DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AC65

Endangered and Threatened Wildlife and Plants; Withdrawal of Proposed Rule to List Parish's Meadowfoam, as Threatened, and Cuyamaca Lake Downingia as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; notice of withdrawal.

SUMMARY: The U.S. Fish and Wildlife Service (Service) withdraws the proposal to list Cuyamaca Lake downingia (*Downingia concolor* var. *brevior*) as an endangered species and Parish's meadowfoam (*Limnanthes gracilis* ssp. *parishii*) as a threatened species under the Endangered Species Act of 1973, as amended (Act).

The Service finds that information now available, discussed below, justifies withdrawal of the proposed listings of these species as endangered or threatened. Various local, State, and Federal agencies have developed and approved a Conservation Agreement that provides adequate protection for these species throughout a significant portion of their range. This agreement is entitled: Conservation Agreement for the Preservation of Cuyamaca Lake Downingia (*Downingia concolor* var. *brevior*) and Parish's Meadowfoam (*Limnanthes gracilis* ssp. *parishii*). The Helix Water District, Lake Cuyamaca Recreation and Park District, California Department of Parks and Recreation (State Parks), California Department of Fish and Game (CDFG), the Service, and the U.S. Forest Service are signatories to the Conservation Agreement, which the Service signed on August 5, 1996. The Conservation Agreement addresses threats to both species and recovery actions through a combination of measures. These measures address impacts resulting from alteration of hydrology in the Cuyamaca Valley, grazing, recreational activities, and off-road vehicle (ORV) access over the majority of the range of these two plant species. Because implementation of the measures in this conservation agreement significantly reduces the risks to *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii,* the Service concludes that listing is not warranted.

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 (see **ADDRESSES** section) telephone 619/431–9440.

SUPPLEMENTARY INFORMATION:

Background

On August 4, 1994, the Service published in the Federal Register (59 FR 39879) a proposal to list *Downingia concolor* var. *brevior* (Cuyamaca Lake downingia) as endangered and *Limnanthes gracilis* ssp. *parishii* (Parish's meadowfoam) as threatened. These species occur in association with wetlands of the Peninsular Ranges of southwestern California from the Santa Ana Mountains of extreme southwestern Riverside County, south to the Laguna Mountains of southern San Diego County, California. Both plants are restricted to grassy meadows or drainages that are vernally wet (wet during the rainy season) with saturated soil conditions and shallow pools for several weeks at a time. In the vicinity of Lake Cuyamaca these shallow pools are associated with drier mounds called mima mounds. This type of physiography is referred to as montane meadow-vernal pool association.

Downingia concolor var. *brevior* is restricted to the Cuyamaca Valley in the Cuyamaca Mountains of central San Diego County, California. This locality also supports the largest concentration of *Limnanthes gracilis* ssp. *parishii.* Although the vernal pool and mima mound topography has been mostly obliterated, much of the unique montane, vernal pool flora remains. This flora includes a number of disjunct species that are more frequently associated with vernal pools of central California or coastal San Diego County (e.g., *Deschampsia danthonioides* (annual hairgrass), *Blennosperma nanum* (common blennosperma)), or occur in highly restricted distributions in the mountains of southern California (e.g., *Delphinium hesperium* ssp. *cuyamacae* (Cuyamaca larkspur)) (Beauchamp 1986a, Winter 1991).

Downingia concolor var. *brevior* (Cuyamaca Lake downingia) was described by McVaugh (1941) based on a collection by Abrams at Cuyamaca Lake, Cuyamaca Mountains, San Diego County, California. Beauchamp (1986b) elevated the plant to a subspecies following the suggestions of Thorne (1978). However, Ayers (1993) recognized this plant as *Downingia concolor* var. *brevior,* which is consistent with McVaugh's (1941) treatment of this taxon.

Downingia concolor var. *brevior* is a member of the bellflower family (Campanulaceae). This plant is a low, slightly succulent annual herb, with stems 5 to 20 centimeters (cm) (2 to 8 inches (in)) long. The flowers are blue and white with a 4-sided purple spot at the base of the united petals. The fruit is 12 to 15 millimeters (mm) (0.5 in) long and the seeds have linear striations (grooves). *Downingia concolor* var. *brevior* blooms from May to July and sets seed from June to August. The seeds are dispersed by flooding and require brief inundation for germination (Munz 1974, Bauder 1992).

Downingia concolor var. *brevior* can be distinguished from the only other two members of this genus that occur in southern California, *Downingia cuspidata* and *Downingia bella,* by the form of the striations on the seed, the color of the flower, and the hair or lack of hair on the corolla lobes. It can be distinguished from the more northern *Downingia concolor* var. *concolor* by the size of the fruit and how rapidly the fruit splits open when the seeds are mature (Ayers 1993).

Downingia concolor var. *brevior* is restricted to a single population at Lake Cuyamaca in the Cuyamaca Valley of San Diego County, California, on private land owned by the Helix Water District, public lands within Rancho Cuyamaca State Park and, to a lesser extent, other private lands. Historically, the population of *Downingia concolor* var. *brevior* was located throughout much of the valley floor. The plant has now been largely restricted to the shore of the lake, extending onto the valley floor only during dry years. From 1988 to 1992, one population existed in the vicinity of Lake Cuyamaca, consisting of between 9 and 24 stands. These stands occupied a total of less than 80 hectares (ha) (200 acres (ac)) and frequently occupied less than 40 ha (100 ac). In years with little flowering, the total observed distribution of *Downingia concolor* var. *brevior* is less than 0.4 ha (1 ac) (E. Bauder, *in litt.*, October 1994). The number of individuals within these stands, and the location and size of these stands vary in any given year in response to rainfall, the extent of winter flooding, and temperature (Bauder 1992).

Limnanthes gracilis ssp. *parishii* (Parish's meadowfoam) was first described by Jepson (1936) as *Limnanthes versicolor* var. *parishii.* The description was based on specimens collected by Parish at the Stonewall Mine on the southern edge of the Cuyamaca Valley, San Diego County,

California. Mason (1952) recognized *Limnanthes versicolor* var. *parishii* as *Limnanthes gracilis* var. *parishii,* based on flower and fruit morphology. Beauchamp (1986b) elevated the plant to a subspecies to be consistent with other treatments of this genus and noted the geographic separation (over 1,200 kilometers (km) (744 miles (mi)) of the taxon from *Limnanthes gracilis* ssp. *gracilis,* which is found in southern Oregon.

Limnanthes gracilis ssp. *parishii* is a member of the meadowfoam family (Limnanthaceae), a small family of wetland species found primarily along the Pacific coast of North America. The plant is a low, widely branching annual with stems 10 to 20 cm (4 to 8 in) long. The leaves are 2 to 6 cm (0.8 to 2.3 in) long and divided. The flowers are bowl-shaped, the petals are 8 to 10 mm (0.32 to 0.4 in) long with a white or occasionally a cream-colored base that becomes pink (Ornduff 1993). The fruit is rough textured. *Limnanthes gracilis* ssp. *parishii* blooms from April through May, setting seed in the late spring and early summer. Germination requires saturated soils or inundation (Munz 1974, Bauder 1992).

Limnanthes gracilis ssp. *parishii* is restricted to moist montane meadows, mudflats, and along stream courses in the Palomar, Cuyamaca, and Laguna Mountains of San Diego County, California. An additional small population is known from the Santa Rosa Plateau, Riverside County, California. Fewer than 20 populations of this taxon exist. The largest population occurs in the Cuyamaca Valley in the vicinity of Lake Cuyamaca and Stonewall Creek where it is restricted to the shore of Lake Cuyamaca at maximum inundation. About one third of this population is on private land (including land owned by the Helix Water District), one third is on California State Parks and Recreation lands, and the remainder is on Forest Service land (E. Bauder, *in litt.*, October 1994).

Historically, the Cuyamaca Valley population of *Limnanthes gracilis* ssp. *parishii* occurred throughout much of the valley floor. Recently, the Cuyamaca Valley population of *Limnanthes gracilis* ssp. *parishii* was described as consisting of 100 stands by Bauder (1992), and 8 small populations by the California Natural Diversity Data Base (CNDDB) (1992). However, these smaller groupings are contiguous, separated by less than 1.5 km (1 mi), and concentrated within a 9 square km (4 square mi) area. Approximately 120 ha (300 ac) of a potential 800 ha (2,000 ac) of the Cuyamaca Valley and Stonewall Creek area are occupied by *Limnanthes gracilis* ssp. *parishii.* The number of individuals and the location and size of stands within this area varies in any given year in response to rainfall, the extent of winter flooding, and temperature (Bauder 1992). Under favorable conditions, *Limnanthes gracilis* ssp. *parishii* can be a conspicuous element of the Cuyamaca Valley during the spring bloom (Craig Rieser, Pacific Southwest Biological Services, pers. comm., 1993).

Other populations of *Limnanthes gracilis* ssp. *parishii* are generally smaller than the Cuyamaca Valley population, both in number of individuals and the extent of occupied habitat. They range in size from less than 2 ha (5 ac) to as much as 40 ha (100 ac), and most populations contain fewer than 1000 individuals. However, at least 4 of the 6 populations that occur on Forest Service lands contain 5,000 to 30,000 individuals and one extends over 60 ha (150 ac). A single isolated population is located in vernal pools on the Santa Rosa Plateau of southwestern Riverside County, California. This area of approximately 2 ha (5 ac) is managed by The Nature Conservancy (TNC). An unauthorized attempt to introduce the plant to National Forest lands in the Laguna Mountains from seeds gathered from the Cuyamaca Valley population (Winter 1991, CNDDB 1992) was unsuccessful (Forest Service, *in litt.*, September 1994).

Previous Federal Action

Federal government action on the two plants considered in this rule began as a result of section 12 of the Act, which 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 and presented to Congress on January 9, 1975, recommended *Limnanthes gracilis* var. *parishii* (= *Limnanthes gracilis* ssp. *parishii*) for endangered status. The Service published a notice in the July 1, 1975, Federal Register (40 FR 27823), of its acceptance of the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)(A)) of the Act, and of the Service's intention to review the status of the plant taxa named therein, including *Limnanthes gracilis* ssp. *parishii.* The Service published a proposal in the June 16, 1976, Federal Register (42 FR 24523) to determine approximately 1,700 vascular plants to be endangered species pursuant to section 4 of the Act. *Limnanthes gracilis* ssp. *parishii* was also included in this Federal Register notice.

General comments received in response to the 1976 proposal were summarized in an April 26, 1978, Federal Register (43 FR 17909). Although the Act amendments of 1978 required all proposals over two years old to be withdrawn, a one-year grace period was given to those proposals published before the enactment of the 1978 amendments. In the December 10, 1979, Federal Register (44 FR 70796), the Service published a notice of withdrawal for that portion of the June 6, 1976, proposal that had not been finalized including *Limnanthes gracilis* ssp. *parishii.*

The Service published an updated Notice of Review of Plants in the Federal Register on December 15, 1980 (45 FR 82480). This notice included *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii* as category 1 candidate taxa (species for which data in the Service's possession were sufficient to support a proposal for listing). On November 28, 1983, the Service published a supplement to the Notice of Review of Plants in the Federal Register (48 FR 53640). This notice was again revised on September 27, 1985 (50 FR 39526). Both plant taxa were included in the 1983 and 1985 supplements as category 2 candidate taxa (species for which data in the Service's possession indicated listing may be appropriate, but for which additional biological information is needed to support a proposed rule). The plant Notice of Review was again revised on February 21, 1990 (55 FR 6184), and again on September 30, 1993 (58 FR 51144). *Downingia concolor* var. *brevior* was included as a category 1 candidate taxon, and *Limnanthes gracilis* ssp. *parishii* as a category 2 candidate taxon in both notices. On February 28, 1996, the Service published a Notice of Review in the Federal Register (61 FR 7596) that discontinued the designation of category 2 species as candidates, which included both species as candidates for listing.

Section 4(b)(3)(B) of the Act as amended in 1982, requires the Secretary to make 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 *Limnanthes gracilis* ssp. *parishii* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of this species was warranted, but precluded by other pending listing proposals of higher priority 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 annually in October of 1984 through 1992.

The Service made a final ''not warranted'' finding on the 1975 petition with respect to *Limnanthes gracilis* ssp. *parishii* and 864 other species in the December 9, 1993, Federal Register (58 FR 64828). One reason was cited as the basis for this finding on this species: data was not then available to the Service in late summer 1993 relating to current threats (i.e., one of the five factors described within the proposed rule under 50 CFR 424.11) throughout a significant portion of the species'' range. The species was retained in category 2 on the basis that it may be subject to extinction or endangerment from uncontrolled loss of habitat or from other man-caused changes to its environment (58 FR 64840). In early 1994, the Service obtained completed survey and other data that adequately described those factors that placed *Limnanthes gracilis* ssp. *parishii* at risk of extinction.

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 *Downingia concolor* ssp. *brevior* (=*D. c.* var. *brevior*) as an endangered species. The petitioner also requested the designation of critical habitat for this species. The Service evaluated the petitioner's requested action for *Downingia concolor* var. *brevior* and published a 90-day finding on August 31, 1991 (56 FR 42966) that substantial information existed indicating that the requested action may be warranted.

A proposed rule to list *Downingia concolor* var. *brevior* as endangered and *Limnanthes gracilis* ssp. *parishii* as threatened was published in the Federal Register on August 4, 1994 (59 FR 39879). The Service extended the public comment period to October 31, 1994 and held a public hearing on October 19, 1994, in Rancho Bernardo, California (59 FR 49045). On April 10, 1995, Congress enacted a moratorium prohibiting work on listing actions (Public Law 104–6) and eliminated funding for the Service to conduct final listing actions. The moratorium was lifted on April 26, 1996, by means of a Presidential waiver, at which time limited funding for listing actions was made available through the Omnibus Budget Reconciliation Act of 1996 (Public Law 104–134, 100 Stat. 1321, 1996). The Service published guidance for restarting the listing program on May 16, 1996 (61 FR 24722).

This withdrawal notice is in accordance with the listing priority guidance for fiscal year 1997 published on December 5, 1996 (61 FR 64475). The processing of a proposed listing, including the completion of a withdrawal notice, is a Tier 2 action under this guidance (61 FR 64479).

Development of a Conservation Agreement

Immediately prior to the Service's decision to propose *Downingia concolor* var. *brevior* for listing as endangered and *Limnanthes gracilis* ssp. *parishii* for listing as threatened, the Helix Water District initiated an effort to address conservation measures required to provide adequate protection of three plant taxa, including the two plants in this notice. Helix Water District manages the largest populations of both plant taxa. During the late summer and fall of 1994, the effort was expanded to include various local, State, and Federal agencies with the intent of producing a Memorandum of Understanding (MOU) that would provide adequate protection for these species throughout a significant portion of their ranges. Development of the MOU included guidance from local botanical experts familiar with these two rare plants. The resulting MOU and Conservation Agreement were signed by the Service on August 5, 1996. Signatories to the agreement include: the Helix Water District, Lake Cuyamaca Recreation and Park District, State Parks, California Department of Fish and Game (CDFG), the Service, and Forest Service. The Conservation Agreement addresses over 80 percent of the remaining *Downingia concolor* var. *brevior* population (Helix Water District, Lake Cuyamaca Recreation and Park District, and State Parks) and about 70 percent (as above and including U.S. Forest Service lands) of the *Limnanthes gracilis* ssp. *parishii* populations.

Under the terms of the Conservation Agreement, the Helix Water District and Lake Cuyamaca Recreation District have agreed to monitor and manage inundation of *Downingia* and *Limnanthes* habitat, control recreational access, and exclude livestock grazing of this habitat by maintaining fences. Helix Water District also will not transfer water from Lake Cuyamaca into the habitat for these species without prior consultation with CDFG and the Service.

Helix Water District and the Lake Cuyamaca Recreation District have identified sensitive areas for *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii.* These areas include the majority of the largest stands of these taxa within the eastern basin of the Cuyamaca Valley above the dike. No activities that impact these species are allowed within these sensitive areas. To the extent practicable, the Helix Water District, Lake Cuyamaca Recreation and Park District, State Parks and the Forest Service will relocate trails away from *Limnanthes* and *Downingia* habitat. Land management signatories also have agreed to allow monitoring of the status of these two taxa.

The Helix Water District, Lake Cuyamaca Recreational and Park District, and State Parks also will exclude livestock grazing and avoid activities that could result in erosion on *Limnanthes* and *Downingia* habitat. The Forest Service, conforming with a 1991 Habitat Management Plan for *Limnanthes gracilis* ssp. *parishii,* will continue to monitor and manage grazing activities to reduce impacts to the species. Additionally, under the Conservation Agreement, Helix Water District, Lake Cuyamaca Recreational and Park District, and State Parks agree to fully comply with California Environmental Quality Act (CEQA) requirements, section 404 of the Federal Clean Water Act, and section 1603 of the CDFG Code regarding projects that may affect these species. These parties also agree to consult with CDFG and the Service for activities that are beyond the normal activities of these agencies as defined in the Conservation Agreement. The Conservation Agreement will remain in effect until after August 1999. At the end of this period, the Conservation Agreement must be reviewed and either modified, renewed, or terminated. If the Conservation Agreement is terminated, the status of *Downingia concolor* var. *brevior* and *Limnanthes gracilis* var. *parishii* will be reassessed by the Service. If the Service determines at any time, that additional Federal protection is warranted, the Service will take appropriate listing action under the Act.

The Service believes that the Conservation Agreement ensures the implementation of conservation measures that reduce the threats to *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii* to the point that listing is not warranted. The Service therefore withdraws the proposal to list *Downingia concolor* var. *brevior* as endangered, and *Limnanthes gracilis* ssp. *parishii* as threatened.

Public Comments on the Proposed Rule

In the August 4, 1994, proposed rule (59 FR 39879), the Federal Register

notification of a public hearing (59 FR 49045), and during two comment periods (August 4 to September 19, 1994, and September 26 to October 31, 1994), all interested parties were requested to submit factual reports or information to be considered in making a final listing determination. Appropriate Federal and State agencies, local governments, scientific organizations, and other interested parties were contacted and asked to comment. Legal notices of the availability of the proposed rule were published in the *Riverside Press Enterprise* and *San Diego Union Tribune* on August 13, 1994. A legal notice of the public hearing which invited general public comment was published in the *Union Tribune* on September 29, 1994.

The Service received 23 written and oral comments. Of the 23 comments, 10 supported the proposed action, 9 opposed it, and 4 stated neither support nor opposition. The Service held a public hearing on October 19, 1994, at the Radisson Hotel in Rancho Bernardo, California. The hearing was conducted to allow comments on two additional proposed rules, which addressed the San Diego fairy shrimp (*Branchinecta sandiegonensis*), the Laguna Mountain skipper (*Pyrgus ruralis lagunae*) and the quino checkerspot (*Euphydryas editha quino*). A total of 24 individuals provided oral testimony. Fifteen of those individuals provided testimony regarding the proposed rule to list *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii*

Written and oral comments are incorporated into this withdrawal where appropriate. Two commenters recommended that a cooperative effort be made by all affected agencies to protect the species. About half the comments were directly related to the status of these plants in the Cuyamaca Valley. Many of the comments supporting or neutral to the listing provided substantive factual information that documented risks to these taxa, or provided additional background data. Substantive comments opposing the listing generally discussed the adequacy of existing regulatory mechanisms then in place to protect these plants, or the proposed Multispecies Conservation Plan (MSCP) of coastal San Diego County. Both species are outside the MSCP planning area. Because of the development and signing of the Conservation Agreement, which covers a majority of the known populations of both plants, a commitment to the conservation of these plants has been assured, rendering most of the comments addressing threats to the species as moot, outdated, or otherwise irrelevant to this withdrawal notice. The Service carefully considered all comments submitted relevant to this decision to withdraw the proposed listing. Comments submitted are available for review at the Carlsbad Field Office (see **ADDRESSES** section).

Summary of Factors Affecting the Species

The Service must consider five factors described in section 4(a)(1) of the Act when determining whether to list a species. These factors, and their application to the Service's decision to withdraw the proposal to list *Downingia concolor* E. Greene var. *brevior* McVaugh (Cuyamaca Lake downingia) and *Limnanthes gracilis* Howell ssp. *parishii* (Jepson) Beauchamp (Parish's meadowfoam), are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Impacts that result in the loss, degradation, and fragmentation of vernally moist wet meadows have contributed to the decline of *Limnanthes gracilis* ssp. *parishii* and *Downingia concolor* var. *brevior.* The habitat for both plants also has been threatened by alterations of hydrology, recreational developments, off-road vehicle (ORV) use, trampling, and the introduction of exotic plants.

The Conservation Agreement addresses factors described above that result in threatened destruction, modification, and reduction of habitat loss (see discussion under previous section titled ''Development of a Conservation Agreement''). The Service considers the required actions by the Helix Water District, Lake Cuyamaca Recreation and Park District, State Parks, and the Forest Service under the Memorandum of Understanding within the Conservation Agreement to be adequate for conservation and recovery of the two plants. Actions required under the Conservation Agreement terminate or minimize the impacts to habitat from inundation, recreational activities, off-road vehicle access, and the indirect effects of these activities on *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii.*

Hydrological Alteration

Historically, montane wet meadow and vernal pool habitats were much more abundant in the Peninsular Ranges of San Diego County (Winter 1991). The wet meadows surrounding Lake Cuyamaca reservoir support the most significant populations of *Limnanthes gracilis* ssp. *parishii* and *Downingia concolor* var. *brevior.* Nearly the entire Cuyamaca Valley was originally a montane meadow-vernal pool complex, except the western end, which supported a small marsh (Bauder 1992, Ball 1994). Dredging during dam construction in 1886–1887 altered the natural topography of the valley, the western marsh, and the valley's vernal pools. Mima mounds were likely excavated since ''much of the earth used for the dam was taken from the meadow north of the dam and from the valley floor'' (Allen and Curto 1987). Later, 160 ha (400 ac) of the valley outside the reservoir was leased from Helix Water District and planted in grain.

Further loss of wet meadow habitat can result from excessive water inundation at Lake Cuyamaca reservoir and within Cuyamaca Valley above the dike. Studies of *Limnanthes gracilis* ssp. *parishii* and *Downingia concolor* var. *brevior*, conducted between 1988 and 1992, have demonstrated that these species cannot tolerate long periods of out-of-season inundation and are currently absent entirely from areas with long duration impoundment (E. Bauder, *in litt.,* October 1994). The reservoir provides domestic water, flood control, and recreational activities such as fishing and duck hunting. These uses are administered through agreements between the Helix Water District, the City of San Diego's El Capitan Reservoir, and Lake Cuyamaca Recreation and Park District (Bauder 1992). Approximately 81 ha (150 ac) of potential meadow habitat are permanently inundated. The system of dikes built in 1967 allows an additional 273 ha (675 ac) to be inundated for extended periods of time during periods of high precipitation, a condition that has occurred as recently as 1993 (Hugh Marx, Lake Cuyamaca Recreation and Park District Manager, pers. comm., 1993). *Limnanthes gracilis* ssp. *parishii* is less able to recover from excessive inundation than *Downingia concolor* var. *brevior*, as shown by the lack of re-establishment in areas of previous inundation (Bauder 1992).

Under terms of the Conservation Agreement, the Helix Water District will closely monitor the status of inundation in the eastern basin within the Cuyamaca Valley above the dike. This area functions as habitat to the largest populations of *Downingia concolor* var. *brevior* and *Limnanthes gracilis* ssp. *parishii* and is inundated to varying degrees dependent on rainfall and pumping activities by Helix Water District. While under normal operating conditions, Helix Water District generally has removed most of the water from the east basin by May 15. However, in wet years, the basin can remain

flooded for longer periods. Additionally out-of-season flooding of the east basin has occurred. Extended inundation retards seed germination (Bauder 1992). Under section III.B.2.b of the MOU, Helix Water District has committed to remove water from the east basin by May 15 of each year. On April 1, Helix Water District will advise CDFG and the Service on the status of water transfer from the east basin. Operations that result in flooding of the east basin out-of-season are considered activities that occur beyond normal operations. Under section IV.B of the MOU, CDFG and the Service must be consulted prior to any non-routine operation that may result in extended or out-of-season inundation of *Downingia* and *Limnanthes* habitat.

A variety of indirect impacts are associated with the diversion of water entering the Lake Cuyamaca reservoir basin. Diversion can result in the alteration of small drainages by down cutting and streambank erosion, which contributes to the loss of potentially suitable habitat upstream of Lake Cuyamaca. Fluctuating lake levels also can increase channel erosion by changing the gradient and velocity of surrounding drainages. Erosion can further be intensified by a decrease in groundwater levels caused by numerous wells in the area. However, significant erosion resulting from fluctuating lake levels is not apparent at this time (Ball 1994). Roads without adequate culverts also divert water flow. Road maintenance and herbicidal weed abatement often precludes the re-establishment of seeds in areas of suitable habitat (Bauder 1992). In addition, the alteration of hydrology in Cuyamaca Valley promotes the invasion of alien species (e.g., *Polygonum* sp. (knotweed) and *Potentilla norvegica* (rough cinquefoil), or favors replacement by more disturbance tolerant native species (e.g., *Polygonum amphibium* (water smartweed), *Juncus xiphoides* (iris-leaved rush), and *Ranunculus aquatilus* (buttercup)) (E. Bauder, in litt., October 1994, L. Henrickson, in litt., October 1994). These indirect effects can have significant, long-term impacts on the meadow habitats and associated sensitive plant species.

Erosion damage resulting from water diversion and road maintenance must be minimized under terms of the Conservation Agreement. According to section III.B.2.c.(4), the Forest Service, Helix Water District, Lake Cuyamaca Recreation and Park District, and State Parks must cooperate in minimizing siltation and erosion on their lands to the extent practicable. Any such operations must be coordinated with CDFG and the Service. Any activities that take place beyond normal operations that result in water diversion related erosion would first require consultation with CDFG and the Service per section IV.B of the MOU. Water diversion will continue to occur unmonitored in areas that are not covered by the Conservation Agreement. Impacts in these areas, however, will not significantly affect the overall status of these plant taxa because these areas comprise only a small proportion of the total populations.

Applications of herbicidal weed treatments at Lake Cuyamaca are normal operations of the Lake Cuyamaca Recreation and Park District that could affect these two rare plant taxa. However, as stated in the Conservation Agreement, application of herbicides is being restricted to Cuyamaca Lake in the west basin. Any application of herbicides in the east basin would be considered beyond normal operations and thus the Lake Cuyamaca Park and Recreation district would consult CDFG and the Service prior to taking such action per section IV.B of the MOU.

Implementation of the above actions reduces the indirect effects of habitat modification that can result in alien plant species competition, or replacement by more tolerant and versatile native species that may displace rare plant species.

Recreation

Direct loss of both species' habitat from recreational activities has been substantial. In many cases, loss of habitat for both species has benefited from the construction of recreational facilities. Traffic from ORVs, horses, and hikers in the Laguna Mountains meadows indirectly impact *Limnanthes gracilis* ssp. *parishii* by altering the composition of the plant community over time. Such damage frequently occurs in spring when the soils are saturated and subject to compaction (Winter 1991). Loss and modification of *Limnanthes gracilis* ssp. *parishii* habitat has been documented as a result of trampling, erosion, and alteration of hydrology at most of the locations occupied by this species (Bauder 1992).

Under terms of the Conservation Agreement, traffic from ORVs and other recreational activities must be minimized or eliminated. Helix Water District and the Lake Cuyamaca Recreation and Park District are required to monitor and repair fencing in a timely manner to prevent human trespassing within sensitive species habitat (MOU section III.B.2.b). No recreational activities are allowed within designated sensitive areas. The Forest Service and the Al-Bahr Shrine Camp (a manager of a private inholding) will jointly maintain fencing to exclude vehicle traffic from sensitive species habitat (MOU section III.B.6.e). Within the National Forest, as per existing Habitat Management Guidelines (Forest Service 1991), hikers and riders are restricted to existing trails. State Parks is examining activities at Los Caballos Horse Camp to determine how impacts to these species can be reduced or eliminated (MOU section III.B.2.e.(10)). While some recreational impacts and ORV activity will persist in areas not under jurisdiction of the Conservation Agreement, these areas do not contain large populations and these impacts will not be significant to the overall status of the two species.

Development

Direct loss of both species' habitat has taken place as result of recreational development, trail construction, and reservoir development. However, significant additional development within the habitat of these two species is not anticipated. Within areas covered by the Conservation Agreement, Helix Water District and the Cuyamaca Lake Recreation and Park District have agreed that no activities detrimental to these species will occur within designated sensitive areas. Future development is not identified as ''normal operations'' on Helix Water District, State Park, or Forest Service lands. Development activities would be beyond normal operations and these agencies would consult with CDFG and the Service prior to taking actions that would harm these species. While these conditions would not apply on private lands managed by owners that are not signatories to the Conservation Agreement, the majority of the *Limnanthes gracilis* ssp. *parishii* populations are on inholdings within the National Forest and are not likely to be subject to significant development. Development could take place on private lands outside Helix Water District lands that support *Downingia concolor* var. *brevior.* These lands are adjacent to a major highway and are not National Forest inholdings. However, these populations represent less than 20 percent of the total known populations of this species. Development in these areas may also be restricted under regulations pertaining to water quality within the Cuyamaca Valley watershed.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Overutilization is not known to be a threat to the two plant taxa under consideration in this withdrawal.

C. *Disease or predation.* Disease is not known to be a factor affecting the taxa considered in this rule. Grazing by cattle was identified as a threat in the proposed rule. Consumption of individual plants by grazing animals has been known to impact the reproduction of these annual plants and has had other effects, such as trampling, erosion (see Factor A) and the introduction of non-native species (see Factor E). The extent of grazing impacts has been declining over time. Grazing was discontinued on Helix Water District-owned lands at Lake Cuyamaca in 1988 when water quality issues were raised and *Downingia concolor* var. *brevior* was believed to be extinct as a result of grazing (David Hogan, San Diego Biodiversity Project, *in litt.*, 1990; Larry Hendrickson, Friends of Cuyamaca Valley, *in litt.*, 1994). The plant re-established itself in the following season (Bauder 1992). Livestock grazing was terminated in Rancho Cuyamaca State Park in 1956, with the exception of a 16 ha (40 ac) inholding that was grazed until 1980 when it was acquired by the State Park. Following the adaption of a 1991 Habitat Management Guide for montane meadows and riparian areas, the Forest Service implemented a late season grazing regime (after meadowfoam plants have set seed); during the 4 subsequent years of monitoring no significant effects of grazing on *Limnanthes. gracilis* ssp. *parishii* have been detected (Forest Service, *in litt.*, September 1994). The Conservation Agreement specifically addresses grazing impacts and assures that grazing practices will not take place on Helix Water District lands or California Parks and Recreation Lands. On Forest Service lands, the management plan limits the number of animals grazing and controls the timing and duration of grazing so as to minimize impacts on *Limnanthes gracilis* ssp. *parishii.* The management plan also requires monitoring of the population status of the plant.

D. *The inadequacy of existing regulatory mechanisms.* The Service evaluated existing Federal, State, and local regulatory mechanisms prior to preparing the proposed rule for listing the two plant taxa. The Service found evidence of inadequacy of the existing regulatory mechanisms at that time. These regulatory mechanisms included: (1) Listing under the California Endangered Species Act (CESA); (2) the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA); (3) conservation provisions under the section 404 of the Federal Clean Water Act and Section 1603 of the California Fish and Game Code, (4) occurrence with other species protected by the Act; (5) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations, and (6) local laws and regulations. The Service believes that actions prescribed and implemented in the Conservation Agreement are sufficient to assure that adequate regulatory mechanisms protect these two plant taxa.

The California Fish and Game Commission has listed *Downingia concolor* var. *brevior* and *Limnanthes gracilis* var. *parishii* as endangered under the Native Plant Protection Act (NPPA) (Div. 2, chapter 10, section 1900 *et seq.* of the CDFG Code) and the CESA. Projects that have impacted these species have occurred, however, without coordination with the State, or without the State's knowledge. While some decline is anticipated to continue, the majority of populations of both species receive the benefits of the Conservation Agreement, which already has resulted in increased coordination with the State and recognition by land managers.

The CEQA (Public Resources Code, section 21000 *et seq.*) requires full disclosure of the potential environmental impacts of proposed projects. The public agency with the primary authority or jurisdiction over the project is designated as the lead agency and is responsible for conducting a review of the project and for consulting with the other agencies concerned with the resources affected by the project. Section 15065 of the CEQA Guidelines requires a finding of significance if a project has the potential to ''reduce the number or restrict the range of a rare or endangered plant or animal.'' However, even if significant effects are identified, the lead agency has the option to require mitigation through changes to the project or to decide that ''overriding social and economic considerations'' make mitigation not feasible (California Public Resources Code, Guidelines, section 15093). In the latter case, projects may be approved that cause significant environmental damage, such as destruction of an endangered plant species. Protection of listed plant species under CEQA is therefore dependent upon the discretion of the lead agency.

Cuyamaca Recreation and Park District is the lead agency that is empowered to uphold and enforce CEQA regulations at Cuyamaca Lake. State Parks is the lead agency that is empowered to uphold and enforce CEQA regulations at Rancho Cuyamaca State Park. While these agencies have not consistently complied with CEQA requirements for projects that have affected *Downingia* and *Limnanthes*, under terms of the Conservation Agreement these agencies have agreed to use the State clearinghouse for full agency circulation and public review of all new projects requiring CEQA compliance that affect the sensitive habitats surrounding Lake Cuyamaca (MOU section III.B.2.c.(7)). Although protection of the species remains at the discretion of the lead agency, this agency is a signatory to the Conservation Agreement and is thereby obligated to protect the species. In addition, the use of the State clearinghouse will facilitate agency and public review, and comment on any proposed actions which might impact the species.

While CEQA pertains to projects on non-Federal land, the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 to 4347) requires disclosure of the environmental effects of projects within Federal jurisdiction. Species that are listed by the State, but not proposed or listed as threatened or endangered by the Federal government, are not protected when a proposed Federal action meets the criterion for a ''categorical exclusion.'' NEPA requires that each of the project alternatives recommend ways to ''protect, restore and enhance the environment'' and ''avoid and minimize any possible adverse effects'' when implementation poses significant adverse impacts. However, it does not require that the lead agency select an alternative with the least significant impacts to the environment (40 CFR 1500 *et seq.*). Federal actions that may affect Federal threatened or endangered species require consultation with the Fish and Wildlife Service under section 7 of the Endangered Species Act and must avoid jeopardizing the continued existence of a listed plant species.

The Cuyamaca Recreation and Park District also is subject to NEPA for recreational improvements that are funded through the Federal Land and Water Grant, a program that is administered by the National Park Service through the California Department of Parks and Recreation. Such projects would require NEPA review.

Land-use planning decisions at the local level are made on the basis of environmental review documents prepared in accordance with CEQA or NEPA that often do not adequately address ''cumulative'' impacts to non-listed species and their habitat. State listed species receive no special

consideration under NEPA. However, under the terms of the Conservation Agreement, both plant taxa receive special consideration that offers additional protective benefits that are not normally applied to non-listed species. For example, as specified in section IV of the MOU, for actions on lands managed by the signatory agencies that are beyond the normal operations as defined under section I of the MOU, agencies must consult with CDFG and the Service. This provides the opportunity for CDFG and the Service to recommend modifications or alternative actions to avoid or minimize potential impacts to the species for actions beyond normal operations. It also provides an early warning for any inadequacies in the MOU which need to be addressed in future conservation agreements.

The Service has considered the adequacy of NEPA and CEQA in regards to protecting these species. While inadequacies will continue to exist, the Service has determined that the implementation of the Conservation Agreement significantly reduces the risk of extinction for both plant species. While the Conservation Agreement does not apply to all populations, those populations that are not covered represent less than 30 percent of either species and many of these populations are on private inholdings within the National Forest where major projects are not likely to occur.

Section 1603 of the California Fish and Game Code authorizes the CDFG to regulate streambed alteration. The CDFG must be notified and approve any work that diverts, alters, or obstructs the natural flow or changes the bed, channel, or banks of any river, stream, or lake. The CDFG does not consider the creation of wetlands for duck habitat to be regulated under section 1603. Thus a streambed alteration permit was not required for flooding the streambed above Cuyamaca Lake reservoir for that purpose. Because the dam has been used continuously since its construction in 1886, and the dike has been in place since 1967, justification for their use has been grand fathered into law.

Similar activities are regulated by the Army Corps of Engineers under section 404 of the Clean Water Act. Under section 404 there are no specific provisions that adequately address species that are not listed under the Act. While neither *Downingia concolor* var. *brevior* or *Limnanthes gracilis* ssp. *parishii* are listed under the Act, the protections under the Conservation Agreement adequately offset these inadequacies. Section III.B.2.c.(8) of the MOU requires signatories to comply with the full extent of both the Clean Water Act and the Act. Inundation status is being monitored and signatory agencies must consult with CDFG and the Service on actions that are beyond normal operations which could alter drainages. Signatory agencies must also coordinate with the Service and CDFG on the use of herbicide application in sensitive wetlands, which is not regulated under section 404. Helix Water District and Lake Cuyamaca Recreation and Park District have also agreed to avoid all activities within sensitive areas that could alter hydrology.

Additional alterations requiring a 1603 permit or a 404 permit could occur on many drainages that support *Limnanthes gracilis* ssp. *parishii* and *Downingia concolor* var. *brevior.* Most of these are under management of the signatories of the Conservation Agreement. However the Service has determined that any impacts from such additional alterations would occur to only a small proportion of the populations of the species and therefore would not significantly put at risk the survival of either species.

No federally listed species inhabit vernally wet meadows in the Peninsular Ranges of southern California. Therefore these two species receive no Federal regulatory protection from sympatry with listed species. *Limnanthes gracilis* ssp. *parishii* is recognized as a ''sensitive species'' (Winter 1991). The Cleveland National Forest has policies to protect sensitive plant taxa under its jurisdiction. The policies include attempting to establish such species in unoccupied but suitable or historic habitat, encouraging land ownership adjustments to acquire and protect sensitive plant habitat, conserving meadow water tables, and protecting meadow habitats (Winter 1991). Alone, these policies have not been entirely effective but, combined with the benefits afforded by the Conservation Agreement, the Service considers the policies adequate for species protection on Forest Service lands. Actions taken by the Forest Service include placing interpretive signs and fences at the Al Shrine Camp, Prado Campgrounds, and Morris Ranch Meadow to reduce trampling impacts. In addition, an alternative location for a proposed campground at Filaree Flat is being considered to avoid impacts to *Limnanthes gracilis* ssp. *parishii.* A late season grazing regime has been enacted at several of these Meadows (Winter 1991; D. Volgrano, Forest Service, pers. comm., 1993). The Service acknowledges that fencing sensitive habitat areas minimizes impacts but does not prevent entry by hikers or mountain bikers. In some cases, plants that remain unprotected within campgrounds are severely trampled by campers. However, these impacts are restricted to a small number of plants and, when considered with protections for other populations, will not place the plant at risk of extinction.

State Parks has eliminated grazing from meadows containing *Limnanthes gracilis* ssp. *parishii* at Rancho Cuyamaca State Park. Other impacts to the species and their habitat continue to occur in this area, including trampling by horses, unauthorized trails, vehicle parking, ORV use, diversion of water flow, erosion, channelization, and water impoundment. Such impacts have been addressed in the Conservation Agreement which is currently being implemented. The Service concludes that, as a result of the implementation of this agreement, the risks to both plant species have diminished to the point that these impacts no longer contribute significantly to the decline of these species. For example, under section III.B.2.c.(4) of the MOU, State Parks must cooperate with CDFG and the Service in minimizing siltation and erosion on their land to the extent practicable. Under section III.B.2.c.(10) of the MOU, State Parks must review activities at Los Caballos Horse Camp to determine how impacts to these plants can be reduced or eliminated.

The Santa Rosa Plateau Preserve is managed by The Nature Conservancy for long-term protection of sensitive species. A single, small population of *Limnanthes gracilis* ssp. *parishii* is located within the preserve.

While the existing regulatory mechanisms alone may not be entirely adequate for protection of these species, the Service has determined that the combination of these regulations and the actions being implemented in the Conservation Agreement signed in 1996 is adequate to eliminate the risk of extinction for these species.

E. *Other natural or manmade factors affecting its continued existence.* The genetic variability of populations of *Downingia concolor* var. *brevior* may be depressed by virtue of its restricted distribution. The likelihood of finding a normal distribution of genetic variability is reduced in small populations (Jensen 1987). Reduced genetic variability may lower the ability of these populations to survive. The potential for local extirpation due to genetic complications in small population size can be increased by environmental conditions such as drought and flooding (Gilpin and Soulé'' 1986). In the case of *Downingia*

concolor var. *brevior,* the species is restricted to a single valley. However, there is no evidence that genetic problems exist in the species.

Due to their accessibility, populations of these two taxa are particularly vulnerable to trampling. As discussed under factor A above, trampling from cattle occurs in meadows occupied by *Limnanthes gracilis* ssp. *parishii* and *Downingia concolor* var. *brevior* in the National Forest and private land holdings. As discussed under factor D in the proposed rule (59 FR 39882–39884), several measures were initiated during the past decade to protect the vernally wet meadow ecosystem and associated sensitive plant species at Cuyamaca State Park and the Cleveland National Forest. The Conservation Agreement reenforces these measures and the Service believes that the threat from trampling by hikers and horses has been significantly reduced. Trampling is specifically addressed under section III.B. of the MOU, as described under Sensitive Habitat Areas (Appendix A), which excludes activities that might result in trampling from specified areas; section III.B.2.b. of the MOU obligates Helix Water District through monitoring and fence repair to prevent human trespassing and grazing on its lands; and section III.B.2.c. of the MOU, which excludes cattle from sensitive habitat in the growing season, establishes cattle exclosures, fencing in the vicinity of camp sites, and requires monitoring of sensitive areas.

Introduced species of grasses and forbs have invaded many of Californian plant communities. Such weedy species can displace the native flora by out-competing them for nutrients, water, light, and space. Weedy plant invasions are facilitated by disturbances such as grazing, urban and residential developments, and various recreational activities. Introduced weeds have become established in many portions of the Laguna Mountains and thereby reduce the amount of suitable habitat for native plant species (Sproul 1979). For example, the invasion of exotic species including *Polygonum* sp. (knotweed), *Lolium perenne* (ryegrass), and *Poa pratensis* (Kentucky bluegrass), and *Potentilla norvegica* (rough cinquefoil) has altered the composition of habitats supporting the two plant taxa (Sproul 1979; E. Bauder, *in litt.,* October 1994, L. Henrickson, *in litt.,* October 1994). Although actions required by the Conservation Agreement that reduce impacts from grazing, trampling, and minimizes alteration will not eliminate all threats from aggressive plant species competition, it will make conditions less favorable to these aggressive species.

Grazing by livestock typically changes the composition of native plant communities by reducing or eliminating species that cannot withstand trampling and predation (see Factors A and C), and enabling more resistant (usually exotic) species to increase in abundance. Seed from non-sterile hay and animal feces increases the likelihood of invasion of exotic species and prevents re-establishment of native plants. Exotic species may flourish with grazing and may reduce or eliminate native plant species through competition for resources. Grazing is considered to be a threat to all populations of *Limnanthes gracilis* ssp. *parishii* within the Cleveland National Forest, primarily as a result of trampling and the invasion of non-native species into sensitive plant habitats (Winter 1991).

In response to these threats, however, the Conservation Agreement (see ''Development of a Conservation Agreement'') mandates that grazing be strictly excluded from Helix Water District and State Parks land. In addition, grazing is managed and monitored on Forest Service lands to minimize impacts to the two plant taxa. The Service believes that these conditions of the Conservation Agreement have significantly reduced the threats from grazing and will permit the development of management techniques deemed necessary for the conservation of the species.

Finding and Withdrawal

Downingia concolor var. *brevior* and *Limnanthes gracilis* ssp. *parishii* are restricted to the Peninsular Ranges of southwestern California from the Santa Ana Mountains of extreme southwestern Riverside County, south to the Laguna Mountains of southern San Diego County, California. They occur in grassy meadows or drainages that are vernally wet (wet during the rainy season) with saturated soil conditions and shallow pools for several weeks at a time. *Downingia concolor* var. *brevior* is restricted to the Cuyamaca Valley in the Cuyamaca Mountains of central San Diego County, California. This locality also supports the largest concentration of *Limnanthes gracilis* ssp. *parishii,* which is more widely distributed.

The proposed rule identified alteration of wetland hydrology, cattle grazing, recreational activities, recreational development, inadequate regulatory mechanisms, and off-road vehicle activities as the primary threats to these two plant taxa. A Conservation Agreement initiated by Helix Water District in 1994 and finalized in August 1996, which includes the Helix Water District, Lake Cuyamaca Recreation and Park District, State Parks, the Forest Service, CDFG, and the Service as signatories, addresses these primary threats and significantly reduces the likelihood of extinction or endangerment for both species such that the species are not endangered or threatened, as those terms are defined in the Act.

After a thorough review and consideration of all information available, including the development and implementation of the Conservation Agreement, the Service has determined that listing of *Downingia concolor* var. *brevior* as endangered, and *Limnanthes gracilis* ssp. *parishii* as threatened is no longer warranted. The Service has carefully assessed the best scientific and commercial information available in the development of this withdrawal notice.

References Cited

A list of all references cited herein is available upon request from the U.S. Fish and Wildlife Service Carlsbad Field Office (see **ADDRESSES** section).

Author

The primary author of this withdrawal notice is Fred Roberts, Carlsbad Field Office (see **ADDRESSES** section).

Authority

The authority for this action is section 4(b)(6)(B)(ii) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: January 30, 1997.

John G. Rogers,

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

[FR Doc. 97–2876 Filed 2–3–97; 8:45 am]

BILLING CODE 4310–55–P