VIII. Paperwork Reduction Act of 1995

This proposed order establishes special controls that refer to previously approved collections of information found in other FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in part 807, subpart E have been approved under OMB control number 0910–0120.

IX. Proposed Effective Date

FDA proposes that any final order based on this proposal become effective 30 days after the date of publication in the **Federal Register**.

X. Comments

Interested persons may submit either electronic comments regarding this document to *http://www.regulations.gov* or written comments to the Division of Dockets Management (see **ADDRESSES**). It is only necessary to send one set of comments. Identify comments with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday, and will be posted to the docket at *http://www.regulations.gov.*

List of Subjects in 21 CFR Part 872

Medical devices.

Therefore, under the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321 *et seq.,* as amended) and under authority delegated to the Commissioner of Food and Drugs, it is proposed that 21 CFR part 872 be amended as follows:

PART 872—DENTAL DEVICES

■ 1. The authority citation for 21 CFR part 872 continues to read as follows:

Authority: 21 U.S.C. 351, 360, 360c, 360e, 360j, 371.

■ 2. Add § 872.5560 to subpart F to read as follows:

§ 872.5560 Electrical salivary stimulatory system.

(a) *Identification.* An electrical salivary stimulatory system is a prescription intraoral device that is intended to electrically stimulate a relative increase in saliva production.

(b) *Classification.* Class II (special controls). The special controls for this device are:

(1) The design characteristics of the device must ensure that the geometry, material composition, and electrical output characteristics are consistent with the intended use;

(2) Any element of the device that contacts the patient must be demonstrated to be biocompatible;

(3) Appropriate analysis and/or testing must validate electromagnetic compatibility and electrical safety, including the safety of any battery used in the device;

(4) Software validation, verification, and hazard testing must be performed; and

(5) Documented clinical experience must demonstrate safe and effective use for stimulating saliva production by addressing the risks of damage to intraoral tissue and of ineffective treatment and must capture any adverse events observed during clinical use.

Dated: September 12, 2014.

Leslie Kux,

Assistant Commissioner for Policy.

[FR Doc. 2014–22255 Filed 9–17–14; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2014–0034; 4500030113]

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List Eriogonum kelloggii (Red Mountain buckwheat) and Sedum eastwoodiae (Red Mountain stonecrop) as Endangered or Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list *Eriogonum kelloggii* (Red Mountain buckwheat) and *Sedum eastwoodiae* (Red Mountain stonecrop) as endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After a review of the best available scientific and commercial information, we find that listing *Eriogonum kelloggii* and *Sedum eastwoodiae* is not warranted at this time. However, we ask the public to submit to us any new information that becomes available concerning threats to the two species or their habitat at any time.

DATES: The finding announced in this document was made on September 18, 2014.

ADDRESSES: This finding is available on the internet at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2014–0034 and at *http://www.fws.gov/arcata/.* Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Arcata Fish and Wildlife Office, 1655 Heindon Road, Arcata, CA 95521; telephone 707–822–7201; facsimile 707–822–8411. Please submit any new information, materials, or questions concerning this finding to the above street address.

FOR FURTHER INFORMATION CONTACT: Bruce Bingham, Field Supervisor, U.S. Fish and Wildlife Service, Arcata Fish and Wildlife Office, 1655 Heindon Road, Arcata, CA 95521; telephone 707–822–7201; facsimile 707–822–8411. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Eriogonum kelloggii and *Sedum eastwoodiae* were first identified as candidate species for Federal listing on July 1, 1975 (40 FR 27823), and December 15, 1980 (45 FR 82479), respectively. The two species remained candidates, and information on their status and threats facing the two species were summarized in our annual candidate notices of review (CNORs). See the Species Profiles for *Eriogonum kelloggii* and *Sedum eastwoodiae* on our Environmental Conservation Online System (ECOS) at *http://ecos.fws.gov/ecos/home* for additional information on the history of candidate assessments for the two species.

In 2011, in resolution of litigation brought by WildEarth Guardians and the Center for Biological Diversity, we agreed to submit either a proposed rule or a not-warranted finding for 251 candidate species no later than September 30, 2016 (*re Endangered Species Act Section 4 Deadline Litigation,* Misc. Action No. 10–377 (EGS), MDL Docket No. 2165 (D.D.C., September 9, 2011)). This determination regarding whether *Eriogonum kelloggii* or *Sedum eastwoodiae* should be proposed for listing is made in compliance with the 2011 settlement.

Section 4(b)(3)(B) of the Act (16 U.S.C. 1531 *et seq.*) requires that, for any petition to revise the Federal Lists of Endangered and Threatened Wildlife and Plants that contains substantial scientific or commercial information that listing the species may be warranted, we make a finding within 12 months of the date of receipt of the

petition. As discussed above, in this finding, we have determined that adding *Eriogonum kelloggii* and *Sedum eastwoodiae* to the Federal List of Endangered or Threatened Plants is not warranted.

This finding is based upon the Species Report for Two Red Mountain Plants: Red Mountain Buckwheat (*Eriogonum kelloggii*) and Red Mountain Stonecrop (*Sedum eastwoodiae*) (Service 2014, entire) (Species Report) and scientific analyses of available information prepared by Service biologists from the Service's Arcata Fish and Wildlife Office, the Pacific Southwest Regional Office, and the Headquarters Office. The Species Report contains the best scientific and commercial data available concerning the status of *E. kelloggii* and *S. eastwoodiae,* including the past, present, and future threats to the species. As such, the Species Report provides the scientific basis that informs our regulatory decision in this document, which involves the further application of standards within the Act and its regulations and policies.

For a detailed discussion of *Eriogonum kelloggii'*s or *Sedum eastwoodiae'*s description, taxonomy, life history, habitat, soils, distribution, and abundance, please see the Species Report for Two Red Mountain Plants: Red Mountain Buckwheat (*Eriogonum kelloggii*) and Red Mountain Stonecrop (*Sedum eastwoodiae*) (Species Report, Service 2014, entire) available for review under Docket No. FWS–R8–ES–2014–0034 at *http://www.regulations.gov.* Also refer to the most recent species assessment forms for both species at *http://ecos.fws.gov/ecos/home* for a summary of additional species information (Service 2012a and 2012b, entire).

Previous Federal Action

On January 9, 1974, as directed by the Act, the Secretary for the Smithsonian Institution submitted a report to Congress on potential endangered and threatened plant species of the United States (Smithsonian 1975, entire). The report identified 1,999 plant species as either endangered or threatened, including *Eriogonum kelloggii* (Smithsonian 1975, p. 92). On July 1, 1975, we published in the **Federal Register** (40 FR 27823) our notification that we considered this report to be a petition to list *E. kelloggii* as either endangered or threatened under the Act. The notice solicited information from Federal and State agencies, and the public, on the status of the species. In 1978, the Smithsonian Institution submitted an additional report (Ayensu and DeFilipps 1978, entire) that revised the list of plant species to be considered as endangered or threatened. We considered this revised report as a supplement to the original 1975 petition. The revised report identified *Sedum eastwoodiae* [as *Sedum laxum* ssp. *eastwoodiae*] as a potential endangered or threatened species (Ayensu and DeFilipps 1978, p. 106). On December 15, 1980, we published in the **Federal Register** (45 FR 82479) our notice of review of plant taxa for listing as endangered or threatened species. Both *E. kelloggii* and *S. eastwoodiae* were identified as Category 1 species (taxa for which we had enough biological information to support listing as either endangered or threatened). As a result, we considered *E. kelloggii* and *S. eastwoodiae* to be candidates for addition to the Federal List of Endangered and Threatened Plants. The December 15, 1980, **Federal Register** notice (45 FR 82479) again solicited information from Federal and State agencies, and the public, on the status of the two species (Service 1981, pp. 1, 4–5).

Both species were included in our annual candidate notices of review (CNORs) between 1983 (48 FR 53640; November 28, 1983) and 2013 (78 FR 70103; November 22, 2013) for *Eriogonum kelloggii;* and between 1985 (50 FR 39525; September 27, 1985) and 2013, for *Sedum eastwoodiae.* In our September 19, 1997, CNOR (62 FR 49397), which identified listing priority numbers for candidate species, these two species were assigned priority numbers of 5 (threats facing the two species were of high magnitude but nonimminent) as outlined in our Listing Priority Guidance (48 FR 43098; September 21, 1983). We were petitioned to list both species by the Center for Biological Diversity and others on May 11, 2004 (Center for Biological Diversity, *et al.,* 2004). In the November 22, 2013, CNOR, we stated that we would be conducting a review of the two species for listing under the Act (78 FR 70103). This notice constitutes our review and final action regarding the petitions to list *E. kelloggii* or *S. eastwoodiae* as endangered or threatened under the Act.

Taxonomy

Eriogonum kelloggii: Gray (1870, p. 293) described this taxon from specimens collected in 1869, by Dr. A. Kellogg from the type locality at Red Mountain, Mendocino County, California. The species is sometimes known as Kellogg's buckwheat (Hickman 1993, p. 874; CDFG 2005, unpaginated; CDFW 2013, p. 9).

Sedum eastwoodiae: Nathaniel Britton first described this taxon as *Gormania eastwoodiae* in 1903, based on specimens from Red Mountain, Mendocino County, California, collected by Alice Eastwood (Britton and Rose 1903, p. 31). Nomenclatural changes followed, and in 1975, the taxon was reduced to the sub-specific level by Robert Clausen, renaming it *S. laxum* ssp. *eastwoodiae* (Clausen 1975, pp. 399–403). Melinda Denton returned the species to *S. eastwoodiae* (Denton 1982, p. 65; Denton 1993, pp. 531–533).

Distribution

The Red Mountain buckwheat (*Eriogonum kelloggii*) and Red Mountain stonecrop (*Sedum eastwoodiae*) are plant species endemic to serpentine habitat of lower montane forest in the northern Coast Range at Red Mountain in Mendocino County, California (Kruckeberg 1984, pp. 113, 121). *Eriogonum kelloggii* is found on dry ridges in rocky barren openings associated with serpentine habitat between 1,900 and 4,100 ft (580 and 1,250 m) in elevation (Munz and Keck 1973, p. 339; Jennings 2003, pp. 1–8). *Sedum eastwoodiae* occupies relatively barren rocky openings and cliffs, generally on west-faced slopes associated with serpentine habitats between 1,900 to 4,100 ft (580 to 1,250 m) in elevation (Jennings 2003, p. 2). Serpentine habitats are thinly soiled and usually contain high levels of heavy metals and other minerals and often support plant species which have become uniquely adapted to this harsher environment (Kruckeberg as cited in Whittaker 1954, pp. 258–288; Kruckeberg 1984, pp. 6–12, 18–21, 34–35, 48–50; University of California 1993, pp. 1–3). The majority of the range of both species overlap except where *E. kelloggii* extends farther south than *S. eastwoodiae* to a 900-square-foot (ft^2) (84-square-meter (m^2)) area on adjacent Little Red Mountain. The area occupied by both species at Red Mountain is scattered over approximately 4 square miles (mi^2) (10.4 square kilometers (km^2)). Limited monitoring indicates that both species have fairly stable populations relative to their distribution. The exact lifespans of *E. kelloggii* and *S. eastwoodiae* are not known. Other *Eriogonum* species occupying similar restricted habitats and which are adapted to similar environmental and ecological conditions (e.g., xeric conditions, limited resources, tolerance of unique soils) have long lifespans and tend to grow slowly and favor individual persistence (Anderson 2006, pp. 1–73). Based on the persistence of monitored

E. kelloggii and *S. eastwoodiae* populations we would expect the lifespan of plants to be long.

Land Ownership and Management

The Bureau of Land Management (BLM) and California Department of Fish and Wildlife (CDFW; formerly known as the California Department of Fish and Game (CDFG)) are the two largest land managers in the Red Mountain area. Both agencies support plant conservation and have participated in monitoring and reducing threats on the two species and their habitat.

In 1979, BLM designated 6,173 acres (ac) (2,498 hectares (ha)) of BLM land at Red Mountain as a wilderness study area (WSA). In 1984 (updated in 1989), BLM also designated 6,895 ac (2,790 ha) of the area as an Area of Critical Environmental Concern and Research Natural Area (ACEC/RNA). These designations provide protection and focused management direction toward conservation of the unique botanical and soils values of the Red Mountain area (BLM 1995, pp. 3–6 to 3–9). As a result of these designations, BLM developed a resource management plan (RMP) for the area (BLM 1995, pp. 2–32 to 2–37). The Red Mountain ACEC/RMP is site-specific and excludes livestock grazing and off-road vehicle use from the area and guides overall management activities within BLM's Arcata Field Office's jurisdiction. In addition, the BLM lands in the Red Mountain area (including those identified above) have also been designated by Congress as part of the South Fork Eel River Wilderness Area through the Northern California Coastal Wild Heritage Wilderness Act of October 17, 2006 (Pub. L. 109–362). The designation removed the WSA status for the area and officially designated the area as wilderness. Under the designation, BLM is directed to manage designated wilderness in a manner that retains the wilderness character for future generations. Within wilderness areas, no new roads can be developed and no mechanical equipment can be used. The BLM has acquired and is working to acquire additional private lands from willing landowners within the area that would help consolidate its ownership. The majority of areas containing *Eriogonum kelloggii* and *Sedum eastwoodiae* populations are within the Red Mountain ACEC and South Fork Eel River Wilderness Area (see Figure 5 of the Species Report (Service 2014)).

The portion of Little Red Mountain containing one population of *Eriogonum kelloggii* is owned and managed by CDFW as an ecological reserve (Little Red Mountain Ecological Reserve). State ecological reserves are established to provide protection for rare, endangered, or threatened native plants, wildlife, aquatic organisms and specialized terrestrial or aquatic habitat types. The CDFW designated *E. kelloggii* as a State endangered plant in April of 1982 (CDFG 2005, unpaginated; CDFW 2013, p. 9). Public entry and use of ecological reserves are to be compatible with the primary purposes of the reserve, and subject to the applicable general rules and regulations for conservation of the area as outlined in Title 14 of the California Code of Regulations at section 630 (CDFW 2014, pp. 1–14).

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533) and implementing regulations (50 CFR 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, a species may be determined to be endangered or threatened based on any of the following five factors:

(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.

In making this finding, information pertaining to *Eriogonum kelloggii* and *Sedum eastwoodiae* in relation to the five factors provided in section 4(a)(1) of the Act is discussed below. In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species warrants listing as endangered or threatened as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of an endangered or threatened species under the Act.

In making our 12-month finding on the petition we considered and evaluated the best available scientific and commercial information.

The primary stressor identified as impacting *Eriogonum kelloggii* and *Sedum eastwoodiae* and their habitat at the time the species were first considered as candidates was the potential for surface mining for chromium, nickel, and potentially cobalt. Other stressors identified throughout our CNORs between 1983 and 2013 consisted of unauthorized off-highway vehicle (OHV) use, illegal marijuana cultivation, wildfire, wildfire suppression, vegetation encroachment, small population size, and the effects of climate change. The potential threat of large-scale surface mining has greatly diminished. The following sections provide a summary of the current stressors impacting *E. kelloggii* and *S. eastwoodiae.*

Stressors previously identified as impacting *Eriogonum kelloggii* and *Sedum eastwoodiae* include mining activities (Factors A and E); habitat disturbance activities (unauthorized OHV use (Factors A and E), trail construction (Factor A), illegal marijuana cultivation (Factors A and E)); wildfire and wildfire management (alteration of the fire regime or fire suppression activities) (Factors A and E); vegetation encroachment (competition with native plant species (Factors A and E)); climate change (Factor A and E); small population size (Factor E); and the inadequacy of existing regulatory mechanisms (Factor D). Listing actions may be warranted based on any of the above factors, singly or in combination. The information pertaining to the two species organized by the five factors is discussed for the two species below. In addition, Table 1 below summarizes the stressors identified for both species over time since the two species were first identified as candidates for listing, and compares these with the situation today. A complete characterization and discussion of the stressors impacting these two species is in the Species Report (Service 2014, pp. 10–28).

TABLE 1—STRESSORS IDENTIFIED AS IMPACTING ERIOGONUM KELLOGGII AND SEDUM EASTWOODIAE OVER TIME

Stressor	At time of petitions 1974/1978	As candidates 1980–2012	Present 2013–2014	Current scope
Mining	Yes	Ongoing	Greatly Reduced or Eliminated.	Red Mountain.
OHV Use	Not Identified	Yes	Decreased	Red Mountain.
Road Construction	Not Identified	Yes	Decreased	Red Mountain.
Trail Construction (authorized)	Not Identified	Potential	Potential	Red Mountain.
Illegal Marijuana Cultivation	Not Identified	Yes	Decreased	Lower Elevations.
Wildfire (Mgt. and Suppression)	Not Identified	Yes	Stable	Everywhere.
Vegetation Encroachment/Mgt.	Not Identified	Yes	Potential	Portions of Range.
Effects of Climate Change	Not Identified	Yes	Stable (changes may offset each other).	Entire Range.
Small Population Size	Yes	Yes	Stable (adapted to small population size).	Entire Range.
Inadequacy of Regulatory Mechanisms	Yes	Yes	No	Entire Range.

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

Some of the same potential activities that affect the habitat of *Eriogonum kelloggii* and *Sedum eastwoodiae* can also affect individual *E. kelloggii* and *S. eastwoodiae* plants. While these impacts to *E. kelloggii* and *S. eastwoodiae* fit under Factor E (Other Natural or Manmade Factors Affecting Its Continued Existence), they are included here in the Factor A discussion for ease of analysis.

Mining

Mining activities that occur, have occurred, or potentially could occur at Red Mountain include recreational, small-scale, and potential commercial (large-scale) mining operations. The historical mining activity that has occurred has been minimal (BLM 1994, pp. 1–2).

Recreational and Small-Scale Mining: Recreational mining includes individuals with hand equipment (e.g., shovels, picks), mostly collecting rocks or looking for other mineral deposits and would involve digging and movement of rocks and other small-impact disturbance. Such activity could also destroy or trample individual plants if it occurred within an area occupied by *Eriogonum kelloggii* or *Sedum eastwoodiae.* This type of recreational mining activity has occurred in the past but most likely has diminished due to designation of most of the Red Mountain area as an ACEC and Wilderness Area. Mining activity has also included small-scale mining efforts using mechanical equipment that have been conducted in the past by individuals prior to the area being designated as an ACEC or Wilderness Area or currently on private lands by individual landowners. These areas are typically localized and limited in scope. According to U.S. Geological Survey (USGS) information on mine locations at Red Mountain, 13 mine locations have been identified within the area (USGS-Mineral Resource On-line Spatial Data 2014). Of these mine sites, only two are located within the areas known to contain *E. kelloggii* and *S. eastwoodiae.* This type of activity if it was to occur within an area occupied by *E. kelloggii* or *S. eastwoodiae,* would most likely destroy individual plants by direct removal, crushing, or burying. Review of aerial imagery of these two mine sites shows very limited habitat disturbance of the two areas and no recent activity. In order for mining activities to resume at these small-scale mining sites, they would require authorization by BLM within the ACEC and Wilderness Area. See Figure 6 in the Species Report for mine sites identified in the Red Mountain area (Service 2014, entire).

If recreational or small-scale mining activities occur in areas occupied by *Eriogonum kelloggii* and *Sedum eastwoodiae,* there may be some limited destruction of plants and habitat. However, the amount of wide-scale recreational and small-scale mining activity on Red Mountain is minimal due to access constraints and these activities have not impacted *E. kelloggii* and *S. eastwoodiae* populations or habitat to a large degree since they were identified as candidate species.

Commercial Mining: Commercial mining activity has not occurred on Red Mountain to date, although the potential for large-scale mining activity exists for the entire Red Mountain area, as it contains widespread deposits of chromium, nickel, and potentially cobalt. The entire known distribution of *Eriogonum kelloggii* and *Sedum eastwoodiae* at Red Mountain is held under unpatented lode or placer mining claims, or occurs on privately owned lands owned by individuals with past or current mining interests (BLM 2009, unpaginated). The one population of *E. kelloggii* at Little Red Mountain within the Little Red Mountain Ecological Reserve is protected from any mining activity (recreational or commercial) through State regulation (CDFW 2014, pp. 1–14).

Commercial mining on Red Mountain would most likely be an open-face bench type mining that would involve removal and processing of the mineral-bearing ore containing nickel, chromium, and possibly cobalt (Service 1990, p. 14). Commercial mining activities would remove plants, degrade habitat, alter drainage, compact soils, and introduce contaminants in the affected area. Although an operation plan for such mining activities would require restoration of the affected areas, plant species composition would undoubtedly be altered. Moreover, there is no evidence in the literature indicating *Eriogonum kelloggii* and *Sedum eastwoodiae* are able to recolonize soils once they are disturbed.

With regard to the potential for Red Mountain to be commercially mined, a Bureau of Mines Preliminary Feasibility Study conducted at Red Mountain in 1978 concluded the nickel deposits met the minimum tonnage grade test at the time (i.e., 35 million short tons of material containing an average 0.8 percent nickel) (K. Geer, Service, pers. comm. 1995). However, commercial mining at Red Mountain was not considered economically feasible at the time due to the relatively low grade of the resource (low metal concentrations) and the high cost of mining the material (Geer, pers. comm. 1995). According to current USGS data (Kelly and Matos 2013 [Comps.], entire) on nickel and chromium production and pricing between 1900 and 2014, the unit value (as calculated in 1998 dollars) of both

nickel and chromium has not increased significantly since the values reported in 1978 (USGS 2014a, pp. 1–7; USGS 2014b, pp. 1–8). The unit value (1998 dollars) for cobalt as of 2012 has decreased since the values reported in 1978 (USGS 2014c, pp. 1–6). The likelihood and extent of future mining will depend on the future economic feasibility and demand for minerals found in the area. The economic feasibility of mining will be determined by the current market value of the mined ore, as well as cost of extraction, processing, and transportation. As discussed above, over the past 35 years since the last economic feasibility report, the price of nickel, chromium, and cobalt has either risen only slightly or decreased. In addition, because Red Mountain is within designated wilderness, avoidance and mitigation measures to reduce or offset impacts to wilderness characteristics may be added to the cost of extraction and feasibility of mining the area.

The majority of *Eriogonum kelloggii* and *Sedum eastwoodiae* occurrences are within the South Fork Eel River Wilderness Area. The legislation designating the wilderness area specifically retained valid land rights, such as mining claims, in existence on the date of enactment (October 17, 2006). However, the area was withdrawn from all new forms of: (1) Entry to, appropriation, or disposal of lands under the public land laws; (2) locating, entering, and establishing new patents under Federal Mining Law; and (3) disposition under all laws pertaining to mineral and geothermal leasing or mining of materials. Consequently, no new mining claims can be established within the South Fork Eel River Wilderness Area.

For the existing mining claims within the South Fork Eel River Wilderness Area, a plan of operation must be developed and approved by the BLM before any permitting of operations can take place (43 CFR 3809.11). Before BLM may approve a mining plan of operations on existing claims, it must conduct a validity examination to determine if the claim is valid and if so develop a Mineral Examination Report (S. Flanagan, BLM, pers. comm., 2014; 43 CFR 3809.100). The validity examination includes a determination of whether the mining claim was valid before the wilderness withdrawal, and whether it remains valid. Because there are different claimholders on Red Mountain that likely filed claims at different times, separate validity exams would need to be performed for each claim, raising the cost of conducting the examination. Due to the high cost of the validity examinations, BLM typically only does them when a plan of operations is filed by a claimholder (S. Flanagan, BLM, pers. comm., 2014). The BLM has 60 days to determine if sufficient information was provided to conduct a validity examination, and then 2 years to complete the examination. If the validity examination fails, the claim is cancelled. If the claim is determined to be valid, the claimant may file patent to gain ownership to the land, although for short-lived mining operations a patent is often not filed. The BLM does not have the right to deny such a patent; however, it can impose protective measures that avoid or reduce impacts to wilderness characteristics. However, the majority of recently conducted validity examinations in California have failed, and BLM does not expect any new validity examinations to be conducted within the area (S. Flanagan, BLM, pers. comm., 2014).

Currently, no small-scale or commercial mining activities are being conducted on BLM or adjacent private lands, and no validity exams have been conducted on any of the mining claims within the Red Mountain area. Some recreational mining activities have occurred in the area in the past; however, with the designation of the majority of the area as an ACEC and Wilderness Area, we do not expect these types of activities to be a major concern for *Eriogonum kelloggii* or *Sedum eastwoodiae* or their habitat now or in the future. As discussed above and in the Species Report, the majority of private lands where *E. kelloggii* or *S. eastwoodiae* occur has been acquired by BLM and are within designated wilderness, and subject to BLM's management. As a result of land use designation and management changes and continued economic infeasibility, we also do not consider large-scale mining to be a threat to *E. kelloggii* or *S. eastwoodiae* or their habitat now or in the future.

Habitat Disturbance Activities

Activities associated with habitat disturbance in the Red Mountain area other than those discussed above under mining include: Road construction, wildfire management construction activities, unauthorized off-highway vehicle (OHV) use, illegal marijuana cultivation, and trail development. The majority of past habitat disturbance in the Red Mountain area has been caused by road construction, both for access and fire control (Imper and Wheeler, unpubl. data 2009). However, due to the designation of the Red Mountain area as an ACEC and part of the South Fork Eel River Wilderness Area and Little Red Mountain as a State ecological reserve, no new road construction or use of mechanical equipment is permitted in the area. One exception that would still be permitted in the area is for the purpose of wildfire management activities (which may include presuppression, fire-break construction, and access road construction) (16 U.S.C. 1133(d)(1)). See the *Wildfire and Wildfire Management* section, below, for further discussion of these activities and how they may affect *Eriogonum kelloggii* and *Sedum eastwoodiae* and their habitat.

The current unauthorized OHV use and associated habitat disturbance at Red Mountain is largely related to illegal marijuana cultivation. Unauthorized OHV use by illegal marijuana growers crushes vegetation and loosens soil, making it more likely to erode during a rain event. Clearing of vegetation, creation of water impoundments, and diversion of streams can also greatly alter local site conditions. These types of activities should they occur in occupied areas would remove, crush, or destroy individual *Eriogonum kelloggii* or *Sedum eastwoodiae* plants and disturb or alter their habitat. However, currently the majority of known sites on Red Mountain where marijuana cultivation has occurred are at the lower elevation areas adjacent to private lands, near existing roads, or with access to streams, and not near locations where *E. kelloggii* and *S. eastwoodiae* occur (J. Knisley, BLM, pers. comm. 2014). The Red Mountain area where *E. kelloggii* and *S. eastwoodiae* occur is more open to observation and has less forest or vegetation cover, and as a result is most likely less desirable for illegal marijuana cultivation sites. BLM, CDFW, and County law enforcement officials have been working with a local nonprofit organization to remove the growing infrastructure (i.e., irrigation, planting materials, and other debris) from the area (Eel River Recovery Project 2014, pp. 1–6). General public access to the area by vehicle is controlled. Considering the extent of illegal marijuana cultivation in northern California, the potential for these activities to be a threat to *E. kelloggii* and *S. eastwoodiae* and their habitat is a concern. However, based on the current extent of these activities within the Red Mountain area and the best available scientific and commercial information, we do not consider these activities to result in significant impacts to *E. kelloggii* and *S. eastwoodiae* as a whole, or to their habitat, nor do we

expect them to become significant in the future.

A proposal to enhance recreational use of the South Fork Eel River Wilderness Area through construction of a foot or horse trail would encourage public use and likely discourage marijuana growing and unauthorized vehicle use (J. Wheeler, pers. comm. 2009). Trail construction will be considered once a wilderness management plan is developed for Red Mountain, and would likely be simple delineation using posts rather than soil disturbance (J. Wheeler, pers. comm. 2013). Habitat for *Eriogonum kelloggii* and *Sedum eastwoodiae* could also potentially be impacted by logging operations, such as cable logging (C. Golec, CDFW, pers. comm. 2005); however, logging of any kind in the absence of a wilderness management plan will not occur. BLM currently does not have a specific timeline for development of a wilderness management plan for the area, and as a result, no trail or logging activities will be authorized for the area in the near future. Due to the tendency of *E. kelloggii* and *S. eastwoodiae* to occur on rock outcrops and rocky slopes, none of the above activities is expected to impact a significant portion of the two species' habitat now or in the future.

Wildfire and Wildfire Management

Fire has been shown to be an important factor affecting vegetation patterns and maintenance of many open habitats, similar to the habitat of *Eriogonum kelloggii* and *Sedum eastwoodiae,* across the Klamath Bioregion (Skinner *et al.* 2006, pp. 175–178; Skinner *et al.* 2009, pp. 76–98). Historically in California, frequent natural and cultural ignitions maintained these disturbance-prone ecosystems dependent on recurrent fire (Holmes *et al.* 2008, pp. 551–552). Pre-European settlement fire-return intervals for mixed conifer stands are thought to have been variable and in some cases ranged as little as 6 to 8 years between events (Skinner *et al.* 2009, pp. 83–84). A decline in fire frequency since European settlement has allowed conifer encroachment or establishment of dense shrub stands in many areas of the region. BLM's general policy is to restore fire to its natural role in the ecosystem (BLM 2012a, pp. 1–25—1–27), except where these activities threaten human life, property, or high value resources on adjacent nonwilderness lands, or where these would result in unacceptable change to the wilderness resource. Wildfire or prescribed burning under certain specific conditions may be used as a wildlife management tool if carefully designed to maintain or enhance the wilderness resource (BLM 2012a, pp. 1–25—1–27).

BLM may conduct fire suppression activities within wilderness areas. Fire suppression activities involving uses generally prohibited in wilderness areas (use of motorized equipment or motor vehicles, mechanical transport, construction of roads, and construction of structures or installations) can only occur if authorized by the applicable BLM State Director, unless this authority has been delegated to the District or Field Manager (BLM 2012a, pp. 1–12—1–15, 1–26). These types of activities may have a direct impact on *Eriogonum kelloggii* and *Sedum eastwoodiae* by removing or crushing plants and their habitat.

Indirectly, fire suppression impacts *Eriogonum kelloggii* and *Sedum eastwoodiae* by allowing vegetation to encroach and to become decadent. Relatively dense growth adjacent to areas occupied by *E. kelloggii* and *S. eastwoodiae* can lead to shading, changing the micro-climate around plant clusters, and using moisture in a xeric landscape. Another consequence of long-term fire suppression is the increase in fire hazards when vegetation is permitted to become relatively dense in a dry environment. This could lead to a potential for more severe fire events, which may lead to greater habitat destruction. The threat of fire is lessened for *E. kelloggii* and *S. eastwoodiae* in that the plants occur mostly in rocky areas, which in most cases do not contain large build-ups of vegetation. Natural and prescribed fires will be supervised and may be allowed to burn under certain conditions. When fire threatens human life or property, motorized equipment may be used to eliminate or minimize the threat. However, in all cases, the equipment and tactics used to manage fires are designed to minimize the impact to wilderness values (BLM 2012a, pp. 1–25—1–27).

Two recorded fires appear to have influenced the Red Mountain area over the past 90 years: The 1952 Lynch Fire and the 2008 Red Mountain Fire (Baad 202, pp. 6–7; California Department of Forestry and Fire Protection 2009). An undocumented fire also occurred in the area and may have influenced localized vegetation patterns at Red Mountain (Goforth 1980, pp. 16–19; Service 2013, p. 18) (see *Vegetation Encroachment* section below). The 1952 Lynch Fire was the only fire included in the Fire and Resource Map Project's (FRAP) online historical fire database (California Department of Forestry and Fire Protection 2009) for the immediate area of Red Mountain since the 1920s. Evidence suggests the Lynch Fire may have stimulated germination and growth of *Pinus attenuata* (knobcone pine) in some areas within the distribution of *Eriogonum kelloggii* and *Sedum eastwoodiae* on the mountain, which has encroached on their habitat (Service 2013, p. 18), but only in a few cases (Goforth 1980, pp. 16–19). See the *Vegetation Encroachment* section, below, for further discussion of the potential effects of vegetation encroachment.

The 2008 Red Mountain fire, which was caused by lightning, burned approximately 3,000 ac (1,214 ha) within the South Fork Eel River Wilderness Area (BLM 2008, p. 1). The fire burned some 1,000 ac (405 ha) at the top of Red Mountain, with reportedly 80 percent mortality of brush and 10 percent tree mortality (J. Wheeler, BLM, pers. comm. 2008). The actual burn footprint was highly irregular, and the majority of the burned habitat appeared to have experienced a relatively low-intensity ground fire, with little crowning (Imper and Wheeler, unpublished data 2009). The fire also extended to Little Red Mountain and burned to near the boundary of one of the populations of *Eriogonum kelloggii;* the population may have been impacted by the fire control efforts, but no survey of the area was completed (S. Koller, CDFW, pers. comm. 2009). Regardless, in an attempt to restore the impacts of the fire suppression activities, CDFW staff worked extensively with California Department of Forestry and Fire Protection (CalFire) to redistribute the pushed up earth material back over the disturbed areas that had been created for safety zones during the 2008 fires (S. Koller, CDFW, pers. comm. 2014). Some 25 percent of the polygons occupied by *Sedum eastwoodiae* and 42 percent of the polygons occupied by *E. kelloggii* mapped by Jennings (2003, pp. 2 and 8) occur within the boundary of 2008 fire, but the extent to which habitat occupied by either species was directly affected by the fire is unknown.

The effects of climate change may also impact habitat conditions and fire frequency and intensity for the Red Mountain area. Changes to wildfire regimes (frequency and intensity) and factors influencing fire (temperature, precipitation, vegetation) have been predicted as a result of climate change (Lenihan *et al.* 2003, pp. 1678–1680; Fried *et al.* 2004, pp. 177–188; Westerling and Bryant 2008, pp. 244–248; Krawchuk *et al.* 2009, pp. 8–10; Cornwell *et al.* 2012, pp. 1–89). However, the results of fire modeling

are variable, as the likelihood of future fires and wildfire severity depend on many factors, including pre-suppression activities, fire suppression strategies, human settlement patterns, ignition sources, variability of local climatic conditions, vegetation type, and fuel loading (Fried *et al.* 2004, p. 185; Westerling and Bryant 2008, pp. 231–235; Krawchuk *et al.* 2009, p. 1; Point Reyes Bird Observatory (PRBO) Conservation Science 2011, pp. 1–59). A 2004 modeling study on the effects of climate change and fire frequency for northern California suggested that there may be an increase in fire risk for northern California as a whole (Fried *et al.* 2004, pp. 177–188), but that northern coastal areas (as represented by the CalFire Humboldt Ranger District and including Red Mountain and Little Red Mountain) would not change. This was attributed to the model's prediction of slower winds and higher humidity offsetting any temperature increases (Fried *et al.* 2004, p. 177). The researchers stated that the majority of fires under both present and predicted future climate scenarios would be of moderate intensity and rates of spread, and are unlikely to become large, damaging fires (Fried *et al.* 2004, p. 177). Consequently, we do not currently consider climate change and its potential effects on fire frequency to be a significant threat to the habitat of *Eriogonum kelloggii* or *Sedum eastwoodiae* now or into the future.

With the history of only two recorded fires over the past 90 years, with one of those fires being a low-intensity ground fire with little crowning, the Red Mountain area being more open and less vegetated than surrounding areas, and management focus increased as a result of its designation as wilderness in part for the conservation of rare plants, we do not currently consider wildfire or wildfire suppression to be a significant threat to *Eriogonum kelloggii* and *Sedum eastwoodiae* or their habitat, and do not expect the fire conditions or management to change significantly in the near future.

Vegetation Encroachment

Habitat modification as a result of natural vegetation changes in the absence of, or as a result of, fire is a stressor to *Eriogonum kelloggii* and *Sedum eastwoodiae.* Encroachment of vegetation into *E. kelloggii* and *S. eastwoodiae* habitat results in the modification of ecological conditions through shading, competition for resources (light, water, nutrients), and greater susceptibility to the effects of fire due to increased fuel. These habitat changes may result in conditions that are not suitable for populations of *E. kelloggii* and *S. eastwoodiae* and may lead to loss of individual plants for both species.

As stated above, an undocumented fire may have stimulated germination and growth of *Pinus attenuata* (knobcone pine) in some areas within the distribution of *Eriogonum kelloggii* and *Sedum eastwoodiae* on the mountain and encroached on their habitat, but only in a few cases (Goforth 1980, pp. 16–19; Service 2013, p. 18). In addition, Baad (2002, pp. 6–7) recognized suppressed reproductive output in *E. kelloggii* at one site on Red Mountain, and attributed the impact to conifer invasion following a fire that occurred 40 years previously. Baad's monitoring efforts (2002, entire) did not observe specific impacts from vegetation encroachment on *S. eastwoodiae,* but the study was not designed to provide that information. In absence of fire, Baad concluded that *S. eastwoodiae* located on rocky ridge tops and with little woody vegetation appeared relatively stable, but populations situated on deeper soils in more sheltered sites are more vulnerable to shading by competing vegetation (Baad 2002, pp. 6–7). The manner and degree to which the 2008 Red Mountain Fire affected *E. kelloggii* or *S. eastwoodiae,* either positively, by setting back natural succession within their habitat, or negatively, by killing plants, is not known.

Although vegetation encroachment is a concern for both *Eriogonum kelloggii* and *Sedum eastwoodiae,* based on the extent of observed effects, persistence of known populations, and increased management of the area, we do not consider vegetation encroachment to be a significant threat to *E. kelloggii* or *S. eastwoodiae* or to their habitat now or into the future.

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

Due to the remoteness of the area and access constraints, little visitor use occurs in the area. As a result there is a low potential for collection or overutilization for any purpose. Status surveys and other informal monitoring have not shown that overutilization is a concern. As a result, the best available scientific and commercial information does not indicate that overutilization for commercial, recreational, scientific, or educational purposes is now, or will be in the future, a threat to *Eriogonum kelloggii* or *Sedum eastwoodiae.*

Factor C. Disease or Predation

It is likely that predation from invertebrates, insects, and animals on *Eriogonum kelloggii's* and *Sedum eastwoodiae's* seeds, vegetative tissue, and roots is occurring on an ongoing basis. Service biologists have documented severed flowering stems, which most likely occurred from small mammal predation (Ken Fuller, U.S. Fish and Wildlife Service, pers. comm. 1994). Because *E. kelloggii* and *S. eastwoodiae* have evolved within this habitat, both species have adapted to some level of predation. There is no evidence from observations of predation on *E. kelloggii* and *S. eastwoodiae* that individuals have been killed from this activity. It is more likely that predation reduces the vigor, including reproductive output, of the two species. However, the best available scientific and commercial information indicates that this level of predation is not a current or expected future threat to *E. kelloggii* and *S. eastwoodiae.* In addition, disease is not known to be a current or expected future threat to *E. kelloggii* and *S. eastwoodiae.*

Factor D. The Inadequacy of Existing Regulatory Mechanisms

The Act requires that the Secretary assess available regulatory mechanisms in order to determine whether existing regulatory mechanisms are adequate to address threats to the species (Factor D). The Species Report includes a discussion of applicable regulatory mechanisms that apply to *Eriogonum kelloggii* and *Sedum eastwoodiae* (Service 2014, entire). In the Species Report, the Service examines the applicable Federal, State, and other statutory and regulatory mechanisms to determine whether these mechanisms provide protections to *E. kelloggii* or *S. eastwoodiae.* As described in the Species Report and outlined below, several Federal and State statutes provide protections to *E. kelloggii* and *S. eastwoodiae* and their habitat.

Under this factor, we examine whether existing regulatory mechanisms are inadequate to address the potential threats to *E. kelloggii* and *S. eastwoodiae* discussed under other factors. We give strongest weight to statutes and their implementing regulations, and management direction that stems from those laws and regulations. Such laws and regulations are nondiscretionary and enforceable, and are considered a regulatory mechanism under this analysis. Examples include State government actions enforced under a State statute or

constitution, or Federal action under statute.

Some other programs are more voluntary in nature or dependent upon available funding (see *Conservation Measures Planned or Implemented,* discussed below); in those cases, we analyze the specific facts for that effort to ascertain its effectiveness at mitigating the threat and the extent to which it can be relied upon in the future. Having evaluated the significance of the threat as mitigated by any such conservation efforts, we analyze under Factor D the extent to which existing regulatory mechanisms adequately address the specific threats identified for the species. We consider relevant Federal, State, and tribal laws and regulations when evaluating the status of a species. Regulatory mechanisms, if they exist, may preclude the need for listing if we determine that such mechanisms adequately address the threats to the species such that listing is not warranted. Only existing ordinances, regulations, and laws that have a direct connection to a stressor are applicable.

Federal Protections

Special Status Species Management: BLM's policy for Special Status Species Management (BLM Manual 6840) includes guidance for the conservation of BLM special status species and their habitat on BLM-administered lands. BLM special status plant species include federally endangered or threatened species and species requiring special management (as determined by BLM State Directors). Management actions are to promote the special status plant conservation for recovery and reduce the likelihood and need for any potential future listing under the Act. Species with ''Special Status'' receive a higher level of scrutiny on proposed projects with a greater emphasis on species conservation under existing environmental laws and implementing regulations. BLM accomplishes this by implementing proactive conservation measures that reduce or eliminate threats to species BLM has categorized as sensitive. These measures include: (1) Development of rangewide and or site-specific management plans; (2) implementation of BLM actions that are consistent with objectives for management of those species; (3) actions that at least maintain or improve the species and its habitat at each occurrence; and (4) monitoring populations to determine whether management objectives are being met (BLM 2012b, entire; BLM 2012c, entire). The California Native Plant Society has ranked plant species according to their conservation status and considers *Eriogonum kelloggii* and *Sedum eastwoodiae* as 1B species (endemic species considered rare throughout their range) (Smith and Berg 1988, pp. XV, 49, 104). The BLM California State Director has identified California 1B ranked species (including *Eriogonum kelloggii* and *Sedum eastwoodiae*) as BLM Special Status Plants for management and conservation purposes (BLM 2013, pp. 1–6).

Areas of Critical Environmental Concern: As stated above, BLM designated the Red Mountain Area as an Area of Critical Environmental Concern (ACEC) Research Natural Area (RNA) in 1984. The area was established in part to protect and conserve sensitive animal and plant species on the specialized habitat at Red Mountain (BLM 1989, p. 2). The management objectives include: (1) Protect and monitor existing populations of *E. kelloggii* and *S. eastwoodiae;* (2) acquire private lands from willing sellers to consolidate and enhance land management within the Red Mountain area; (3) develop a fire management plan and implement measures to reduce the impacts of suppression activities on sensitive species and their habitat; (4) close the area to public vehicle use and limit private vehicle access to existing roads; (5) close the area to grazing activities; and (6) post boundary signs to assist in appropriate visitor access (BLM 1989, pp. 1–17; BLM 1995, pp. 2–32 to 2–37).

South Fork Eel River Wilderness Area Designation: As stated above, the Red Mountain Area was designated as part of the South Fork Eel River Wilderness Area in 2006. Wilderness areas are those Federal lands recognized as an area where the earth and its community of life are untrammeled by human activity and retain their primeval character and influence, without permanent improvements or human habitation. These areas are protected and managed so as to preserve their natural conditions and (1) generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) have outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) have at least 5,000 ac (2,023 ha) of land or are of sufficient size as to make practicable their preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Under the designation, BLM is directed to manage the designated wilderness at Red Mountain in a manner that retains the wilderness character for future generations. Within wilderness areas, there shall be no commercial enterprise, no permanent roads, and except as necessary to meet minimum requirements for the administration of the area, there shall be no temporary roads, no use of motor vehicles, no use of motorized equipment, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

State Protections

California Endangered Species Act: The California Endangered Species Act (CESA) makes it illegal to import, export, ''take,'' possess, purchase, sell, or attempt to do any of those actions to species that are designated as endangered, threatened, or candidates for listing, unless permitted by CDFW. ''Take'' is defined as ''hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.'' Under CESA, CDFW may permit take or possession of endangered, threatened, or candidate species for scientific, educational, or management purposes, and may also permit take of these species that is incidental to otherwise lawful activities if certain conditions are met. Some of the conditions for incidental take are that the take is minimized and fully mitigated, adequate funding is ensured for this mitigation, and that the activity will not jeopardize the continued existence of the species.

California Native Plant Protection Act: The California Native Plant Protection Act (NPPA) was enacted in 1977, and allows the California Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of rare or endangered native plants, but includes some exceptions for agricultural, nursery, and timber operations; emergencies; mining assessments; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. Section 1911 of the NPPA requires that all State departments and agencies to consult with the CDFW, and use their authorities to carry out programs for the conservation of rare or endangered native plants. Such programs include, but are not limited to, the identification, delineation, and protection of habitat critical to the continued survival of rare or endangered native plants (California Fish and Game Code section 1900 *et seq.*).

California Environmental Quality Act: The California Environmental Quality Act (CEQA) is a law that requires public

agencies to analyze and publicly disclose the environmental impacts from projects they approve, and adopt feasible alternatives and mitigation measures to mitigate for the significant impacts they identify. During CEQA review, State public agencies must evaluate and disclose impacts to plant species protected under CESA, and in most cases must mitigate all significant impacts to these species to a level of less than significant. In addition, during the CEQA process, public agencies must also address plant species that may not be listed under CESA, but that may nevertheless meet the definition of rare or endangered provided in CEQA. The CDFW advises public agencies during the CEQA process to help ensure that the actions they approve do not significantly impact such resources and often advises that plant species with an appropriate California Rare Plant Rank (as identified by the State or California Native Plant Society) be properly analyzed by the lead agency during project review to ensure compliance with CEQA.

The State of California listed *Eriogonum kelloggii* as endangered under CESA in 1982 (CDFG 2005, unpaginated; CDFW 2014, p. 4). As a State-listed species, *E. kelloggii* is subject to the conservation provisions of CESA and NPPA, and to the provisions of CEQA. *Sedum eastwoodiae* is not listed by the State of California as an endangered, threatened, or candidate species, but it is identified as a 1B species (rare throughout its range) by the California Native Plant Society (CNPS) (Smith and Berg (eds.) 1988, pp. 49, 104). Therefore, impacts to *S. eastwoodiae* are evaluated by the lead agency under CEQA, and the lead agency must adopt feasible mitigation measures to mitigate for any significant impacts that they identify.

Based on the analyses contained within the Species Report and outlined above on the existing regulatory mechanisms for *Eriogonum kelloggii* and *Sedum eastwoodiae,* we conclude that the best available scientific and commercial information does not indicate that the existing regulatory mechanisms are inadequate to address impacts to *E. kelloggii* and *S. eastwoodiae* from the identified potential threats, and these mechanisms provide protections to these two species that were not available when the species were first identified as Federal candidate species.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

For ease of discussion, the impacts to individual *Eriogonum kelloggii* and *Sedum eastwoodiae* plants from mining, habitat disturbance activities (unauthorized OHV use, illegal marijuana cultivation, and trail development), wildfire suppression and management, and vegetation encroachment associated with this factor are discussed under Factor A. For a complete discussion of potential impacts to both habitat and individual plants from these activities, see our Factor A discussion, above.

Small Population Size

Other natural or human-caused stressors for *Eriogonum kelloggii* and *Sedum eastwoodiae* are related to its small distribution and overall population size, and the potential impacts of climate change on the species and its habitat. Generally, small populations are more prone to impacts from random environmental events, and from genetic impoverishment as a result of habitat fragmentation, genetic isolation, and declining effective population size (Saunders *et al.* 1991, pp. 18–32; Meffe and Carroll 1997, pp. 269–304).

General conservation principles indicate that endemic species limited to small areas are inherently more vulnerable to extinction than are widespread species, because of the increased risk of genetic bottlenecks; random demographic fluctuations; climate change effects; and localized catastrophes, such as drought and fire due to changes in demography, the environment, genetics, or other factors (Gilpin and Soulé 1986, pp. 24–34; Pimm *et al.* 1988, p. 757; Mangel and Tier 1994, p. 607). These problems are further magnified when these geographically restricted and small numbers of populations contain small numbers of individuals in these populations. Small, isolated populations can often also exhibit reduced levels of genetic variability, which diminishes the species' capacity to adapt and respond to environmental changes, thereby lessening the probability of long-term persistence (Barrett and Kohn 1991, p. 4; Newman and Pilson 1997, p. 361). Small, isolated populations are also more susceptible to reduced reproductive vigor due to ineffective pollination and inbreeding depression. Although a tenet of conservation biology is that larger, well-distributed populations of species are less vulnerable and insure persistence, many narrow endemic plants combine small population ranges and sizes with long-term persistence, depending on how they have adapted to their unique environments (Lavergne *et al.* 2004, pp. 505–518; Matthies *et al.* 2004, pp. 481–488; García 2008, pp. 106–113).

For *Eriogonum kelloggii* and *Sedum eastwoodiae,* their small population size and the extent of stress factors impacting the two species were among the primary reasons they were first identified as Federal candidate species. As stated above, the distribution of the two species is extremely limited, and the identified potential threats facing the two species occur throughout their distribution. However, the known distribution and population size of the species has always been limited and small in size. *Eriogonum kelloggii* and *S. eastwoodiae* are narrow endemic species that have evolved and adapted to the particular serpentine habitats in which they occur. Although there are stressors acting on the two species, their populations are dispersed throughout the Red Mountain area, making it less likely for a single or multiple single events to significantly impact the species. In addition, the populations of *E. kelloggii* and *S. eastwoodiae* have persisted and remained stable since the two species were first identified as Federal candidate species. As a result, we do not consider small population size a threat to *E. kelloggii* or *S. eastwoodiae* now or in the near future.

The Effects of Climate Change

The effects of climate change may be affecting both *Eriogonum kelloggii* and *Sedum eastwoodiae's* habitat (Factor A) and individual plants (Factor E) through several means. For the ease of analysis, the discussion of the effects of climate change has been included with discussion of each applicable threat or is discussed below.

The terms ''climate'' and ''climate change'' are defined by the Intergovernmental Panel on Climate Change (IPCC). The term ''climate'' refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements (IPCC 2013a, p. 1450). The term ''climate change'' thus refers to a change in the mean or variability of one or more measures of climate (for example, temperature or precipitation) that persists for an extended period, whether the change is due to natural variability or human activity (IPCC 2013a, p. 1450). Various types of changes in climate can have direct or indirect effects on species. Scientific measurements spanning several decades demonstrate

that changes in climate are occurring, and that the rate of change has increased since the 1950s. Examples include warming of the global climate system, and substantial increases in precipitation in some regions of the world and decreases in other regions (for these and other examples, see Solomon *et al.* 2007, pp. 35–54, 82–85; IPCC 2013b, pp. 3–29; IPCC 2014, pp. 1–32).

Climate change predictions are variable for the area within the range of *Eriogonum kelloggii* and *Sedum eastwoodiae.* 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; Cayan *et al.* 2005; IPCC 2007). According to one downscaled climate model (California Natural Resources Agency 2012, pp. 7–12) for northern California, temperatures and drought intensity would increase. The effects of climate change can impact and influence any one of the stressors impacting *E. kelloggii* and *S. eastwoodiae* and outside the threat of large-scale mining may be the greatest influence on the two species. The effects of climate change may result in shifts in vegetation types, increased competition between species like *E. kelloggii* and *S. eastwoodiae* and other native and nonnative species (Loarie *et al.* 2008, pp. 1–10), or result in habitat changes resulting from altered fire frequency as discussed above. However, another study found that the area would experience slower winds (less drying effect) and higher humidity, thereby offsetting any temperature increases and limiting the effects of climate change (Fried *et al.* 2004, p. 177).

Predicting how *Eriogonum kelloggii* and *Sedum eastwoodiae* may react to the effects of climate change is difficult. The majority of the distribution of *E. kelloggii* and *S. eastwoodiae* occurs in upland, often exposed, xeric habitats that are expected to offer less refuge under drying or warming conditions. The distribution of both species is also limited to specific edaphic and geologic features on the landscape, which would limit the two plants' ability to spread to more hospitable or suitable habitat over time. Despite these concerns, the populations of both species have remained stable based on the limited survey information available. Although more recent modeling shows the area may be affected by climate change, without long-term information or observed population declines the impacts of such climate change are difficult to determine or predict. Based on the best available information, we do not find that the effects of climate change are negatively impacting populations of *E. kelloggii* and *S. eastwoodiae* now or into the foreseeable future.

Combination of Threats and Cumulative Threats

When conducting our analysis about the potential threats affecting *Eriogonum kelloggii* and *Sedum eastwoodiae,* we also assessed whether the two species may be affected by a combination of factors (see ''Combination of Threats and Cumulative Threats'' section of the Species Report (Service 2014, entire)). In the Species Report (Service 2014, entire), we identified multiple potential threats that may have interrelated impacts on *E. kelloggii* and *S. eastwoodiae* or their habitat.

For example, mining activities and exploration may result in the loss of habitat. Depending on the nature of mining activities, these impacts can be permanent and irreversible (conversion to land uses unsuitable to the species) or less so (minor ground-disturbance and loss of individual plants) (Factors A and E). When mineral development and exploration occurs in-between (but not within) populations, this can eliminate corridors for pollinator movement, seed dispersal, and population expansion. Fire suppression activities, such as grading fire breaks and maintaining access roads, may have direct impacts by removing and crushing plants and eliminating suitable habitat. Indirectly, fire suppression impacts *Eriogonum kelloggii* and *Sedum eastwoodiae* by allowing other vegetation to encroach and to become dominant. Relatively dense growth can lead to shading of *E. kelloggii* and *S. eastwoodiae,* changing the micro-climate around plant clusters, and can also result in competition for space, moisture, nutrients, and light with other plant species in a xeric (dry) landscape. Another consequence of long-term fire suppression is the increase in fire hazards when vegetation is permitted to become relatively dense in a dry environment, thereby leading to a potential of more severe or frequent fire events, which may lead to greater habitat destruction or alteration. Off highway vehicle and other road corridors can exacerbate habitat loss and fragmentation, and tend to be associated with (accompanying or following) fire suppression, recreational, or illegal marijuana cultivation activities (Factors A and E). Off highway vehicle and road corridors tend to create conditions that favor increased habitat disturbance beyond the footprint of the road or OHV corridor, leading to further deterioration of habitat because of increased access (Factors A and E). Climate change has the potential to alter landscape features and conditions, including precipitation and temperature regimes that in turn influence the establishment and persistence of vegetation, which then may influence the frequency and intensity of wildfire (Factors A and E). Because of the limited distribution and restricted nature of the habitat available to the two species, climate change and altered precipitation and temperature regimes may interfere with seedling recruitment and persistence of the two species on the landscape (Factors A and E).

However, the current best available scientific and commercial information does not show that these combined impacts are resulting in significant impacts to either species as a whole. Therefore, we do not consider the cumulative impact of threats to *Eriogonum kelloggii* and *Sedum eastwoodiae* to be substantial at this time, nor into the future.

All or some of the potential stressors could also act in concert to result as a cumulative threat to *Eriogonum kelloggii* and *Sedum eastwoodiae.* However, the best available scientific and commercial information currently does not indicate that these stressors singularly or cumulatively are causing now or will cause in the future a substantial decline of the total extant population of the species or have large impacts to *E. kelloggii* and *S. eastwoodiae* at the species level. Therefore, we do not consider the cumulative impact of these stressors to *E. kelloggii* and *S. eastwoodiae* to be a substantial threat at this time, nor into the future.

Conservation Measures Planned or Implemented

The designation of 6,173 ac (2,498 ha) of BLM land at Red Mountain as a wilderness study area (WSA) in 1979, and 6,895 ac (2,790 ha) as an Area of Critical Environmental Concern (ACEC)/Research Natural Area (RNA) in 1984 (updated in 1989), and the recent designation of the area as a Wilderness Area has focused management concern and direction toward conservation of the unique botanical and soils values of the Red Mountain area, including conservation of *Eriogonum kelloggii* and *Sedum eastwoodiae* (BLM 1995, pp. 3–6 to 3–9). Site visits to Red Mountain are generally conducted annually by BLM staff to ensure that no new road construction occurs (J. Wheeler, BLM, pers. comm. 2014). Most, or all, of the occupied or suitable habitat for *E. kelloggii* and *S. eastwoodiae* in the

vicinity of the South Fork Eel River Wilderness Area was recommended for acquisition (willing landowners) in the resource management plan (RMP) for the area (BLM 1995, pp. 2–32 to 2–37), and several parcels have been acquired. The RMP excludes livestock grazing and off-road vehicle use from the area, guides overall BLM management activities, and is site-specific. There is overlap with the management designations of the Red Mountain ACEC/RNA and the South Fork Eel River Wilderness Area as the entire ACEC/RNA is encompassed by the Wilderness Area designation (J. Wheeler, BLM, pers. comm. 2013).

Conservation measures implemented in 2009 for *Eriogonum kelloggii* and *Sedum eastwoodiae* included only a visual inspection and photo-documentation of a portion of their habitat. Previous conservation measures included initiation of the long-term life history and population monitoring in 1987 (Baad 2002, pp. 2–8); field mapping of occupied habitat on public lands in 2003 (Jennings 2003, pp. 1–8); and general ongoing public outreach activities, such as public field trips and academic visitation. BLM staff applied for grant funding in 2010, to conduct an ecological assessment for the two species. That effort was unsuccessful, but both Service and BLM staff will continue to seek funding to implement complete population inventories, and ecological assessments of the two species and their habitat.

South Fork Eel River Wilderness Area

The designation of the area as the South Fork Eel River Wilderness Area has invoked numerous conservation measures related to maintaining and protecting *Eriogonum kelloggii* and *Sedum eastwoodiae* and their habitat. Signs indicating the wilderness boundary have been posted in many locations. Mechanized or motorized vehicles are not allowed in the wilderness area. Camping is allowed but limited to 14 days. Campfires are allowed unless prohibited during seasonal fire restrictions. Gathering wood for campfires, when permitted, is limited to dead and down materials, and cutting live vegetation is prohibited.

Finding

The Act defines an endangered species as any species that is ''in danger of extinction throughout all or a significant portion of its range'' and a threatened species as any species ''that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.'' After review of the best available scientific and commercial information pertaining to *Eriogonum kelloggii* and *Sedum eastwoodiae* and their habitat, we have determined that the ongoing threats are not of sufficient imminence, intensity, or magnitude to indicate that *E. kelloggii* and *S. eastwoodiae* are presently in danger of extinction throughout all of their range or likely to become so in the foreseeable future. As stated in the Species Report (Service 2014, p. 11), the location, distribution, and abundance of *E. kelloggii* and *S. eastwoodiae* populations coincide with their known historical distribution and have remained stable relative to their distribution over at least the past 30 years. Both species have a relatively long lifespan, and thus their stable distribution and the persistence of the populations over time (1975–2014) allow us to predict to some degree their persistence into the future. We have determined that the risk of threats acting on these populations are minimal: The fire frequency for the area is low (2 recorded and one unrecorded fire over the past 90 years) and the impacts of those fires have been minimal due to the open nature of the habitat being less prone to intense habitat destruction (Service 2014, pp. 23–25). OHV use has decreased due to the designation of the area as ACEC and Wilderness. Mining interests have also greatly diminished due to numerous factors and no existing claims are currently active or anticipated in the future. If the two species continue to persist in their current distribution, we conclude that they will have sufficient resiliency, redundancy, and representation to persist now and into the future. For *E. kelloggii* and *S. eastwoodiae,* we define foreseeable future as approximately 20 to 30 years. This period is based on the timeframes associated with population studies and informal monitoring for the two species (1986–2014) and the persistence of the populations over time (1975–2014), which demonstrate stable populations over time that are likely to persist over a similar time frame into the future. The period is also based on the minimal fire frequency for the area, the future management of the area as an ACEC and Wilderness, and the relatively long lifespan of individual plants, all of which lead us to conclude that 20–30 years is a time period in which we can reasonably rely on predictions regarding the future populations, status, trends, and threats to each species.

Although some stressors still impact the two species and will continue to do so into the foreseeable future, these threats have either not materialized (commercial mining), or they are not of such magnitude to have population-level impacts. In addition, the implementation of conservation measures and regulatory actions has greatly reduced the imminence and severity of these stressors on *Eriogonum kelloggii* and *Sedum eastwoodiae* and their habitat.

Significant Portion of the Range Determination

Under the Act and our implementing regulations, a species may warrant listing if it is an endangered or a threatened species throughout all or a significant portion of its range. The Act defines ''endangered species'' as any species which is ''in danger of extinction throughout all or a significant portion of its range,'' and ''threatened species'' as any species which is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The term ''species'' includes ''any subspecies of fish or wildlife or plants, and any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature.'' On July 1, 2014, we published a final policy interpreting the phrase ''significant portion of its range'' (SPR) (79 FR 37578). The final policy states that (1) if a species is found to be an endangered or a threatened species throughout a significant portion of its range, the entire species is listed as an endangered or a threatened species, respectively, and the Act's protections apply to all individuals of the species wherever found; (2) a portion of the range of a species is ''significant'' if the species is not currently an endangered or a threatened species throughout all of its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range; (3) the range of a species is considered to be the general geographical area within which that species can be found at the time the Service or the National Marine Fisheries Service makes any particular status determination; and (4) if a vertebrate species is an endangered or a threatened species throughout an SPR, and the population in that significant portion is a valid DPS, we will list the DPS rather than the entire taxonomic species or subspecies.

The SPR policy is applied to all status determinations, including analyses for the purposes of making listing, delisting, and reclassification determinations. The procedure for

analyzing whether any portion is an SPR is similar, regardless of the type of status determination we are making. The first step in our analysis of the status of a species is to determine its status throughout all of its range. If we determine that the species is in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range, we list the species as an endangered (or threatened) species, and no SPR analysis will be required. If the species is neither an endangered nor a threatened species throughout all of its range, we determine whether the species is an endangered or a threatened species throughout a significant portion of its range. If it is, we list the species as an endangered or a threatened species, respectively; if it is not, we conclude that listing the species is not warranted.

When we conduct an SPR analysis, we first identify any portions of the species' range that warrant further consideration. The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that are not reasonably likely to be significant and either an endangered or a threatened species. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that (1) the portions may be significant and (2) the species may be in danger of extinction in those portions or likely to become so within the foreseeable future. We emphasize that answering these questions in the affirmative is not a determination that the species is an endangered or a threatened species throughout a significant portion of its range—rather, it is a step in determining whether a more detailed analysis of the issue is required. In practice, a key part of this analysis is whether the threats are geographically concentrated in some way. If the threats to the species are affecting it uniformly throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats apply only to portions of the range that clearly do not meet the biologically based definition of ''significant'' (i.e., the loss of that portion clearly would not be expected to increase the vulnerability to extinction of the entire species), those portions will not warrant further consideration.

If we identify any portions that may be both (1) significant and (2) endangered or threatened, we engage in a more detailed analysis to determine whether these standards are indeed met. The identification of an SPR does not create a presumption, prejudgment, or other determination as to whether the species in that identified SPR is an endangered or a threatened species. We must go through a separate analysis to determine whether the species is an endangered or a threatened species in the SPR. To determine whether a species is an endangered or a threatened species throughout an SPR, we will use the same standards and methodology that we use to determine if a species is an endangered or a threatened species throughout its range.

Depending on the biology of the species, its range, and the threats it faces, it may be more efficient to address the ''significant'' question first, or the status question first. Thus, if we determine that a portion of the range is not ''significant,'' we do not need to determine whether the species is an endangered or a threatened species there; if we determine that the species is not an endangered or a threatened species in a portion of its range, we do not need to determine if that portion is ''significant.''

We consider the ''range'' of *Eriogonum kelloggii* and *Sedum eastwoodiae* to include all populations within the Red Mountain area in Mendocino County, California. The range of the populations of *E. kelloggii* and *S. eastwoodiae* overlap, except for the one population of *E. kelloggii* on adjacent Little Red Mountain. These populations account for the current and known historical distribution of the two species.

In considering any significant portion of the range of the two species, we considered whether the threats facing *Eriogonum kelloggii* and *Sedum eastwoodiae* might be different at any of the locations where the two species have been found. Our evaluation of the best available information indicates that the overall level of threats is not significantly different at any of the areas where the two species occur (Service 2014, entire), and that the threats that are impacting or have the potential to impact the range of the two species are widespread across the two species' ranges (Service 2014, entire). Therefore, it is our conclusion, based on our evaluation of the current potential threats to *E. kelloggii* and *S. eastwoodiae* at each of the locations where the two species occur (see Summary of Factors Affecting the Species section of this finding and the ''Discussion of Threats to the Species'' section of the Species Report (Service 2014, entire)), that threats are neither sufficiently concentrated nor of sufficient magnitude to indicate that either of the two species are in danger of extinction at any of the areas that support populations.

Our review of the best available scientific and commercial information indicates that neither *Eriogonum kelloggii* nor *Sedum eastwoodiae* is in danger of extinction (an endangered species) or likely to become endangered within the foreseeable future (a threatened species), throughout all or a significant portion of their ranges. Therefore, we find that listing either of these plant species as an endangered or threatened species under the Act is not warranted at this time.

We request that you submit any new information concerning the status of, or threats to, *Eriogonum kelloggii* or *Sedum eastwoodiae* to our Arcata Fish and Wildlife Office (see **ADDRESSES**) whenever it becomes available. New information will help us monitor these two species and encourage their conservation. If an emergency situation develops for either of these plant species, we will act to provide immediate protection.

References Cited

A complete list of all references cited in this final rule is available on the Internet at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2014–0034 or upon request from the Field Supervisor, Arcata Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this finding are staff from the Pacific Southwest Regional Office in Sacramento, California, in coordination with staff from the Arcata Fish and Wildlife Office in Arcata, California.

Authority

The authority for this section is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: September 8, 2014.

Stephen Guertin,

Acting Director, U.S. Fish and Wildlife Service.

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