

the parties and the Board, the parties may request the appointment of one or more Board judges to act as a Board Neutral or Neutrals. The parties may request that the Board's chairman appoint a particular judge or judges as the Board Neutral, or ask the Board's chairman to appoint any judge or judges as the Neutral. If, when ADR has been requested for a case that has already been docketed with the Board, as provided in paragraph (a)(1) of this section, the parties may request that the panel chairman serve as the Board Neutral. In such a situation, if the ADR is unsuccessful,

(i) If the ADR has involved mediation, the panel chairman shall not retain the case, and

(ii) If the ADR has not involved mediation, the panel chairman, after considering the parties' views, shall decide whether to retain the case.

(2) *Retention and confidentiality of materials.* The Board will review materials submitted by a party for an ADR proceeding, but will not retain such materials after the proceeding is concluded or otherwise terminated. Material created by a party for the purpose of an ADR proceeding is to be used solely for that proceeding unless the parties agree otherwise. Parties may request a protective order in an ADR proceeding in the manner provided in 6101.12(h).

(c) *Types of ADR.* ADR is not defined by any single procedure or set of procedures. The Board will consider the use of any technique proposed by the parties which is deemed to be fair, reasonable, and in the best interest of the parties, the Board, and the resolution of contract disputes. The following are examples of available techniques:

(1) *Mediation.* The Board Neutral, as mediator, aids the parties in settling their case. The mediator engages in *ex parte* discussions with the parties and facilitates the transmission of settlement offers. Although not authorized to render a decision in the dispute, the mediator may discuss with the parties, on a confidential basis, the strengths and weaknesses of their positions. No judge who has participated in discussions about the mediation will participate in a Board decision of the case if the ADR is unsuccessful.

(2) *Neutral case evaluation.* The parties agree to present to the Board Neutral information on which the Board Neutral bases a non-binding, oral, advisory opinion. The manner in which the information is presented will vary from case to case depending upon the agreement of the parties. Presentations generally fall between two extremes,

ranging from an informal proffer of evidence together with limited argument from the parties to a more formal presentation of oral and documentary evidence and argument from counsel, such as through a mini-trial.

(3) *Binding decision.* One or more Board judges render a decision which, by prior agreement of the parties, is to be binding and non-appealable. As in the non-binding evaluation of a case by a Board Neutral, the manner in which information is presented for a binding decision may vary depending on the circumstances of the particular case.

(4) *Other procedures.* In addition to other ADR techniques, including modifications to those listed in this section, as agreed to by the Board and parties, the parties may use ADR techniques that do not require direct Board involvement.

(5) *Selective use of standard procedures.* Parties considering the use of ADR are encouraged to adapt for their purposes any provisions in part 6101 which they believe will be useful. This includes but is not limited to provisions concerning record submittals, pretrial discovery procedures, and hearings.

Dated: September 26, 1996.

Robert W. Parker,
Vice Chairman.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AC01

Endangered and Threatened Wildlife and Plants; Determination of Endangered or Threatened Status for Four Southern Maritime Chaparral Plant Taxa from Coastal Southern California and Northwestern Baja California, Mexico

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) determines endangered status pursuant to the Endangered Species Act of 1973, as amended (Act), for two plants—*Arctostaphylos glandulosa* ssp. *crassifolia* (Del Mar manzanita) and *Chorizanthe orcuttiana* (Orcutt's spineflower) throughout their historic range in southwestern California and northwestern Baja California, Mexico;

and threatened status for two plants—*Verbesina dissita* (big-leaved crown-beard) and *Baccharis vanessae* (Encinitas baccharis) throughout their historic range in southwestern California and northwestern Baja California, Mexico. These four taxa are threatened by one or more of the following—trampling by farm workers or recreational activities; fuel modification; competition from non-native plant species; and habitat destruction due to residential, agricultural, commercial, and recreational development. Several of these plant taxa are also threatened by a risk of extinction from naturally occurring events due to their small population size and limited distribution. This rule implements the Federal protection and recovery provisions afforded by the Act for these four plants.

EFFECTIVE DATE: November 6, 1996.

ADDRESSES: The complete file for this rule is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Carlsbad Field Office, 2730 Loker Avenue West, Carlsbad, California 92008.

FOR FURTHER INFORMATION CONTACT: Fred Roberts, Botanist (see ADDRESSES section) (telephone: 619/431-9440).

SUPPLEMENTARY INFORMATION:

Background

Southern maritime chaparral is a low, fairly open chaparral typically dominated by *Ceanothus verrucosus* (wart-stemmed ceanothus), *Xylococcus bicolor* (mission manzanita), *Adenostoma fasciculatum* var. *obtusifolium* (chamise), *Quercus dumosa* (Nuttall's scrub oak), *Cneoridium dumosum* (bush rue), *Rhamnus crocea* (red berry), *Yucca schidigera* (Mojave yucca), and occasionally *Dendromecon rigida* (bush poppy) (Holland 1986; Todd Kehler-Wolf, Plant Ecologist, California Department of Fish and Game (CDFG), pers. comm., 1993; Dan Kelly and Patricia Gordon-Reedy, biologists, OGDEN, pers. comm., 1993). Southern maritime chaparral is a plant association that occurs only in coastal southern California along the immediate coast of San Diego and Orange counties and northwestern Baja California, Mexico. The distribution of southern maritime chaparral in Orange County is disjunct, and the species composition is slightly different from that found in San Diego County and Mexico (Gray and Bramlet 1992).

Southern maritime chaparral is considered to be a unique and

threatened plant community. It has been estimated that about 120 hectares (ha) (300 acres (ac)) of southern maritime chaparral occurred historically in Orange County (U.S. Fish and Wildlife Service (USFWS), unpublished data), while about 8,400 ha (21,000 ac) of southern maritime chaparral occurred historically in San Diego County (Oberbauer and Vanderwier 1991). Currently, there are an estimated 60 ha (150 ac) of southern maritime chaparral in Orange County (Todd Kehler-Wolf, pers. comm., 1993) and between 600 and 1,480 ha (1,500 and 3,700 ac) in San Diego County (Oberbauer and Vanderwier 1991; OGDEN 1993; Dave Hogan, Southwest Center for Biological Diversity, *in litt.*, 1993). This represents an 82 to 93 percent decline in habitat in southern California, largely due to agricultural conversion and urbanization. Much of the remaining 10 to 20 percent of the United States portion of southern maritime chaparral is located on Carmel Mountain, Torrey Pines State Park, and in the cities of Carlsbad and Encinitas in San Diego County. The distribution of southern maritime chaparral and related associations has also declined significantly in Baja California, Mexico, for many of the same reasons.

One of the four plant taxa to be listed by this final rule, *Chorizanthe orcuttiana*, is primarily restricted to weathered sandstone bluffs in association with or in microhabitats within southern maritime chaparral. This species is endemic to south-central and southern coastal San Diego County, California. A second taxon, *Arctostaphylos glandulosa* ssp. *crassifolia*, is also primarily associated with southern maritime chaparral in San Diego County, California. It also occurs in disjunct populations in northwestern Baja California, Mexico, at least as far south as Mesa el Descanseo, 40 kilometers (km) (25 miles (mi)) north of Ensenada.

The remaining two taxa, *Verbesina dissita* and *Baccharis vanessae*, are frequently associated with southern maritime chaparral but also extend into other plant communities. *Verbesina dissita* is restricted to rugged coastal canyons in association with San Onofre breccia-derived soils in the southern maritime chaparral of southern Orange County, California. This taxon also occurs in limited numbers in Venturan-Diegan transitional coastal sage scrub (Gray and Bramlet 1992), Diegan coastal sage scrub, and southern mixed chaparral (Holland 1986). *Verbesina dissita* occurs disjunctly in similar vegetation associations from Punta Descanso south to San Telmo in

northwestern Baja California, Mexico. *Baccharis vanessae* occurs in southern maritime chaparral in the vicinity of Encinitas, central San Diego County, California, and extends inland to Mount Woodson and Poway where it is associated with dense southern mixed chaparral. One population of this plant occurs in the Santa Margarita Mountains of northern San Diego County. Two of the four taxa are found below 250 meters (m) (820 feet (ft)) in elevation in the United States. *Arctostaphylos glandulosa* ssp. *crassifolia* reaches 730 m (2,400 ft) elevation in Mexico. *Baccharis vanessae* is known to occur at 880 m (2,890 ft) in elevation on Mount Woodson.

While three of the four plant taxa are largely restricted to the United States, 85 percent of the known populations of *Verbesina dissita* are known from northwestern Baja California, Mexico. Although the status of this species and its habitat in Mexico is not well documented, over 20 percent of the populations occurring in Mexico have been extirpated. Agricultural conversion, resort and residential development, and wide fuel breaks and slash and burn practices have already affected and continue to contribute to the decline of *Verbesina dissita* in Mexico (CDFG 1990, Oberbauer 1992).

The natural plant communities of coastal Orange and San Diego Counties have undergone significant changes resulting from both human-caused activities and natural events. The rapid urbanization of southern Orange County and south-central San Diego County has already eliminated a significant portion of the southern maritime chaparral and the four plant taxa considered herein. Fire also plays an important role in determining southern California plant community distribution and composition. The advent of widespread urbanization and the disruption in natural fire cycles potentially threatens the remaining southern maritime chaparral. Populations of these four taxa have been subjected to a considerable degree of fragmentation.

Discussion of the Four Taxa

Arctostaphylos glandulosa ssp. *crassifolia* (Del Mar manzanita), a member of the heath family (Ericaceae), is one of six recognized subspecies occurring in California and northwest Baja California, Mexico (Wells 1987, 1993). The subspecies is an erect shrub, generally 1 to 1.2 m (3.3 to 4 ft) tall, but occasionally higher when introgressed (influenced by other subspecies).

This taxon is distinguished from other subspecies of *Arctostaphylos glandulosa* by its shorter stature (other subspecies

are up to 2.5 m (8.2 ft) tall), and by its dark gray-green leaves that are glabrate above and tomentulose beneath. The branchlets and leaf-like bracts are non-glandular and tomentulose with scattered long hairs or bristles (Wells 1993). Generally, *A. glandulosa* (Eastwood manzanita) is a relatively open, smooth, dark red-barked shrub characterized by a basal burr and scarcely leaf-like bracts that are shorter than the hairy flower-stalks. Four of six subspecies of *A. glandulosa* lack non-glandular, tomentulose hairs and scattered white bristles on the branchlets, bracts and leaves. Of the remaining two taxa, *A. g.* ssp. *mollis* of the western Transverse Ranges has more uniformly distributed, long, white bristles and bright green, smooth and shiny leaves, while *A. g.* ssp. *glaucomollis* of the San Gabriel and San Bernardino Mountains lacks leaf-like bracts (Wells 1993).

Arctostaphylos glandulosa ssp. *crassifolia* was first described by Willis Jepson (1922) based on a specimen he collected in Del Mar, California. In 1925, Jepson placed Del Mar manzanita under the name *Arctostaphylos tomentosa* var. *crassifolia* (Knight 1981). This name was used by Howard McMinn (1939), who stated that Del Mar manzanita "seems very closely related to *A. glandulosa* var. *cushingiana* but the more truncate leaf-bases, the usually more tomentulose lower leaf-surfaces, and distribution seem sufficient to maintain it as a variety of *A. tomentosa*." J.E. Adams, in his 1940 treatment of the genus *Arctostaphylos*, transferred var. *crassifolia* to *A. glandulosa* as in Jepson's original treatment (Knight 1981).

Philip Wells (1968) stated that "other morphological variants of the *A. glandulosa* complex have largely allopatric (do not overlap) geographic distributions and are recognized as subspecies." Accordingly, Wells applied the name *A. glandulosa* ssp. *crassifolia* to the Del Mar manzanita. Subsequent taxonomic review (Munz 1959, 1974) upheld this treatment. Walter Knight (1981) reviewed the morphology and summarized the taxonomic history of *A. g.* ssp. *crassifolia*. While the majority of Knight's discussion in that article supported the validity of *A. g.* ssp. *crassifolia*, Knight concluded that this taxon should not be recognized. He stated that *A. g.* ssp. *crassifolia* was a product of hybridization between *A. glandulosa* and other manzanita species in the area. However, Knight's conclusions were not widely accepted by botanists in San Diego County (Beauchamp 1986; Thomas Oberbauer, Planner, County of San Diego, pers.

comms., 1993, 1994). Knight did not offer support, nor discuss potential parentage for considering *A. g. ssp. crassifolia* as a hybrid entity. *Arctostaphylos glandulosa* ssp. *crassifolia* is allopatric with other manzanita taxa, except in Mexico, where the range is partly sympatric (overlapping) with *A. g. ssp. zacaensis* (Wells 1987). Additionally, the morphological characters of *A. g. ssp. crassifolia* do not appear to be intermediate with any other species within the vicinity of its range (McMinn 1939, Munz 1974, Wells 1993, Roberts 1994).

Both Knight and Wells were asked to examine populations of manzanita along coastal San Diego County in March 1986. From these field observations, Knight revised his position and agreed with the classical treatment, concluding that *Arctostaphylos glandulosa* ssp. *crassifolia* was distinct (T. Oberbauer, pers. comms., 1993, 1994; Jim Bartel, USFWS, pers. comm., 1994). Wells reaffirmed the distinctness of *A. g. ssp. crassifolia*, stating "(*A. g.*) ssp. *crassifolia* is one of the more consistent and well-defined taxa within the variable *A. glandulosa* complex, and (*A. g. ssp.*) *crassifolia* has a discrete distribution, allopatric from other taxa" (Wells 1987, Sweetwater Environmental Biologists (SEB) 1993b).

Arctostaphylos glandulosa ssp. *crassifolia* is restricted to sandstone terraces and bluffs from Carlsbad south to Torrey Pines State Park, extending inland to Rancho Santa Fe and Del Mar Mesa in San Diego County, California. An additional population has been reported just south of the San Dieguito River southwest of Lake Hodges. This species has been reported from five localities in northwestern Baja California, Mexico, from just east of Tijuana along the United States border, to Cerro el Coronel and Mesa Descanseo 40 km (25 mi) south of the United States border. These populations may no longer be extant due to considerable urban and agricultural development in the Tijuana vicinity (Roberts 1992). The most recent collection in the San Diego Museum of Natural History was made by Reid Moran in 1982.

About 1982, approximately 16,600 to 17,600 individuals of *Arctostaphylos glandulosa* ssp. *crassifolia* were known to be distributed over about 26 population centers (Roberts 1992, SEB 1993b, OGDEN 1995a). A significant number of these populations have been severely impacted since then. For example, in 1987, one population of nearly 500 individuals near San Dieguito Creek and the surrounding southern maritime chaparral habitat was

cleared and converted to agriculture. Cultivation at this site was active for one season and has not been continued (T. Oberbauer, pers. comm., 1992). Currently, about 9,400 to 10,300 individuals, scattered roughly throughout the historic distribution of the species in San Diego County, are known to be extant (Roberts 1993, SEB 1993b, OGDEN 1995a). About 75 percent of all remaining individuals are located within six concentrations. The majority of the 26 populations are found on private land, four occur in State, county or local parks, and none are known from Federal lands. The number of individuals in Baja California, Mexico, is not known but is likely to be smaller than in the United States, based on the limited availability of habitat.

Four populations of *Arctostaphylos glandulosa* totaling approximately 3,000 individuals in the vicinity of Miramar Reservoir have been attributed to *A. g. ssp. crassifolia*, but Wells (pers. comm., 1992) maintains that these plants are intermediate with other subspecies of *A. glandulosa* and can not be definitely placed. Later inclusion of these populations in *A. g. ssp. crassifolia* would not significantly alter the findings of this rule. Nearly 50 percent of the individuals known from the vicinity of Miramar Reservoir in 1982 were eliminated by the Scripps Ranch development between 1989 and 1992.

Baccharis vanessae (Encinitas baccharis), a member of the sunflower family (Asteraceae), is a dioecious broom-like shrub, 0.5 to 1.3 m (1.6 to 4.3 ft) tall. It was discovered by Mitchel Beauchamp in October 1976 in southern maritime chaparral on Eocene sandstones along the north side of Encinitas Boulevard in Encinitas. The species was later described by Beauchamp (1980). *Baccharis vanessae* is distinguished from other members of the genus by its filiform leaves and delicate phyllaries which are reflexed at maturity (Beauchamp 1980, Munz 1974).

As currently understood, the historical distribution of this species included 19 natural populations scattered from Encinitas east through the Del Dios highlands and Lake Hodges area to Mount Woodson and south to Poway and Carmel Mountain in San Diego County, California. Fourteen of these populations are still extant and contain approximately 2,000 individuals in total (CDFG 1992). Four of these populations, however, contain fewer than six individuals each. An additional disjunct individual was discovered on the western slopes of Carmel Mountain in 1993 (D. Hogan, *in litt.*, 1993). This location harbors the

southernmost known population. A single transplanted population of 34 individuals was established in San Dieguito Park, but this population has not persisted (Hall 1987). The majority of the remaining populations are on private lands.

Chorizanthe orcuttiana (Orcutt's spineflower) was first described by Charles Parry in 1884 based on a specimen collected by Charles Orcutt at Point Loma, San Diego County, in the same year (Parry 1884). *Chorizanthe orcuttiana* is a low, yellow-flowered annual of the buckwheat family (Polygonaceae) restricted to sandy soils. It is distinguished from other members of the genus by its prostrate form, campanulate three-toothed involucre and involucre awns that are hooked near the tip (Reveal 1989).

Historically, *Chorizanthe orcuttiana* is known from 10 separate localities in San Diego County from Point Loma near San Diego (including the U.S. Naval Reservation), Del Mar, Kearney Mesa and Encinitas (CDFG 1992). Only two populations have been seen in recent years. Allen reported 50 to 100 individuals at Torrey Pines State Park in 1987 (CDFG 1992). However, this population has not been relocated in the last several years, possibly due to changing plant species composition and density as result of a 1984 burn. The species was thought to be extinct until a new population was discovered in 1991 at Oak Crest Park in Encinitas (D. Hogan, *in litt.*, 1991). This population numbered fewer than 40 individuals in 1993 and fewer than 10 individuals in 1994, and it is distributed over a relatively small area (about 4 square m (43 square ft)) (unpublished USFWS data). The number of individuals varies widely from year to year because the success of germination is highly dependent on factors such as rainfall, which often differ significantly from one year to the next in southern California.

Verbesina dissita (big-leaved crown-beard) was first described by Asa Gray (1885) based on a collection made by Charles Orcutt at Ensenada, Baja California, Mexico, in September 1884. The taxon apparently was first collected in the United States at Arch Beach in South Laguna, Orange County, in 1903 by Mrs. M.F. Bradshaw (Hall 1907).

Verbesina dissita, a member of the sunflower family (Asteraceae), is a low, semi-woody perennial shrub with bright yellow flowers. This species grows from 0.5 to 1.0 m (1.6 to 3.3 ft) tall and has distinctive scabrid leaves. *Verbesina dissita* is distinguished from other members of the genus in California and Baja California, Mexico, by its naked

achenes and broad involucre (Munz 1974).

Verbesina dissita is found on rugged hillsides in dense maritime chaparral from Laguna Beach in Orange County south to the San Telmo area east of Cabo Colonet in Baja California, Mexico. In California it is known from two population centers less than 3.2 km (2 mi) apart. Because of the low growth habit and preference for understory locations, the population size of this taxon is difficult to estimate. The United States populations have been estimated to contain several thousand plants (CDFG 1992, Marsh 1992). Historically, this taxon has been recorded from 23 separate locations in Mexico. Of the Mexican localities, over 20 percent, all north of Punta Santo Tomas, have been eliminated. Nearly all known populations are on private land.

Previous Federal Action

Action by the Federal government on two of the four plant taxa contained herein began pursuant to section 12 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 153 *et seq.*). Section 12 directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975, and included *Arctostaphylos glandulosa* ssp. *crassifolia* and *Chorizanthe orcuttiana* as endangered. The Service published a notice in the July 1, 1975, Federal Register (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3) of the Act) and its intention thereby to review the status of the plant taxa named therein. On June 16, 1976, the Service published a proposal in the Federal Register (42 FR 24523) to determine approximately 1,700 vascular plants to be endangered species pursuant to section 4 of the Act. *Chorizanthe orcuttiana* and *Arctostaphylos glandulosa* ssp. *crassifolia* were included in the June 16, 1976, Federal Register notice.

General comments received in response to the 1976 proposal were summarized in an April 26, 1978, Federal Register notice (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals already over two years old be withdrawn. A 1-year grace period was given to those proposals already more than two years old. In the December 10, 1979, Federal Register (44 FR 70796), the Service published a notice of

withdrawal of the portion of the June 8, 1976, proposal that had not been made final, along with four other proposals that had expired.

The Service published an updated notice of review of plants on December 15, 1980 (45 FR 82480). This notice included *Baccharis vanessae* and *Chorizanthe orcuttiana* as category 1 taxa. Category 1 taxa are those taxa for which substantial information on biological vulnerability and threats are available to support preparation of listing proposals. On November 28, 1983, the Service published in the Federal Register a supplement to the Notice of Review (48 FR 53840), in which *B. vanessae* and *C. orcuttiana* were reclassified from category 1 to category 2. Category 2 candidates were taxa for which data in the Service's possession indicated listing was possibly appropriate but for which substantial information on biological vulnerability and threats was not known or on file to support the preparation of proposed rules. The designation of category 2 species was not included in the latest notice of review (February 28, 1996; 61 FR 7596). *Arctostaphylos glandulosa* ssp. *crassifolia* was not included in either the 1980 review list or the 1983 supplement.

The plant notice was again revised on September 27, 1985 (50 FR 39526), and *Arctostaphylos glandulosa* ssp. *crassifolia* was listed as a category 3B taxon. Category 3B taxa were those taxa that, based upon current taxonomic understanding, did not represent distinct taxa under the Act's definition of species (the designation of category 3B has also been discontinued). This change reflected the questionable validity of the taxon as presented by Knight (1981). The taxonomy of *Arctostaphylos glandulosa* ssp. *crassifolia* was subsequently reevaluated, and the plant was included as a category 2 taxon in the February 21, 1990, Plant Notice of Review (55 FR 6184), based on the work of Wells (1987). In this same notice, *Baccharis vanessae* and *Chorizanthe orcuttiana* were reevaluated and included as category 1 species based on information contained in status reports prepared in conjunction with State listing as endangered. The 1990 review included *C. orcuttiana* as a category 1* candidate, indicating that this species was possibly extinct. Based on additional information on threats and vulnerability, the Service elevated *A. g. ssp. crassifolia* and *C. orcuttiana* to category 1 and added *Verbesina dissita* as a category 1 candidate in the September 30, 1993, Notice of Review (58 FR 51144).

Section 4(b)(3)(B) of the Act requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Arctostaphylos glandulosa* ssp. *crassifolia* and *Chorizanthe orcuttiana* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of these species was warranted, but precluded by other pending listing actions pursuant to section 4(b)(3)(B)(iii) of the Act. Notification of this finding was published in the Federal Register on January 20, 1984 (49 FR 2485). Such a finding requires the petition to be recycled, pursuant to section 4(b)(3)(C)(i) of the Act. The finding was reviewed in October of 1984, 1985, 1987, 1988, 1989, 1990, 1991, and 1992. Publication of the proposed rule constituted the warranted finding for these taxa.

On December 14, 1990, the Service received a petition dated December 5, 1990, from Mr. David Hogan of the San Diego Biodiversity Project, to list *Baccharis vanessae* as an endangered species. The petition also requested the designation of critical habitat. The Service evaluated the petitioner's requested action and published a 90-day finding on August 30, 1991 (56 FR 42968), stating that substantial information had been presented that the requested actions concerning *Baccharis vanessae* may be warranted.

A proposed rule to list *Arctostaphylos glandulosa* ssp. *crassifolia*, *Baccharis vanessae*, and *Chorizanthe orcuttiana* as endangered and *Verbesina dissita* as threatened was published in the Federal Register on October 1, 1993 (58 FR 51302). That proposed rule also included *Dudleya blochmaniae* ssp. *brevifolia* (short-leaved dudleya) to be listed as endangered and *Corethrogyne filaginifolia* var. *linifolia* (Del Mar sand-aster) to be listed as a threatened taxon. The proposals to list those two taxa are withdrawn and addressed in a document published concurrently in the proposed rule section of this issue of the Federal Register.

The processing of this final rule follows the Service's listing priority guidance published in the Federal Register on May 16, 1996 (61 FR 24722). The guidance clarifies the order in which the Service will process rulemakings following two related events: 1) the lifting, on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Public Law

104-6), and 2) the restoration of significant funding for listing through passage of the omnibus budget reconciliation law on April 26, 1996, following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. The guidance calls for prompt processing of final rules containing species facing threats of high magnitude. All four taxa in this rule face high magnitude threats.

Summary of Comments and Recommendations

In the October 1, 1993, proposed rule (58 FR 51302) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. A 90-day comment period closed on January 1, 1994. Appropriate State agencies, county governments, Federal agencies, and other interested parties were contacted and requested to comment. A letter of notification and a copy of the proposed rule were also sent to the government of Mexico. Public notices announcing the publication of the proposed rule were published in the *Press-Enterprise* in Riverside County on October 12, 1993, and the *San Diego Union Tribune* in San Diego County and the *Orange County Register* on October 13, 1993. No request for a public hearing was received.

A total of seven written comments were received. Two commenters supported the listing of these taxa. Two commenters neither supported nor opposed the proposed listing. Three commenters opposed the proposed listing. Information from a number of these comments has been incorporated into the final rule. Eleven relevant issues were raised in these comments and the Service's response to each is as follows:

Issue 1: One commenter stated that the estimate for remaining southern maritime chaparral was too high and suggested that the definition of southern maritime chaparral adopted by the Service, based on Holland (1986), required modification.

Service Response: A range of estimates for remaining southern maritime chaparral has been incorporated into the final rule. While the exact amount of remaining southern maritime chaparral is not agreed upon, the Service considers this plant association to be sensitive and rare. The Service has coordinated with the CDFG, knowledgeable biologists, and other parties in determining an appropriate definition for southern maritime chaparral (Jim Dice, CDFG, T. Keeler-

Wolf, D. Kelly and P. Gordon-Reedy, pers. comms., 1993).

Issue 2: One commenter argued that *Arctostaphylos glandulosa* ssp. *crassifolia* does not warrant protection under the Act because the Service has failed to demonstrate that it is a distinct taxon. The commenter claimed that there was no consensus within the scientific community regarding this taxon. The commenter stated that the Service did not clearly demonstrate that Knight's treatment (Knight 1981) should be rejected over Wells (1987, 1993). The commenter questioned the use of morphological variation in determining subspecific classification. Additionally, the commenter claimed that it is unclear whether the Scripps Ranch population of *Arctostaphylos glandulosa* is representative of this taxon.

Service Response: A discussion regarding the taxonomic history of this taxon is included under the "Discussion of the Four Taxa" section of this rule. The discussion in the proposed rule has been expanded to increase clarity and address concerns included within this comment. In determining the taxonomic status of any taxon, the Service utilizes the best available information. Nearly all taxonomic treatments published since the original description of *Arctostaphylos glandulosa* ssp. *crassifolia* in 1922 recognize this taxon as distinct. The two most recent treatments (Wells 1987, 1993) are the accepted, peer reviewed treatments for this genus. This taxon is also recognized as distinct in local floras (Beauchamp 1986) and other reports regarding the status of the taxon (SEB 1993b).

The Service does not rely on Knight (1981) because this treatment does not represent the best available information. As discussed under the "Background" section of this rule, Knight did not substantiate his claim that *Arctostaphylos glandulosa* ssp. *crassifolia* was of hybrid origin between *A. glandulosa* and other unidentified species of *Arctostaphylos*. Furthermore, Knight reversed his opinion in 1986 and accepted *A. g. ssp. crassifolia* as valid (T. Oberbauer, pers. comm., 1993; J. Bartel, pers. comm., 1994). Wells (1968, 1993) published in peer-reviewed publications while Knight (1981) did not. Both Wells and Knight applied morphological variation in determining the status of *A. g. ssp. crassifolia*. While the Service acknowledges that other methods (i.e., chemotaxonomy and genetic analysis) may be used as supplements to morphological variation as available tools for taxonomic definition, morphological variation has historically been the most widely

accepted basis for taxonomic distinction for all biological organisms.

Issue 3: One commenter claimed that historic losses of *Arctostaphylos glandulosa* ssp. *crassifolia* were the result of taxonomic confusion because of "complete lack of consensus within the scientific community." The commenter noted the taxon has only recently been considered a distinct subspecies. The commenter also noted that the California Native Plant Society rejected this taxon in their 1988 Inventory (Smith and Berg 1988) and that the Service determined in the September 27, 1985, Notice of Review (50 FR 39528) that *A. g. ssp. crassifolia* did not represent a distinct taxon. The commenter also asserted that Federal recognition of this taxon has been lacking since the 1985 notice.

Service Response: As discussed under the "Background" section, this subspecies has been recognized as distinct for nearly 70 years. This taxon was first described as a variety of *A. glandulosa* in 1922, and has been widely recognized in taxonomic treatments since then (McMinn 1939; Abrams 1951; Munz 1959, 1974; Wells 1968, 1987, 1993; Beauchamp 1986). In 1985, the Service rejected this taxon based on the most recent taxonomic treatment at that time. However, since that time, floristic and monographic treatments by Beauchamp (1986) and Wells (1987) recognized *A. g. ssp. crassifolia* as a distinct taxon. The latter treatment detailed the taxonomic argument for retention of the subspecies. The Service, following the criteria of the best available information, reinstated the taxon to category 2 status in 1990. The California Native Plant Society currently recognizes *A. g. ssp. crassifolia* as a list 1B taxon (Skinner and Pavlik 1994). Plants included on list 1B are considered rare and endangered in the State of California and are eligible for State listing under California's Native Plant Protection Act (chapter 10 section 1901) or the State Endangered Species Act (Skinner and Pavlik 1994).

As discussed in this rule under "Previous Federal Action," the commenter is incorrect in asserting that the Service has not identified this taxon as a candidate for protection under the Act since 1985. It was published as a category 2 candidate species in the February 21, 1990, Plant Notice of Review (55 FR 6184) and as a category 1 candidate in 1993. During the period between 1985 and 1990, *Arctostaphylos glandulosa* ssp. *crassifolia* was widely recognized in environmental documentation (Beauchamp 1986; Nelson 1988; Pacific Southwest Biological Services 1990; Stephen Lacy,

Biological Resource Manager, ERCE, *in litt.*, 1991; T. Oberbauer, pers. comm., 1993). Based on the best available scientific and commercial information, the Service finds *A. g. ssp. crassifolia* to be a taxon eligible for listing under the Act.

Issue 4: Two commenters claimed that these taxa did not warrant listing as endangered or threatened because the majority of their populations are protected from development. One commenter dealt mainly with a species now being withdrawn from consideration for listing. Another commenter claimed that the report entitled "Description, Status, Distribution, and Conservation of Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)" by Sweetwater Environmental Biologists (SEB 1993b), rebuts the Service's finding that listing of Del Mar manzanita is warranted. Based on this report, the commenters stated that the majority of these individuals (76 percent) occur within 7 of the 22 populations. Of these 7 major populations (each containing over 500 individuals), the commenters claimed that 82 percent will be preserved, which accounts for 70 percent of the entire taxon.

Service Response: Although these commenters evidently include *Baccharis vanessae*, *Chorizanthe orcuttiana*, and *Verbesina dissita* within the context of this comment, no specific discussion was included regarding these taxa.

The Service has considered the findings of the SEB report (1993b) in determining the status of *Arctostaphylos glandulosa* ssp. *crassifolia*. SEB reported that there were about 17,000 individuals of Del Mar manzanita distributed over 302 subpopulations within 24 populations in San Diego County from Oceanside south to La Jolla, and inland to Scripps Ranch in the United States. SEB described the range of this taxon as extending along the immediate coast of Baja California, Mexico, south to Cabo Colonet about 200 km (124 mi) south of the United States border.

Available data (Reid Moran, California Academy of Sciences, Philip Wells, T. Oberbauer, pers. comms., 1992; and herbarium collections at the San Diego Natural History Museum) indicate that the distribution of this taxon in Mexico is limited. The Service has not been presented with any evidence that *Arctostaphylos glandulosa* ssp. *crassifolia* occurs farther south than Mesa Descanseo 40 km (25 mi) south of the international border.

According to SEB (1993b), 22 of the 24 United States populations, 137 (45 percent) of the subpopulations and about 7,100 to 9,700 individuals (42 to 58 percent) of *Arctostaphylos glandulosa* ssp. *crassifolia* are still extant. SEB (1993b) further states that of the remaining individuals of this taxon, about 82 percent are proposed for conservation, which includes about 35 percent on public lands and 48 percent on private lands.

SEB (1993b) identify seven major populations that contain about three-fourths of all San Diego County *Arctostaphylos glandulosa* ssp. *crassifolia*. The Service concurs with the assessment of six of these populations and identifies the seventh population identified in SEB (1993b) as moderately large. Service staff assessed this population at fewer than 500 individuals in December 1993. The Service further considers that both the size and the configuration of these populations are important to the long-term viability of *A. g. ssp. crassifolia*. Currently all seven of the populations identified as large in SEB (1993b) are situated in natural blocks of vegetation greater than 40 ha (100 ac) in size.

The number of individuals in the SEB (1993b) report is not significantly different from, and generally conforms with, estimates used by the Service in preparation of the proposed rule. However, SEB (1993b) significantly overestimates the preserved population of *Arctostaphylos glandulosa* ssp. *crassifolia*. The remarks and data summary on Table 1 of the report are inconsistent—the data summary indicates that about 18 percent of this taxon is threatened by development, while the remarks section indicates that over 30 percent of the *A. g. ssp. crassifolia* is currently threatened by development. Although SEB (1993b) acknowledges that one of the major populations located in the city of Carlsbad, California, consists of nearly 2,000 individuals, only about 750 of these are accounted for in Table 1. The remaining 1,200 individuals are assumed to have been "graded." However, these individuals are still extant and are threatened by the implementation of a large scale development project. The Service considers the loss of most of this population, which represents a reduction of 10 to 15 percent of the United States populations of *A. g. ssp. crassifolia*, to be a significant impact on this taxon. Nor is public open space necessarily equivalent to protection, as indicated in the SEB report. This is exemplified by clearing and mulching of southern maritime chaparral east of

Palomar Airport (Ken Cory, USFWS, pers. comm., 1996) in an area identified as a public open space in Table 1 of the SEB report.

Estimates for preservation in SEB (1993b) do not consider the configuration of remaining occupied open space or edge effects resulting from existing and proposed development. The majority of the existing *Arctostaphylos glandulosa* ssp. *crassifolia* populations are relics of larger historic populations. Nearly 50 percent of the remaining populations, comprising about 10 to 14 percent of all individuals of *A. g. ssp. crassifolia*, are in open space parcels that are smaller than 20 ha (50 ac). While all populations of *A. g. ssp. crassifolia* are important, the majority of these small, isolated, and poorly configured populations are entirely within 60 m (200 ft) of, and are often surrounded by, development. These population configurations likely will not contribute significantly to the long-term preservation of the taxon. All are subject to edge effects (i.e., invasion of exotic plants, disturbances by local residents) and may be threatened by fuel modification activities (i.e., fire breaks, discing, reduction through thinning). The effect of isolation and habitat size reduction also retards natural fire and successional cycles within the habitat of *A. g. ssp. crassifolia* (Roberts 1993).

Of the larger and more significant populations of *Arctostaphylos glandulosa* ssp. *crassifolia*, only one population is protected and managed for long-term preservation (Torrey Pines State Park north). However, this population is located within a 80 ha (200 ac) parcel that is completely surrounded by development (Roberts 1993). Another population (Crest View Canyon) is under public management; however, about 50 percent of this population is located within 60 m (200 ft) of development and is subject to edge effects (Roberts 1993). While another population (upper end of Agua Hedionda) is also under public management, it is subject to incremental clearing impacts as a result of adjacent airport operations, road-widening activities, and clearing related to mulching and agriculture (Roberts 1994; K. Cory, pers. comm., 1996). This population is also bisected by numerous footpaths. At least 15 percent of this population is situated within 60 m (200 ft) of development (Roberts 1993).

Of the remaining four major populations, all are threatened in part by development and will be further fragmented or isolated when projects are completed. While the majority of one of these populations (Green Valley,

Encinitas and Carlsbad) is proposed for conservation, three others, all located within the City of Carlsbad, will be significantly reduced as a result of proposed development. Two of these populations currently contain nearly half of all individuals (about 3,000). After mitigation is implemented for proposed development projects, these populations will be reduced by about 50 percent and will be scattered over four parcels of open space containing fewer than 20 ha (50 ac). A 20 ha (50 ac) parcel is not likely to insure long-term conservation of *Arctostaphylos glandulosa* ssp. *crassifolia*.

Additionally, the majority of the surviving individuals will be situated within 60 m (200 ft) of development and will likely be adversely affected by edge effects (Roberts 1993, City of Carlsbad and Fieldstone/La Costa Associates 1994, OGDEN 1995a). Therefore the Service finds that the claim that 82 percent of this taxon is proposed for conservation and preservation is not supported by available data. The best available data indicate that while about 80 percent of the *A. glandulosa* ssp. *crassifolia* populations are within dedicated open space, parks, or preserved areas (about 30 percent of the total San Diego County populations are within the Multiple Species Conservation Program (MSCP) preserve area), only about 55 percent of the total populations are preserved when edge effects and configuration of preserved areas are considered.

Issue 5: Two commenters stated that these taxa do not warrant listing because existing regulatory mechanisms provided by the California Environmental Quality Act (CEQA), County and City of San Diego Resource Protection Ordinances (RPO's), and multispecies programs including the State Natural Communities Conservation Plan (NCCP), and local MSCP, Multiple Habitat Conservation Plan (MHCP), and the Carlsbad Habitat Management Plan (HMP) provide adequate protection.

Service Response: Although the County and City of San Diego adopted RPO's in 1991, many of the populations of these four taxa occur outside the jurisdiction of these ordinances. For example, none of the major populations of *Arctostaphylos glandulosa* ssp. *crassifolia* are within the City of San Diego or on lands under County jurisdiction. Currently, the Service is aware of 10 development projects that have recently been approved or proposed that may eliminate nearly 50 percent of the remaining *Arctostaphylos glandulosa* ssp. *crassifolia*. This rate of decline is consistent with historical

losses incurred over the last decade. As indicated by the commentor, many RPO's protect steep slopes. In addition, RPO's also apply to all biologically sensitive lands, which are defined to include those lands that support sensitive vegetation (San Diego Municipal Code § 101.0462). The ordinance further states that biologically sensitive lands shall be preserved in their natural state and that any encroachment must be minimal and must not adversely impact any rare, threatened or endangered species. This presumably would include any sites containing populations of the species listed herein.

The Service acknowledges that the NCCP, MSCP, MHCP, and HMP were not adequately discussed in the proposed rule. Most of these programs were in the early development stage at the time the rule was developed. However, the Service has both monitored and actively participated in coordinating the development of these programs as they have matured. The MSCP in southern coastal San Diego County has proceeded to a significant level. As a result of these planning efforts, one taxon (*Dudleya blochmaniae* ssp. *brevifolia*) originally proposed as endangered with the four subject taxa is being withdrawn (see separate concurrent Federal Register notice), while another (*Baccharis vanessae*) is being finalized as threatened instead of endangered. The Service considers the mitigation proposed within the MSCP adequate for threats to *Baccharis vanessae* and *Arctostaphylos glandulosa* ssp. *crassifolia* within the MSCP subregion. However, both taxa have significant populations outside this planning area. While other programs may ultimately provide significant protection to the taxa considered herein, at their current planning stages, the degree of conservation afforded these taxa is uncertain and would not significantly alter the Service position. A detailed discussion regarding these programs and others has been incorporated into the final rule under Factor D ("The inadequacy of existing regulatory mechanisms"). *Verbesina dissita* does not occur in San Diego County and is not subject to the MSCP, MHCP, or the HMP planning efforts.

Issue 6: One commenter stated that while the Service asserted that State and local regulatory controls are inadequate to protect these plant taxa, the Service failed to demonstrate how Federal listing will provide further protection. The commenter noted that the Endangered Species Act provides no direct protection to listed plants on private lands. Specifically, the

commenter discussed how Federal listing would not provide *Arctostaphylos glandulosa* ssp. *crassifolia*, which occurs primarily on private lands, additional protection in the two examples cited in the proposed rule.

Service Response: The Service is required to determine whether any species qualifies for listing as endangered or threatened based on a review of the five factors listed under Section 4 of the Act. The Service acknowledges that the level of protection provided for listed plant species is not equivalent to the protection accorded federally listed animal species. Impacts to listed plant species are addressed through consultation with other Federal agencies when a Federal action is involved. While Federal actions may be limited on private lands, some protection may be afforded through this process. For example, in autumn of 1993, the United States Army Corps of Engineers (Corps) initiated conferencing regarding the proposed impacts of a large-scale development project on a significant population of *Arctostaphylos glandulosa* ssp. *crassifolia*. The conferencing process resulted in improved preservation of that taxon.

When assessing a habitat conservation plan under section 10(a)(1)(B) of the Act, the Service must conduct an internal consultation pursuant to section 7 of the Act to determine whether approval of the plan will jeopardize any federally proposed or listed plant or animal species. Additionally, "take" of federally listed plant species is prohibited under Federal law in circumstances where a State law is violated, such as a violation of the provisions of CEQA or the California Endangered Species Act.

Federal listing also provides a significant degree of recognition by State and local agencies and private landowners which may result in increased protection. Survey requirements and conservation guidelines for listed and non-listed species differ considerably under the State Coastal Protection Act, CEQA, RPO's and other local conservation regulations. Frequently, unlisted rare species are inadequately surveyed or given inadequate protection under these processes.

Issue 7: One commenter claimed that listing these taxa would have a negative effect on current multispecies planning efforts.

Service Response: The Service is required to determine whether any species is endangered or threatened based on the applicability of the five

factors listed under Section 4(a)(1) of the Act. While the Service supports the intent of multispecies planning efforts to avoid or reduce the need for future listing actions within designated planning areas, significant populations of the four taxa discussed herein are outside approved or nearly completed multispecies conservation plan areas (MSCP), or not adequately protected within approved plans (i.e., *Verbesina dissita* within the Central Coastal subregion of Orange County). Two of the four taxa are considered covered species under the MSCP (*Arctostaphylos glandulosa* ssp. *crassifolia* and *Baccharis vanessae*). Future impacts to these taxa within the MSCP have been considered and are addressed through planned preservation or management for plan participants throughout the subregion (see Available Conservation Measures). Thus listing these three taxa will not have a negative effect on current planning efforts. *Chorizanthe orcuttiana* is extremely rare and not considered adequately conserved by the MSCP. Federal and State listing actions frequently drive multispecies planning efforts and offer guidance to these conservation efforts, many of which are voluntary. Well-designed multispecies conservation plans must consider a wide range of sensitive species and their habitats. The necessity for additional listings indicate that these goals have not yet been met as indicated in the discussion under Factor D.

Issue 8: One commenter thought that the Service should designate critical habitat for all four taxa included in this rule, stating that critical habitat designation would support the mapping efforts and recommendations of the City of San Diego's MSCP, and that critical habitat should include all remaining

southern maritime chaparral. Commenters noted that the locations of most of these taxa are available to the public through environmental impact reports, rebutting the Service's argument that the designation of critical habitat was not prudent since this would increase the likelihood of vandalism (i.e., habitat destruction) by revealing precise locations.

Service Response: The Service acknowledges that available public environmental documentation has already disclosed the location of many populations of the four taxa. The Service finds that designation of critical habitat is not prudent because it would not be beneficial to any of these four taxa. Critical habitat is only applicable to actions that have a Federal nexus. Any Federal action that may affect a listed species or designated critical habitat is addressed through section 7 of the Act, which requires a Federal agency to consult with the Service to determine if the action is likely to jeopardize a species or result in destruction or adverse modification of critical habitat. Of the four taxa, only *Chorizanthe orcuttiana* (historically) and *Baccharis vanessae* occur on Federal lands, and none are associated with wetlands which receive protection under section 404 of the Clean Water Act. It is anticipated that few of the remaining populations will be affected by actions of Federal agencies.

Issue 9: The Service should consider economic effects in determining whether to list these taxa under the Endangered Species Act.

Service Response: In accordance with section 4(b)(1)(A) of the Act, and 50 CFR 424.11(b) of the implementation regulations, listing decisions are made solely on the basis of the best available

scientific and commercial information, without reference to possible economic or other impacts of such a determination.

Issue 10: One commenter stated that collection is not a threat to any of the four taxa.

Service Response: As discussed under Factor B ("Overutilization for commercial, recreational, scientific or educational purposes"), *Chorizanthe orcuttiana* is threatened by overcollection because of limited population size, horticultural appeal, and the relative ease of access to remaining sites.

Issue 11: Two commenters requested that a qualified party perform scientific peer review to reconcile the status of Del Mar manzanita as a distinct subspecies, and one suggested that the Service reopen the comment period to facilitate this review.

Service Response: As discussed in the Background section, disagreements over the taxonomic status of this species between Wells, the primary expert on the species, and Knight, who once proposed that the subspecies was not distinct, have been resolved in peer-reviewed publications.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). The threats facing these four taxa are summarized in Table 1.

TABLE 1.—SUMMARY OF THREATS

	Trampling	Alien plants	Fire control	Develop. activity	Limited numbers
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	X	X	X	X
<i>Baccharis vanessae</i>	X	X	X	X	X
<i>Chorizanthe orcuttiana</i>	X	X	X	X
<i>Verbesina dissita</i>	X	X

These factors and their application to *Arctostaphylos glandulosa* Eastw. ssp. *crassifolia* (Jeps.) Wells (Del Mar manzanita), *Baccharis vanessae* Beauchamp (Encinitas baccharis), *Chorizanthe orcuttiana* Parry (Orcutt's spineflower), and *Verbesina dissita* Gray (big-leaved crown-beard) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* One

of the four taxa herein (*Chorizanthe orcuttiana*) is restricted to the south-central coast of San Diego County, California. *Baccharis vanessae* extends inland 32 km (20 mi) and north to the Santa Margarita Mountains of northern San Diego County. *Arctostaphylos glandulosa* ssp. *crassifolia* extends from the south-central coast of San Diego County south into northwestern Baja California, Mexico. *Verbesina dissita*

occurs in two disjunct populations, one in coastal southern Orange County and one along the coast in northwestern Baja California, Mexico. The most imminent threat facing all four taxa and their associated habitats is the ongoing and threatened destruction and modification of habitat by one or more of the following—urban development, agricultural development, recreational

activities, trampling, and fuel modification activities.

Arctostaphylos glandulosa ssp. *crassifolia* (Del Mar manzanita) is restricted to sandstone-derived soils along the south-central coast of San Diego County, extending south to Mesa el Descanso 40 km (25 mi) south of the United States border, Baja California, Mexico. This taxon is restricted almost exclusively to southern maritime chaparral and is considered to be an indicator species for this plant community. Estimates indicate that between 82 and 93 percent of southern maritime chaparral vegetation in San Diego County has been lost as a result of urban and agricultural development (Oberbauer and Vanderwier 1991; OGDEN 1993; D. Hogan, *in litt.*, 1993). Between 1980 and 1990, the population of San Diego County increased by more than 600,000 people. Most of this increase occurred on or near the coast at sites historically occupied, in part, by southern maritime chaparral. About 140 to 180 ha (300 to 450 ac) (12 to 30 percent) of southern maritime chaparral is currently located within approved or proposed developments in San Diego County (RECON 1987, Roberts 1992, SEB 1993a; D. Hogan, *in litt.*, 1993; Gail Kobetich, USFWS, *in litt.*, 1993). Less than 30 percent of the remaining southern maritime chaparral is preserved in parks (e.g., Torrey Pines State Park) with long-term management for conservation.

While 25 of 26 populations of *Arctostaphylos glandulosa* ssp. *crassifolia* are still extant in part, the majority of these populations have been greatly reduced and significantly fragmented by urban and agricultural development, most of which has occurred since 1982. About a 50 percent decline in the number of stands and the number of individuals has occurred since 1982 (Roberts 1993, SEB 1993b). Of the remaining individuals, the majority are distributed in highly fragmented habitat along the margins of residential development.

Over 75 percent of *Arctostaphylos glandulosa* ssp. *crassifolia* in the United States occurs within 6 concentrations located in Carlsbad, Encinitas, Del Mar, and Torrey Pines State Park. Four of the six populations, located in Carlsbad and Encinitas, are threatened in part by approved or proposed development projects. These projects will result in the elimination of over 1,900 individuals (over 35 percent) of *A. g.* ssp. *crassifolia* that occurs within these 6 populations through direct impacts. Furthermore the additional loss of 1,000 individuals (20 percent) will likely result from indirect impacts such as fuel

modification and edge effects (Roberts 1993, SEB 1993a). Several of the smaller populations of *A. g.* ssp. *crassifolia* in Encinitas, Carlsbad, Carmel Valley and on Carmel Mountain are also threatened by development and associated indirect impacts (Roberts 1992, SEB 1993b).

The status of *Arctostaphylos glandulosa* ssp. *crassifolia* and its habitat in extreme northwestern Baja California, Mexico, are not well documented. However, this species only extends some 40 km (25 mi) south of the United States border. This region represents one of the most severely impacted areas in Baja California. Many of the same factors (urban and agricultural development) that have affected the status of this taxon in the United States are also clearly having an impact south of the border (Oberbauer 1992).

Chorizanthe orcuttiana (Orcutt's spineflower) is restricted to exposed sandy soils at two sites in coastal south-central San Diego County. One site, located at Torrey Pines State Park, is protected. However, this population has not been seen since 1987 (T. Oberbauer, pers. comm., 1992). The only currently known population is within Oak Crest Park in Encinitas, and this population is threatened by proposed recreational facilities (see Factor D). The reduction of the southern maritime chaparral in the park will have a significant impact on the long-term viability of the only existing *C. orcuttiana* population. Estimates indicate that between 82 and 93 percent of southern maritime chaparral vegetation in San Diego County has been lost as a result of urban and agricultural development (Oberbauer and Vanderwier 1991; OGDEN 1993; D. Hogan, *in litt.*, 1993).

Baccharis vanessae (Encinitas baccharis) is associated with dense mixed chaparral and southern maritime chaparral. Fourteen populations (and one isolated individual) currently exist. Seven of these remaining populations are threatened by development projects. Five populations are in the Del Dios Highlands within the Rancho Cielo project area. Three of these are threatened by urban development and a golf course (CDFG 1992). Clearing vegetation in 1991 and 1992 and application of herbicides in 1993, in combination with a serious fire in 1990, may already have eliminated some of these plants. Two other populations near Lake Hodges have been identified as threatened by proposed developments (CDFG 1992) or inundation from a proposed water storage facility (OGDEN 1995b).

In the United States, *Verbesina dissita* (big-leaved crown-beard) is restricted to

rugged coastal hillsides and canyons in southern maritime chaparral and, to a lesser extent, coastal sage scrub and mixed chaparral, along a 3.2 km (2 mi) stretch of coastline in Laguna Beach, Orange County. Although some populations extend into Aliso-Woods Regional Park, the majority of the remaining populations are on private land and these populations are threatened by residential development and fuel modification activities (CDFG 1992).

Residential development and fuel modification activities continue to incrementally impact the main Laguna Beach population of *Verbesina dissita* (CDFG 1992). At least four residences were built directly on *V. dissita* plants after its State-listing as a threatened species in 1989. Although the individual houses eliminated a relatively small number of plants, local ordinances require the creation of a fuel modification zone up to 46 m (150 ft) from the residence (Richard Drewberry, Laguna Beach Fire Department, pers. comm., 1991). Over 20 percent of *V. dissita* occurrences are within 46 m (150 ft) of residential development. If these ordinances are fully implemented, a significant portion of this species in the United States would be eliminated. In 1984, a fuel break was cut through one population on Temple Hill. The species normally persists in relatively dense brush, although it is known to respond favorably to some clearing and fires. The plants in the fuel break began to decline after four years (Fred Roberts, USFWS, pers. obs., 1992). In 1991, the City of Laguna Beach used goats to clear fuel breaks despite objections that the goats could potentially consume rare plant species (Dr. Peter Bowler, University of California, Irvine, pers. comm., 1992). The City of Laguna Beach has indicated that many areas containing dense brush adjacent to residential development will be cleared (R. Drewberry, pers. comm., 1991). These areas are occupied in part by *V. dissita*. One development completed in 1989 has placed irrigation and hydromulching over one population. *Verbesina dissita* is not expected to persist with overwatering and competition from *Atriplex semibaccata* (Australian saltbush), which is frequently used in landscaping along the borders of development (F. Roberts, pers. obs., 1992).

The remaining habitat of *Verbesina dissita* in the United States is relatively contiguous. However, several developments have been proposed that will reduce and further fragment this rare vegetation association. Only 20 percent of the habitat is preserved (i.e., in Aliso-Woods Canyon Regional Park).

The majority of *Verbesina dissita* populations occur south of the United States-Mexican border in coastal, northwestern Baja California, where it occurs in vegetation associations similar to those found in Laguna Beach, California. The status of *V. dissita* and its habitat in Mexico are not well documented. According to one prominent researcher, the distribution of *V. dissita* in Mexico is spotty (R. Moran, pers. comm., 1992). Over 20 populations are known between Punta Descanseo and San Telmo near Cabo Colonet (Roberts 1988). A survey of historic localities in 1988 between Punta el Descanseo and Punta Santo Tomas determined that over 25 percent of these localities had been urbanized or converted to agriculture. Four separate localities are known from Punta Bunda just south of Ensenada. However, three of these are threatened by changes in land use from relatively pristine conditions in 1987 to extensive clearing in addition to rural condominium development in 1990 (F. Roberts, memo to file, 1992). Many of the same factors threatening the species in the United States (i.e., urban and agricultural development) are threatening this species in Mexico as well (Oberbauer 1992).

B. Overutilization for commercial, recreational, scientific, or educational purposes. Some taxa have become vulnerable to collecting by curiosity seekers as a result of increased publicity following the publication of listing proposals. *Chorizanthe orcuttiana* is highly restricted and is vulnerable to over-collection because of its rarity. Some professional and amateur botanists are known to favor collection of rare species, either to have examples in their collection or because these specimens are valuable to trade with other institutions.

C. Disease or predation. Disease is not known to be a factor for any of the taxa. Although swollen galls on the stems of *Baccharis vanessae* indicate parasitism by a moth or butterfly (Beauchamp 1980), insect predation of the four taxa is not well understood.

D. The inadequacy of existing regulatory mechanisms. Existing regulatory mechanisms that may provide some protection for *Arctostaphylos glandulosa* ssp. *crassifolia*, *Baccharis vanessae*, *Chorizanthe orcuttiana*, and *Verbesina dissita* include—(1) the California Endangered Species Act (CESA); (2) the California Environmental Quality Act (CEQA); (3) the California Natural Community Conservation Planning Program (NCCP), which includes the San Diego Multiple Species

Conservation Plan (MSCP), Multiple Habitat Conservation Plan (MHCP), and Carlsbad Habitat Management plan (HMP); (4) the Federal Endangered Species Act in those cases where these taxa occur in habitat occupied by other listed species; (5) conservation provisions under the Federal Clean Water Act; (6) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations; and (7) local laws and regulations.

State Laws and Regulation:

Pursuant to the Native Plant Protection Act (chapter 10 section 1900 *et seq.* of the California Fish and Game Code) and California Endangered Species Act (chapter 1.5 section 2050 *et seq.* of the Fish and Game Code), the California Fish and Game Commission listed *Baccharis vanessae* as endangered in 1987 and *Chorizanthe orcuttiana* in 1979. *Verbesina dissita* was listed as threatened by the State of California in 1989. Although both statutes prohibit the "take" of State-listed plants (chapter 10 section 1908 and chapter 1.5 section 2080), some projects do not comply with State law. As an example, in 1992, *V. dissita* plants in Laguna Beach were removed without the State's knowledge (Ken Berg, CDFG, pers. comm., 1992).

Local lead agencies empowered to uphold and enforce the regulations of the CEQA have made determinations that have or will adversely affect these taxa and their southern maritime chaparral habitat. The CEQA requires that a project proponent publicly disclose the potential environmental impacts of proposed projects. The public agency with primary authority or jurisdiction over the project is designated as the lead agency, and is responsible for conducting a review of the project and consulting with other agencies concerned with resources affected by the project. Required biological surveys are often inadequate and project proponents may disregard the results of surveys if occurrences of sensitive species are viewed as a constraint on project design. Mitigation measures used to condition project approvals are often experimental and fail to adequately guarantee protection of sustainable populations of the taxa considered herein. CEQA decisions are also subject to overriding social and economic considerations.

To illustrate, the environmental documentation for a large-scale development project in Carlsbad did not include sufficient surveys for *Chorizanthe orcuttiana* or *Baccharis vanessae* (Pacific Southwest Biological Services 1990; Larry Sward, SEB, *in litt.*,

1993), although the only currently known population of *C. orcuttiana* occurs in Encinitas, less than 3.2 km (2 mi) distant, and one of the largest populations of *B. vanessae* occurs on an adjacent parcel. One of the largest populations of *Arctostaphylos glandulosa* ssp. *crassifolia* also occurs within this project site. Although impacts to this taxon were identified as significant under the CEQA, the adopted mitigation measures were considered to be insufficient (S. Lacy, *in litt.*, 1991). In another project within the City of Carlsbad, the elimination of a population of *A. g. ssp. crassifolia* was not considered to be a significant impact, even though the taxon was a Federal category 2 candidate for listing at the time (M.F. Pongeggi and Associates 1993). Impacts to category 2 candidates were considered significant under the CEQA prior to 1996 revisions in candidate policy that eliminated category 2 ranking (61 FR 7596; February 28, 1996).

Moreover, transplantation is frequently used to mitigate for the loss of rare plant species; however, it has yet to be demonstrated to provide for long-term viability of any of the four taxa. Several attempts at transplanting *Baccharis vanessae* and *Arctostaphylos glandulosa* ssp. *crassifolia* have been reported by Hall (1987). Attempts to transplant *B. vanessae* at Quail Botanical Garden and at San Dieguito County Park failed shortly after the monitoring period ended. Six years after individuals of *A. g. ssp. crassifolia* were transplanted at Quail Botanical Garden, 75 percent of the plants had died.

Regional Planning Efforts

In 1991, the State of California established the NCCP program to address conservation needs throughout the State. The focus of current planning programs is the coastal sage scrub community in southern California, although other vegetation communities are being addressed in an ecosystem-level approach. Southern maritime chaparral and the four taxa are currently being considered under the MSCP, MHCP, and the Orange County Central Coastal NCCP programs. The MHCP, which will include the Carlsbad HMP program, is still in the early developmental phase and thus it is uncertain to what degree it will be successful in providing protection for these taxa.

The NCCP for the Central and Coastal Subregion of Orange County was approved in July of 1996. Only one of the four taxa (*Verbesina dissita*) occurs within the Central/Coastal NCCP. While the entire population of this species in

the United States is within this subregion, only about 10 percent of the species' distribution is protected by the Central/Coastal Plan. The species is not adequately conserved, nor is it considered a "covered species" under the plan. Covered species are those species that have been adequately considered in terms of long-term preservation within a Habitat Conservation Planning Area or NCCP subregion. Under an agreement with the participants, CDFG, and the Service, future potential impacts for covered species are considered adequately addressed through proposed preservation, mitigation, and management.

Since the publication of the proposed rule, the MSCP, a regional planning effort in southwestern San Diego County, has been finalized and submitted to the Service as part of an application for a section 10(a)(1)(B) incidental take permit for 85 species, including *Arctostaphylos glandulosa* ssp.0 *crassifolia* and *Baccharis vanessae*. The Service and the City of San Diego have jointly prepared a *Recirculated Environmental Impact Report/Environmental Impact Statement, Issuance of Take Authorizations for Threatened and Endangered Species due to Urban Growth within the Multiple Species Conservation Program (MSCP) Planning Area*. This document, released on August 30, 1996, for a 45-day public review period, assesses the effects of land-use decisions that will be made by local jurisdictions to implement the plan and the effects of the proposed issuance of the incidental take permit on the 85 species. A decision on the permit issuance is expected in late 1996.

The MSCP will, upon approval, set aside preservation areas and provide monitoring and management for the 85 "covered species" addressed in the permit application, including *Arctostaphylos glandulosa* ssp. *crassifolia* and *Baccharis vanessae*. "Covered species" are taxa that will be adequately conserved by the plan's proposed preservation and management. About 30 percent of the *A. g. ssp. crassifolia* population (without consideration to edge effect) is protected within the MSCP (about 90 percent of the species' total populations are within the subregion) and about 45 percent of *B. vanessae* populations are protected within the MSCP (about 70 percent of the total populations are within the subregion). While all threats have not been eliminated for these two taxa within the subregion, the Service believes that future potential impacts will be adequately addressed by

management incorporated into the final MSCP agreement. Project proponents in areas outside the MSCP subregion will be required to coordinate with the Service on these taxa where applicable.

Federal Laws and Regulations

The Endangered Species Act may already afford protection to candidate or other sensitive species if they co-exist with species already listed as threatened or endangered under the Act. Although the coastal California gnatcatcher (*Poliophtila californica californica*) is listed as threatened under the Act and overlaps with the range of the taxa considered herein, the coastal California gnatcatcher primarily utilizes a different habitat (coastal sage scrub).

Additionally, under provisions of section 10(a) of the Act, the Service may permit the incidental "take" of the gnatcatcher during the course of an otherwise legal activity provided that the taking will not appreciably reduce the likelihood of its survival and recovery in the wild. Projects developed with authorization for take of the coastal California gnatcatcher may, however, contribute to the decline of *Arctostaphylos glandulosa* ssp. *crassifolia*, *Baccharis vanessae* and *Chorizanthe orcuttiana* in areas where the project area includes both coastal sage scrub and southern maritime chaparral.

Some protection has been afforded to these taxa through section 404 of the Clean Water Act (G. Kobetich, *in litt.*, 1993). However, since the majority of these taxa occur in upland habitat or in isolated and fragmented parcels, it is unlikely that actions affecting the taxa will require section 404 permits.

Land Acquisition and Management

Land acquisition and management by State or local agencies or by private groups and organizations have contributed to the protection of some localities containing the taxa included in this rule. However, as discussed below, these efforts are inadequate to assure the long-term survival of these four taxa. For example, Torrey Pines State Park and Crest Canyon Preserve (Del Mar) contain significant populations of *Arctostaphylos glandulosa* ssp. *crassifolia*. While Torrey Pines State Park is managed for long-term preservation of biological resources, the populations within the park contain less than 20 percent of the remaining *A. g. ssp. crassifolia* individuals. The populations of this taxon in Crest Canyon Preserve Park are affected by trampling associated with recreational activities and edge effects (see Factor E). A small population of *A.*

g. ssp. crassifolia located within San Diego County Park is also threatened by edge effects and trampling from recreational activities.

Three of the species considered within this rule (*Arctostaphylos glandulosa* ssp. *crassifolia*, *Baccharis vanessae*, and *Chorizanthe orcuttiana*) occur within Oak Crest Park in Encinitas. While this park is under public ownership and management, these plants are threatened by the construction of recreational facilities, invasive exotics, and trampling (see Factors A and E).

A single population of *Baccharis vanessae* is known from the Cleveland National Forest in the Santa Margarita Mountains (S. Boyd, Rancho Santa Ana Botanical Garden, *in litt.*, 1992). While this population is protected in part because it is isolated, it represents less than 10 percent of the known populations of this species. In Orange County, *Verbesina dissita* extends into Aliso-Woods Canyons Regional Park. However, this park encompasses less than 10 percent of the known populations of the species. Additionally, while this county regional park is, in part, managed for biological conservation, *V. dissita* is threatened by fuel modification (i.e., thinning, mechanical clearing, and irrigation) and exotic vegetation replacement at the park boundary.

These plant taxa also occur in "dedicated" open space frequently in association with development projects. These areas are often specifically set aside for conservation as required by local and county project approvals and/or the CEQA, and are managed by private organizations, individuals, corporations, or local jurisdictions. However, open space dedications do not incorporate the principles of conservation biology. Many are inadequately configured, or are too small for the long-term preservation of these taxa (see Factor E). County open space designations within General Development Plans are subject to amendments and, therefore, cannot be considered as permanent conservation.

Local Laws, Regulations, and Ordinances

The four taxa in this rule have been identified as sensitive under various local laws, regulations and ordinances. However, development projects continue to be approved and implemented with designs that do not preserve populations or habitat for the taxa considered herein. Currently, the Service is aware of 10 approved or proposed development projects that will directly or indirectly impact about 3,000

individuals of *Arctostaphylos glandulosa* ssp. *crassifolia*. While these projects have been or currently are subject to review under existing local regulatory mechanisms and conservation plans, this taxon is still declining rapidly. Management and recovery become increasingly difficult as options for preservation are reduced.

Existing local land-use regulations have failed to protect these taxa as exemplified by Oak Crest Park in Encinitas. Although a portion of the park was originally set aside for conservation purposes by the County of San Diego (D. Hogan, *in litt.*, 1991; T. Oberbauer, pers. comm., 1992), recreational development has eliminated southern maritime chaparral habitat and individuals of *Arctostaphylos glandulosa* ssp. *crassifolia*, *Baccharis vanessae*, and *Chorizanthe orcuttiana*. One area recently developed included a natural preserve area set aside under an agreement between the City and the California Coastal Commission. Current recreational development plans for Oak Crest Park, including the construction of a community center, swimming pool and numerous walking paths, will impact two of these taxa (*A. g.* ssp. *crassifolia* and *B. vanessae*). The proposed development will reduce the *B. vanessae* population and the extent of southern maritime chaparral within the park by approximately one-third (David Wigginton, City of Encinitas Community Services, pers. comm., 1992).

Another example demonstrating how existing regulatory mechanisms are inadequate is provided by a project in the City of Carlsbad that was originally approved circa 1980. The project area contained the northernmost known population of *Arctostaphylos glandulosa* ssp. *crassifolia* and a significant stand of southern maritime chaparral. When a city official was approached by the project proponent in 1992, the city informed the proponent that the existing CEQA documentation was inadequate and that additional biological surveys would be required. Despite this finding, the proponent was able to obtain grading permits to clear the land without additional documentation (Terri Stewart, CDFG, pers. comm., 1992).

Several development projects have proceeded without adequate surveys for *Chorizanthe orcuttiana* (City of Carlsbad and Fieldstone/La Costa Associates 1994). *Arctostaphylos glandulosa* ssp. *crassifolia* has been considered in the majority of these plans; however projects have recently been proposed and approved that have or will directly or indirectly eliminate nearly half of the

population within these planning areas (SEB 1993a, 1993b). Because *A. g.* ssp. *crassifolia* has already declined by about 50 percent over the last decade, these additional significant losses will contribute to the further decline of this taxon and may affect its recovery (Roberts 1993; SEB 1993b; G. Kobetich, *in litt.*, 1993). Although the only extant population of *C. orcuttiana* is on public land within the jurisdiction of the MHCP, no protection measures have been developed or implemented for this population. Several important populations of *Baccharis vanessae* are threatened by current project proposals that will reduce the effectiveness of the MHCP, when developed, to adequately stabilize populations within the subregion (OGDEN 1995a; D. Hogan, *in litt.*, 1991; D. Wigginton, pers. comm., 1992). The additional recognition that results from listing is expected to generate additional efforts in providing for the long-term preservation of these four taxa.

Laws and Regulation in Mexico

The range of *Arctostaphylos glandulosa* ssp. *crassifolia* and *Verbesina dissita* continues south along the Pacific coast into northwestern Baja California, Mexico. Mexico has laws that presumably provide protection to rare plants; however, enforcement of these laws is lacking (USFWS 1992b).

In summary, although most of these taxa are receiving at least some protection through existing regulatory mechanisms, threats continue to adversely affect the taxa, as indicated by their declining status.

E. *Other natural or manmade factors affecting their continued existence.* At least two of the taxa (*Baccharis vanessae* and *Chorizanthe orcuttiana*) may be threatened by a risk of extinction from naturally occurring events because of their restricted distribution and small population size. Genetic viability can be reduced in small populations, making them less adaptable to changes in the environment. The potential for extirpation by virtue of their small population sizes can be exacerbated by natural causes such as drought or fire. For example, the impact of fire on *Baccharis vanessae* is not fully understood, yet a 1,200 ha (3,000 ac) fire in the Del Dios highlands burned four of the known populations in September 1990 (CDFG 1992, Los Angeles Times 1992). Many populations are now in close proximity to residential development, and are threatened by edge effects including fuel modification activities, fire suppression, the invasion of exotic plant species, and increased

human activities associated with nearby urbanization. Additionally, unidentified pollinators or seed-dispersal agents for these taxa may also be impacted by development.

Habitat fragmentation and isolation, in addition to fuel modification, threaten the taxa in areas adjacent to residential development. For example, nearly 15 percent of extant *Arctostaphylos glandulosa* ssp. *crassifolia* occurs in small, fragmented, and isolated parcels of open space (Roberts 1993). Of the six largest populations of this taxon, 20 percent of the individuals are within 60 m (200 ft) of existing development and are threatened by edge effects (Roberts 1993, SEB 1993a). This is exemplified by Crest Canyon Preserve, where nearly 50 percent of the approximately 1,000 individuals of *A. g.* ssp. *crassifolia* are within 60 m (200 ft) of development. *Arctostaphylos glandulosa* ssp. *crassifolia* is also threatened by trampling where trails have been cut through populations by recreationalists and farm workers (Hogan 1990; CDFG 1992; F. Roberts and E. Berryman, USFWS, pers. obs.).

Conflicts between fire management and preservation arise when insufficient buffers exist between sensitive biological resources and residential dwellings. A recent example includes clearing of about 1 ha (2 ac) of southern maritime chaparral adjacent to a new residential development in Carlsbad in June 1992.

Baccharis vanessae is limited to small numbers, comprising only 14 extant populations containing about 2,000 individuals. No population is known to have over 300 individuals and 5 of these populations have fewer than 6 individuals. One individual has been discovered on the western slopes of Carmel Mountain.

Chorizanthe orcuttiana, known from a single locality, is the most vulnerable of the four taxa. This species is threatened by trampling by farm workers and recreationalists because of its small size and its preference for open areas, which tend to attract foot traffic through otherwise dense chaparral vegetation (F. Roberts and E. Berryman, pers. obs.). The only known site could be eliminated in a single event if a particularly large number of people were to walk through and trample the population. Exotic grass and weed species are also threatening the population.

All four taxa are potentially threatened by the interruption of the natural fire cycle. Fragmentation has rendered individual populations more susceptible to fire events that may either

occur too frequently or be suppressed too long to maintain a healthy southern maritime chaparral habitat.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these four taxa in determining to make this rule final. Based on this evaluation, the preferred action is to list

Arctostaphylos glandulosa ssp. *crassifolia* and *Chorizanthe orcuttiana* as endangered. These taxa are in danger of extinction throughout all or a significant portion of their ranges due to habitat alteration and destruction resulting from urban, recreational and agricultural development; fuel modification activities; trampling by farm workers and recreational activities; inadequacy of existing regulatory mechanisms; naturally occurring events due to limited populations; and competition from exotic plant species. For the reasons discussed below, the Service finds that *Verbesina dissita* and *Baccharis vanessae* are likely to become endangered within the foreseeable future throughout all or a significant portion of their range. Although *V. dissita* is extremely threatened in the United States by development and fuel modification activities, the status of this species in Baja California, Mexico, is considerably better due to a larger number of extant populations. However, it is still threatened by similar activities in Mexico. Therefore the preferred action is to list *V. dissita* as threatened. While nearly half of the known *B. vanessae* populations continue to be at risk from urban development, inundation from a proposed water storage facility, and fire management methods, the species is not in immediate danger of extinction. The Service therefore revises the preferred action for *B. vanessae* from listing as endangered in the original proposed regulation to listing as threatened in this final rule. In addition, the MSCP in San Diego County will offer significant management and preservation for about half of the populations upon its authorization. Critical habitat is not being proposed for these taxa for the reasons discussed below.

Critical Habitat

Critical habitat, is defined in section 3 of the Act, as: (i) 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 (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas

outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for the taxa discussed in this rule at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species; or (2) such designation of critical habitat would not be beneficial to the species.

As discussed under Factor B, *Chorizanthe orcuttiana* is particularly threatened by taking, specifically overcollecting, an activity difficult to regulate and enforce. Taking is only regulated by the Act with respect to plants in cases of (1) removal and reduction to possession of federally listed plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging-up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. The publication of precise maps and descriptions of critical habitat in the Federal Register would make these plants more vulnerable to incidents of collection or vandalism and, therefore, could contribute to the decline of this species.

Critical habitat designation provides protection only on Federal lands or on private lands when there is Federal involvement through authorization or funding of, or participation in, a project or activity. Of the taxa discussed herein, only one population of *Baccharis vanessae* is known to occur on Federal lands. All Federal and state agencies and local planning agencies involved have been notified of the location and importance of protecting the habitat of these taxa. Protection of their habitat will be addressed through the recovery process and through the section 7 consultation process. Section 7(a)(2) of the Act requires Federal agencies, in

consultation with the Service, to ensure that any action authorized, funded, or carried out by such agency, does not jeopardize the continued existence of a federally listed species, or does not destroy or adversely modify designated critical habitat. The taxa in this rule are all confined to small geographic areas and each population is composed of so few individuals that the determinations for jeopardy and adverse modification would be similar. Therefore, designation of critical habitat provides no additional benefit beyond those that these taxa would receive by virtue of their listing as endangered or threatened species and likely would increase the degree of threat from vandalism, collecting, or other human activities. The Service finds that designation of critical habitat is not prudent for these taxa at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition from willing sellers and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) 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 listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of 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 formal consultation with the Service.

Although only one of the four taxa (*Baccharis vanessae* at the Olivenhein Water Storage Facility) is known to be directly affected by activities permitted under section 404 of the Clean Water Act, effects of actions that include direct and indirect impacts that are interrelated or interdependent with the taxa under consideration may require a permit under section 404 of the Clean Water Act. Additionally, two of the taxa (*Arctostaphylos glandulosa* ssp. *crassifolia* and *B. vanessae*) are known to occur in areas where highway projects, which may involve Federal funding and the Federal Highways Administration, have been proposed. At least one taxon (*B. vanessae*) occurs on Federal land, within the Cleveland National Forest and within 1 km (0.6 mi) of Camp Pendelton Marine Base. New populations of these taxa could be discovered at Miramar Naval Air Station, Point Loma Naval Reserve, and Camp Pendelton Marine Base. These Federal nexuses would require initiation of section 7 consultation on actions that may affect the taxa.

Two of these species, *Arctostaphylos glandulosa* ssp. *crassifolia* and *Baccharis vanessae*, are considered covered species under the MSCP. These species will receive benefits from the plan upon its approval. These benefits include—(1) preservation of the majority of populations within the subregion including two major populations of *A. g.* ssp. *crassifolia* and one and a half major populations of *B. vanessae*, (2) management plans that will address impacts from fuel management and close proximity of existing and proposed development, and (3) monitoring of the status of these populations. Some populations within this subregion will be eliminated or reduced, but it has been determined that the populations preserved under the plan will be adequate to stabilize the status of these taxa within the MSCP planning area.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered or threatened plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61 (endangered plants) or 17.71 (threatened plants), apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or remove and reduce the species to possession from areas under Federal jurisdiction. In addition, for plants listed as endangered, the Act

prohibits the malicious damage or destruction on any area under Federal jurisdiction and the removal, cutting, digging up, or damaging or destroying of such endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Section 4(d) of the Act allows for the provision of such protection to threatened species through regulation. This protection may apply to *Baccharis vanessae* and *Verbesina dissita* in the future if regulations are promulgated. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that their containers are marked "Of Cultivated Origin". Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.62, 17.63, and 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered or threatened species under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. For threatened plants, permits are also available for botanical or horticultural exhibition, educational purposes, or special purposes consistent with the purpose of the Act. It is anticipated that few trade permits would ever be sought or issued because none of the four taxa are common in cultivation or in the wild.

It is the policy of the Service, published in the Federal Register on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. One of these four taxa (*Baccharis vanessae*) is known to occur on lands under the jurisdiction of the U.S. Forest Service and populations of the taxa may potentially be discovered on lands under the jurisdiction of the Department of Defense (Navy). Collection, damage or destruction of any of these species on Federal lands is prohibited, although in appropriate cases a Federal endangered species permit may be issued to allow collection. Such activities on non-Federal lands would constitute a violation of section 9 if conducted in knowing violation of State law or regulations or in violation of State criminal trespass law. The Service is not aware of any otherwise lawful activities being conducted or proposed by the public that will be affected by this

listing and result in a violation of section 9.

Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Service's Carlsbad Field Office (see ADDRESSES section). Requests for copies of the regulations concerning listed plants and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232-4181 (telephone 503/231-2063; facsimile 503/231-6243).

National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein is available upon request from the Carlsbad Field Office (see ADDRESSES section).

Author

The primary author of this final rule is Fred M. Roberts, Jr., Carlsbad Field Office (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended 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. Section 17.12(h) is amended by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants, to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS:							
* <i>Arctostaphylos glandulosa ssp. crassifolia.</i>	* Del Mar manzanita ...	* U.S.A. (CA), Mexico	* Ericaceae	* E	* 589	* NA	* NA
* <i>Baccharis vanessae</i>	* Encinitas baccharis	* U.S.A. (CA)	* Asteraceae	* T	* 589	* NA	* NA
* <i>Chorizanthe orcuttiana.</i>	* Orcutt's spineflower	* U.S.A. (CA)	* Polygonaceae	* E	* 589	* NA	* NA
* <i>Verbesina dissita</i>	* Big-leaved crown-beard.	* U.S.A. (CA), Mexico	* Asteraceae	* T	* 589	* NA	* NA
* 	* 	* 	* 	* 	* 	* 	*

Dated: September 27, 1996.
 John G. Rogers,
 Acting Director, Fish and Wildlife Service.
 [FR Doc. 96-25462 Filed 10-4-96; 8:45 am]
 BILLING CODE 4310-55-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 951116270-5308-02; I.D. 092696B]

Fisheries of the Northeastern United States; Summer Flounder Fishery; Commercial Quota Harvested for Massachusetts

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

ACTION: Commercial quota harvest.

SUMMARY: NMFS issues this notification announcing that the summer flounder commercial quota available to the Commonwealth of Massachusetts has been harvested. Vessels issued a commercial Federal fisheries permit for the summer flounder fishery may not land summer flounder in Massachusetts for the remainder of calendar year 1996, unless additional quota becomes available through a transfer. Regulations governing the summer flounder fishery require publication of this notification to advise the Commonwealth of Massachusetts that the quota has been harvested and to advise vessel and

dealer permit holders that no commercial quota is available for landing summer flounder in Massachusetts.
EFFECTIVE DATE: October 2, 1996 through December 31, 1996.

FOR FURTHER INFORMATION CONTACT: Lucy Helvenston, 508-281-9347.

SUPPLEMENTARY INFORMATION: Regulations governing the summer flounder fishery are found at 50 CFR part 648. The regulations require annual specification of a commercial quota that is apportioned among the states from North Carolina through Maine. The process to set the annual commercial quota and the percent allocated to each state are described in § 648.100.

The total commercial quota for summer flounder for the 1996 calendar year is set equal to 11,111,298 lb (5,040,000 kg) (January 4, 1996, 61 FR 291). The percent allocated to vessels landing summer flounder in Massachusetts is 6.82046 percent, or 757,841 lb (343,751 kg).

Section 648.100(d)(2) provides that any overages of the commercial quota landed in any state will be deducted from that state's annual quota for the following year. In the calendar year 1995, a total of 1,127,995 lb (511,650 kg) were landed in Massachusetts. The amount allocated for Massachusetts landings in 1995 was 1,122,246 lb (509,042 kg), creating a 5,749 lb (2,608 kg) overage that was deducted from the amount allocated for landings in that state during 1996 (April 5, 1996, 61 FR 15199). The resulting quota for Massachusetts is 752,092 lb (341,143 kg).

Section 625.101(b) requires the Regional Administrator, Northeast Region (Regional Administrator) to monitor state commercial quotas and to determine when a state commercial quota is harvested. The Regional Administrator is further required to publish a notification in the Federal Register advising a state and notifying Federal vessel and dealer permit holders that, effective upon a specific date, the state's commercial quota has been harvested and no commercial quota is available for landing summer flounder in that state. Because the available information indicates that the Commonwealth of Massachusetts has attained its quota for 1996, the Regional Administrator has determined that based on dealer reports and other available information, the State's commercial quota has been harvested.

The regulations at § 648.4(b) provide that Federal permit holders agree as a condition of the permit not to land summer flounder in any state that the Regional Administrator has determined no longer has commercial quota available. Therefore, effective 0001 hours October 2, 1996 further landings of summer flounder in Massachusetts by vessels holding commercial Federal fisheries permits are prohibited for the remainder of the 1996 calendar year, unless additional quota becomes available through a transfer and is announced in the Federal Register. Federally permitted dealers are also advised that they may not purchase summer flounder from federally permitted vessels that land in Massachusetts for the remainder of the