

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB52

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Plant *Limnanthes floccosa* ssp. *californica* (Butte County Meadowfoam)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) determines endangered status for a plant, *Limnanthes floccosa* ssp. *californica* (Butte County meadowfoam). The subspecies is threatened principally by urban development in the undeveloped northern and eastern portions of the city of Chico in Butte County, California. In addition, conversion of the plant's habitat, vernal pools and ephemeral drainages, for agricultural purposes threatens the plant. Road widening or realignment, overgrazing by livestock, garbage dumping, off-road vehicle use, competing alien vegetation, and stochastic (random) extinction by virtue of the small isolated nature of the remaining populations threaten the subspecies to some degree. This rule implements the protection and recovery provisions afforded by the Endangered Species Act of 1973, as amended (Act), for this species.

EFFECTIVE DATE: June 8, 1992.

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, Sacramento Field Office, 2800 Cottage Way, room E-1803, Sacramento, California 95825.

FOR FURTHER INFORMATION CONTACT: Jim Bartel at the above address (916/978-4866 or FTS 460-4866).

SUPPLEMENTARY INFORMATION:**Background**

Limnanthes floccosa ssp. *californica*, a member of the false mermaid family (Limnanthaceae), was first collected in 1917 by Amos Heller 10 miles (16 kilometers (km)) north of Chico in Butte County, California. In a paper revising the taxonomy of *L. floccosa*, a species that ranges from Jackson County in Oregon to Butte County, Mary Kalin de Arroyo (1973) described *L. floccosa* ssp. *californica* from a 1970 collection she made 0.5 miles (0.8 km) south of Shippee Road along State Route 99 in Butte

County. The Butte County meadowfoam is a densely pubescent, winter annual herb. Its stems, which range from 1 to 10 inches (3 to 25 centimeters (cm)) in length, generally lie flat on the ground with the tips curved upward. Appearing in late March through April, the flowers of *L. floccosa* ssp. *californica* are white with dark yellow veins at the base of each of the five petals (McNeill and Brown 1979). Though similar in appearance, differences in nutlet (seed) ornamentation, inflorescence, flower shape during full bloom, and sepal fusion and vestiture (i.e., coloring and type of hairiness) separate *L. floccosa* ssp. *californica* from *L. floccosa* ssp. *floccosa* (Jokerst 1989). In addition, electrophoretic (Arroyo 1975) and allozyme (Brown and Jain 1979, McNeill and Jain 1983) studies demonstrated the genetic distinctiveness of *L. floccosa* ssp. *californica*.

Butte County meadowfoam is restricted to a narrow 25-mile (40 km) strip along the eastern flank of the Sacramento Valley from central Butte County to the northern portion of Chico (Jokerst 1989). According to James Jokerst (1989), *Limnanthes floccosa* ssp. *californica* has two centers of distribution; near the type locality in central Butte County, and in and around Chico. Although Arroyo (1973) reported the subspecies from the summit of Table Mountain in Butte County, this locality is based on a 1949 collection by Herbert Mason that is probably mislabeled (James Jokerst, consulting botanist, pers. comm., 1987). Three other *Limnanthes* taxa occasionally are associated with the Butte County meadowfoam: *L. alba* ssp. *alba*, *L. douglasii* var. *rosea*, and *L. floccosa* ssp. *floccosa* which reaches its southern distributional limits in the northern portion of Chico. However, using allozyme and morphometric data, Jefferey Dole and Mei Sun (in press) reported finding no evidence of introgression (i.e., hybridization) at sympatric sites of *L. floccosa* ssp. *californica* and *L. alba* ssp. *alba*. They also found that the Butte County meadowfoam had only an average of 1.2 percent of polymorphic loci, which is an extremely low level of genetic variation compared to other restricted species or *Limnanthes* taxa (Karron 1991). Like other annual flowering plants (Hamrick *et al.* 1991), the proportion of genetic diversity of *L. floccosa* ssp. *californica* existed among rather than within its populations. Consequently, the subspecies' continued existence likely will depend on the long-term conservation of most, if not all, populations (Dole, U.C. Davis researcher, pers. comm., April 30, 1991)

meadowfoam to be an endangered species with the publication of this rule.

Summary of Comments and Recommendations

In the February 15, 1991, proposed rule (56 FR 6345) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county and city governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices were published inviting general public comment. On March 12, 1991, the Service received a written request for a public hearing from Mr. Tom Guarino of the Greater Chico Chamber of Commerce. Subsequently, the Service received another public hearing request from Mr. Thomas J. Lando of the Community Services Department of the City of Chico on March 21, 1991. As a result, the Service published (56 FR 14055) a notice of a public hearing on April 5, 1991, and extended the deadline for the comment period to May 6, 1991. The Service conducted the hearing on April 25, 1991, at the City of Chico Council Chambers in Chico, California. Testimony was taken from 6 p.m. to 9 p.m. Notice of the proposal and public hearing were published in the *Chico Enterprise-Record* and *Sacramento Bee*.

During the comment period, the Service received 44 comments (e.g., letters and oral testimony) from 31 individuals. The California Department of Fish and Game (Fish and Game) was among 12 commenters expressing support for the listing proposal, while 11 commenters opposed or asked for a delay in the listing action. Eight commenters were neutral and the information they provided was generally non-substantive, although some of these individuals provided locality or miscellaneous data on the subspecies or they inquired as to the possible effects of listing on their activities or interests. Written comments or oral statements obtained during the public hearing and comment period are combined in the following discussion. Opposing comments and other comments questioning the rule can be organized into approximately eight specific issues. These categories of comments and the Service's response to each are listed below:

Comment 1: Many commenters requested the Service delay or not list *Limnanthes floccosa* ssp. *californica* because additional distributional and autecological data are needed to determine the subspecies' true status. In

addition, they variously contended that past surveys cited in the proposed rule, Dole (1988) and Jokerst (1989), were inadequate. Though the rationale varied, most of the support for this contention was that areas outside the known range of the plant may harbor additional populations. To support the need for further field work, two commenters cited the discovery by Caltrans biologists of three new populations within the known range of the subspecies. Others, however, asserted that the distribution of the Butte County meadowfoam, which has been the subject of botanical study for nearly 20 years by several researchers and local members of the CNPS, is well known and not in need of further study.

Service response: Only four commenters provided precise data on new populations or extensions of known sites beyond that detailed in the two principal surveys of *Limnanthes floccosa* ssp. *californica* (Dole 1988 and Jokerst 1989), which were the primary basis of the proposed rule. Kelley (pers. comm., March 20, 1990) detailed two *L. floccosa* ssp. *californica* populations: (1) "some scattered plants" immediately north of the "Humboldt" population along State Route 32, and (2) an isolated stand east of the "Rancho Arroyo" population along a tributary of Sycamore Creek. Subsequently, Kelley (pers. comm., April 4, 1991) stated that the latter site was actually *L. floccosa* ssp. *floccosa*. Jokerst (pers. comm., May 6, 1991) reported three new populations or extension: (1) the same Butte County meadowfoam north of the "Humboldt" population described by Kelley, (2) a southerly extension of the "Doe Mill" population, and (3) three easterly outlying stands east of the "Rancho Arroyo" population. These "Rancho Arroyo" stands differed in their precise locality from population of *L. floccosa* ssp. *floccosa* reported by Kelley from the same general area. Mary Meyer (pers. comm., April 20, 1991) found a new population of *L. floccosa* ssp. *californica* consisting of four plants west of Dry Creek and 1.5 miles (2.4 km) east of State Route 70. As discussed earlier, Caltrans staff located approximately 40 pools and swales harboring *L. floccosa* ssp. *californica* within one section (1 square mile) along State Route 149. These sites can be grouped into three populations; one population between Cottonwood Creek and Gold Run (which was previously reported by the CNDDDB and included in the proposed rule), and two new populations between Gold Run and Dry Creek. These population data have been incorporated into this rule. Nonetheless,

no new significant distributional data affecting the status of the subspecies were reported by any respondent. In addition, despite claims of populations in Tehama and Yuba Counties, no populations are reported from outside the known range of the Butte County meadowfoam and no data were presented to contradict the Service's contention that the subspecies is imminently threatened by rapid urban development and other threats in Butte County (see Factor A in "Summary of Factors Affecting the Species"). Although future surveys likely will reveal additional small and isolated pool sites within less-accessible portions of Butte County, these newly discovered sites likely will be threatened by the same activities affecting the other known populations. The Service maintains that this decision is based on the best and most current information available. In addition, the Service believes that sufficient information is available on *L. floccosa* ssp. *californica* to warrant making a determination on its status.

Comment 2: Congressman Herger asserted that "the Butte County meadowfoam does not appear to be facing an immediate threat to its survival" because of the considerable attention and cooperation the subspecies is receiving in the Chico area from the U.S. Army Corps of Engineers (Corps), Fish and Game, and City of Chico. In this regard, one respondent noted that a large development proposed for northeast Chico would not adversely affect the Butte County meadowfoam and that 62 acres would be designated a "natural open space." Five respondents, including the congressman, suggested or implied that the mitigation program adopted by the City of Chico to conserve *Limnanthes floccosa* ssp. *floccosa* should be given a chance. However, other commenters claimed that the protection afforded the subspecies by the three agencies, especially the City's program, was insufficient. One respondent listed examples of the City of Chico's past failure to live up to environmental protection agreements, while another contended that the City program essentially "calls for further destruction of the remaining Butte County meadowfoam sites within the city."

Service response: Regarding the adequacy of local and State regulation, the mitigation program adopted by the City of Chico generates no acquisition funding and relies on developer dedication, either via fee title or conservation easement, of preserved pool habitat. Perhaps as a result of the

voluntary nature of the mitigation program, only one 14.76-acre parcel within a secondary preserve area ("Doe Mill") has been established to date, though two other landowners reportedly are negotiating with the City of Chico (Thomas J. Lando, City of Chico, pers. comm., May 3, 1991). Moreover, the alternative program does not provide for the preservation of, at least, portions of all populations in the Chico area, including the two largest stands "Bruce-Stilson" and "Cohasset" (Dole, pers. comm., April 30, 1991). Such a strategy is likely essential for the long-term survival of this genetically depauperate subspecies. Thus, the long-term effectiveness of the City of Chico's mitigation program in protecting and managing the vernal pool habitat is questionable and likely insufficient. The County of Butte, which declared bankruptcy in 1990, has undertaken no actions to date to protect *Limnanthes floccosa* ssp. *californica* (Jokerst, pers. comm., May 5, 1991). Reportedly, the County has allowed the conversion of over 1,000 acres of Butte County meadowfoam habitat over the last 5 years (Jokerst, pers. comm., May 5, 1991). Regarding the adequacy of Federal regulation, the Corps' report (Art Champ, Regulatory Section, Sacramento District, pers. comm., April 1, 1991) of numerous ongoing or future permit actions affecting most of the remaining Butte County meadowfoam populations in and around Chico attests to the precarious state of Federal protection now provided to the subspecies. See the discussion under Factor D ("Summary of Factors Affecting the Species") for a complete discussion on the inadequacy of existing regulatory mechanisms for *Limnanthes floccosa* ssp. *californica*.

Comment 3: One respondent stated that seeds of *Limnanthes floccosa* ssp. *californica* collected from destroyed pools within the "Humboldt" population should be sown elsewhere.

Service response: Any effort to sow the Butte County meadowfoam on another site would require, at a minimum, a large source of genetically uncontaminated seed, and appropriate, unoccupied, vernal pool or swale habitat within the known range of the subspecies. Moreover, such an introduction effort must provide for the long-term protection of the introduction site. Even when such conditions can be found, success cannot be guaranteed. For example, one commenter reported that an introduced population of Macoun's meadowfoam (*Limnanthes macounii*) in apparently suitable habitat declined and slowly disappeared for no

obvious reason after 7 years of monitoring (Adolf Ceska, botanist and *Limnanthes* researcher, Royal British Columbia Museum, pers. comm., April 19, 1991). As a result, introduction efforts, like that suggested by the respondent, likely will offer only limited mitigation opportunities in the future.

Comment 4: A few people expressed concerns over the economic impact of listing the plant. For example, one respondent claimed that the listing of *Limnanthes floccosa* ssp. *californica* would be costly for people "struggling to purchase their first home." Another commenter stated that any action resulting in a monetary loss regarding his land would not be acceptable.

Service response: Under section 4(b)(1)(A) of the Act, a listing determination must be based solely on the best scientific and commercial data available. The legislative history of this provision clearly states the intent of Congress to "ensure" that listing decisions are "based solely on biological criteria and to prevent non-biological considerations from affecting such decisions" H.R. Rep. No. 97-835, 97th Cong. 2d Sess. 19 (1982). As further stated in the legislative history, "economic considerations have no relevance to determinations regarding the status of species * * * " *Id.* at 20. Because the Service is specifically precluded from considering economic impacts in a final decision on a proposed listing, the Service does not respond to comments concerning possible economic consequences of listing the Butte County meadowfoam.

Comment 5: One commenter was concerned that listing of *Limnanthes floccosa* ssp. *californica* would force local developers to change mitigation agreements made with the City of Chico. Apprehension over potential changes in current agreements likely prompted one respondent to detail the story of 3 years of trying to obtain necessary permits from the Corps to construct church facilities on vernal pool habitat east of Chico. Similarly, two other respondents strongly asserted that the construction of church facilities should be allowed to proceed.

Service response: As discussed under the "Available Conservation Measures" section below, section 7(a) of the Act requires all Federal agencies, like the Corps, to evaluate their actions with respect to *Limnanthes floccosa* ssp. *californica* and to ensure that activities the agency authorizes, funds, or otherwise carries out are not likely to jeopardize the continued existence of a listed species. Though the Corps would become involved with this plant species

through its permitting authority under section 404 of the Clean Water Act, the fate of such consultations with the Corps or any consultations with other Federal agencies is not known at this time. As a result, the effect of listing the Butte County meadowfoam on such local projects, including the church, cannot be precisely predicted. Regardless, the listing of the plant may result in a revisiting of past mitigation agreements.

Comment 6: One commenter contested the claim in the proposed rule that all species of *Limnanthes* have the potential to be of high agronomic value because of the oil contained within their seeds (see discussion under Factor D in the "Summary of Factors Affecting the Species"). This commenter stated that *L. floccosa* ssp. *californica* likely has no commercial value because of its narrow habitat requirements and its short stature (usually less than 8 inches (20 cm) tall), which would make cultivation and harvest difficult. However, another respondent noted that Gary Jolliff (crop scientist, Oregon State University) reported during a talk on meadowfoam cultivation at California State University, Chico on April 19, 1991, that meadowfoam is "[i]ncredibly encouraging as a crop potential." This respondent also brought to the public hearing a few meadowfoam-based products (e.g., hand cream, face cream) to demonstrate the potential commercial value of the genus.

Service response: As stated under Factor D in the "Summary of Factors Affecting the Species," crop breeding studies at the University of California Davis suggest that *Limnanthes floccosa* ssp. *californica* has desirable traits for future agricultural use (Jokerst 1989). Regardless as to the eventual commercial value of the Butte County meadowfoam, the Service maintains that the subspecies has not been and likely will not be overutilized in this regard.

Comment 7: One commenter suggested that it would be worthwhile to examine more definitively the taxonomic status of the Butte County meadowfoam in relation to *Limnanthes alba* and other subspecies of *L. floccosa*. Without providing any details or specimens, this commenter also implied that hybrids of *L. floccosa* ssp. *californica* may exist in Yuba County.

Service response: Aside from the electrophoretic (Arroyo 1975) and allozyme (Brown and Jain 1979, McNeill and Jain 1983) studies that demonstrated the genetic distinctiveness of *Limnanthes floccosa* ssp. *californica*, Dole and Sun (in press) reported finding no evidence

attorney, Hackard, Taylor & Phillips, pers. comm., April 16, 1991). Regardless as to the outcome of this development, the alternative program does not provide for the preservation of, at least, portions of all populations in the Chico area, including the two largest stands "Bruce-Stilson" and "Cohasset" (Dole, pers. comm., April 30, 1991). Such a strategy is likely essential for the long-term survival of this genetically depauperate subspecies. As a result, the long-term effectiveness of the City of Chico's mitigation program in protecting and managing the vernal pool habitat is questionable and likely insufficient.

The County of Butte, which declared bankruptcy in 1990, has undertaken no actions to date to protect *Limnanthes floccosa* ssp. *californica* (Jokerst, pers. comm., May 5, 1991). Reportedly, the County has allowed the conversion of over 1,000 acres of Butte County meadowfoam habitat over the last 5 years (Jokerst, pers. comm., May 5, 1991).

Under section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of fill into waters and adjacent wetlands of the United States. To be in compliance with the Clean Water Act, potential permit applicants are required to notify the Corps prior to undertaking any activity (e.g., grading, discharge of soil or other fill material) that would result in the fill of wetlands. Nationwide Permit Number 26 (33 CFR 330.5), which was reissued on November 22, 1991, and became effective on January 21, 1992, (56 FR 59110), addresses fills of headwaters and isolated waters. This permit was issued to regulate the fill of wetlands that are relatively small, less than 10 acres. Most proposals involving the fill of wetlands smaller than 1 acre in size would qualify under Nationwide Permit Number 26. Where fill would occur in a wetland 1 to 10 acres in size, the Corps circulates for comment a predischARGE notification to the Service and other interested parties prior to determining whether or not the proposed fill activity qualifies under Nationwide Permit Number 26. Because the Corps must respond within 20 days or the proposed activity will be authorized under Nationwide Permit 26, many projects are authorized by default. Individual permits are required for the discharge of fill into wetlands greater than 10 acres in size. The review process for the issuance of individual permits is more rigorous, and conditions may be included that require the avoidance or mitigation of environmental impacts. The Corps has discretionary authority and can require an applicant to seek an

individual permit if the Corps believes that the resources are sufficiently important, regardless of the size of the wetland. In practice, the Corps rarely requires an individual permit when a project would qualify for a nationwide permit.

With respect to the vernal pools harboring *Limnanthes floccosa* ssp. *californica*, most individual pools and ephemeral drainages in Butte County encompass less than 10 acres. As a result, even large projects can qualify for Nationwide Permit 26. For example, the Corps confirmed a wetland delineation of 7.8 acres of vernal pools on property owned by Crocker Development within the "Rancho Arroyo" population, although, to reiterate, the proposed development reportedly will not adversely affect the subspecies. Although the Sacramento District of the Corps has not required individual permits for projects that involve the filling of vernal pools or ephemeral drainages, the District did issue a cease and desist order to a landowner that graded 0.4 acres of vernal pool habitat on a 10.83-acre parcel in violation of section 404 of the Clean Water Act. However, the District notified two applicants (i.e., Century Industrial Park, Pleasant Valley Assembly of God) that proposed fills of vernal pool habitat of *L. floccosa* ssp. *californica* qualified for Nationwide Permit 26. In addition, five landowners have submitted or are preparing wetland delineations for their respective properties in the Chico area, each of which likely will involve less than 10 acres of wetlands (Champ, Core of Engineers, Sacramento District, pers. comm., April 1, 1991).

The issuance of Nationwide Permit 26 or disclaimers does not allow for the assessment of cumulative impacts to the vernal pools or the plant species under consideration herein. Thus, *Limnanthes floccosa* ssp. *californica* is not currently afforded protection under section 404 of the Clean Water Act.

The Corps cannot determine that a project qualifies for a nationwide permit if a federally listed endangered or threatened species may be adversely affected by the proposed project until the Corps has complied with section 7 of the Act (see discussion below under "Available Conservation Measures"). In addition, federally listed species are known to be important to the Nation and its people, and the issuance of further disclaimers would be unlikely upon the listing of the plant as endangered.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Alien, annual grasses and forbs invaded the low-elevation, plant communities of California during the days of the Franciscan missionaries. Today, these grasses, which account for 50 to 90 percent of the vegetative cover (Heady 1977) and can stand up to a meter (3.3 feet) in height (Holland 1986), dominate most grasslands in California. By germinating in late fall prior to native forbs, alien grasses have outcompeted these natives (for nutrients and water) and displaced much of the native flora throughout California. Although vernal pools are "relatively immune" to the competition of alien plants (Zedler 1987), Jokerst (1989) reported that soil disturbance or reductions in the frequency and length of time pool soil is saturated facilitate the invasion of the vernal pool habitat by weedy species. The effect of grazing livestock (see Factor C "Summary of Factors Affecting the Species") in concert with the ubiquitous presence of alien plants on *Limnanthes floccosa* ssp. *californica* needs further study.

Natural fluctuations in rainfall patterns resulting in little to no water in the vernal pools may effect localized extinctions (Jokerst 1989). Though climatic-induced extirpations have not been documented for *Limnanthes floccosa* ssp. *californica*, the small isolated nature of the remaining populations make stochastic extinction more likely. A prolonged drought of several years is the most likely stochastic phenomenon that would result in the localized extinction of a vernal pool plant like the Butte County meadowfoam. In addition, because of the proximity of the subspecies to roads and urban development, Jokerst (1989) reports that garbage dumping, and off-road vehicle use may adversely affect some populations of *Limnanthes floccosa* ssp. *californica*. In light of recent Caltrans survey activity along State Route 149, highway widening or realignment may also threaten portions of three populations.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *Limnanthes floccosa* ssp. *californica* in determining to issue this rule. Based on this evaluation, the preferred action is to list *L. floccosa* ssp. *californica* as endangered. At least two populations have been lost due to urbanization in the Chico Area, while 90 percent of a third site has been converted to a rice field. Of the remaining 18 populations of

the Butte County meadowfoam, all are subject to urban development, airport maintenance activities, and/or ag-land conversion. In addition, road widening or realignment, overgrazing by livestock, garbage dumping, off-road vehicle use, competing alien vegetation, and stochastic extinction by virtue of the small isolated nature of the remaining populations threaten the entire range of the subspecies to some degree. Federal listing will provide opportunities for protection of populations from natural and anthropogenic (human-induced) loss and degradation of vernal pools and their associated watersheds.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that determination of critical habitat is not prudent for this species at this time. *Limnanthes floccosa* ssp. *californica* occurs primarily on private land that has been and is subject to urban development and ag-land conversion (see Factor A in "Summary of Factors Affecting the Species"). The vernal pool and ephemeral drainage habitat of the plant is usually small and easily identified. Therefore, the publication of precise maps and descriptions of critical habitat in the **Federal Register** would make this plant more vulnerable to incidents of vandalism and could contribute to the decline of the species. A listing of *L. floccosa* ssp. *californica* as endangered also would publicize the rarity of this plant and, thus, could make it attractive to researchers or collectors of rare plants. The proper agencies have been notified of the locations and management needs of this plant. Landowners were notified of this listing action and the importance of protecting habitat of this subspecies. Nonetheless, some landowners reportedly indicated that if the "level of protection gets higher," "they would make attempts to destroy those populations" (Gaylord Enns, pastor, Pleasant Valley Assembly of God, pers. comm., April 25, 1991). Another commenter described one incident where a landowner threatened to disc under any meadowfoam populations on his property (Dole, pers. comm., April 30, 1991). Protection of these species' habitats will be addressed through the recovery process and through the section 7 consultation process. The Service believes that Federal involvement in the areas where these plants occur can be identified

without the designation of critical habitat. Therefore, the Service finds that designation of critical habitat for this plant is not prudent at this time, because such designation likely would increase the degree of threat from vandalism, collecting, or other human activities.

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 private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking 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)(2) of the Act requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The U.S. Army Corps of Engineers will become involved with this subspecies through its permitting authority under section 404 of the Clean Water Act. By regulation, nationwide permits may not be issued where a federally listed endangered or threatened species would be affected by the proposed project without first completing formal consultation pursuant to section 7 of the Act. The presence of listed species would highlight the national importance of these resources, thus rendering any disclaimers of jurisdiction unlikely. In addition, if the U.S. Department of Housing and Urban Development proposes to insure housing loans in areas that presently support *Limnanthes floccosa* ssp. *californica*, like the

recently discovered population near Pentz, the funding of these loans would be subject to review by the Service under section 7 of the Act. Airport development at Chico Municipal Airport, if proposed, likely would be subject to review and/or approval by the Federal Aviation Administration and, thus, subject to section 7 consultation.

Listing of *Limnanthes floccosa* ssp. *californica* provides for the development of a recovery plan and will bring together State and Federal efforts involving the conservation of the plant. The plan would establish a framework for agencies to coordinate activities and cooperate with each other in their conservation efforts. The plan would set recovery priorities and estimate costs of various tasks necessary to accomplish recovery. It would also describe site-specific management actions needed to achieve conservation and survival of the subspecies.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 for endangered plant species set forth a series of general prohibitions and exceptions that apply to all endangered plants. With respect to the Butte County meadowfoam, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal with respect to any endangered plant 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 to remove and reduce to possession any such species from areas under Federal jurisdiction; maliciously damage or destroy any such species on any area under Federal jurisdiction; or remove, cut, dig up, damage, or destroy any such species on any other area in knowing violation of any State law or regulation, or in the course of any violation of a State criminal trespass law. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species under certain circumstances. Though the seeds of *Limnanthes floccosa* ssp. *californica* likely have high agronomic value (see Factor B "Summary of Factors Affecting the Species"), the Service anticipates that few trade permits would be sought or issued for this species. Requests for copies of the regulations on plants and

inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, room 432, Arlington, Virginia 22203-3507 (703/358-2104).

National Environmental Policy Act

The Service has determined that an Environmental Assessment, 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

Arroyo, M.T.K. de. 1973. A taximetric study of infraspecific variation in autogamous *Limnanthes floccosa* (Limnanthaceae). *Brittonia* 25:177-191.
 Arroyo, M.T.K. de. 1975. Electrophoretic studies of genetic variation in natural populations of allogamous *Limnanthes alba* and autogamous *Limnanthes floccosa* (Limnanthaceae). *Heredity* 35:153-164.
 Brown, C.R. and S.K. Jain. 1979. Reproductive system and pattern of genetic variation in two *Limnanthes* species. *Theor. Appl. Genetics* 54:181-190.
 City of Chico. 1989. Addendum to the draft plan for the conservation of Butte County meadowfoam in the City of Chico. Unpubl. rep., City of Chico, Calif. 6 pp.
 Dole, J.A. 1988. Results of a field survey for the Butte County meadowfoam in the vicinity of the City of Chico, California. Univ. Calif., Davis. Unpubl. rep., Univ. Calif. Davis. 34 pp.

Dole, J.A. and M. Sun. in press. Field and genetic survey of the endangered Butte County meadowfoam-*Limnanthes floccosa* subsp. *californica* (Limnanthaceae). Draft manuscript submitted to *Conserv. Biol.*
 Hamrick, J.L., M.J.W. Godt, D.A. Murawski, and M.D. Loveless. 1991. Correlations between species traits and allozyme diversity: Implications for conservation biology. Pages 75-86 in D.A. Falk and K.E. Holsinger, eds. *Genetics and conservation of rare plants*. Oxford Univ. Press, New York.
 Heady, H.F. 1977. Valley grassland. Pages 491-514 in M.G. Barbour and J. Major, eds. *Terrestrial vegetation of California*. John Wiley and Sons, New York.
 Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpubl. rep., Calif. Dept. Fish and Game. 156 pp.
 Jain, S.K., R.O. Pierce, and H. Hauptli. 1977. Meadowfoam: Potential new oil crop. *Calif. Ag.* 18-20 March.
 Jokerst, J.D. 1989. A draft plan for the conservation of Butte County meadowfoam in the City of Chico. *Limnanthes floccosa* ssp. *californica*. Unpubl. rep., Jones & Stokes Associates, Inc. Sacramento, Calif.
 Karron, J.D. 1991. Patterns of genetic variation and breeding systems in rare plant species. Pages 87-98 in D.A. Falk and K.E. Holsinger, eds. *Genetics and conservation of rare plants*. Oxford Univ. Press, New York.
 McNeill, C. and C. Brown. 1979. *Limnanthes floccosa* ssp. *californica* Arroyo; Butte County Meadowfoam. Unpubl. rep., California Native Plant Society. 3 pp.
 McNeill, C.I. and S.K. Jain. 1983. Genetic differentiation studies and phylogenetic inference in the plant genus *Limnanthes* (section *Inflexae*). *Theor. Appl. Genetics* 66: 257-269.

Stone, R.D. 1990. California's endemic vernal pool plants: Some factors influencing their rarity and endangerment. Pages 89-107 in D.H. Ikeda and R.A. Schlising, eds. *Vernal pool plants—Their habitat and biology*. Calif. State Univ., Chico.
 Zedler, P.H. 1987. The ecology of southern California vernal pools: A community profile. U.S. Fish and Wildlife Serv. Biol. Rep. 85(7.11).

Author

The primary author of this proposed rule is Jim A. Bartel, Sacramento 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

PART 17—[AMENDED]

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations is amended as set forth below:

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

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

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family indicated, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *
 (h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Limnanthaceae—False mermaid family:						
<i>Limnanthes floccosa</i> ssp. <i>californica</i> .	Butte County meadowfoam	U.S.A. (CA)	E	471	NA	NA

Dated: May 18, 1992.
 Richard N. Smith,
 Acting Director, U.S. Fish and Wildlife Service.
 [FR Doc. 92-13253 Filed 6-5-92; 8:45 am]
 BILLING CODE 4310-55-M