat rule. They collectively stated or implied there has been no systematic effort to locate Casey's June beetle elsewhere in the Coachella Valley or desert areas farther south, and such an effort is needed before listing would be warranted. The first two commenters specifically stated they know of a Casey's June beetle captured "well outside" the proposed critical habitat, and another report of what may be a Casey's June beetle from a site near the City of Yuma, Arizona.

The second commenter made several statements questioning the scientific credibility of the proposed listing and critical habitat rule. The commenter argued: (1) Survey methodology requires further development and may be skewed because light traps require access to electricity; (2) the Service's assumption that all areas occupied by Casey's June beetle comprise a single population is not based on scientific data; (3) proposed PCE 2 (intact, native Sonoran desert scrub vegetation and native desert wash vegetation) is not valid (citing James Cornett's detection of the species in the Smoke Tree Ranch

maintenance yard and the tennis court, and consistent species observations in a dry wash characterized as Sonoran creosote bush scrub and desert wash vegetation, portions of which were disturbed); and (4) preliminary results from spring 2010 surveys conducted by James Cornett confirm an association with "non-native tamarisk" (submitted an email communication from James Cornett). They concluded the species' biological and physical requirements are so poorly understood that proposed PCE 2 is not valid, and data contradict the assumption habitat disturbance threatens the species' continued survival; therefore, the proposed critical habitat designation is arbitrary and capricious. They further commented this "fundamental legal flaw" renders the proposed listing determination in violation of the Act's best available scientific evidence standard and is, therefore, also arbitrary and capricious.

The third commenter stated listing was not warranted because it is not clear what actions would be required to recover the species, and because Casey's June beetle appears to be less susceptible to human interaction than is currently recognized. They specifically stated the species has been collected in higher numbers where habitat has greater exposure to human impacts.

*Our Response:* The comment regarding the species' known range and a need for surveys is the same as the Tribe's above (Comment 5), and the commenter's statement that Casey's June beetle listing and critical habitat designation are not supported by the best available scientific data is similar to the Tribe's comment as well. We believe our current biological conclusions and the need to list Casey's June beetle as endangered under the Act are well supported by the best available scientific and commercial data. Please see our response to *Comment 5* above for further discussion.

Regarding the second commenter's specific statements numbered above: (1) Some past surveys may have been biased by trap placement proximal to electricity sources; however, some light traps are battery-powered, and past trapping efforts represent the best available scientific data. (2) We agree it is possible all individuals in currently occupied habitat areas do not belong to a single population. Nevertheless, we believe we adequately acknowledged this uncertainty in the proposed rule by stating, "We consider all known occurrences of Casey's June beetle to constitute a single population based on currently available data. However, additional studies are needed to confirm this assumption." Our consideration is

based on the flight and movement potential of male Casey's June beetles, as well as the fact that all currently occupied habitat areas were historically contiguous. Furthermore, it is not unusual for species' population distributions to be ill-described prior to listing (see *Euphydryas editha quino* (Quino checkerspot butterfly) final revised critical habitat rule; 74 FR 28775, June 17, 2009). (3) We agree that the proposed PCEs were overly restrictive; therefore, we edited PCE 2 to include other Sonoran vegetation types and disturbed habitat. In the proposed revised rule we specified "Intact, native Sonoran (Coloradan) desert scrub vegetation and native desert wash vegetation \* \* \*." In this final revised rule we use the more inclusive language in PCE 2, i.e., "predominantly native desert vegetation" (see *Primary Constituent Elements for Casey's June Beetle* and response to peer reviewer *Comment 2* above). (4) The email from James Cornett describing his preliminary 2010 survey results presents inconclusive and incomplete data. Cornett listed beetle abundance data from 3 nights of collection using an unspecified number of traps of unspecified design placed "near" cheesebush (*Hymenoclea salsola*) and tamarisk (*Tamarix spp.*). The first 2 nights he reported higher numbers of male Casey's June beetle attracted to traps located near *Tamarix spp.*; however, on the third night he collected almost twice as many individuals from traps located near *Hymenoclea salsola*. Cornett did not discuss any other possible habitat correlations with trap placement that could have affected his results. Furthermore, preliminary results from David Hawks' 2010 (pers. comm.) surveys on Smoke Tree Ranch indicate no correlation of female Casey's June beetle emergence holes with any particular species or type of plant, not even native plants (see *New Species Information and Primary Constituent Elements for Casey's June Beetle* sections above). Hawks' (pers. comm. 2010) study indicated soil type, moisture content, and other factors were more likely determinants of habitat than associated plant species or types.

Therefore, based on information discussed in the response above, and reasons discussed in the response to *Comment 5* above, we conclude there is no valid basis for the second commenter's statement that this critical habitat designation or listing determination are arbitrary and capricious.

We considered the third commenter's statements that listing is not warranted because it is not clear what actions are

required to recover the species, and the species appears to survive equally well in habitats exposed to disturbance. Until a species is recovered there is always some level of uncertainty regarding actions required to achieve recovery; furthermore actions required for recovery are not typically analyzed or described until a species is listed and a recovery outline or plan is developed. Articulated recovery actions are not a prerequisite for listing. On the disturbance issue, the data do not support that the species has been collected in higher abundance where human impacts are greatest. Some of the highest observed numbers and most consistent collections of male Casey's June beetles have been in the gated community of Smoke Tree Ranch, where the largest and most protected area of remaining occupied habitat is found. Therefore, we do not believe the best scientific and commercial data available support the commenter's statement that listing is not warranted.

*Comment 11:* Three commenters argued specific areas proposed for critical habitat designation and considered occupied are not occupied and should not be included in the final critical habitat designation. The first commenter stated surveys conducted in 2009 indicate habitat south of Bogart Trail and west of South Palm Canyon Drive is not occupied, and stated this area should not be designated as critical habitat. The second commenter stated the proposed critical habitat south of State Route 111 near Gene Autry Trail as mapped appears to extend arbitrarily beyond what was mapped as occupied in the 2006 Bruyera report. The third commenter stated multiple past surveys of their property (the easternmost polygon of proposed critical habitat), and a survey conducted in April of 2010, were all negative. The third commenter submitted a letter from James Cornett documenting negative survey results.

*Our Response:* The commenters' statements that areas proposed as critical habitat must be occupied to meet the definition of critical habitat appear to be based on the assumptions that negative surveys are definitive, the scale of occupancy described in a critical habitat rule is the same as that determined in the smallest-scale presence-absence project-based survey, and occupancy is a requirement for critical habitat designation. First, it is not uncommon for Casey's June beetle surveys, for which we have not yet developed a robust survey protocol, to not detect occupancy where it in fact exists. For example, Cornett's (2004, p. 8) surveys near Gene Autry Trail at the

wash crossing and at another site near the State Route 111 intersection with Gene Autry Trail did not detect Casey's June beetle; however, Powell (2003, p. 4) had reported collecting 70 male Casey's June beetles in the first 15 minutes and "many afterwards" one night at the wash crossing, while Bruyera (2006, pp. 10–11) reported traps "consistently attracted [Casey's June beetle] during each of the four survey visits" at the State Route 111 intersection site. Second, the scale of occupancy described in critical habitat rules is at the population distribution scale, not the individual, local scale sometimes determined by smaller-scale presence-absence surveys. Because population distributions could expand and contract over time at the local scale depending on habitat conditions and other factors, individual-or "colony-" scale occupancy may not reflect the greater longer-term population distribution. We also note the first commenter did not provide any further information regarding the referenced survey, and we do not have any information corresponding with the described survey. Therefore, with regard to Casey's June beetle occupancy status, we believe the designation of critical habitat would be appropriate for those areas referred to by the commenters.

We did, however, determine the third commenter's property does not contain the primary soil type specified in PCE 1 (CdC) required to meet the definition of critical habitat. Therefore, we determined this property did not meet the definition of critical habitat (see also Summary of Changes From the 2009 Proposed Critical Habitat Rule, above) and did not include it in this final critical habitat designation.

*Comment 12:* One commenter asserted the maintained Palm Canyon Wash channel and levee system does not meet the definition of critical habitat because the reoccurrence of scouring and sediment deposition within the channel and levee system likely precludes any long-term development of viable Casey's June beetle PCEs. They stated that published annual peak stream flow information from the U.S. Geological Survey shows Palm Canyon Wash has experienced at least 16 peak flow events of over 1,000 cubic feet per second (cfs) (28 cubic meters per second (cms)) since 1980, and these peak streamflows have occurred at a minimum of every 1 to 3 years.

Two other commenters gave reasons why they believed their property did not meet the definition of critical habitat. The second commenter stated their property is surrounded on three sides by existing homes and was "pretty

well torn up” 2 years ago when they were compelled to clean up a vegetation dump created by their neighbors. The third commenter objected to the proposed designation of their property in the vicinity of Araby Drive (“Araby Cove”) as critical habitat. The reasoning the third commenter articulated in support of their objection was: (1) Their property is elevated with fill dirt (and therefore does not contain the PCEs); (2) no experts have evaluated their property to establish soil suitability; and (3) they have been at their property for 5 years at dusk and evening and never observed any beetle species. The commenter suggested the Service could maintain the total area proposed as critical habitat by moving mapped proposed critical habitat off their property to include “non-buildable,” adjacent, undisturbed land. They stated that designating their residential lot and not any other neighboring properties with similar physical and biological features is illegal. The commenter submitted several photographs in support of their written comments.

*Our Response:* We considered the first commenter’s statement that the Palm Canyon Wash channel and levee system does not meet the definition of critical habitat. We also acknowledge that some portions of Palm Canyon Wash are not likely to support occupancy by females and immature life stages. While it makes sense that some level of scouring intensity would extirpate occupancy in some places, at relatively small scales within the Palm Canyon Wash channel, the correlation between flood intensity and mortality at a given life stage is unknown. Many collections of adult males have been made within and adjacent to Palm Canyon Wash, even where there is no adjacent upland habitat (such as Powell 2003, p. 4). The best available data also indicate that all areas of Palm Canyon Wash will always contain both PCEs. We believe any conclusions regarding peak stream flow effects on Casey’s June beetle occupancy in Palm Canyon Wash are premature, and use of the channel and levee system by adult males also justifies inclusion of this area as designated critical habitat.

Lands which are “occupied” in some capacity but do not contain the PCEs (for example areas where only movement of males in flight is possible) do not meet the definition of Casey’s June beetle critical habitat; therefore, any levees or areas elevated by fill dirt inadvertently mapped as designated critical habitat would not be considered critical habitat. When determining the critical habitat boundaries, we made every effort to map precisely only the areas that contain the PCEs and provide

for the conservation of Casey’s June beetle. However, due to the mapping scale that we use to determine critical habitat boundaries, we cannot guarantee that every fraction of critical habitat contains the PCEs. Additionally, we made every attempt to avoid including developed areas such as lands underlying buildings, paved areas, and other structures that lack PCEs for Casey’s June beetle. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any developed structures (such as a developed levee) and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this critical habitat designation are excluded by text in this rule and are not designated as critical habitat. Federal actions involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific actions may affect the PCEs in adjacent critical habitat (see Critical Habitat Background section above). Therefore, we believe designation of the Palm Canyon Wash channel and other lands as critical habitat, as mapped in this final rule, is warranted.

We considered the third commenter’s statements that they have never observed any beetle species on their property and that designating their residential lot and not any other neighboring properties with similar physical and biological features is illegal. We further considered their suggestion we could maintain the total area proposed as critical habitat by “moving” mapped critical habitat off their property to include adjacent, undisturbed land. The Act specifies we use the best commercial and scientific data available to determine what lands meet the definition of critical habitat (see Critical Habitat Background, above). We do not base our designation on a particular size area or property boundaries. For us to alter the mapped final critical habitat designation to remove their property as the commenter suggested, without sound scientific or commercial data to support our actions, would be arbitrary and capricious in our decision making. Therefore, we did not alter mapped final critical habitat to avoid the commenter’s property based on any of these statements.

Regarding the third commenter’s statement that their property did not contain the PCEs, we examined digital aerial photography and did not include buildings and structures and surrounding areas that appeared to be

constructed on raised fill dirt (their entire property) in this final critical habitat designation (see Summary of Changes from the 2009 Proposed Critical Habitat Rule, above).

*Comment 13:* One commenter argued that although their property (a patch of habitat near the intersection of Gene Autry Drive and State Route 111) is occupied, it should not be designated as Casey’s June beetle critical habitat. They stated the Casey’s June beetle population on their property is isolated and not viable because: (1) The habitat is not contiguous with other occupied habitats and is 0.5 miles (1 km) distant from the nearest occupied location; (2) females are flightless; (3) male beetle movement appears to be limited to less than 7 ft (2 m) above the ground and to “short distances;” (4) the property is bordered by a road and developed areas where artificial lights would attract and disorient male beetles resulting in mortality; (5) the property is disturbed and has compacted soils; and (6) the “low” numbers of Casey’s June beetles collected on this property relative to typical collections in other habitats indicate a relatively small population size. They concluded their property does not meet the definition of critical habitat.

The letter from James Cornett submitted by the commenter further stated, “To successfully immigrate or emigrate from [this habitat] site, a beetle would need to fly higher than the species ever does, or fly in a straight line and head directly down highway 111 or Gene Autry Trail at the approximate level of rapidly moving motor vehicles (thereby risking substantial harm). The limited distribution of the species strongly suggests these latter scenarios rarely, if ever, happen.”

*Our Response:* Beetle behaviors described in the best available scientific and commercial data do not support the commenter’s statements. It is less than 1 mi (less than 2 km) to the nearest occupied habitat (Palm Canyon Wash) through undeveloped foothills below 600 ft (180 m) in elevation, and approximately 0.5 mi (1 km) through residential development to the north or the west. No available scientific information we reviewed indicates any beetle species must fly in a straight line down roads. In fact, Casey’s June beetles could take an equally direct route of equal distance to occupied wash habitat through residential homes from any number of points on the property other than the road intersection indicated by Cornett. While it is true the male beetle’s attraction to lights is known to cause some mortality (e.g., drowning in

pools and attraction to light-based bug traps), there is no data indicating all individuals attracted to lights in residential areas die. If males are disoriented the lights may also cause them to move in a wandering, indirect fashion through a development. No data were provided to support the assertion they never fly above 7 ft (2 m), nor were any data presented that indicated how far or in how much of a straight line male Casey's June beetles are likely to fly. Therefore, as long as females on site are not eradicated, there is potential for population survival and genetic exchange with individuals in other occupied habitats.

We considered the commenter's statement that habitat on their property is too degraded and isolated to support a viable Casey's June beetle population. We acknowledge habitat suitability may have been compromised; however disturbance, nonnative plant invasion, and soil compaction are all habitat features that may require management to maintain PCEs. Furthermore, in a habitat assessment conducted by Hovore (1997c, p. 4), he described this area as "of sufficient size to sustain viable populations despite having [SR] 111 pass along [its] margin." Inspection of historical Google Earth imagery from 1996 indicates the amount of undeveloped land in this area has not changed significantly since Hovore's assessment. Therefore even with some undesirable habitat features, this property meets the definition of critical habitat.

We further considered James Cornett's statement submitted by the commenter that the limited distribution of the species strongly suggests flight of male Casey's June beetles more than 0.5 miles (1 km) or above 7 ft (2 m) rarely, if ever, occurs. An equally plausible explanation for the species' limited distribution is direct mortality of females during habitat disturbance and loss, coupled with adaptation of the species to limiting habitat factors such as wind exposure and soil moisture content that we do not yet fully understand. Therefore, we do not agree the limited species' distribution suggests a limited movement capability of male Casey's June beetles.

*Comment 14:* One commenter stated they fully support listing Casey's June beetle as endangered for reasons identified in the original petition (threatened by loss and degradation of habitat, mortality due to artificial lighting and vehicular traffic, fragmentation of habitat, chance catastrophic events such as flooding, small population size, and inadequate regulatory protection) and the

subsequent information provided in the proposed listing rule. The commenter also stated they support the designation of critical habitat for this species.

*Our Response:* We appreciate the commenter's review of our proposed rule. Please see *Comment 1* and our response for further discussion of the scientific validity of this final rule.

*Comment 15:* One commenter stated they were concerned the proposed critical habitat is "limited \* \* \* to the present range of the species" and did not include any unoccupied habitat that may be necessary for recovery of the species. They stated critical habitat must include areas required for species recovery, not just survival. They argued that past attempts by the Service to disregard the critical habitat recovery standard under the Act have repeatedly been found unlawful (see *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1069–70 (9th Cir. 2004), citing *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441–42 (5th Cir. 2001) and *N.M. Cattle Growers Ass'n v. U.S. Fish & Wildlife Serv.*, 248 F.3d 1283 & n.2 (10th Cir. 2001)). The commenter cited the Ninth Circuit Court, "[i]f the [Service] follows its own regulation, then it is obligated to be indifferent to, if not to ignore, the recovery goal of critical habitat" and such an interpretation "would drastically narrow the scope of protection commanded by Congress under the Endangered Species Act" (*Gifford Pinchot*, 378 F.3d at 1070). The commenter concluded that the Service should consider designation of additional areas of unoccupied habitat that may be necessary to provide sufficient habitat to support recovery of Casey's June beetle.

*Our Response:* We considered the commenter's argument that our proposed critical habitat designation may have been too limited in scope. As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining the specific areas within the geographical area occupied by the species that contain the features essential to the conservation of species which may require special management considerations or protection, as well as when determining if any specific areas outside the geographical area occupied by the species are essential for the conservation of the species. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–

554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure our decisions are based on the best scientific data available. We used primary and original sources of information as the basis for our recommendations. We only designate areas outside the geographical area occupied by a species when the Secretary determines that a designation limited to a species' present range would be inadequate to ensure the conservation of the species (50 CFR 424.12(e)). We carefully considered all patches of apparently suitable habitat within the species' historical (versus current) range for proposal as critical habitat, even where reintroduction could potentially occur (see Criteria Used To Identify Critical Habitat section). As defined in section 3(5)(A) of the Act, we believe we have designated all specific areas that the best available scientific data indicate meet the definition of critical habitat. We do not believe there is sufficient scientific data to indicate specific areas outside the geographical area occupied by the species are essential for conservation of the species. Section 3(5)(C) of the Act states that except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the endangered or threatened species. As we learn more about the biology of this species and its habitat requirements we may identify additional habitat areas necessary for conservation of the species. Please see *Comment 2* and response above for further discussion of this issue.

#### Comments Relating to Potential Exclusions From Critical Habitat Designation

*Comment 16:* One commenter requested exclusion of Palm Canyon Wash and two "isolated" proposed critical habitat areas within the approved Palm Springs Master Drainage Plan Line 41, Stage 3 project alignment located east of Palm Canyon Wash and south of Palm Canyon Drive based on economic hardship and public health and safety. They stated inclusion of the maintained flood control system within the final critical habitat designation would trigger a lengthy section 7 consultation process and likely prevent timely construction and maintenance essential to safeguard the physical and economic well-being of the city of Palm Springs and its citizens. The commenter believes that potential direct and indirect impacts of critical habitat designation include but are not limited to: (1) Increased costs associated with



species surveys and the section 7 consultation process; (2) increased risk that the flood control system may fail to provide the full measure of its crucial public health and safety benefits due to a lengthy section 7 consultation process and any requirements imposed through that process to minimize effects of the action; (3) increased costs (such as increased flood insurance rates) imposed on the local community through the National Flood Insurance Program as a result of not meeting Federal Emergency Management Agency (FEMA) requirements; (4) potential damages to the communities that may result if critical maintenance activities are delayed; and (5) "additional mitigation costs and potential conflicts associated with flood control facilities." Specifically, they stated the Palm Springs Master Drainage Plan Line 41, Stage 3 project alignment will provide 100-year flood protection to existing downstream development currently located within a FEMA-mapped Special Flood Hazard Area.

The commenter argued that exclusion of the wash would not result in extinction of the species because the species is frequently extirpated from the wash by scouring events. The commenter also stated exclusion of the two isolated areas proposed as critical habitat would not result in extinction of the species because continued occupancy and reproduction on-site is not viable long-term. They argued that occupancy in these two sites depends on flightless females for reproduction, and claimed the sites are isolated from Palm Canyon Wash by existing contiguous development and steep rocky hillsides. They further stated that a past Casey's June beetle survey indicated that species' density in these areas may be low (cited Bruyey 2006), and beetles occupying this area may be a remnant colony of past conditions when dense urban development did not separate it from Palm Canyon Wash. The commenter concluded that occupancy would eventually be lost and recolonization from Palm Canyon Wash would be unlikely.

*Our Response:* We considered the commenter's statement that Palm Canyon Wash and areas within the approved Palm Springs Master Drainage Plan Line 41, Stage 3 project alignment should be excluded from critical habitat designation based on economic hardship and public health and safety. Any emergency or critical infrastructure projects undertaken to protect public health and safety can be appropriately and quickly addressed through emergency consultations. Furthermore, the DEA and subsequent FEA attributed

the majority of flood control activity costs to the listing of the species as endangered (baseline impacts), not to designation of critical habitat (incremental impacts). We will work with the responsible agencies to facilitate and expedite any consultations regarding projects that may affect public health and safety. Therefore, we do not believe exclusion of Palm Canyon Wash and areas within the approved Palm Springs Master Drainage Plan Line 41, Stage 3 project alignment from critical habitat designation is justified.

Regarding the commenter's conclusion that recolonization is unlikely following eventual loss of occupancy in some areas designated as critical habitat, we may determine that artificial recolonization and management will be required to achieve species' recovery. See also our response to *Comment 2* above regarding Casey's June beetle occupancy.

*Comment 17:* One commenter stated they believe the designation of critical habitat for Casey's June beetle in Palm Springs is not appropriate because it does not "conform" to the Coachella Valley Multiple Species Habitat Conservation Plan (Coachella Valley MSHCP).

A second commenter objected to designation of the same property as critical habitat for Casey's June beetle "or any other species." They stated this property is planned for development as a senior continued care retirement community for the gay and lesbian community in the city of Palm Springs. They further asserted it is the last available "[tribal] fee site" in the city of Palm Springs large enough for the planned development project, and is ideally located for senior citizens because it is close to medical care, grocery stores, and public transportation. They stated they should get special consideration because gays and lesbians have "been declared a suspect and protected class of state citizens by the California State Court."

*Our Response:* We reexamined the soil maps with regard to the property identified by these commenters, and have determined the primary soil type specified in PCE 1 (CdC) required for critical habitat is not mapped on this property. Therefore, we determined this property does not meet the definition of critical habitat (see also Summary of Changes From the 2009 Proposed Critical Habitat Rule, and response to *Comment 11* above) and did not designate it as critical habitat. While we appreciate the commenters' concerns, because we determined that these lands do not meet the definition of critical habitat, we did not further consider the

commenters' request for exclusion of this area under section 4(b)(2) of the Act.

*Comment 18:* One commenter argued portions of Smoke Tree Ranch should be excluded from the final critical habitat designation. The commenter stated they spent over 2 years negotiating a Casey's June beetle Candidate Conservation Agreement ("CCA") with the Service. They argued that, although the CCA was not finalized, they remain committed to implementing the terms of the CCA and have proceeded to implement it. They further stated the Service, the Center for Biological Diversity, the Sierra Club, and the commenter spent 2 years evaluating Smoke Tree Ranch habitat, and areas identified as valuable habitat have been placed under a conservation easement monitored by the Center for Natural Lands Management. The commenter provided a copy of the conservation easement deed in support of their statement. The commenter argued they are the only landowner who has, to date, entered into binding agreements to protect beetle habitat, and the portions of their land not covered by a conservation easement should be considered for exclusion. The commenter proposed to continue their conservation partnership with the Service to finalize the CCA if the species is not listed or, should the species be listed, to explore additional habitat conservation within the easement, or provide for adaptive management. They cited exclusion precedents they believe supported their request that critical habitat designation should be limited to areas covered by the conservation easement, and the remainder of Smoke Tree Ranch property should be excluded from critical habitat.

The commenter further argued the Service's proposal to designate most of Smoke Tree Ranch, including all homes and property of residents, does not reflect the best scientific data available and ignores the definition of the species' PCEs. The commenter suggested designation of private homes and other developed areas as critical habitat is unprecedented. They expressed concern that although the proposed rule text purports to exclude "lands covered by developed areas, such as buildings, pavement, and other structures" from the critical habitat, it includes areas around homes and structures and only applies to existing structures. They further concluded the "mere threat of Service regulation of improvement or modification of an existing home or structure undermines public support for the [Act] and distracts the scarce resources of the Service from real and important conservation challenges."

They stated even if the Service elects not to exercise regulatory authority over the activities of private homeowners at Smoke Tree Ranch, the designation of critical habitat will create a powerful legal weapon for the use of third parties. They stated Smoke Tree Ranch has also recorded deed restrictions on all of the property that restrict development and retain native desert habitat as the prominent property feature. The commenter submitted a “form” of deed restrictions (superseded) and an excerpt of current Smoke Tree Ranch covenants, conditions, and restrictions in support of their statements.

*Our Response:* We considered the commenter’s statements regarding potential impacts resulting from the critical habitat designation and their request for exclusion of lands within Smoke Tree Ranch not covered by the conservation easement. We recognize and appreciate the efforts made by Smoke Tree Ranch, Inc., to assist in the conservation of Casey’s June beetle, and look forward to continuing to work with these partners to assure that long-term conservation and management is assured for the species. However, after considering the relevant impacts, the Secretary is declining to exercise his discretion to exclude these lands, in part because we determined there were no existing regulations or other measures in place on these lands redundant with protection provided by critical habitat designation.

We do not agree that inclusion of private homes and other developed areas in areas mapped as designated critical habitat is unprecedented. We routinely include structures such as single-family dwellings, and other features that do not contain PCEs, in areas mapped as designated critical habitat because the scale of our mapping does not allow us to remove such areas from our maps. The cost and time required to remove all areas that do not contain the PCEs at the scale of a single-family dwelling would be prohibitive. In the case of Smoke Tree Ranch, there are occupied habitat patches distributed within the developed area, making it especially difficult to remove structures from mapped areas. Where inclusion of developed lands lacking PCEs in mapped critical habitat cannot be avoided, these areas are excluded by text in this final rule and are not designated as critical habitat.

#### Comments Related to Legal and Procedural Issues

*Comment 19:* Two commenters expressed concern that they were not personally notified of the proposed critical habitat designation, and

expressed concern that their legal rights might be violated in the future. The first commenter expressed concern that they were “denied” a requested public hearing. The second commenter specifically requested an extension of the 30-day comment period (initiated on March 31, 2010, at 75 FR 16046) under 50 CFR 424.16(c)(2) because they were not notified by the Service of the proposed rule. They stated they were not aware of the proposed rulemaking until the City of Palm Springs informed them in a letter on April 19, 2010. They also stated that if their property was not excluded from the final critical habitat designation, they were requesting a public hearing under 50 CFR 424.16(c)(3). Finally, the second commenter argued that designation of critical habitat would constitute regulatory “taking” of their property.

*Our Response:* We considered the commenters’ concerns regarding notification of our proposed rulemaking and the associated request for comment period extension. Under 50 CFR 424.16(c)(2) the Secretary may extend or reopen the period for public comment on a proposed rule upon a finding that there is good cause to do so. Under 50 CFR 424.16(c)(1)(iii), we gave notice of the proposed regulation to local authorities and private individuals known to be affected by the rule. In particular we notified the Tribe and the City of Palm Springs who have jurisdiction over the commenters’ properties. We did not know the commenter would be affected by the rule because we do not know the identity of most private property owners within a proposed critical habitat designation prior to publication. However, under 50 CFR 424.16(c)(1)(vi), we published a public notice of the proposed rulemaking on July 20, 2009, in the local Desert Sun newspaper, at the beginning of the first comment period. Furthermore, as the second commenter stated, the City notified them personally of our proposed rulemaking and open comment period on April 19, 2010, in time to submit their comments. Therefore, we determined that lack of personal notification of the commenters upon publication of the proposed rule was not a good cause to extend the 30-day comment period.

We considered the commenters’ concerns and requests regarding the opportunity for a public hearing. Under 50 CFR 424.16(c)(3), the Secretary shall promptly hold at least one public hearing if any person so requests within 45 days of publication of the proposed regulation (during the first 60-day comment period). The commenters

submitted their requests more than 45 days after the proposed rule published, during the second comment period. We believe we fulfilled our obligation under the Act to notify the public of our proposed rulemaking, and provided sufficient time to prepare and submit comments (see above discussion). Therefore, we informed the commenters of our policies and notifications, and did not hold a public hearing as requested.

Regarding the commenter’s statement that designating the property as critical habitat would result in a “taking” of the property, we have determined that the designation of critical habitat for Casey’s June beetle does not pose significant takings implications for lands within or affected by the designation (see *Takings—Executive Order 12630*, under Required Determinations, below).

#### Comments Related to the Draft Economic Analysis

##### Comments From Tribes

*Comment 20:* The Tribe and one tribal member stated the Service’s methodological approach of separately estimating incremental impacts of the designation relative to existing baseline protections has been invalidated in court and violates the Act.

*Our Response:* The estimation of incremental impacts is consistent with direction provided by the Office of Management and Budget (OMB) to Federal agencies for the estimation of the costs and benefits of Federal regulations (see OMB, Circular A–4, 2003). It is also consistent with several recent court decisions, including *Cape Hatteras Access Preservation Alliance v. U.S. Department of the Interior*, 344 F. Supp. 2d 108 (D.D.C.) and *Center for Biological Diversity v. U.S. Bureau of Land Management*, 422 F. Supp. 2d 1115 (N.D. Cal. 2006). Those decisions found that estimation of incremental impacts stemming solely from the designation of critical habitat is proper.

*Comment 21:* The Tribe and one other commenter stated the DEA’s assignment of costs to the baseline and incremental scenarios relies on the untested assumption that there is a 25-percent chance of a negative or false negative survey for the beetle at a given project site. They asserted this approach is inconsistent with real world experience where project proponents, Federal agencies, and the Service develop and negotiate minimization and mitigation strategies.

*Our Response:* Where a Federal nexus is present, project proponents typically engage biologists and survey to determine whether listed species are

present prior to determining whether consultation with the Service is required. Thus, the presence or absence of the beetle is a key factor in determining whether a consultation will go forward absent critical habitat. The assumption about likely outcomes of future surveys is necessary to estimate the possible impacts in our FEA.

*Comment 22:* The Tribe asserted that if 100 percent of critical habitat is essential, then the economic analysis should assume 100 percent of the area will be fully and equally conserved due to that critical habitat designation, not only 25 percent.

*Our Response:* This comment appears to reflect a misunderstanding of the DEA, confusing all costs associated with listing and critical habitat designation with total costs of conserving areas designated as critical habitat. The DEA assumed 75 percent of all costs associated with listing would occur due to occupancy regardless if critical habitat were designated (baseline), and where there was no occupancy detected (25 percent of the time), costs would be attributable solely to critical habitat. In areas where the beetle has been previously identified, we expect positive surveys, and all costs are attributed to the baseline. The analysis assumes 100-percent conservation of the designated habitat; however, the majority of the time, these areas would have been conserved anyway as a result of the presence of the beetle at the site.

*Comment 23:* The Tribe clarified it has chosen not to delegate land use authority to a local agent (e.g., the City of Palm Springs) in the area of its reservation south of Acanto Drive. This area is subject to the Tribe's Indian Canyons Master Plan and tribal zoning. The Tribe states it was not contacted for land use information in this area and that the economic analysis should be revised to consider tribal land uses and controls in this area.

*Our Response:* The Service's consultants responsible for preparing the DEA attempted to contact the Tribe to collect information about land uses and the potential impact of the designation on reservation lands via email and telephone multiple times between August and October 2009; however, the Tribe did not respond. Therefore, consultants relied on economic and other data they obtained from the Tribe at the end of 2007 during the preparation of the economic analysis of the proposed designation of critical habitat for the *Ovis canadensis nelsoni* (Peninsular bighorn sheep). At that time, the Tribe identified several planned development projects north of Acanto Drive that overlap proposed

critical habitat for the beetle, including the Eagle Canyon (Alturas) Project, the Monte Sereno residential development, and an unnamed residential development project also identified in the City of Palm Springs' Canyon South Specific Plan. Data provided by the Tribe did not identify any planned projects on tribal reservation lands south of Acanto Drive.

We reviewed the Indian Canyons Master Plan, which includes tribal zoning maps, and have revised the economic analysis to incorporate this newer information. Specifically, that plan identifies allotted trust and tribal trust lands south of Acanto Drive zoned for low density residential development (2 dwelling units per ac (0.4 ha)) and open space—rural development (1 dwelling unit per ac (0.4 ha)). The Tribe's master plan outlines a vision for the type of development it would like to see, as opposed to demand, for development expressed by the market. The likelihood these lots will be converted to residential housing in the reasonably foreseeable future (e.g., the next 10 to 20 years) is difficult to predict. The City of Palm Springs is predominantly built-out, increasing the value of remaining, developable land. In addition, parcels south of Acanto Drive are adjacent to recently developed parcels to the north and east, suggesting this area may be subject to development as the City of Palm Springs' population grows. However, in its 2007 General Plan, the City of Palm Springs reports higher than optimal housing vacancy rates, which is likely to depress housing prices and the demand for raw land.

Data on sales transactions for these or similar, undeveloped parcels are scarce, and because the lands are not subject to local real estate taxes, assessed values are not available. Furthermore, lacking information about the demand for and timing of future development, it is not possible to estimate the present value of these parcels based on current housing prices. Therefore, the potential impact of critical habitat designation on these parcels is discussed qualitatively in Chapter 3 of the FEA.

*Comment 24:* One tribal commenter stated the economic analysis should consider the unique circumstances regarding the loss of value of tribal lands, which go beyond simple losses in land value. Indian allotments represent economic and cultural patrimony for the allottee.

*Our Response:* Additional discussion of these unique circumstances has been added to Chapter 3 of the FEA.

*Comment 25:* One tribal member commented they intend to sell their 4-ac (1.6-ha) property to help support

their children, who are not members of the Tribe and, therefore, cannot inherit tribal property or receive financial support from the Tribe.

*Our Response:* Based on information in the comment letter and our independent mapping effort, the commenter's parcel appears to be part of the Tribe's allotted trust lands south of Acanto Drive. According to the Indian Canyons Master Plan, the parcel is targeted for residential development at a maximum density of 2 units per ac (0.4 ha). Potential impacts to this parcel are discussed in conjunction with other tribal lands located in this area in Chapter 3 of the FEA.

*Comment 26:* One apparent (based on land property information) tribal commenter asserted their parcel is currently approved for three residences and the total value of the parcel is \$3 million. They stated designating the property as critical habitat would render it undevelopable, resulting in a "taking" of the property.

*Our Response:* Based on information provided in the comment letter, this parcel appears to be part of the Tribe's allotted trust lands located south of Acanto Drive. Depending on its exact location, the parcel lies in an area zoned for either two units per ac (0.4 ha) or one unit per 40 ac (16 ha) consistent with the Indian Canyons Master Plan. The commenter provides no detail on the approval of the 25-ac (10-ha) property for three residences (presumably by the tribal planning authorities) or whether development of the site is imminent. Land for the 56-ac (23-ha) Eagle Canyon (Alturas) development project located approximately 1 mi (1.6 km) northwest of the site will be developed at a significantly higher density of four units per ac (0.4 ha) and sold for approximately \$6.6 million in 2007 (based on information obtained from the Riverside County Assessor). Thus, the subject parcel, which is less than half the size, will be developed at a significantly lower density, is farther from the City of Palm Springs, and is likely to have a present value that is less than the \$3 million value provided in the comment letter. Potential impacts to this parcel are discussed in conjunction with other tribal lands located in this area in Chapter 3 of the FEA.

Regarding the commenter's statement that designating the property as critical habitat would result in a "taking" of the property, we have determined that the designation of critical habitat for Casey's June beetle does not pose significant takings implications for lands within or affected by the designation (see

Takings—*Executive Order 12630*, below).

*Comment 27:* The Tribe stated that in the course of its ongoing section 10(a)(1)(B) habitat conservation plan (HCP) permit consultation process with the Service, the Service indicated if Casey's June beetle is not covered by the draft HCP, it will "exclude" 2,160 ac (874 ha) from HCP coverage. The Tribe noted this "exclusion" area is greater than the area containing recent and historic Casey's June beetle observation records and expressed concern that it includes areas never before identified as potential habitat for this species. The Tribe contended this HCP "exclusion" area is equivalent to expansion of critical habitat to almost four times the proposed area and requests the costs of this larger area be included in the economic analysis.

*Our Response:* The Tribe notified us in a letter dated October 6, 2010, that they suspended their pursuit of a section 10(a) permit for their draft HCP (ACBCI 2010a, p. 1). The Tribe is continuing to implement the draft HCP and will continue to protect and manage natural resources within its jurisdiction (ACBCI 2010b, p. ES-1). This final rule reflects the best available information we have at this time regarding the areas that meet the definition of critical habitat. It is possible that, as we learn more about the species, new areas may be identified as potential habitat for the species. Critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Regarding Tribe's request that these areas be included in the economic analysis, any additional costs related to any areas outside the designation would result from the listing of the species, not critical habitat designation. The focus of an economic analysis is the incremental cost of critical habitat designation. Thus, the geographic scope of the

analysis is limited to the areas designated as critical habitat. Furthermore, section 4(b)(1) of the Act specifically prohibits the consideration of economic impacts in decisions concerning the listing of a species. Therefore, impacts associated with species listing to areas outside of proposed critical habitat are not included in an economic analysis.

#### Public Comments on the Economic Analysis

*Comment 28:* One commenter stated the discount rate applied should be reevaluated given current economic conditions.

*Our Response:* The U.S. Office of Management and Budget (OMB) requires Federal agencies to report results using discount rates of 3 and 7 percent (see OMB, Circular A-4, 2003). Furthermore, most of the costs presented in the DEA are based on current land values derived from assessor's data and adjusted to current dollars using retrospective price indexes. Thus, these values are not influenced by the discount rate assumption.

*Comment 29:* One commenter stated the DEA did not clearly define how it estimates potential costs associated with time delays, regulatory uncertainty, and stigma.

*Our Response:* Chapter 2 of the DEA and subsequent FEA defines these categories of cost for the purposes of the analysis. Data are not readily available to quantify potential impacts from regulatory uncertainty and stigma; thus they are only discussed qualitatively. For residential and commercial development projects that may proceed with modification, the value of potential time delays resulting from the need for additional section 7 or CEQA review should be less than the value of the property; otherwise the project would likely be cancelled. Given the uncertainty regarding viable reasonable and prudent alternatives, the DEA (and FEA) estimated an upper-bound impact equivalent to the total value of the parcels. We discuss potential delay costs to flood damage reduction projects qualitatively in Chapter 4 of the FEA because the data required to quantify impacts are unavailable.

*Comment 30:* One commenter stated the DEA failed to acknowledge the impact to species or the costs to conservation efforts that will accrue due to any exclusions or failure to include additional habitat required for species recovery.

*Our Response:* The commenter implied exclusion of lands from critical habitat and failure to include additional

lands (outside of those proposed) would result in increased species' recovery costs. Data and models required to understand changes in recovery probability are not readily available. Thus, such costs to the species of excluding areas cannot be quantified at this time. The DEA evaluated regulatory alternatives proposed by the Service, effectively the designation of all or some combination of the proposed lands. Evaluation of costs or benefits of designating lands outside the proposal are beyond the scope of the economic analysis. Additionally, we do not believe that our exclusion of 11 ac (4 ha) tribal trust reservation lands (see Tribal Reservation Lands under Exclusions) is likely to result in increased costs associated with species conservation.

Regarding possible failure to include additional habitat required for recovery, the lands that we determined meet the definition of critical habitat are what we consider essential for conservation of the species. Therefore, we do not believe conservation costs would accrue due to exclusion of lands from or non-inclusion of lands in critical habitat designation.

*Comment 31:* One commenter stated the Service's economic analysis framework ignores indirect and cumulative effects of critical habitat designation. They asserted measurement of these types of impacts is required under the National Environmental Policy Act (NEPA).

*Our Response:* Executive Order 12866, Regulatory Planning and Review, and OMB's Circular A-4, which provides direction to Federal agencies on the implementation of Executive Order 12866, represent the framework used to estimate the costs and benefits of regulations promulgated by all Federal agencies. They do not require the estimation of indirect or cumulative impacts. Furthermore, section 4(b)(2) of the Act is silent on the definition of "economic impacts" to be considered prior to the designation of critical habitat. Thus, the Service relies on the well-established and universally followed principals laid out in OMB's Circular A-4.

*Comment 32:* One commenter pointed out the DEA noted, "the City of Palm Springs has not mandated changes in a project's design as a result of critical habitat designation for other species." They asserted this statement is inaccurate, and stated that nearly 15 years ago the City of Palm Springs worked with the Service to revise plans for the Mountain Falls, Palm Hills, and Shadowrock projects to support restoration of the Peninsular bighorn sheep.

*Our Response:* Language has been added to the FEA to clarify that the City of Palm Springs has not mandated changes in a project's design to address listed species conservation without input from the Service and the California Department of Fish and Game to facilitate these changes. With regards to changes proposed by the wildlife agencies to protect the Peninsular bighorn sheep, proposed changes were due to the presence of the sheep, not critical habitat. Fifteen years ago, no critical habitat was designated for the Peninsular bighorn sheep.

*Comment 33:* One commenter argued the economic analysis should rely on the fair market value of affected parcels rather than the assessed or adjusted values.

*Our Response:* Fair market value is determined through observed sales transactions for parcels of land. Given the small size of the designation and the recent economic downturn, sales of raw land within critical habitat in the last year are rare. Therefore, as described in Chapter 3, the economic analysis relies on assessed values, which are based on the most recent sales transaction for the parcel and adjusted for changes in the value of homes or commercial property in the region since the date of that transaction using retrospective indices. We believe the assessor's values represent the best available data.

*Comment 34:* One commenter asked how the estimate of \$12,703,000 of baseline costs referenced in the document announcing the availability of the DEA was derived (75 FR 16046; March 31, 2010). A second commenter stated that in assessing the costs of designating critical habitat, the Service must look only at the incremental cost and should not consider costs attributable to the listing alone. They commended the Service for clearly separating baseline costs from the incremental costs of the designation.

*Our Response:* This estimate is the total of the present value impacts, assuming a 7 percent discount rate, presented in Exhibit ES-4 of the DEA. This Exhibit has been updated in the FEA based on new information. We appreciate the second commenter's opinion and agree that our methods were appropriate.

*Comment 35:* One commenter noted the DEA provides caveats to its cost estimates describing the possibility that impacts may be reduced if reasonable and prudent alternatives to specific projects are possible. The commenter stated the report should instead simply acknowledge that designation results in the complete loss of value of the affected parcels.

*Our Response:* Given the high degree of uncertainty associated with the potential outcome of specific future section 7 consultations or the CEQA review process, the DEA made the simplifying assumption that affected parcel value could be lost completely. This assumption is intended to bound potential impacts to developable parcels. However, as described in the report, the Service believes that if a project is likely to adversely modify critical habitat it may be possible to maintain the viability of the project through the development of reasonable and prudent alternatives, resulting in impacts that are less than projected.

*Comment 36:* One landowner stated they intend to build a home and a guest house on their approximately 2.7-ac (1.1 ha) parcel located at 2540 Araby Drive. They stated they believe designation of critical habitat would prevent their development plans from being realized and lower the value of their land.

*Our Response:* Chapter 3 of the FEA was revised to include this development project. The effect of critical habitat on development plans depends on the presence of a Federal nexus, and in the absence of a nexus, actions taken by the City of Palm Springs in response to the designation. However, see *Comment 11* above for further discussion of this land; we ultimately did not include it in this final critical habitat designation.

*Comment 37:* One commenter stated they own two lots that they are holding for possible development of a small home for personal use. They are opposed to critical habitat designation if it restricts their ability to develop the lots. If development is precluded, they stated they would like to sell the property to a conservation organization.

*Our Response:* A discussion of the value of these lots has been added to Chapter 3 of the FEA.

*Comment 38:* One commenter stated the designation of private homes and other developed areas within Smoke Tree Ranch is unprecedented. They argued the designation of critical habitat would threaten the "specter of Federal regulatory control over home maintenance, landscaping, and other normal routine activities." They expressed concern that despite the Service's textual exclusion of developed areas, this exclusion does not apply to the areas around the homes or future modifications to the existing structure.

*Our Response:* The activities described above are unlikely to involve a Federal agency; thus section 7 consultation is not anticipated. City of Palm Springs permitting is also unlikely to be required for the routine activities.

Future modifications to existing structures could require approval from the City of Palm Springs' planning or building departments. Given the existing conservation easement in place at Smoke Tree Ranch to protect Casey's June beetle, and the deed restrictions associated with individual homes, local authorities are unlikely to require additional protection measures for the beetle. Any additional protection measures would be due to the presence of the listed beetle and therefore will occur regardless of whether critical habitat is designated. The FEA discusses the data needed to quantify these baseline impacts; however, data limitations prevent the quantification of such impacts at this time.

*Comment 39:* One commenter stated the DEA underestimates potential economic losses at Smoke Tree Ranch for two reasons. First, it omits the value of undeveloped lots. Second, it ignores the potential decreases in property value for developed parcels resulting from the stigma associated with the designation and the inability of these homeowners to make home improvements.

*Our Response:* The comment is not explicit as to whether the referenced undeveloped lots are lots targeted as homesites that simply have not been developed yet, or are parcels adjacent to homes that comprise part of the home's value but are likely to remain undeveloped to protect the viewshed and natural aesthetics of the community (view lots). Chapter 3 of the FEA has been updated to include the value of currently undeveloped lots that are not part of Smoke Tree Ranch's conservation easement. This value represents an upper-bound estimate of the potential impacts of restricting development because we are unable to distinguish between sites targeted for development and lots likely to remain undeveloped permanently to protect the viewshed. Potential impacts are attributed to the baseline scenario based on the known presence of the beetle.

It is possible the designation of critical habitat may stigmatize existing homes, reducing their value, if potential buyers are concerned they will not be able to modify or improve the existing structures due to the designation. However, given the potential for existing stigma associated with the presence of the beetle and current deed restrictions, it is difficult to measure the potential incremental decrease in value. Therefore, this issue is discussed qualitatively in Chapter 3 of the FEA.

*Comment 40:* One commenter stated that the Gay and Lesbian Association of Retiring Persons, Inc. (GLARP), a

nonprofit organization, has been in the planning stages of developing senior housing in Palm Springs for the last 10 years. After several unsuccessful attempts involving other parcels, the organization has identified the Rim Rock property as their last remaining option. The owner is prepared to sell to GLARP; however, designation of critical habitat may affect the development potential of the parcel. Therefore, GLARP objects to the designation of this property as Casey's June beetle critical habitat, citing the hardship that will be caused to the senior gays and lesbians, a protected class of California citizens.

*Our Response:* This additional information regarding the potential use of the Wessman property has been added to Chapter 3 of the FEA. This land is not included in this final critical habitat designation due to lack of PCEs. See response to Comment 17 above for more information.

*Comment 41:* One commenter stated their property, located at the southwest corner of East Palm Canyon Drive and Matthew Drive (referred to in the DEA as the "Rainbow Vision" site), has approval from the City for development of a mixed-use retirement community. The original recipient of the approvals was Rainbow Vision Palm Springs LLC; however, through a series of transactions in 2008, the commenter became the fee owner and acquired all development rights related to the project. The commenter stated the value of the property reported in the DEA is understated, because the property is fully entitled for development.

*Our Response:* The FEA has been updated to reflect current ownership information, development approvals, and the confirmed presence of the beetle at the property. As described in Chapter 3, the DEA relied on assessor's data to estimate property values. The assessments are based on the market value of the property at the date of its most recent acquisition and adjusted annually thereafter based on the California Consumer Price Index. The commenter's property is comprised of two parcels that were sold in 2008 and 2009. Thus, the market data relied upon by the assessor is current and likely reflects the entitled status of the property (project approval was granted by the Palm Springs City Council on March 19, 2008). The landowner did not provide an alternate estimate of the market value of the property; therefore, we relied on the existing estimate presented in the DEA.

*Comment 42:* One commenter stated the DEA should consider the cost of maintenance activities beyond sedimentation removal (e.g., grading,

erosion repair, vegetation removal) within the Palm Canyon Wash channel and levee system.

*Our Response:* Chapter 4 of the FEA includes language indicating other maintenance activities may be affected by the critical habitat designation, but detailed information about these activities is not available to calculate cost estimates.

*Comment 43:* In relation to the flood control projects, one commenter expressed concern the DEA did not provide Federal decision makers a complete and accurate estimate of the incremental costs associated with the proposed critical habitat designation. They argued the DEA did not evaluate scenarios that could occur if flooding and scouring events within the maintained Palm Canyon Wash channel and levee system periodically eliminate suitable habitat for the beetle and preclude beetle occupancy and section 7 consultations are still required due to the critical habitat designation.

*Our Response:* While it is true that flooding and scouring events within the maintained Palm Canyon Wash channel and levee system could periodically eliminate beetle occupancy, we believe these events would not eliminate suitable habitat nor preclude recolonization during the next active beetle season following a given event. We believe this area, regardless of periodic flooding and scouring events is occupied because within the area: (1) There is consistently high population abundance; (2) there are consistent positive survey findings; and (3) the location of the wash at the center of the species' current range and known population distribution. Therefore, the costs associated with projects within Palm Canyon Wash are appropriately considered baseline costs associated with listing, and not critical habitat designation.

*Comment 44:* One commenter stated the DEA is based on the inaccurate assumption that all Palm Canyon Wash maintenance activities would always involve a Federal nexus under section 404 of the Clean Water Act. The commenter also pointed out the proposed critical habitat designation has the potential to increase the costs of State and local approvals (such as CEQA) associated with maintenance activities that are similar to potential increased Federal regulatory costs.

*Our Response:* Chapter 4 of the FEA clarifies that some Palm Canyon Wash maintenance activities may not have a Federal nexus. Although unlikely, where no Federal nexus exists, the City of Palm Springs may request project modifications via its review under

CEQA. The CEQA review process may be affected by the critical habitat designation in a manner similar to that for section 7 consultation.

*Comment 45:* Two commenters stated the DEA did not evaluate the potential increased flood insurance cost, and the costs associated with increased flood risks and damages, if critical habitat designation delayed flood damage reduction activities. They suggested these costs may be reflected as reduced property values.

*Our Response:* Chapter 4 of the FEA presents the cost of sedimentation removal as the low-end estimate of the lost value that would result if the Riverside County FCWCD is not able to carry out maintenance activities. It is likely the lost value is higher. This value may include increased flood insurance cost and increased flood risks and damages, but data required to quantify these costs are not readily available. Similarly, the FEA states that if the Palm Springs Master Drainage Plan (MDP) Line 41, Stage 3 Flood Control Project cannot move forward then increased risk to health and human safety from floods and increase cost of flood insurance may result. Again, data do not exist to quantify these costs.

*Comment 46:* One commenter described possible mitigation measures that may be required for Palm Canyon Wash maintenance activities to avoid adverse modification.

*Our Response:* Chapter 4 focuses specifically on sedimentation removal within Palm Canyon Wash. The FEA assumes that the Riverside County FCWCD will be prevented from carrying out sedimentation removal due to presence of the beetle and presents the cost of sedimentation removal as the low-end estimate of the lost value of this activity. The FEA notes it is possible the Service will find complete avoidance of sedimentation removal is not necessary and may recommend reasonable and prudent alternatives or other conservation measures to avoid adverse modification. Measures requested by the Service may be similar to those outlined in the MDP Line 41, Stage 3 Flood Control Project, including replacement of permanently impacted suitable habitat at a 2:1 ratio with offsite habitat creation or enhancement, or a mitigation fee of \$5,730 per ac (0.4 ha). The Riverside County FCWCD suggested the sedimentation removal project could permanently impact 47 ac (19 ha) of habitat, resulting in the need for a 94-ac (38-ha) mitigation area or approximately \$269,000 in mitigation fees.

*Comment 47:* One commenter took issue with the fact that the DEA

assumed all costs associated with the MDP Line 41, Stage 3 Flood Control Project, except for a portion of the administrative costs of consultation related to adding adverse modification to the consultation, are considered baseline.

*Our Response:* Because a Federal nexus is present and the project location has had positive surveys for the beetle in the past, all costs, except for a portion of the administrative costs of consultation related to adding adverse modification to the consultation, are considered baseline. The FEA notes that the entire project may not fall under the jurisdiction of the U.S. Army Corps of Engineers, but similar impacts would likely be felt as the result of challenges to previously prepared CEQA documents. Based on the best available scientific information, including several recent studies and multiple years of positive surveys, the Service considers all of Palm Canyon Wash to be entirely occupied (see *New Species Information* above), and will continue to view this area as occupied; thus costs are considered baseline (see our responses to *Comments 22* and *46* above).

*Comment 48:* One commenter stated the potential slowing of development as a result of critical habitat designation and the corresponding reduction in infrastructure needs has an economic benefit of reducing greenhouse gas emission. They argued this benefit should be assessed in the FEA.

*Our Response:* Whether the proposed designation will have a measurable impact on greenhouse gas emissions is subject to considerable uncertainty. First, many of the development projects discussed are already sited in areas with existing infrastructure; thus new roads and utilities may not be required. Furthermore, certain projects may find alternate locations, redistributing emissions geographically without producing a net reduction. Finally, the Service has stated previously that the underlying causes of climate change are complex global issues that are beyond the scope of the Act (see 74 FR 56070; October 29, 2009). Thus, the potential for such benefits is not discussed in the FEA.

*Comment 49:* One commenter stated the designation of tribal reservation lands as critical habitat may encourage the Tribe to relocate these projects to other reservation lands where housing and commercial buildings can be constructed more efficiently. They suggested that, alternatively, existing housing in the area could be purchased at a deep discount in the current economic climate. They asserted that in failing to look at these alternatives,

estimates in the DEA of foregone economic value are grossly inaccurate.

*Our Response:* Regardless of whether other options are available to the Tribe, potentially removing the existing development potential associated with designated parcels represents a real loss of resource value that should be quantified in the analysis. Furthermore, the majority of the reservation lands proposed for designation (75 percent) are either allotted trust lands held in trust for the benefit of individual tribal members (or their heirs), or fee-title lands owned by individuals who may or may not be members of the Tribe. Thus, these individuals may not have alternative reservation lands available to them, or their substitution options may be limited and already slated for development (see Chapter 3 of the FEA and *Comment 23* above). In these cases, potential losses estimated in the DEA are unlikely to be offset. Furthermore, these parcels are often seen as an investment to be sold to a developer, rather than as a source of housing for tribal members. To make members whole, the Tribe would need to provide alternative parcels of land of equal value. The development value of the designated parcel is still lost to society, even though the impact has been redistributed from individuals to the tribal entity. Finally, we assume the Tribe is a rational economic actor whose current development plans represent the most efficient allocation of resources. Thus, if alternative sites are developed, these are likely to be second-best options. These alternative parcels may experience an increase in value; however, that increase is not likely to completely compensate for the lost value of the designated parcels. The data required to estimate such net effects are not readily available.

*Comment 50:* One commenter stated the DEA failed to include consideration of all benefits that would result from critical habitat designation, such as the preservation of open space; protecting and improving water quality by maintaining the alluvial fan in its natural state; preservation of natural habitat for other species, including those displaced by global warming; prevention of development in flood prone areas; and reduction of hazards (e.g., wildfires, erosion) associated with development on the alluvial fan. They asserted the DEA assumed the market accounts for these benefits and suggested these benefits should be assessed and quantified where possible or otherwise included in a detailed qualitative analysis.

*Our Response:* As described in Chapter 5 of the DEA, the purpose of

critical habitat is to support the conservation of Casey's June beetle. The data required to estimate and value in monetary terms incremental changes in the probability of conservation resulting from the designation are not available. Depending on the project modifications ultimately implemented as a result of the regulation, other ancillary benefits that are not the stated objective of critical habitat (such as increasing the value of homes adjacent to preserved habitat or preserving habitat for other non-listed species) may occur. We do not assume that these benefits have been accounted for in development decisions made by the market; rather, these benefits are discussed qualitatively. The FEA (5.1.111) has been revised to include discussion of the new ancillary benefit categories referenced in the comment.

### Required Determinations

#### *Regulatory Planning and Review—Executive Order 12866*

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this rule under Executive Order (E.O.) 12866. OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of \$100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

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

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (5 U.S.C. 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities.

The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we are certifying that the critical habitat designation for Casey's June beetle will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term significant economic impact is meant to apply to a typical small business firm's business operations.

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (e.g., development). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also

consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect Casey's June beetle. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinstate consultation for ongoing Federal activities (see *Application of the "Adverse Modification" Standard* section).

In our final economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from implementation of conservation actions related to the designation of critical habitat for Casey's June beetle. The analysis identifies the estimated incremental impacts associated with the proposed rulemaking, as described in Appendix A of the analysis, and evaluates the potential for economic impacts related to activity categories including residential and commercial development, tribal activities, flood control activities, and recreational activities. The analysis concludes that the incremental impacts resulting from this rulemaking that may be borne by small businesses will be associated only with development. Incremental impacts are either not expected for the other types of activities considered or, if expected, will not be borne by small entities.

As discussed in Appendix A of the final economic analysis, the largest impacts of the proposed rule on small businesses would potentially result indirectly from CEQA compliance associated with the identified development projects. In the 20-year time frame for the analysis, one developer (the analysis identifies two; however, we did not include the lands owned by one of these companies in this final critical habitat designation) may experience significant impacts. The one-time costs resulting from compliance with CEQA, including administrative time spent by the businesses, compensation costs, and the value of time delays, total approximately \$400,000 (7 percent discount rate present value impacts).

These costs result from complete avoidance of habitat under CEQA that could occur even in the absence of critical habitat designation. The final economic analysis did not specify if this business qualifies as a small business; however, as it is the only business that may be significantly affected, the number of small entities significantly affected is not substantial.

In summary, we considered whether the rule will result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we conclude that this rule will not result in a significant economic impact on a substantial number of small entities. Therefore, we are certifying that the designation of critical habitat for Casey's June beetle will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

#### *Energy Supply, Distribution, and Use—Executive Order 13211*

On May 18, 2001, the President issued 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. The OMB's guidance for implementing this Executive Order outlines nine outcomes that may constitute "a significant adverse effect" when compared to not taking the regulatory action under consideration. The final economic analysis finds that none of these criteria are relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with Casey's June beetle conservation activities within the critical habitat designation are not expected. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

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

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

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



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

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

(2) We do not believe that this rule will significantly or uniquely affect small governments because it would not produce a Federal mandate of \$100 million or greater in any year; that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform

Act. The FEA concludes incremental impacts may occur due to project modifications that may need to be made for development and flood control activities; however, these are not expected to affect small governments. Incremental impacts are expected to be borne by the Riverside County FCWCD, which is not considered a small government based on the county’s population. Consequently, we do not believe that the critical habitat designation will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

#### *Takings—Executive Order 12630*

In accordance with E.O. 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), we have analyzed the potential takings implications of designating 587 ac (237 ha) of lands in Riverside County, California, as critical habitat for Casey’s June beetle in a takings implications assessment. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this designation of critical habitat for Casey’s June beetle does not pose significant takings implications for lands within or affected by the designation.

#### *Federalism—Executive Order 13132*

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A Federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in California. The designation may have some benefit to State and local governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of Casey’s June beetle are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (rather than having them wait

for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

#### *Civil Justice Reform—Executive Order 12988*

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have designated critical habitat in accordance with the provisions of the Act. This final rule uses standard property descriptions and identifies the features essential to the conservation of the species within the designated areas to assist the public in understanding the habitat needs of Casey’s June beetle.

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

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). The rule does not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.)*

It is our position that, outside the jurisdiction of the Circuit Court of the United States for the Tenth Circuit, we do not need to prepare environmental analyses under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld by the Circuit Court of the United States for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d

1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

*Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal reservation lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We identified tribal reservation lands that meet the definition of critical habitat for Casey's June beetle. There has been a substantial amount of government-to-government consultation between the Tribe and Service on developing the draft Tribal HCP and this rulemaking process for Casey's June beetle. Although the Tribe informed us in an October 28, 2008, letter that they removed Casey's June

beetle from the list of species addressed in the draft Tribal HCP, they indicated they will "continue to informally coordinate with the Service regarding this species where it occurs on the Reservation." The Tribe stated they are deferring to the Service to allow "the Service to take the lead in addressing how to effectively conserve and protect this species" (ACBCI 2008, p. 1). Although the Tribe has suspended their pursuit of a section 10(a) permit (ACBCI 2010a, p. 1), they are continuing to implement the draft HCP and will continue to protect and manage natural resources within its jurisdiction (ACBCI, 2010a, p. 1; ACBCI 2010b, p. ES-1). We will continue to work cooperatively with the Tribe on efforts to conserve Casey's June beetle. We believe the exclusion of tribal trust reservation lands from critical habitat will help preserve and strengthen the partnership we have developed with the Agua Caliente Band of Cahuilla Indians, reinforce those relations we are building with other tribes, and foster future partnerships and development of future management plans with both Agua Caliente Band of Cahuilla Indians and other tribes throughout the United States. At this time the Secretary is exercising his discretion to exclude tribal trust lands (i.e., non-fee, non-allotted lands) from critical habitat (see *Tribal Reservation Lands* discussion under Exclusions, above).

**References Cited**

A complete list of all references cited in this rulemaking is available on

<http://www.regulations.gov> and upon request from the Field Supervisor, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

**Authors**

The primary authors of this notice are staff members of the Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

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

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

**Regulation Promulgation**

Accordingly, 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 an entry for "Beetle, Casey's June", in alphabetical order under "INSECTS," to read as follows:

**§ 17.11 Endangered and threatened wildlife.**

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

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	*
INSECTS							
*	*	*	*	*	*	*	*
Beetle, Casey's June .....	<i>Dinacoma caseyi</i> .....	U.S.A. (CA)	Entire .....	E	793	17.95(i)	NA
*	*	*	*	*	*	*	*

- 3. In § 17.95, amend paragraph (i) by adding an entry for "Casey's June Beetle (*Dinacoma caseyi*)," in the same alphabetical order that the species appears in the table at § 17.11(h), to read as follows:

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

(i) *Insects.*

**Casey's June Beetle (*Dinacoma caseyi*)**

- (1) The critical habitat unit is depicted for Riverside County in California on the map below.
- (2) Within this area, the primary constituent elements of critical habitat for Casey's June beetle are the habitat components that provide:
  - (i) Soils of the Carsitas (CdC) gravelly sand and Riverwash (RA) series, or inclusions of Carsitas cobbly sand (ChC) series soils, or inclusions of Myoma fine

- sands (MaB) or Coachella fine sands (CpA) within CdC soils, at or below 620 ft (189 m) in elevation, associated with washes and alluvial fans deposited on 0 to 9 percent slopes to provide space for population growth and reproduction, moisture, and food sources; and
- (ii) Predominantly native desert vegetation, to provide shelter from traffic-related mortality and food for the species.
- (3) Critical habitat does not include lands covered by manmade structures,

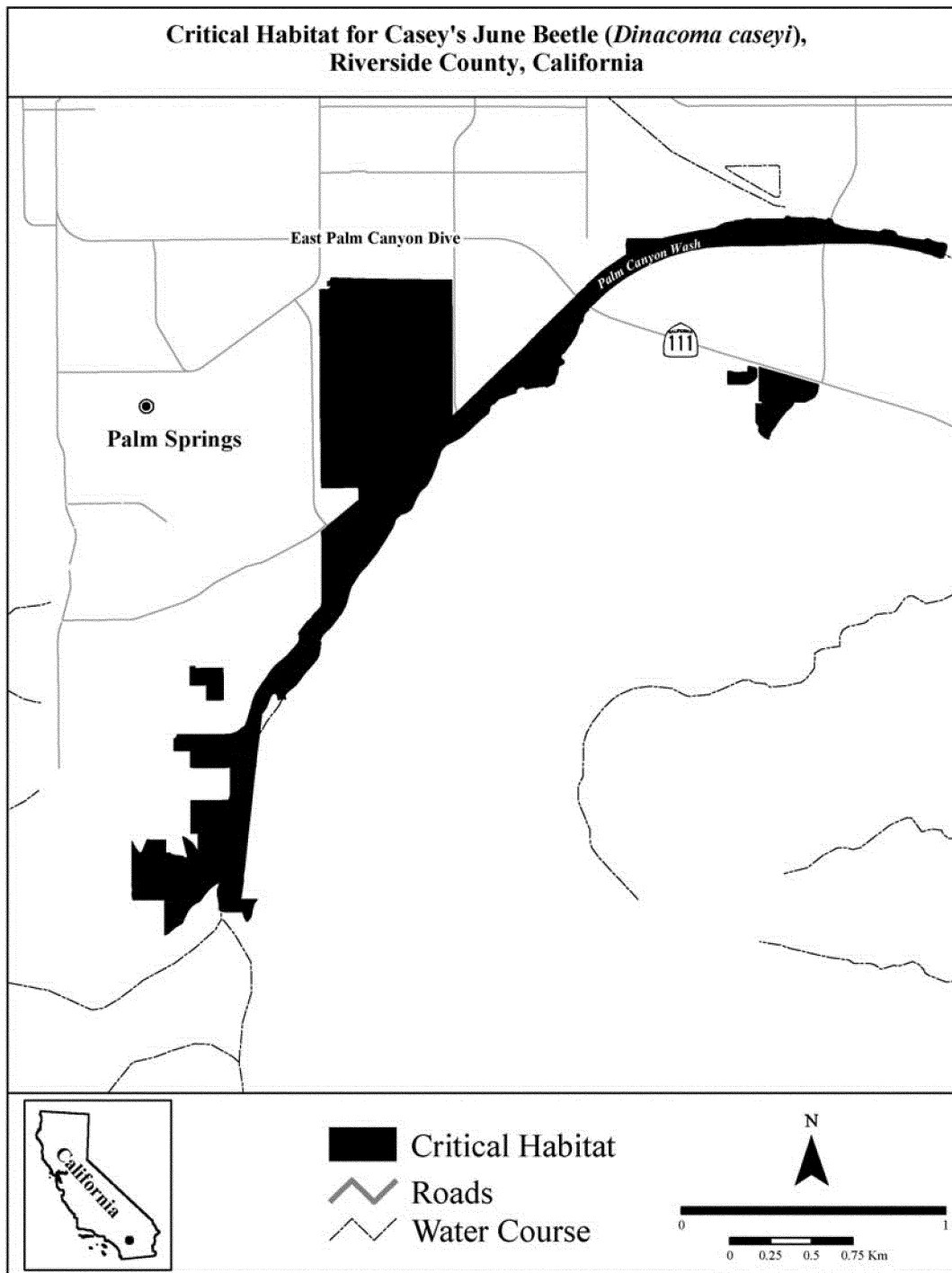
such as buildings, aqueducts, airports, and roads, existing on the effective date of this rule and not containing one or more of the primary constituent elements.

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

zone 11, North American Datum (NAD) 1983 coordinates.

(5) **Note:** Map of critical habitat for Casey's June beetle follows:

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(6) Palm Springs: Palm Canyon Wash, 3740158; 545884, 3740153; 545855, 3739309; 544860, 3739295; 544821, Riverside County, California. From 3740146; 545821, 3740135; 545781, 3739281; 544792, 3739270; 544775, USGS 1:24,000 quadrangles Palm 3740122; 545754, 3740111; 545748, 3739264; 544761, 3739261; 544754, Springs and Cathedral City, land 3740109; 545743, 3740106; 545742, 3739256; 544751, 3739253; 544748, bounded by the following Universal 3740106; 545717, 3740096; 545699, 3739249; 544726, 3739226; 544725, Transverse Mercator (UTM) North 3740088; 545681, 3740081; 545664, 3739226; 544722, 3739226; 544718, American Datum of 1983 (NAD83) 3740073; 545646, 3740064; 545629, 3739224; 544709, 3739219; 544709, coordinates (E, N): (E, N): 546545, 3740055; 545612, 3740046; 545595, 3739218; 544703, 3739211; 544701, 3740037; 545578, 3740028; 545550, 3739200; 544699, 3739186; 544697, 3740010; 545533, 3740000; 545516, 3739181; 544691, 3739169; 544669, 3740362; 546595, 3740361; 546603, 3739989; 545499, 3739977; 545483, 3739152; 544642, 3739130; 544576, 3740360; 546608, 3740360; 546614, 3739965; 545467, 3739953; 545450, 3739067; 544533, 3739029; 544487, 3740359; 546625, 3740360; 546637, 3739941; 545435, 3739929; 545431, 3739002; 544487, 3739002; 544485, 3740361; 546650, 3740363; 546657, 3739926; 545427, 3739923; 545425, 3739001; 544435, 3738976; 544434, 3740362; 546667, 3740364; 546668, 3739921; 545419, 3739916; 545404, 3738976; 544433, 3738975; 544405, 3740364; 546674, 3740364; 546680, 3739903; 545388, 3739889; 545373, 3738943; 544388, 3738897; 544388, 3740362; 546700, 3740357; 546722, 3739876; 545359, 3739862; 545344, 3738896; 544375, 3738851; 544345, 3740353; 546734, 3740350; 546746, 3739848; 545330, 3739833; 545330, 3738778; 544317, 3738731; 544302, 3740348; 546756, 3740350; 546764, 3739833; 545330, 3739833; 545330, 3738717; 544285, 3738701; 544273, 3740355; 546767, 3740358; 546768, 3739833; 545330, 3739833; 545329, 3738690; 544272, 3738689; 544249, 3740359; 546789, 3740351; 546791, 3739833; 545329, 3739833; 545329, 3738644; 544248, 3738643; 544246, 3740349; 546791, 3740343; 546795, 3739833; 545329, 3739832; 545329, 3738638; 544238, 3738620; 544230, 3740334; 546799, 3740329; 546805, 3739832; 545329, 3739832; 545329, 3738596; 544216, 3738578; 544186, 3740325; 546810, 3740322; 546821, 3739832; 545329, 3739832; 545328, 3738560; 544155, 3738551; 544154, 3740320; 546823, 3740320; 546833, 3739832; 545329, 3739832; 545326, 3739830; 545306, 3738550; 544128, 3738526; 544127, 3740314; 546865, 3740301; 546941, 3739832; 545326, 3739830; 545306, 3738525; 544118, 3738499; 544109, 3740289; 546971, 3740284; 546980, 3739812; 545305, 3739811; 545305, 3738474; 544107, 3738468; 544087, 3740284; 547001, 3740284; 547022, 3739808; 545303, 3739801; 545297, 3738437; 544057, 3738388; 544010, 3740282; 547038, 3740280; 547058, 3739796; 545297, 3739796; 545285, 3738316; 543957, 3738246; 543954, 3740277; 547075, 3740275; 547086, 3739787; 545276, 3739771; 545272, 3738243; 543942, 3738229; 543906, 3740279; 547092, 3740281; 547093, 3739754; 545271, 3739750; 545269, 3738190; 543901, 3738185; 543900, 3740281; 547104, 3740290; 547115, 3739731; 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Dated: September 12, 2011.  
**Rachel Jacobson,**  
*Acting Assistant Secretary for Fish and Wildlife and Parks.*

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